

• **Board of Directors**  
**Water Planning, Quality and Resources Committee**

September 14, 2004 Board Meeting

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**8-8**

**Subject**

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Authorize upgrades to the commercial and institutional landscape water efficiency incentive program

**Description**

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Authorization is requested to upgrade Metropolitan's program for landscape water-use efficiency on commercial, institutional and large residential landscapes maintained under professional management. The objective of the program upgrades is to increase water conservation in larger urban landscapes. The program links Metropolitan's Professional Protector del Agua training to the creation of landscape water budgets for individual properties and quantified water savings. Water budgets establish the amount of water required to maintain a healthy landscape.

**Program Upgrades.** In 1993, Metropolitan began offering large landscape water-use efficiency incentives to assist member agencies in complying with terms of the California Urban Water Conservation Council Memorandum of Understanding, Best Management Practice No. 5 ([Attachment 1](#)). In light of experience gained and advances in technology, it is now timely to upgrade Metropolitan's approach.

In close consultation with the member agencies, staff developed the three components of the upgraded landscape water efficiency program listed below and detailed in [Attachment 2](#).

1. Water-Use Accountability
2. Measured Water Savings for Installed Irrigation System Upgrades
3. Weather-Based Irrigation Controller Incentive Rebate

The proposed program upgrades in combination with Metropolitan's recycled water program would provide water agencies with robust choices to achieve landscape water use efficiency.

**Resource Target.** The IRP Update calls for conservation to offset approximately 17 percent of the region's annual retail water demand by 2025. The proportionate share of needed landscape water-use efficiency improvement is 170,000 acre-feet of savings in 2025. To achieve this conservation goal, landscape conservation needs to increase by 8,500 acre-feet per year. Staff established a long-term target of about one-half of this reduction (4,300 acre-feet annual savings growth) from the proposed large landscape program, with the remainder to be accomplished by residential rebate programs.

**Professional Protector del Agua (PPDA) Program.** In 1995, Metropolitan established PPDA to train landscape professionals about efficient irrigation practices. Attendance and training cost have grown significantly. The proposed new landscape program links Metropolitan's financial investment in the PPDA to quantified water saving activities. These new program components also provide choice for member agencies to conduct their own irrigation training and receive commensurate incentives from Metropolitan.

**Administration.** Within the contracts with member agencies, the proposed program upgrades would be continually assessed for performance and adjusted or suspended if expected savings are not achieved.

**Cost.** The overall cost to the Conservation Credits budget to expand large landscape conservation by 4,300 acre-feet per year is about \$600,000 annually. To transition to the upgraded program, existing large landscape projects implemented by member agencies under agreement with Metropolitan would receive continued funding for up to six months beginning July 1, 2004. Cost of this transition would be about \$60,000.

## Policy

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By Minute Item 40121, dated March 9, 1993, the Board approved the Landscape Conservation Program.

By Minute Item 41969, dated July 9, 1996, the Board approved expansion of the Landscape Conservation Program.

By Minute Item 43225, dated Oct. 13, 1998, the Board approved continuation and expansion of Metropolitan's Large Landscape and Landscape Conservation Education Program.

By Minute Item 44974, dated Aug. 20, 2002, the Board authorized an incentive of \$65 per unit for the retrofit installation of evapotranspiration controllers in residential landscapes.

By Minute Item 45208, dated Feb. 11, 2003, the Board adopted water conservation policy principles that encourage collaborative landscape partnerships and public promotion of water efficient landscapes.

By Minute Item 45534, dated Oct. 14, 2003, the Board authorized a \$5.50 per station incentive for commercial-grade weather-based irrigation controllers.

## California Environmental Quality Act (CEQA)

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CEQA determination for Options #1, #2 and #3:

The proposed actions are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The overall activities involve providing financial incentives and modeling efforts in the design and installation of conservation equipment within existing public facilities along with the construction of minor appurtenant structures with negligible or no expansion of use and no possibility of significantly impacting the physical environment. In addition, some of the activities would consist of basic data collection and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource. This may be strictly for information gathering purposes, or as part of a study leading to an action, which a public agency has not yet approved, adopted, or funded. Accordingly, the proposed actions qualify under Classes 1, 3 and 6 Categorical Exemptions (Sections 15301, 15303, and 15306 of the State CEQA Guidelines). Moreover, the fiscal aspects of the financial incentives are not subject to CEQA because they involve other government fiscal activities, which do not involve any commitment to any specific project, which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed actions qualify under three Categorical Exemptions (Class 1, Section 15301; Class 3, Section 15303; and Class 6, Section 15306 of the State CEQA Guidelines). In addition, the fiscal aspect of the financial incentives is not subject to CEQA (Section 15378(b)(4) of the State CEQA Guidelines).

## Board Options/Fiscal Impacts

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### Option #1

Adopt the CEQA determination and

- a. Authorize proposed upgrades to the commercial and institutional landscape water efficiency program; and
- b. Authorize six months of transitional funding, retroactive to July 1, 2004, for Metropolitan-funded agency landscape programs to adapt to the new program upgrades.

**Fiscal Impact:** Conservation Credit funding of \$600,000 annually for program upgrades and about \$60,000 for transitional funding to provide near-term support to member agency projects

### Option #2

Adopt the CEQA determination and authorize proposed Weather-Based Irrigation Controller Incentive Rebate.

**Fiscal Impact:** Conservation Credit funding up to \$200,000 annually based on an increased incentive rate of \$500 per acre as described in [Attachment 1](#)

**Option #3**

Do not take any action.

**Fiscal Impact:** None

**Staff Recommendation**

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Option #1

*Stephen N. Arakawa* 8/19/2004  
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Stephen N. Arakawa Date  
Manager, Water Resource Management

*Ronald R. Gastelum* 8/23/2004  
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Ronald R. Gastelum Date  
Chief Executive Officer

**Attachment 1 – California Urban Water Conservation Council Memorandum of Understanding,  
Best Management Practice No. 5 - Large Landscape Conservation Programs  
and Incentives**

**Attachment 2 – Upgraded Commercial and Institutional Landscape Water Efficiency Incentive  
Program**

BLA #2933



# Memorandum

## What we are about

### 5. LARGE LANDSCAPE CONSERVATION PROGRAMS AND INCENTIVES

#### A. Implementation

Implementation shall consist of at least the following actions:

##### **Customer Support, Education and Assistance**

- a) Agencies shall provide non-residential customers with support and incentives to improve their landscape water use efficiency. This support shall include, but not be limited to, the following:

##### **Accounts with Dedicated Irrigation Meters**

- a) Identify accounts with dedicated irrigation meters and assign ET<sub>0</sub>-based water use budgets equal to no more than 100% of reference evapotranspiration per square foot of landscape area in accordance with the schedule given in Section B of this Exhibit.

- b) Provide notices each billing cycle to accounts with water use budgets showing the relationship between the budget and actual consumption in accordance with the schedule given in Section B of this Exhibit; agencies may choose not to notify customers whose use is less than their water use budget.

##### **Commercial/Industrial/Institutional Accounts with Mixed-Use Meters or Not Metered**

- a) Develop and implement a strategy targeting and marketing large landscape water use surveys to commercial/industrial/institutional (CII) accounts with mixed-use meters. Each reporting period, directly contact via letter or telephone not less than 20% of CII accounts with mixed-use meters and offer water use surveys. (Note: CII surveys that include both indoor and outdoor components can be credited against coverage requirements for both BMP 5 and BMP 9.)

- b) Unmetered service areas will actively market landscape surveys to existing accounts with large landscapes, or

accounts with landscapes which have been determined by the purveyor not to be water efficient.

c) Offer the following measures when cost-effective:

- i) Landscape water use analysis/surveys
- ii) Voluntary water use budgets
- iii) Installation of dedicated landscape meters
- iv) Training (multi-lingual where appropriate) in landscape maintenance, irrigation system maintenance, and irrigation system design.
- v) Financial incentives to improve irrigation system efficiency such as loans, rebates, and grants for the purchase and/or installation of water efficient irrigation systems.
- vi) Follow-up water use analyses/surveys consisting of a letter, phone call, or site visit where appropriate.

d) Survey elements will include: measurement of landscape area; measurement of total irrigable area; irrigation system check, and distribution uniformity analysis; review or develop irrigation schedules, as appropriate; provision of a customer survey report and information packet.

e) Track survey offers, acceptance, findings, devices installed, savings potential, and survey cost.

#### **New or Change of Service Accounts**

Provide information on climate-appropriate landscape design, efficient irrigation equipment/management to new customers and change-of-service customer accounts.

#### **Recommended**

- a) Install climate appropriate water efficient landscaping at water agency facilities, and dual metering where appropriate.
- b) Provide customer notices prior to the start of the irrigation season alerting them to check their irrigation systems and make repairs as necessary. Provide customer notices at the end of the irrigation season advising them to adjust their irrigation system timers and irrigation schedules.

#### **B. Implementation Schedule**

- a) Agencies signing the MOU prior to December 31, 1997, implementation shall commence no later than July 1, 1999.
- b) Agencies signing the MOU or becoming subject to the MOU after December 31, 1997, implementation shall commence no later than July 1 of the second year following the year the agency signed or became subject to the MOU.
- c) Develop ETo-based water use budgets for all accounts with dedicated irrigation meters by the end of the second reporting period from the date implementation was to commence.
- d) Develop and implement a plan to target and market landscape water use surveys to CII accounts with mixed-use meters by the end of the first reporting period from the date implementation was to commence.
- e) Develop and implement a customer incentive program by the end of the first reporting period from the date implementation was to commence.

#### **C. Coverage Requirements**

- a) ETo-based water use budgets developed for 90% of CII accounts with dedicated irrigation meters by the end of the second reporting period from the date implementation was to commence.
- b) Not less than 20% of CII accounts with mixed-use meters contacted and offered landscape water use surveys each reporting period.
- c) Irrigation water use surveys completed for not less than 15% of CII accounts with mixed-use meters within 10 years of the date implementation was to commence. (Note: CII surveys that include both indoor and outdoor components can be credited against coverage requirements for both BMP 5 and BMP 9.) For the purposes of calculating coverage, 15% of CII accounts means the number of accounts equal to 15% of CII accounts with mixed-use meters in 1997 or the year the agency signed the MOU, whichever is later.

#### **D. Requirements for Documenting BMP Implementation**

##### **Dedicated Landscape Irrigation Accounts**

Agencies shall preserve water use records and budgets for customers with dedicated landscape irrigation accounts for a period of not less than two reporting periods. This information may be used by the Council to verify the agency's reporting on this BMP .

- a) Number of dedicated irrigation meter accounts.

- b) Number of dedicated irrigation meter accounts with water budgets.
- c) Aggregate water use for dedicated landscape accounts with budgets.
- d) Aggregate budgeted water use for dedicated landscape accounts with budgets.

#### **Mixed Use Accounts**

- a) Number of mixed use accounts.
- b) Number, type, and dollar value of incentives, rebates, and no, or low interest loans offered to, and received by, customers.
- c) Number of surveys offered.
- d) Number of surveys accepted.
- e) Estimated annual water savings by customers receiving surveys and implementing recommendations.

#### **E. Criteria to Determine BMP Implementation Status**

- a) Agency has developed water use budgets for 90% of accounts with dedicated irrigation meters by end of second reporting period from date implementation was to commence.
- b) Agency has implemented irrigation water use survey program for CII accounts with mixed-use meters, and directly contacts and offers surveys to not less than 20% of accounts each reporting period. (A program to retrofit mixed-use accounts with dedicated landscape meters and assigning water use budgets, or a program giving mixed-use accounts ETo-based budgets for irrigation uses satisfies this criterion.)
- c) Agency is on track to provide water use surveys to not less than 15% of CII accounts with mixed-use meters within 10 years of the date implementation was to commence. Agency may credit 100% of the number of landscape water use surveys for CII accounts with mixed-use meters completed prior to July 1, 1996, that have received a follow-up inspection against the coverage requirement; and 50% of surveys that have not received follow-up inspections. Agency may credit 100% of the number of landscape water use surveys completed for CII accounts with mixed-use meters after July 1, 1996 against the coverage requirement. (A program to retrofit mixed-use accounts with dedicated landscape accounts, or a program giving mixed-use accounts ETo-based budgets for irrigation uses satisfy this criterion.)

- d) An agency will be considered on track if the percent of CII accounts with mixed-use meters receiving a landscape water use survey equals or exceeds the following: 1.5% by end of first reporting period following date implementation to commence; 3.6% by end of second reporting period; 6.3% by end of third reporting period; 9.6% by end of fourth reporting period; and 13.5% by end of fifth reporting period. (A program to retrofit mixed-use accounts with dedicated landscape accounts, or a program giving mixed-use accounts ETo-based budgets for irrigation uses satisfy this criterion.)
- e) Agency has implemented and is maintaining customer incentive program(s) for irrigation equipment retrofits.

#### **F. Water Savings Assumptions**

Assume landscape surveys will result in a 15% reduction in demand for landscape uses by surveyed accounts.

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## **Upgraded Commercial and Institutional Landscape Water Efficiency Incentive Program**

Specified below are program eligibility requirements and details pertaining to each of the following components:

1. Water-Use Accountability
2. Measured Water Savings for Installing Irrigation System Upgrades
3. Weather-Based Irrigation Controller Incentive Rebate

### **Eligibility**

Irrigated landscape sites must satisfy the following minimum requirements:

- A commercial/industrial/institutional or large residential site using potable water for irrigation, and
- No prior receipt of a Metropolitan incentive for a weather-based irrigation controller (WBIC) at the site.

Metropolitan reserves the right to make appropriate administrative changes consistent with primary program objectives.

Note: Sites participating in Metropolitan's Weather-Based Irrigation Controller Grant Program sponsored by the California Department of Water Resources are not eligible to participate in the Upgraded Commercial and Institutional Landscape Water Efficiency Incentive Program.

### **Landscape Incentive Components**

Agencies can choose, by site, to implement any one of the following three components and must elect as an agency whether or not to participate in Metropolitan's Professional Protector del Agua training.

#### **1. Water-Use Accountability**

**Objectives.** To improve landscape water-use efficiency by altering water use behavior of site participants via the development of water budgets, providing professional landscape irrigation training, and regularly communicating water use performance data.

**Incentive Alternatives.** Under this component an agency could choose either of the two incentive alternatives listed below to offset a portion its costs:

- a. Metropolitan's incentive of \$2.50 per month per acre under irrigation management and participation in Metropolitan's Professional Protector del Agua (PPDA) training, or
- b. Metropolitan's incentive of \$3.50 per month per acre under irrigation management and landscape irrigation training similar to PPDA provided by the member or retail agency.

Incentives would be paid to member agencies for up to five years per participating site to offset up to one-half the agencies' costs. The benefits to property owners include reduced water purchases and avoidance of significant penalties associated with runoff.

**Background and Cost.** Based on results of a five-year water-budget pilot study conducted by the Municipal Water District of Orange County and co-funded by Metropolitan, water savings from an information-based landscape management program are expected to yield about 0.4 acre-foot per year for acreage under management.

This component uses water-budget based incentives to achieve greater irrigation efficiency without requiring a dedicated landscape meter. It can be applied to mixed-use meter accounts, which are common in urban settings and costly to retrofit with dedicated landscape meters.

The communication system creates a loop of accountability between the property owner, property management firm and landscape contractor. The simultaneous communication spurs changes in water management practices

when actual water use exceeds water budget targets and creates unnecessary expense and potential runoff liability for the property owner.

Because this component provides incentives based on acreage under management, it reduces administrative overhead for Metropolitan and its member and retail agencies. The incentives are paid based on statistical estimates of savings as done in other Metropolitan incentive programs.

The estimated cost of water savings is \$109 per acre-foot. This amount reflects one-half of the projected component cost plus Metropolitan's full cost for providing PPDA training.

Requirements. To qualify, participating retail agencies must do the following:

- a. Develop water budget for each participating site.
- b. Provide performance data (actual use versus budget) for each billing cycle through a well-structured communications system to the property owner (the likely bill payer), the property manager, and the landscape maintenance company.
- c. Maintain an electronic database that includes:
  1. Addresses of all participating sites,
  2. Acres of irrigated landscape under management per site,
  3. Dates when sites become participants (once water budgets have been established and water use performance information is being supplied to site participants),
  4. Dates when PPDA or equivalent landscape irrigation efficiency education has been provided to participating sites,
  5. Dates of annual contact with site participants, and
  6. Acreages of sites removed from participation when they have received incentives from Metropolitan for Weather-Based Irrigation Controllers.
- d. Database may contain more fields than those listed above for member / retail agency implementation needs.
- e. Contact each site participant directly at least once per year.
- f. For participating sites with water use that exceeds budget by more than 20 percent for four consecutive months, review with site participants barriers inhibiting desired performance and recommend changes to overcome the barriers. If the site continues to exceed budget by more than 20 percent for an additional four months, member agency shall review site issues with Metropolitan to determine if site should be removed as a participant, incentive payments halted, and other options considered for improving site's efficiency.
- g. Provide Metropolitan with pre- and post-retrofit site water use information for all sites randomly selected by Metropolitan for regional analysis of the component's effectiveness.
- h. Submit invoices to Metropolitan specifying the amount of acreage added since the previous invoice was submitted and identifying the cumulative amount of acreage under management for each month of the new invoice period. Submit copy of database as back-up documentation.

This component applies to commercial, institutional, and industrial managed landscapes, and large residential landscapes with similar management conditions.

## **2. Measured Water Savings Component for Installed Irrigation System Upgrades**

Objective. To improve landscape water use efficiency by incentivizing property owners to invest in landscape water-use efficiency upgrades.

Incentive Alternatives. Under this option an agency could choose either of two incentive alternatives:

- a. Metropolitan's incentive of \$115 per acre-foot of verified savings, documented via a dedicated landscape meter, and participation in Metropolitan's Professional Protector del Agua (PPDA) training, or
- b. Metropolitan's incentive of \$154 per acre-foot of verified savings, documented via a dedicated landscape meter, and landscape irrigation training similar to PPDA provided by the member or retail agency.

Incentives would be paid annually on a pay-for-performance basis using savings verified by meter readings. Incentives would be paid for up to five years or until one-half of the eligible upgrade costs have been recovered by the end-user, whichever occurs first. The incentive amounts reflect both the incentive payments plus the full cost of providing PPDA or its equivalent. Incentives would be paid to customers (via currently established Conservation Credits Program procedures) for verified water savings.

Background and Cost. Metropolitan initiated several pilot projects in 1993-1995 for the retrofit of large landscapes with centralized irrigation control systems (CICS). The Board approved a CICS program 1998. The new component described herein replaces that program by broadening the definition of eligible water saving landscape improvements and streamlining administrative requirements by offering software developed by Metropolitan that accepts historical and monitored water use data, calculates weather normalized savings, and computes the Conservation Credit earned.

For either incentive alternative, Metropolitan's cost is \$154 per acre-foot of verified water savings.

Requirements. To qualify, participating retail agencies must do the following:

- a. Establish a water budget for each site.
- b. Make recommendations for system improvements that increase irrigation efficiency.
- c. Certify installation of whichever improvements property owner elects to implement.
- d. Annually certify weather-adjusted water savings against historical use.
- e. Contact each project participant directly once per year.
- f. Certify to Metropolitan that a water budget has been individually prepared for a participating site and the site had not received Metropolitan funding for a weather-based irrigation controller prior to its inclusion in the component.
- g. Provide a brief report to Metropolitan and the site's participants describing barriers inhibiting the desired performance if a site's water use exceeds its budget by 20 percent for more than four month.
- h. Provide Metropolitan with pre- and post-retrofit site water use information for all sites randomly selected by Metropolitan for regional analysis of the component's effectiveness.

This component applies to commercial, institutional, and industrial managed landscapes, and large residential landscapes with similar management conditions.

### **3. Weather-Based Irrigation Controller Incentive Rebate Component**

Objective. To improve landscape water-use efficiency by incentivizing property owners of commercial, industrial and institutional sites to install Weather-Based Irrigation Controllers (WBICs).

Background, Incentive and Cost. Based on two studies of WBICs in single-family residential settings in Irvine, a residential WBIC rebate of \$65 was approved by the Board in 2002. Subsequent studies of WBICs by the Municipal Water District of Orange County and the Los Angeles Department of Water and Power demonstrate significantly greater savings are achievable on commercial and large residential settings (e.g., homeowners associations, apartment complexes, etc.). The increased savings result from the larger areas of landscape served per station by each controller in a CII setting.

Based on the savings from these studies, staff recommends a rebate incentive of \$500 per acre of irrigated landscape served by WBICs installed on commercial, industrial and institutional (CII) managed landscape sites. The use of irrigated area as the unit on which the incentive is based can be applied equally to all of Metropolitan's service area.

The estimated cost of water savings is \$100 to \$154 per acre-foot. As more field data is received, the incentive will be reevaluated and, if necessary, recommendations for revisions to the incentive would be presented to the Board for its consideration.

Requirements. Participating retail agencies must do the following:

- a. Certify the site area to be under WBIC control (to establish the amount of incentive).
- b. Certify that existing controllers are not WBICs (to avoid replacing WBICs with WBICs).
- c. Maintain an electronic database of rebates issued, with:
  1. Full name, address and telephone number of site owner,
  2. Installation address if different than address in (a) above,
  3. WBIC make, model, number of units rebated, and number of active stations per site,
  4. Amount of rebate issued, and
  5. Date rebate issued.
- d. Provide database to Metropolitan as back-up documentation for invoices requesting Conservation Credits for rebate amounts.
- e. Include within the rebate application form a section to secure property owner's written agreement to allow on-site inspection for installation verification of WBICs, if requested by Metropolitan and/or the member agency.
- f. Secure and retain copies of WBIC purchase receipts with rebate applications.
- g. Provide Metropolitan with pre- and post-retrofit site water use information for all sites randomly selected by Metropolitan for regional analysis of the component's effectiveness.

Incentives would be paid via currently established Conservation Credits Program procedures

This component applies to commercial, institutional, and industrial managed landscapes, and large, non-single family residential landscapes (e.g., homeowners associations, apartment complexes, condominiums, etc.).

Metropolitan would retain its existing single-family residential incentive of \$65 for WBICs with up to 12 stations and an additional \$5.50 for each station in excess of 12 stations. Excluding Requirement No. 1 above, the same program requirements listed above shall apply to rebates issued for single-family residences.