

**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

7-13

September 29, 1998

To: Board of Directors (Water Planning and Resources Committee—Action)

From: *for* General Manager

Edward J. Meany, III

Submitted by: Debra Man, Chief of Planning and Resources

Debra Man

Subject: Metropolitan's Large Landscape and Landscape Conservation Education Program

RECOMMENDATION

It is recommended that the Board approve the continuation of the Large Landscape and Landscape Conservation Education Program as described herein.

EXECUTIVE SUMMARY

Staff last updated the Board in 1996 on Metropolitan's Landscape Water Conservation Program (Program). The present update covers the period since then, reviews Program plans that reflect the most recent revisions to Best Management Practice (BMP) No. 5, and recommends that Metropolitan continue the Program.

Minor modifications to Metropolitan's Program have been made to help member agencies implement the recently revised BMP No. 5 for urban landscape conservation. The revised landscape BMP requires that agencies "provide non-residential customers with support and incentives to improve their landscape water use efficiency." The major components of this BMP are: 1) assigning weather-based water budgets for landscaped sites; 2) offering landscape water use efficiency surveys; 3) installing water meters dedicated to landscape water use; 4) providing financial incentives to improve irrigation system efficiency; and 5) providing training and education on landscape water use issues.

APPROVED
By the Board of Directors of
The Metropolitan Water District
of Southern California
at its meeting held

OCT 13 1998

Debra Man
EXECUTIVE SECRETARY

DETAILED REPORT

The Board approved the Landscape Conservation Program (Program) in 1996 (see attached Board Letter No. 7-5, dated June 25, 1996). The subsequent evolution of member agency projects has moved toward consolidating these existing programs under two areas of the revised BMP: providing financial incentives to improve irrigation system efficiency and providing training and education on landscape water use issues. In 1998-99, Metropolitan budgeted \$1.6 million for the Program. This budget amount will be evaluated each year depending on future needs.

Providing financial incentives to improve irrigation system efficiency

The majority of the Program budget is comprised of Conservation Credits funding for irrigation system efficiency improvements. For fiscal year 1998-99, the budget for Program financial incentives is \$1,272,000. To receive this funding, agencies enter into agreements to implement specific irrigation system improvements and to supply both pre- and post-installation water use records to verify the water savings achieved. Agencies are paid \$154 per acre-foot (AF) of verified water savings, up to one half of the project cost, which is consistent with Conservation Credits Program funding policy established by the Board. Two large pilot projects to upgrade irrigation systems have been completed and analyzed. Combined savings will be approximately 230 AF of water per year. Requests for Metropolitan to fund similar projects are expected to increase significantly over the next few years.

Staff is currently developing and testing methods to use water savings estimates from past projects on sites where data is insufficient to accurately verify water savings, such as, sites without dedicated landscape meters. A group of agencies and landscape professionals have been working together to develop this pilot project. If the pilot proves to be cost-effective, staff may request additional budget for this program in fiscal year 2000-01. The results of this pilot could be instrumental to developing cost-effective projects to accomplish two other BMP components: assigning weather-based water budgets for landscaped sites and offering landscape water use efficiency surveys.

Training and education

Metropolitan continues offering the "Protector del Agua" (PDA) Education Program. For fiscal year 1998-99, the budget for PDA is approximately \$340,000. PDA has had over 3,000 participants to-date from 20 participating member agencies. This popular and award-winning training course on efficient water use is offered in English and Spanish to landscape maintenance workers. At the request of your member agencies, staff expanded the PDA program with the development of a 6-hour module on low-water using plants for landscape workers. A one-day PDA Residential workshop for homeowners was developed this year also at the request of your

members agencies. Homeowners receive a basic overview of water supply, efficient irrigation practices, soil and plant information. We expect PDA to continue at the same level for the next three years, with potential for more growth through the new plant module and the PDA Residential workshop.

In addition, staff has participated in member agency and statewide workshops on landscape water use and on implementation issues pertaining to the new landscape BMP. Education is an important Program component because achieving outdoor water savings requires many behavioral changes by those responsible for landscape irrigation.

Other Program Components

Metropolitan offers technical assistance to its member agencies for the more technically complicated landscape projects, and continues to conduct plant and evapotranspiration research. Staff is also investigating new technologies to evaluate the conservation potential of different landscape management techniques.

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Attachment

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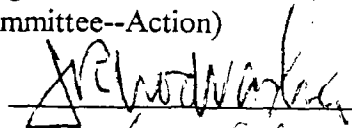
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

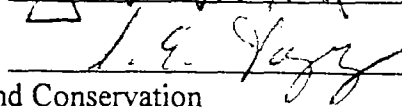
REVISED

7-5

June 25, 1996

To: Board of Directors (Finance and Insurance Committee--Action)
(Water Planning and Resources Committee--Action)
(Executive Committee--Action)

From: General Manager 

Submitted by: S.E. Vazquez
Acting Director of Public Affairs and Conservation 

Subject: Landscape Conservation Program for Fiscal Year 1996-97

RECOMMENDATION(S)

It is recommended that:—1) your Board approve the Landscape Conservation Program as described herein; and 2) the General Manager be authorized to enter into agreements with member agencies in excess of \$250,000 to participate in Metropolitan's Landscape Conservation Program during Fiscal Year 1996-97.

EXECUTIVE SUMMARY

Metropolitan's Landscape Conservation Program has been developing over the past three years. The Landscape Conservation Program for Fiscal Year 1996-97 was designed by choosing various components from pilot projects that exhibited the highest water savings potential. Your Board approved a budget for the Landscape Conservation Program at \$1,490,700 as part of the Conservation Branch budget. Staff proposes the following components be offered to all member agencies for Fiscal Year 1996-97:

- Landscape water audits with irrigation retrofits
 - Moisture Sensor Program
 - Central Irrigation Computer Control System Program
- "Protector del Agua" Landscape Education Program
- Pilot landscape area assessment studies
- Research in low-water use plants and irrigation scheduling
- Research new landscape conservation technologies for future programs
- Evaluation of landscape conservation programs
- Circuit Rider

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DETAILED REPORT

The following is a description of each of the components of the proposed Landscape Conservation Program for Fiscal Year (FY) 1996-97.

Landscape Water Audits with Irrigation Retrofits

Metropolitan will participate in the retrofit of moisture sensors and central irrigation computer control systems. The participating member agency and Metropolitan will agree on a minimum guaranteed amount of water savings for the project. Funding will be under the Conservation Credits Program criteria of \$154 per acre-foot up to 50 percent of the project cost. Payments will be bimonthly based on member agency submittal of reports and invoices for the project. A reconciliation will be done at the end of the project to insure the guaranteed minimum water savings amount. Each project will include three phases:

Phase I: Presurvey

Member agencies will presurvey sites to select only those sites that show potential water savings.

Phase II: Landscape Water Audits

Sites selected by presurvey will be audited. Results from water audits will be included in a report and will identify sites where the retrofitting of irrigation equipment shows a five-year payback or less based on estimated water savings.

Phase III: Retrofitting

Sites identified as having a five-year payback or less for suggested retrofits of moisture sensors and central irrigation computer control systems must perform those retrofits as part of the agreement.

Note: If member agencies have audit reports from previously performed audits, upon approval by Metropolitan, an agreement could be entered into for Phase III.

Protector del Agua Program

The "Protector del Agua" Program (PDA) is an education program targeting landscape maintenance workers which is fully funded by Metropolitan. During FY 1996-97, Metropolitan will make the following changes and/or expansions to PDA:

- Full-time Bilingual PDA Program Manager
- Additional Instructors
- Additional Field Equipment
- Additional Spanish-Speaking Classes
- Class Scheduling Flexibility

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- Research Results will be Incorporated into PDA

PDA has received awards from the United States Bureau of Reclamation under the category of innovative partnerships in conservation, and the California Municipal Utilities Association for outstanding leadership in water efficiency. PDA complements the Landscape Retrofit Program well by educating the users of the hardware on how to achieve and maintain water savings over time.

Pilot Landscape Area Assessment Studies

Metropolitan will participate with a small number of member agencies in landscape area assessment studies to identify large landscape sites in their service area. By combining aerial photography and digital parcel maps in computer compatible format, the following information can be determined:

- Landscape area (square footage)
- Amount of turf and other plant categories
- Weather-based site specific landscape water budgets

Using this information, member agencies will be able to identify what types of sites in their service areas have large landscapes. This will enable Metropolitan and its member agencies to target certain types of sites in future programs.

Research in Low-Water Use Plants and Irrigation Scheduling

Metropolitan will continue research on:

- Determining water use rates for warm-season turfgrasses
- Water use and adaptability of nonindigenous tree species
- Development of crop coefficients for mixed landscapes

Portions of this research will be completed during FY 1996-97 and Metropolitan will be developing informational brochures to share research results with member agencies. All three research programs are yielding information useful to the landscape industry, including more efficient irrigation scheduling techniques and new varieties of drought resistant plant materials.

Researching New Landscape Conservation Technologies for Future Programs

During FY 1996-97, Metropolitan will be investigating and researching new landscape conservation technologies for use in future programs. This will be done by staff and through suggestions from member agency conservation staff. Promising new technologies may be pilot tested on a small scale during this FY.

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Water Savings Evaluation

Metropolitan is currently conducting two evaluation programs which will be completed during FY 1996-97. One evaluation is being done to determine the effects of water conservation pricing, landscape water budget allocations, and education on the success of landscape water conservation programs. The other evaluation is of the San Diego County Water Authority's large turf water audit program.

Circuit Rider

The "Circuit Rider" Program assists cities in the implementation of the State Landscape Ordinance AB325, or their local landscape ordinance. Metropolitan will begin a small-scale evaluation of Circuit Rider during FY 1996-97 and will continue funding those agencies who have been participating. Results of the evaluation will determine whether Metropolitan will continue funding Circuit Rider after this FY.

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