

2004 Water Use Efficiency Proposal Solicitation Package

APPENDIX A: Project Information Form

Applying for:

Urban Agricultural

1. (Section A) **Urban or Agricultural Water Use Efficiency Implementation Project**

(a) Implementation of Urban Best Management Practice, # 14

(b) Implementation of Agricultural Efficient Water Management Practice, # _____

(c) Implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # or Quantifiable Objective #, if applicable

(d) Specify other: _____

2. (Section B) **Urban or Agricultural Research and Development; Feasibility Studies, Pilot, or Demonstration Projects; Training, Education or Public Information; Technical Assistance**

(e) Research and development, feasibility studies, pilot, or demonstration projects

(f) Training, education or public information programs with statewide application

(g) Technical assistance

(h) Other

3. Principal applicant (Organization or affiliation):

Metropolitan Water District of Southern California

4. Project Title:

High-Efficiency Toilet Rebate Program

5. Person authorized to sign and submit proposal and contract:

Name, title Steve Arakawa

Mailing address P. O. Box 54153

Los Angeles, CA 90054

Telephone 213-217-6052

Fax. 213-217-6119

E-mail sarakawa@mwdh2o.com

APPENDIX A: Project Information Form (con't)

6. Contact person (if different):	Name, title.	Alice Webb
	Mailing address.	P. O. Box 54153 Los Angeles, CA 90054
	Telephone	213-217-6716
	Fax.	213-217-7159
	E-mail	awebb@mwdh2o.com
<hr/>		
7. Grant funds requested (dollar amount): <i>(from Table C-1, column VI)</i>		\$5,000,000
<hr/>		
8. Applicant funds pledged (dollar amount):		\$4,200,000
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9. Total project costs (dollar amount): <i>(from Table C-1, column IV, row n)</i>		\$9,200,000
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10. Percent of State share requested (%) <i>(from Table C-1)</i>		54
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11. Percent of local share as match (%) <i>(from Table C-1)</i>		46
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12. Is your project locally cost effective? <i>Locally cost effective means that the benefits to an entity (in dollar terms) of implementing a program exceed the costs of that program within the boundaries of that entity.</i> <i>(If yes, provide information that the project in addition to Bay-Delta benefit meets one of the following conditions: broad transferable benefits, overcome implementation barriers, or accelerate implementation.)</i>		<input checked="" type="checkbox"/> (a) Yes <input type="checkbox"/> (b) No
13. Is your project required by regulation, law or contract? If no, your project is eligible. If yes, your project may be eligible only if there will be accelerated implementation to fulfill a future requirement and is not currently required. <i>Provide a description of the regulation, law or contract and an explanation of why the project is not currently required.</i>		<input type="checkbox"/> (a) Yes <input checked="" type="checkbox"/> (b) No

APPENDIX A: Project Information Form (con't)

- | | |
|---------------------------------------------------------------------|--------------------------------------------------------------------|
| 14. Duration of project (month/year to month/year): | Dec 2005 thru June 2008 |
| 15. State Assembly District where the project is to be conducted: | 35, 37 – 80 |
| 16. State Senate District where the project is to be conducted: | 17, 19 - 40 |
| 17. Congressional district(s) where the project is to be conducted: | 23-53 |
| 18. County where the project is to be conducted: | Los Angeles, San Diego, Orange, Riverside, San Bernardino, Ventura |
| 19. Location of project (longitude and latitude) | N/A |
| 20. How many service connections in your service area (urban)? | Urban Wholesale Supplier |
| 21. How many acre-feet of water per year does your agency serve? | 2.4 million acre-feet |
| 22. Type of applicant (select one): | |
- (a) City
 - (b) County
 - (c) City and County
 - (d) Joint Powers Authority
 - (e) Public Water District
 - (f) Tribe
 - (g) Non Profit Organization
 - (h) University, College
 - (i) State Agency
 - (j) Federal Agency
 - (k) Other
 - (i) Investor-Owned Utility
 - (ii) Incorporated Mutual Water Co.
 - (iii) Specify _____

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23. Is applicant a disadvantaged community? If 'yes' include annual median household income.

(a) Yes, _____ median household income

(b) No

(Provide supporting documentation.)

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APPENDIX B: Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form has the legal authority to submit the proposal on behalf of the applicant;

There is no pending litigation that may impact the financial condition of the applicant or its ability to complete the proposed project;

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant;

The applicant will comply with all terms and conditions identified in this PSP if selected for funding; and

The applicant has legal authority to enter into a contract with the State.

Signature

Name and Title

Date

Statement of Work, Section One: Relevance and Importance

Metropolitan provides imported water service to more than 18 million residents over a 5,200 square mile service area that includes Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties. Metropolitan relies on State Water Project deliveries from the Bay/Delta for approximately one-third of the region's water supplies.

To meet increasing water demands, Metropolitan, in conjunction with its member agencies, pursues a multitude of opportunities to implement water demand management projects. Metropolitan is proposing a Toilet Rebate Program for toilets exceeding current standards, specifically dual-flush and one gallon per flush models. This project would provide incentives to retrofit high-water use toilets with higher efficiencies over ultra-low-flush toilets (ULFTs), targeting installation of 50,000 higher-efficiency toilets in Metropolitan's service territory. Program objectives include:

- Provide a sufficient number of rebates leading to increased awareness that higher efficiency toilets are available, and encourage purchase through rebates,
- Achieve accelerated water savings by installing toilets that exceed current standards,
- Accelerate market growth both in number of choices and availability,
- Influence public response in purchasing a toilet by providing financial incentives at a base rebate of \$160. This would assist local water agencies in providing a viable incentive to consumers to purchase higher efficiency toilets as opposed to ULFTs,
- Allow water agencies the opportunity to augment base funding to create a greater incentive for customers that purchase higher-efficiency toilets,
- Target areas that have not installed ULFTs with more efficient products,
- Achieve year 2000 Regional Urban Water Management Program objectives,
- Save 41,300 acre-feet of water over the 20-year toilet life (0.826 acre-feet saved per toilet x 50,000 toilets).

Metropolitan intends to use grant funds to support its member agencies in their efforts to add this water-saving technology to their residential and commercial programs. Metropolitan would also use the grant funding in its regionwide commercial program. A total of 50,000 rebates would be offered to customers through Metropolitan's participating member agencies. Actual rebate amounts may be larger, depending on the local water agency's contribution. This project includes both residential and commercial toilets. Only non-ULFTs would qualify to receive incentives.

Rebates would be issued by local water agencies over the period of the grant. Metropolitan would provide \$4,000,000 in rebate funding (\$80 per unit). Metropolitan is requesting \$4,000,000 (\$80 per unit) toward rebates and \$1,000,000 (\$20 per unit) for program administration, marketing, and targeting. Targeting would involve identifying areas that have not replaced high-water use toilets with ULFTs. Additional funding is anticipated from Metropolitan's member agencies in the form of in-kind services, which are estimated at

\$200,000, and increased rebates to make it more attractive to their customers. The 50,000 toilets are expected to save 41,300 acre feet of water over their functional life.

The sources of rebate funding would be:

▪ Metropolitan	\$ 80
▪ Proposition 50	<u>+\$ 80</u>
Base Rebate Amount	\$160
▪ Member agency ABC funding (optional)	<u>+\$X</u>
Final Rebate Amount (for customers of member agency ABC)	\$160 + \$X

For the past decade, water agencies in Metropolitan’s service area have been successful at encouraging residential customers to retrofit their older, less efficient models for new ULFTs through the use of rebates. Because there was a more-efficient replacement product available in the marketplace, a simple rebate was often sufficient to cause the older fixture to be replaced with a new, efficient model. Water agencies are satisfied with these programs because they provide long-term water demand reduction and value added customer service to residences, generally the agency’s largest customer segment. Because toilets account for much of residential water use, retrofitting older toilets achieved the greatest amount of savings available from a single fixture-type.

Over the past few years, dual-flush toilets and one gallon per flush toilets have begun to enter the US market. These toilets provide the opportunity for added water savings over installation of ULFTs. Since these toilets are new to the market, they are substantially more expensive than ULFTs. By providing a higher incentive for these high-efficiency toilets, water agencies can continue to spur development and availability of these products, which will lead to a reduction in price over time. It is important to foster this process so that manufacturers do not abandon the effort to bring more efficient toilets to the market. With rebates, water agencies can encourage customers to buy more efficient toilets now, achieving water conservation benefits sooner and transforming the toilet market. These market transformations are necessary to continue realizing water agencies’ conservation expectations. Increasing the amount of water conservation – demand reduction – is necessary to meet the needs of the state’s growing economy with its limited water supplies.

Metropolitan is committed to water conservation projects in order to: 1) reduce its demand for Bay-Delta water, 2) achieve Urban Water Management Plan objectives, 3) implement Integrated Water Resources Plan components, and 4) comply with its obligations as a signatory to the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU).

The replacement of high-water use toilets with ULFTs or these higher efficiency toilets fulfills Best Management Practice No. 14 of the MOU. Toilets are the highest water use inside a residence. In total, this project would save more than 40,000 acre-feet of water over the life of the toilets.

Retail cost for most dual-flush and one gallon per flush toilets is about \$200 - \$400. (This compares to ULFTs that average between \$50-\$100). This grant proposal is intended to secure a sufficiently large base rebate amount (\$160) to make it attractive for customers, independent of local water agency decision on additional contributions. To make the rebate more attractive, member agencies have the option of including additional rebate money for their customers. Many of Metropolitan's member agencies recognize that additional funding could add to program success and are willing to make such commitments.

Over the course of this program, as these toilets become more accessible and popular, the price should come down. If the cost per toilet were reduced significantly, Metropolitan would request that the grant fund contribution be reduced to \$40, reducing the total rebate to \$120 per toilet. Under this scenario, the total number of units that could be funded would increase, which in turn would increase the estimated water savings and affect the benefit/cost ratio. Since the timing and effect of this cannot be determined at this time, the benefits and costs included assume the rebate would remain at the higher amount.

Metropolitan has been funding ULFT programs for approximately 12 years. Over 2 million ULFTs have been installed using Metropolitan's incentives. The most recent data shows that service-area wide saturation is approximately 50 percent. Metropolitan plans to phase out of ULFT programs and focus incentives only on dual-flush and one gallon per flush toilets to retrofit the non-ULFTs remaining in the service area. By providing a higher incentive using these funds, this evolution could be accelerated and achieve higher water savings from customers that have never retrofitted older, less efficient models.

This program will help achieve targets for resource development beyond Metropolitan's Integrated Resource Plan, which was updated in July 2004. Over the long-term, this effort helps meet CALFED water supply reliability objectives by reducing Southern California's residential water demand growth rate, resulting in more effective management of water resources and reduced pressure on water and energy distribution facilities. This program would influence purchase decisions and motivate strong public response through rebates for high efficiency toilet installations, reduce wastewater discharge to local sewerage systems and coastal estuaries, and result in withdrawals from local storage facilities at a lower rate. Several benefits accrue directly and indirectly to CALFED and the Bay/Delta estuary or locally, within the State Water Project watershed, in a manner that is consistent with CALFED objectives.

Statement of Work, Section Two: Technical/Scientific Merit, Feasibility

Metropolitan has executed master agreements with 23 of its member agencies to implement toilet programs. This grant would be added to those agreements, so rapid deployment of the Proposition 50 funds will not be an obstacle. Metropolitan currently provides an incentive of \$80 to replace high-water use toilets with dual-flush toilets. Residential and commercial incentives are currently available to member agencies for their programs.

Timeline:

Date	Task
December 2005	Award of Contract
January 2006	Add grant funds to our member agency and/or vendor contracts
January 2006	Member agencies begin offering incentives
Quarterly	Provide reports on incentives paid to member agencies
Annually	Provide reports on benefits and costs
June 2008	Provide final report

The proposed activity is not defined as a project under CEQA because it involves continuing administrative activities, such as purchases for supplies, general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed activity is not subject to CEQA because it involves 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 proposed activity is not subject to CEQA pursuant to Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines. No further action is required for consideration of this application and subsequent program implementation.

Statement of Work, Section Three: Monitoring and Assessment

Metropolitan currently provides an \$80 incentive for dual-flush toilets based on three studies done on water savings, which quantified additional water savings from dual-flush toilets compared to standard ULFTs. All three studies had similar results, with the average additional water savings for dual-flush toilets measured at 2,250 gallons per year per toilet. These water savings are in addition to the water savings that would have been achieved by installing an ULFT. The additional water savings, along with an estimated 20-year life of the dual-flush toilet, equates to Metropolitan's value of the water savings of \$20. This amount is added to the \$60 value for the ULFT for a total of \$80 per unit.

The California Urban Water Conservation Council is in the process of developing data on water savings for one gallon per flush toilets. Assuming the water savings are at least as much as a dual-flush, Metropolitan will provide the same \$80 incentive for this program. When the study is complete and available, this incentive would be reevaluated.

Based on study information, Metropolitan would report the number of units and the associated water savings over the life of the toilets, rather than monitor water savings. The number of units and backup documentation of installation would be maintained. Member agencies would certify that these units were installed replacing high-water use toilets. Member agencies would also report total costs incurred for projects, to be used for cost/benefit analysis.

Qualifications of the Applicants and Cooperators

Andy Hui – Regional Supply Unit Manager for the Water Resource Management Group. Mr. Hui has 19 years experience working with local resource development projects including recycled water, groundwater recovery, water conservation and seawater desalination.

Alice Webb – Senior Resource Specialist. Ms. Webb has 14 years experience working on various water conservation programs and provides oversight of various programs including ultra-low-flush toilets, high-efficiency clothes washers, residential surveys, weather-based irrigation controllers, and Metropolitan’s landscape education program, Protector Del Agua. See attached resume for Alice Webb.

Other grant programs that Metropolitan has administered are:

Proposition 13 High-Efficiency Clothes Washers

Proposition 13 ET Controllers

CALFED High-Efficiency Clothes Washers

CALFED Protector Del Agua

USBR grants for various conservation programs.

Outreach, Community Involvement, and Acceptance

Metropolitan has an on-going conservation advertising campaign, which would incorporate this project into Metropolitan’s overall conservation programs. Some member agencies implement toilet programs using community-based organizations (CBO) to target and implement their programs, and it is expected that these CBOs would also be used for this program. CBOs may be able to help reach areas that have not yet participated in ULFT programs and may have better access to those customers.

Innovation

This project proposes to transition toilet programs to the next level. While many toilets have been retrofitted under the ULFT program, this project specifically targets unsaturated areas and sites. Not only will this effort expand to hard to reach areas, but also will incorporate even more efficient toilets than current standards, gaining higher water savings than would otherwise be possible.

Benefits (supporting documentation)

Project costs include actual rebate amounts plus funding for agencies' program administration. Consultants may be used for implementation, marketing, and/or targeting. In order to reach unsaturated areas, there may be a significant effort to identify those areas. Metropolitan's contribution will be \$80 per toilet.

Benefits are based on ULFTs saving 0.0348 acre-feet per year and dual-flush/one gallon per flush toilets saving an additional 0.0065 acre-feet per year and a 20-year toilet life. Water savings benefits are based on a benefit of \$154 per acre-foot for 20 years. Once all 50,000 high-efficiency toilets are installed, they will save 41,300 acre-feet of water over the projected 20-year life of the toilets.

The Metropolitan Water District of Southern California funds conservation programs at the rate of \$154 per acre-foot directly and through its member agencies as part of the implementation of Southern California's Integrated Water Resources Plan (IRP). The IRP established resource targets based on a number of criteria including cost effectiveness. Through the IRP, cost effectiveness for local resources including conservation was determined to be up to \$250 per acre-foot of water, when the payment is made at the time of water production. Since most conservation programs are funded through upfront payments and the savings accrues over time, the \$250 value is present valued at 6% for the typical life of a conservation measure—twenty years. The present value of Metropolitan's \$250 per acre-foot value of local resources is approximately \$154 per acre-foot. In addition to this direct incentive, Metropolitan pays overhead through staff management and marketing estimated at about 10%. Therefore, the local value of conserved water paid through Metropolitan conservation programs is approximately \$169.40 ($\$154 \times 110\%$) per acre-foot.

This program's objective is to implement a highly effective regional demand management initiative within the State Water Project watershed, consistent with CALFED water use efficiency objectives.

I - Benefits Accruing to the Bay-Delta:

1) Avoided Future Withdrawals from the Bay-Delta System: Metropolitan's implementation of this and other water use efficiency programs either offsets or defers State Water Project deliveries from the Bay-Delta to meet urban water demands.

2) Participation in Flexible Storage Programs: In the past, Metropolitan has participated in statewide flexible storage programs that support CALFED's environmental restoration objectives (e.g. Environmental Water Account). In general, southern California's ability to participate in this type of program is a function of storage and distribution system operational flexibility. Growing demands over time may erode system flexibility, potentially reducing our ability to participate in such programs, which are linked to direct environmental benefits within the Bay-Delta estuary. Proposition 50 grant awards for Metropolitan's proposed water conservation

programs would greatly assist ongoing regional efforts to preserve system flexibility, strengthening our ability to continue flexible storage programs into the future.

3) Innovation and Knowledge Transfer: Metropolitan continues to play a leadership role in the development and implementation of innovative water use efficiency programs. Existing Metropolitan programs cover a wide range of conservation initiatives, from financial incentives for water efficient appliances to educational resources, such as our *Protector del Agua* program, which provides classroom instruction to promote outdoor water conservation among professionals and homeowners. This program would achieve higher-water savings than standard toilet programs, which could be transferable elsewhere in the State.

II - Benefits to Southern California Watersheds:

1) Water Efficient Appliances and Fixtures: Under this program, Metropolitan is promoting the latest water-efficient technology for the home, providing financial incentives for high efficiency toilets. It is generally acknowledged that indoor water conservation programs yield significant direct benefits to the region's wastewater sector and coastal watersheds through lower discharge volumes.

2) Other Public and Fiscal Benefits: This program warrants consideration based on potentially large cost savings to public agencies and ratepayers by reducing requirements for future capital improvements and water importation.

APPENDIX C: Project Costs and Benefits Tables

Table C- 1: Project Implementation Costs (Budget)

Table C- 2: Annual Operations and Maintenance Costs

Table C- 3: Total Annual Project Costs

Table C-4: Capital Recovery Factor

Table C- 5: Project Annual Physical Benefits (Quantitative and Qualitative Description of Benefits)

Table C- 6: Project Annual Local Monetary Benefits

Table C- 7: Project Local Monetary Benefits and Project Costs

Table C- 8: Applicant's Cost Share and Description