

**2004 WATER USE EFFICIENCY
PROPOSAL FOR PROPOSITION 50
GRANT APPLICATION**

SECTION A: URBAN WATER USE EFFICIENCY
IMPLEMENTATION PROJECT

Enhanced Rebates for CII Water Saving Devices
Zero Water Consumption Urinals

PRESENTED TO:
STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
OFFICE OF WATER USE EFFICIENCY
1416 NINTH STREET, ROOM 338
SACRAMENTO, CA 95814
Attention: Debra Gonzales

Submitted by:

City of Beverly Hills
Department of Public Works
Robert Beste
Director of Public Works
Tel: 310-285-2467
Email: rbeste@beverlyhills.org

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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 # 9 and 10
- (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)*

City of Beverly Hills, Department of Public Works

4. *Project Title:*

Enhanced Rebates for CII Water Saving Devices-Zero Water Consumption Urinals

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

Name:

Robert Beste,

Title:

Director of Public Works

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Beverly Hills CA 90210*

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6. *Contact person (if different):*

Name, title:

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Programs Manager

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Fax:

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7. Grant funds requested (dollar amount): **\$267,000**
(from Table C-1, column VI)

8. Applicant funds pledged (dollar amount): \$36,000.00

9. Total project costs (dollar amount): \$303,000.00
(from Table C-1, column IV, row n)

10. Percent of State share requested (%): 88%
(from Table C-1)

11. Percent of local share as match (%): 11%
(from Table C-1)

12. Is your project locally cost effective?

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. (a) yes

(If yes, provide information that the project in addition to Bay-Delta benefit meets one of the following conditions: (b) no
broad transferable benefits, overcome implementation barriers, or accelerate implementation.)

11. Is your project required by regulation, law or contract? (a) yes
 (b) no

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.

Provide a description of the regulation, law or contract and an explanation of why the project is not currently required.

12. Duration of project (month/year to month/year): 12 months

13. State Assembly District where the project is to be conducted: 42

14. State Senate District where the project is to be conducted: 23

15. Congressional district(s) where the project is to be conducted:

30

16. County where the project is to be conducted:

Los Angeles County

17. Location of project (longitude and latitude)

34° 423" North &
118° 23'58" West

18. How many service connections in your service area (urban)?

10,647 Urban Connections

19. How many acre-feet of water per year does your agency serve?

12,805.13 Acre Feet

20. 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 _____

21. Is applicant a disadvantaged community? If 'yes' include annual median household income. (Provide supporting documentation.)

(a) yes, _____ median household income

(b) no

2004 Water Use Efficiency Proposal Solicitation Package
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

Robert Beste, Director of Public Works
Name and title

January 6, 2004
Date

A-15c: Section 1: Relevance and Importance

The City of Beverly Hills is requesting an enhanced rebate program for implementation of a commercial, institutional and industrial (CII) Direct Zero Water Consumption Urinal Install Program for replacement of existing high consumption urinals with new zero water consumption urinals in order to meet its long-term water conservation goals. The proposed program will offer free zero water consumption urinals to CII customers, specifically targeting older facilities which have greater than 1.6 gallons per flush water-fed urinals. A main focus of the program will be the public schools and other institutional uses within the City's jurisdictional boundary where preliminary surveys indicate a prevalence of older pre-1992 water-fed urinals with estimated water usage of greater than 3 gallons per flush.

The term of the proposed project is one year and two months. The program goal is to install 300 zero-water consumption urinals at commercial and industrial sites 300 zero-water consumption urinals at institutional (with a focus on schools) sites at a project average cost of \$440 per installed urinal. The proposed program will be used to facilitate the City's implementation of BMP 9 as contained in the Memorandum of Understanding (MOU) of the California Urban Water Conservation Council. While the City of Beverly Hills has been a member of the Metropolitan Water District of Southern California, we only recently became signatories to the MOU. As such, we are enthusiastic about the opportunities that exist for water use efficiency in the CII sector through this grant funding application. The successful implementation of this project will encourage all CII customers from varying sub-sectors to replace inefficient, older pre 1992 water fed urinals with highly efficient and cost effective zero water consumption urinals. In order to obtain detailed water savings estimates associated with zero water consumption urinals, replacement of approximately 600 urinals is proposed. The City of Beverly Hills has a unique opportunity to market and implement a program like this due to the prevalence of commercial, industrial and institutional uses within a very small and defined geographic area.

While the City's service area is approximately 5.6 square mile and serves approximately 35,000 residents, the daytime population of the City can exceed 250,000 people per day. This highly urbanized and centralized main commercial center (the Business Triangle) is comprised of numerous older commercial structures that have pre 1992 water-fed urinals. Water usage in the commercial sector is tied to this increase in daytime population and the proposed project would provide a means of reducing water consumption without affecting behavior or commerce.

The most effective method to implement this project is to operate within the existing CII rebate program. The proposed project will encourage CII customers throughout the City to replace inefficient, older pre-1992 water-fed urinals with highly efficient and cost-effective zero water consumption urinals. Focus groups and very low participation in the City's and MWD's existing rebate program (which currently offers \$60.00 rebates for zero water consumption urinals) indicate that a turnkey operation is necessary in order to

maximize the water savings potential of zero-consumption urinals in the CII sector within the City's service area.

The project water savings will reduce the amount of imported water the City currently purchases from MWD and will reduce future demands on the State Water project.

The primary objective is to save water in a cost effective manner that also meets the needs of the City's commercial customers. Water conservation and water use efficiency are consistent with the City's mission statement to provide a safe and reliable water supply at a reasonable cost. As a very recent signatory to the California Urban Water Conservation Council (CUWCC), the City is undertaking implementation of all applicable BMPs of the Memorandum of Understanding of the CUWCC. This enhanced rebate program is an important component of the stated water conservation goals of the Urban Water Management Plan and is consistent with BMP 9 of the MOU.

Project objectives include 1) enhancing and obtaining valuable information about the varied needs of CII sector customers; 2) accelerate the purchase and installation of zero water consumption urinals by CII customers through increased participation in the rebate program; 3) reduce imported water demand; 4) reduce stress on the Bay Delta; 5) improve water supply reliability; 6) improve water quality; 7) meet the objectives of the Memorandum of Understanding Regarding Urban Water Conservation in California, and local and regional water management plans.

For a total project cost of \$303,000 over the 12-month project period, over 1104 AF of lifetime water savings can be realized for a total avoided cost of purchased water of nearly \$525,000.

Below is the map of the City of Beverly Hills service area.

A-15d: Section 2: Technical/Scientific Merit

The Enhanced Rebates for CII Water Savings Devices will offer the City of Beverly Hills commercial, institutional, and industrial customers free zero water consumption urinals, including installation. The program for urinal retrofit installation will be marketed primarily to existing CII customers who have greater than 1.6 gallon water-fed urinals, as they offer the highest water savings for urinal retrofit.

The contracted price includes the cost of a zero-consumption urinal. There is no out-of-pocket expense to the CII customer, as the City of Beverly Hills will administer the program as part of the existing CII rebate program.

The objective of this Program is to reduce water and sewer discharge by the City's CII customers. A direct mailer will be sent to all CII customers to encourage participation in the program. All customers interested in the program will be provided a free cost benefit analysis of the retrofit. Other marketing efforts include a program brochure, web page, press releases and contractor(s) marketing program. The desired program will provide a meaningful, long-term implementation of a proven technology in the CII sector. The main program objective is to replace 600 high water consumption urinals. Added objectives include obtaining water savings of over 55 Acre Feet per year, reducing

demand on imported water for the City reducing energy demand, greatly reducing sewage outflow, and helping to meet the goals of local, regional, and statewide water plans.

The City of Beverly Hills is one of numerous MWD member agencies participating in the Region-wide Program. The City has previously signed an agreement with MWD to participate in this program, and supports program administration by an experienced contractor. The Region-wide Program currently offers rebates to commercial, industrial, and institutional (CII) customers for purchase and installation of a number of water savings devices, including zero water consumption urinals. Prop 50 grant funding would be used to increase rebate levels for zero water consumption urinals to enable purchase and installation to occur at no or very little cost to the CII customer.

To date, the City of Beverly Hills has not had the opportunity to implement this type of program for several reasons. First, the amount of rebate offered to customers is often not enough to convince customers to replace their high consumption plumbing fixtures. Second, there is a lack of education in the commercial sector with respect to the cost benefits and decreased maintenance costs that can be realized with the use of zero water consumption urinals. Third, and more importantly, many CII customers cannot take the time to hire a contractor, get an estimate, and then submit an application for a rebate. In the eighteen months that the City has partnered with MWD on the Region-wide Commercial Rebate Program and aggressively marketed rebates (for not only urinals but ULFTs as well) to the CII sector, there has been scant interest in the rebate program.

This is a 12 month program. Below are the costs and deliverable dates.

Fiscal Year 2005

Major Program Tasks	Implementation Time Frame	Projected Program Cost w/out Partnership Funding	Projected Program Funding Request	Yearly Expenditure Projection
Enter in Cost-Sharing Partnerships	12/01/05–12/31/05	N/A	N/A	N/A
Market Program to CII Customers	12/01/05 – 12/31/06	N/A	N/A	N/A
Purchase 600 zero water consumption urinals @ \$315	12/01/05 – 12/31/06	\$189,000	\$153,000	\$189,000
Pay for 600 Installations @ \$125	12/01/05 – 12/31/05	\$75,000	\$75,000	\$75,000
Develop Participant Database	12/01/05 – 12/31/05	\$10,000	\$10,000	\$10,000
Conduct Data Analysis	12/01/05 – 12/31/05	\$19,000	\$19,000	\$19,000
Provide Program Results to DWR, MWD, etc.	10/01/03 – 8/31/05	\$10,000	\$10,000	\$10,000
Total Costs		\$303,000	\$267,000	\$303,000

Environmental Documentation

No adverse, negative potential environmental, social, and economic impacts are anticipated and all applicable local, county, State, and federal permitting requirements will be complied with.

A-15e: Section 3: Monitoring and Assessment

A qualified contractor will perform pre and post surveys of all sites receiving urinals from the Proposed Program. Pre-site surveys will determine average water use per day from the existing high consumption urinals at selected sites, and post-site evaluations will determine average water savings from the new waterfree urinals, as well as verify proper urinal installation. Water savings from the program will be calculated based on the cumulative water savings from the average number of flushes per day at each site before and after urinal installation over the useful life of the urinal.

The monitoring of the program will be coordinated through the City's existing Commercial Conservation Program. Because this program will be an integral part of the California Urban Water Conservation Council (CUWCC) evaluation of CII programs, the data collected for the program will follow the guidelines of Best Management Practices (BMP) 9 of the CUWCC Memorandum of Understanding. Data to be collected as part of this project will include:

- The number of accounts and amount of water used within each CII sector, participant information (account number, name and address and type of facility), and number of urinals being replaced;
- Number of CII urinals replaced or distributed per year by CII sub sector;
- Total program costs per year, including labor, materials, marketing, and overhead services;
- Total program budget per year;
- Program funding sources per year, including intra-agency funding mechanisms, inter-agency cost sharing, state and federal financial assistance sources;
- Descriptions of the program design and implementation, such as marketing and advertising method and levels, customer targeting methods, customer contact methods, use of outside services, and participation tracking/follow-up; and
- Description of the program acceptance/resistance by customers, obstacles to implementation, and other issues affecting the program implementation or effectiveness.

Task	Task Name	Task Description
1	Project Planning	
	CII customer identification	Mailing list of CII customers to participate in the program
	RFP development	Develop RFP for contractor proposals for a variety of urinal installations for CII customers.
	Contractor Selection	RFP selection of the best contractor proposal for urinal installation.
2	Program Administration	
	Direct mail CII customers	Develop flier, brochure, and website for the program,

	Promotional urinal site listing	List of urinal installations for potential participants to evaluate
	Pre site survey and inspection	Perform water use site survey and confirm program eligibility
	Issue vouchers for CII urinals	Develop program vouchers to issue to participant redeemable from contractor for urinals
	Post site survey and inspection	Post site survey evaluating water conserving measures installed
3	Direct Install Implementation	
4	Data Collection	
	Site Data	Develop ACCESS database for all participants. Data to include items listed in Section B6 below
	Water Use Data	Develop water savings calculation for each site receiving urinals
	Post Installation Questionnaire	Develop a post participation questionnaire to assess the program
	Provide Data	All data collected will be provided to the CUWCC for use in their evaluation report

The Direct install program will target the replacement of 600 high-water-using urinals with zero-consumption urinals in the CII sector. Since water savings are dependant on the type of high consumption retrofitted with a zero consumption urinal, a conservative average savings of 30,000 gallons per year per urinal is being used. For the first year, the annual water savings is estimated to be 55 Acre Feet. Therefore, the cumulative water savings for the 600 CII urinal installations is 1100 Acre Feet (30,000 gallons per urinal/year*600 urinals*20 years) over the 20-year useful life of the urinals.

A-15f. Qualifications of the Applicant and Cooperators

See attached Resumes. (Appendix A)

A-15g: Outreach, Community Involvement, and Acceptance

The City of Beverly Hills is located in the center of the greater Metropolitan Los Angeles area, in a highly urbanized and developed area. The City has always viewed water use efficiency as an important component of providing a safe and reliable water supply, and this application is needed to provide an impetus for the CII sector to utilize existing technologies.

Water usage within the City's service area is about 12,800 AF of water per year, of which approximately 80% is imported from the Metropolitan Water District of Southern

California (MWD). Without local conservation, recycling, and groundwater conjunctive use program's, the regions need for additional imported water from MWD is expected to increase.

The City is committed to implementing local projects that will reduce the region's dependence on imported MWD water supplies. Conservation is a critical element in this regional strategy.

Rebates that address these higher costs for existing and new commercial customers will result in immediate and sustainable water savings through increased program participation.

The City proposes to offer a regional rebate program within its service area for the retrofit of up to 600 zero-water consumption urinals. As a result of this rebate program, the City expects to conserve nearly 18,000,000 gallons of water per year or 55 AF annually. The proposed program is not locally cost effective and has a Benefit-Cost ratio of 0.99. The program also fulfills the requirements of BMP 9 for Commercial, Industrial, and Institutional Conservation programs.

The proposed rebate program is not a demonstration project. It will provide hard water savings at a cost effective price. If the grant request is funded, The City will offer a rebate of \$440.00 to cover the purchase and installation cost of zero-water consumption urinals.

Zero Water consumption urinals represent a significant conservation opportunity. To date, even with an existing rebate of \$60.00 offered by MWD, not one zero water consumption urinal within the City's service area has been retrofitted. By providing the additional funding to enhance the rebate to cover the costs of both the purchase and installation of these urinals for retrofit, the State of California Department of Water Resources is significantly adding to the water solution for California.

MWD receives water that is allocated from the Bay Delta. Any water conserved by the District will directly improve the Bay Delta.

This program has been designed to meet the needs and concerns of various communities, organizations, and environmental groups that are concerned about water conservation and urban run-off. Following are some of the needs it satisfies:

- This program has been designed to satisfy numerous Best Management Practices (BMPs) of the California Urban Water Conservation Council. Our Districts have been signatories to the Memorandum of Understanding since 1991. This program meets a portion or all of the following BMPs:
 - BMP 9
 - BMP 10
- The reduced indoor water use in numerous CII applications will greatly reduce sewage outflow and infrastructure degradation.

- Reduce the regions dependence on imported water from the Bay Delta System.

Outreach efforts may include a press conference announcing the availability of the rebate, advertising through local business newsletters and publications, local cable television spots, and publicity through local papers. Program advertising will feature two messages: the value of conserving water to CII customers within the City's service area and the environmental and economic benefits of the rebate program.

The City has partnered with the Metropolitan Water District (MWD) to provide CII customers within our service areas with free zero water consumption urinals and installation.

This program meets the local goals of cities, sanitation districts, water quality control boards, water agencies, and environmental groups, which is to conserve water and to reduce sewage outflow.

The District has not identified any negative third party outcomes.

A-15h. Innovation

The grant proposal would accelerate the use of a proven technology, the zero water consumption urinal, in a key sampling of CII sectors. Because the City has a very defined and condensed commercial center, there is a unique opportunity for these CII customers to be targeted with a proven water conservation technology. The use of urinals in almost all CII facilities is commonplace. The results of the water savings and cost savings analysis has the potential to help water agencies throughout California successfully implement BMP 9 of the CUWCC MOU.

A-15i. Benefits and Costs

When compared with other indoor plumbing devices for the CII sector, zero water consumption urinals appear to be the most cost effective retrofit device available. While water saving estimates for self-closing faucet retrofits range from 3 gpd to 45 gpd and estimates for ULFT retrofits range from 15 gpd to 57 gpd, (based on the CUWCC July 2000 BMP Guide), the estimates for zero water consumption urinals range from 8gpd to 131 gpd.

The City realizes the water savings that can be achieved through conducting this type of program directed at the CII sector. While the technology has been successfully utilized in individual applications throughout the State, the Prop 50 grant will allow the external water savings to be comprehensively estimated.

Besides water savings, the zero water consumption urinals will greatly reduce the wastewater treatment and energy costs. Conserving water helps to ensure that this important resource will be available for many generations to come. Conserving water also saves energy- the energy needed to treat, transport, and treat wastewater.

Water savings through this program will be quantifiable. Studies will be conducted to see how much water savings was achieved by the installation of the zero water consumption urinals.

Table C-1: Project Costs (Budget)

Table C-2: Annual Operations and Maintenance Costs

Table C-3: Total Annual Project Costs

Table C-5: Project Annual Physical 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

Other benefits besides water savings include the following:

- Conservation reduces demands on water diversions from the Bay Delta. When less water is diverted, water quality in the Delta improves and more water is available for the delicate ecosystem that relies on it.
- Partnerships to conserve water are built. The City's cooperation with MWD will further promote conservation in the region.
- Free Zero Water Consumption Urinals and Installation will be provided.
- Local groups and contractors will be sought to assist with the implementation of the program.
- The program will be heavily marketed to educate the public about DWR and the benefits derived from Proposition 50.
- Local businesses will be able to showcase the program and highlight the results of the program in their newsletters and other community information materials.

Studies by the Federal Energy Management Program (FEMP) and the Department of Defense Energy and Engineering Division have summarized the testing of waterless urinals in more than 40 federal facilities around the country. These studies reported favorable overall responses to these fixtures. Actual water savings vary at each installation because of differences in the types of urinals replaced and the amount of

usage. While these Federal studies estimate average savings of 43,680 gallons per fixture per year, this proposal uses a slightly more conservative estimate of 30,000 gallons of water saved per urinal per year.

Quantifiable Water Savings

600 urinals x 30,000 gallons per year x 20 year useful-life / 326,000 gallons per acre-foot = 1104 acre-feet water savings.

Avoided Cost of Purchased MWD / Bay-Delta Water

1104 acre-feet saved x \$475 per acre-foot (MWD) = \$525,540

Applicant:

THE TABLES ARE FORMATTED WITH FORMULAS: **FILL IN THE SHADED AREAS ONLY**

Section A projects must complete Life of investment, column VII and Capital Recovery Factor Column VIII. Do not use 0.

Table C-1: Project Costs (Budget) in Dollars)

	Category (I)	Project Costs \$ (II)	Contingency % (ex. 5 or 10) (III)	Project Cost + Contingency \$ (IV)	Applicant Share \$ (V)	State Share Grant \$ (VI)	Life of investment (years) (VII)	Capital Recovery Factor (VIII)	Annualized Costs \$ (IX)
	Administration ¹	0							
	Salaries, wages		5	\$0	\$0	\$0	20	0.0872	\$0
	Fringe benefits	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
	Supplies	\$0	5	\$0	\$0	\$0	20	0.0872	\$0
	Equipment	\$0	5	\$0	\$0	\$0	20	0.0872	\$0
	Consulting services	\$0	5	\$0	\$0	\$0	20	0.0872	\$0
	Travel	\$0	5	\$0	\$0	\$0	20	0.0872	\$0
	Other	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(a)	Total Administration Costs	\$0		\$0	\$0	\$0			\$0
(b)	Planning/Design/Engineering	\$0	10	\$0	\$0	\$0	20	0.0872	\$0
(c)	Equipment Purchases/Rentals/Rebates/Vouchers	\$195,000	0	\$195,000	\$36,000	\$159,000	20	0.0872	\$17,004
(d)	Materials/Installation/Implementation	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(e)	Implementation Verification	\$0	5	\$0	\$0	\$0	20	0.0872	\$0
(f)	Project Legal/License Fees	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(g)	Structures	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(h)	Land Purchase/Easement	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(i)	Environmental Compliance/Mitigation/Enhancement	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(j)	Construction	\$75,000	0	\$75,000	\$0	\$75,000	20	0.0872	\$6,540
(k)	Other (Specify)	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(l)	Monitoring and Assessment	\$20,000	0	\$20,000	\$0	\$20,000	20	0.0872	\$1,744
(m)	Report Preparation	\$13,000	0	\$13,000	\$0	\$13,000	20	0.0872	\$1,134
(n)	TOTAL	\$303,000		\$303,000	\$36,000	\$267,000			\$26,422
(o)	Cost Share -Percentage				12	88			

1- excludes administration O&M.

Applicant:

THE TABLES ARE FORMATTED WITH FORMULAS: FILL IN THE SHADED AREAS ONLY

Table C-2: Annual Operations and Maintenance Costs

Operations (1) (I)	Maintenance (II)	Other (III)	Total (IV) (I + II + III)
\$0	\$0	\$0	\$0

(1) Include annual O & M administration costs here.

Table C-3: Total Annual Project Costs

Annual Project Costs (1) (I)	Annual O&M Costs (2) (II)	Total Annual Project Costs (III) (I + II)
\$26,422	\$0	\$26,422

(1) From Table C-1, row (n) column (IX)

(2) From Table C-2, column (IV)

Table C- 4: Capital Recovery Table (1)

Life of Project (in years)	Capital Recovery Factor
1	1.0600
2	0.5454
3	0.3741
4	0.2886
5	0.2374
6	0.2034
7	0.1791
8	0.1610
9	0.1470
10	0.1359
11	0.1268
12	0.1193
13	0.1130
14	0.1076
15	0.1030
16	0.0990
17	0.0954
18	0.0924
19	0.0896
20	0.0872
21	0.0850
22	0.0830
23	0.0813
24	0.0797
25	0.0782
26	0.0769
27	0.0757
28	0.0746
29	0.0736
30	0.0726
31	0.0718
32	0.0710
33	0.0703
34	0.0696
35	0.0690
36	0.0684
37	0.0679
38	0.0674
39	0.0669
40	0.0665
41	0.0661
42	0.0657
43	0.0653
44	0.0650
45	0.0647
46	0.0644
47	0.0641
48	0.0639
49	0.0637
50	0.0634

(1) Based on 6% discount rate.

Applicant: **West Basin Municipal Water District**

THE TABLES ARE FORMATTED WITH FORMULAS: FILL IN THE SHADED AREAS ONLY

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

	Qualitative Description - Required of all applicants ¹				Quantitative Benefits - where data are available ²
	Description of physical benefits (in-stream flow and timing, water quantity and water quality) for:	Time pattern and Location of Benefit	Project Life: Duration of Benefits	State Why Project Bay Delta benefit is Direct ³ Indirect ⁴ or Both	Quantified Benefits (in-stream flow and timing, water quantity and water quality)
Bay Delta	Decreased		20 years		0
Local			20 years	Not applicable.	This project will conserve over 4500 Acre-feet of water o

¹ The qualitative benefits should be provided in a narrative description. Use additional sheet.

² Direct benefits are project outcomes that contribute to a CALFED objective within the Bay-Delta system during the life of the project.

³ Indirect benefits are project outcomes that help to reduce dependency on the Bay-Delta system. Indirect benefits may be realized over time.

⁴ The project benefits that can be quantified (i.e. volume of water saved or mass of constituents reduced) should be provided.

ver its lifetime.