

**State of California  
Proposition 50 Section B Grant Proposal**

**NEW BUSINESS PLAN REVIEW PROGRAM  
FOR WATER USE EFFICIENCY**

**Submitted by**

**East Bay Municipal Utility District  
375 11<sup>th</sup> Street, Oakland, CA 94607**

**January 11, 2005**

**Contact Information**

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**State of California  
Proposition 50 Grant - Section B Proposal**

**PROJECT SUMMARY**

- Project Title:** New Business Plan Review Program for Water Use Efficiency
- Project Purpose:** Develop a Water Use Efficiency Plan Review Program for new business construction in the Commercial, Industrial, and Institutional (CII) sector as an effort to achieve additional and cost-effective water savings in urban areas through a new water conservation measure
- Project Products:** 500 guidebooks to serve as a technical resource, a survey of water utility and public agencies, a one-year pilot CII plan review program with a report assessing findings, and a training/educational program
- Project Cost:** \$300,000
- Requested Cost Share:** 50% applicant (\$150,000 in-kind services among study participants); 50% State (\$150,000)
- Study Participants/Supporters:** East Bay Municipal Utility District (EBMUD), State of New Mexico, Seattle Public Utilities, City of Austin, City of Tucson, California Urban Water Conservation Council, the Pacific Institute, and the Bay Area Water Agencies Coalition
- Project Timeframe:** 36 months
- Water Savings:** 10% in new construction in the business sector (an estimated 8,600 AF per one million population over 20 years or 310,000 AF in California)
- Program Location/Implementation Sites:** Urban areas
- Innovative Elements:** Potential new conservation measure for national urban business sector (not just California); significant water savings resulting in more water potentially available for marketing/transfers; cost-effective; increased interagency

coordination; collaborative process; addresses institutional barriers; develops marketing strategy and incentives for new businesses using WaterStar/WaterSmart and Green Business themes; and consideration by the CUWCC membership as a potential Best Management Practice.

**Relevance and Importance:**

This proposal represents a potential new water conservation measure with significant water savings and therefore, supports California Bay-Delta goals. The benefits identified in this proposal are transferable to other parts of the State and support CALFED Water Use Efficiency Program goals and objectives. This proposal represents the initial effort in a multi-phased program to potentially save over 300,000 AF in California over 20 years.

**Technical/Scientific Merit and Feasibility:**

Technical information will be collected and published in a guidebook. Potential administrative issues will be addressed by analyzing the results of surveys conducted on public agencies and water utilities. The information collected and published will help agencies promote efficient water use in the CII sector by providing the information and training needed to implement a plan review program. This proposal will assess the feasibility of implementing this new conservation measure.

**Monitoring and Assessment:**

This proposal includes surveys, a pilot study, an assessment of potential water savings, administrative issues and barriers, and program cost-effectiveness conducted by a team of consultants, and a final report with findings, conclusions, and recommendations.

**Costs and Benefits:**

An important objective of the pilot program and this proposal is to assess the cost-effectiveness (costs and benefits) of this potential new conservation measure.

## DISCUSSION

### BACKGROUND

Plan review for energy efficiency in new construction occurs periodically. However, plan review for water efficiency in new construction is nearly non-existent. There are several reasons for this.

First, water use efficiency is oftentimes not a priority with new businesses. This is because the operating costs due to water use are generally low for the average business, usually in the 1-4% range. However, businesses have a lot to gain from efficient water use. Efficient water use can reduce not only water costs, but can also reduce the costs of any required on site wastewater treatment facilities (capital, operating, and maintenance costs) and wastewater discharge fees. Water and wastewater fees are expected to continue to out pace the cost of inflation as utilities address the need for new facilities to meet more stringent water and wastewater treatment standards and replace aging infrastructures. The business community is just beginning to see the benefits of planning for efficiency at the start of a project.

Second, most water utilities do not have the in-house technical expertise or the resources to implement a Commercial, Industrial and Institutional (CII) plan review program. They require assistance, primarily in the form of technical material and administrative guidelines.

Third, a plan review process oftentimes involves water utility coordination and cooperation with the local government entity, such as a city or county agency, which may entail institutional barriers. Resources may be needed to sort through what could be significant issues before a program can be implemented. Regional coordination may also be beneficial to pool resources of a number of water utilities to provide a CII plan review program.

A study conducted under of the auspices of the American Water Works Association Research Foundation in 2000 titled *Commercial and Institutional End Uses of Water* indicated that businesses in the commercial and institutional sectors (industrial saving potential was not the focus of this study) could reduce water use at existing facilities from between 15% and 35%. The results of this study indicate that there is a large potential for addressing water use efficiency in these sectors and it starts with proper planning at the beginning of the project. In addition, industrial customers in the EBMUD service area reduced consumption during a severe water shortage in 1976-77 by over 25% by implementing a number of conservation measures and have maintained that savings level. This, again, demonstrates the potential for significant savings in the business sector through better planning.

Some utilities offer financial incentives to CII customers in the form of rebates, free surveys and hardware to improve water use efficiency. However, most, if not all, of these incentives would not be necessary if the business had planned for and incorporated water efficient hardware and processes from the beginning. The goal of this project is to

make the CII sector water (and energy) efficient from the start: a more cost-effective approach.

The development of a Model CII Plan Review Program will assist in the implementation of either recommendations or requirements or a combination of both for the installation of water conserving hardware or processes not currently required in the plumbing code or local building codes in new construction. Examples of indoor water conserving hardware appropriate for the CII sector include air-cooled ice machines, 1.8 gallon per minute pre-rinse spray valves, convection-less steamers, water and energy efficient commercial dishwashers, digital x-ray machines, dual-flush and/or other high efficiency toilets, waterless urinals, use of efficient cooling technology, reuse and recycling systems and processes, etc.

## **SCOPE OF WORK**

### **Technical/Scientific Merit, Feasibility: Proposed Work and Major Tasks**

This proposal involves three components: the development of educational material, a training program, and a pilot program. Educational/technical material will be presented in a guidebook that includes an administrative plan for the implementation of a CII Plan Review Program. Figure 1 depicts the process used to develop the technical material. Training will be offered via workshops sponsored by California Urban Water Conservation Council and Bay Area Water Agencies Council. Finally, a one year pilot program will be conducted to provide a practical test of the material and the plan review process. The one-year pilot program will then be evaluated and revised, as appropriate, for possible full-scale implementation. The proposal contains the following key elements:

- A broad-based collaborative/cooperative process involving the formation of a **project advisory committee** (PAC) among interested parties for peer review and project support
- The development of a list and description of water saving products and processes for the major categories of water intensive businesses
- The development and publishing of a practical **guidebook** that will include a recommended implementation plan that addresses administrative issues and a practical guide for plan review for water use efficiency
- The development of a **marketing strategy** that includes a recognition/incentive program involving a WaterStar<sup>TM</sup>/WaterSmart<sup>TM</sup> and Green Business (LEED) theme for businesses
- The implementation of a one year **pilot program** to provide a practical test of concept and the material developed in Phase 1, which will be evaluated to make potential refinements prior to possible full scale program implementation. The pilot program will be monitored and a **report** will be issued addressing program cost-effectiveness and administrative issues.
- A **training program** for a CII plan review program

The work needed to satisfy the objectives of this proposal includes the following tasks:

Task 1

*What:* A Project Advisory Committee (PAC).

*How:* The study participants will form a PAC comprised of interested parties to provide peer review and approve project deliverables.

Task 2.

*What:* Develop a list and description of end uses of water in the CII sector and identify water saving hardware and processes for the following major categories of CII businesses that include, but not necessary limited to (full list to be developed in coordination with the consultant and the PAC): offices, restaurants, food sales (grocery stores), hospitals, schools, laundries, car washes, chemical manufacturing, food processing, laboratories, plating shops, printed circuit board manufacturing, semi-conductor manufacturing, etc.

*How:* The study participants will contract with one or more consulting teams to develop the technical information, which will serve as the framework for a guidebook (see Figure 1).

Task 3.

*What:* The development of administrative guidelines for plan review.

*How:* The study participants will contract with a consultant to survey public agencies and water utilities to address administrative issues and develop recommended administrative guidelines.

Task 4.

*What:* The development of a guidebook that contains 1) technical information to serve as a reference for plan reviewers for CII water use efficiency, and 2) an administrative guide for program implementation.

*How:* The study participants will contract with a consultant to develop a guidebook.

Task 5

*What:* The dissemination of information on the implementation of a CII Plan Review program.

*How:* The study participants will be responsible for contracting for the printing of the guidebook. EBMUD will work with other agencies to have information posted on appropriate web-sites and will present the results of the information collected at professional association conferences, such as the American Water Works Association. EBMUD will work with the CUWCC to have the CII Plan Review Program studied as a

Potential Best Management Practice (PBMP) in FY06 for possible adoption and implementation as a Best Management Practice (BMP) in FY07. If adopted by the CUWCC as a BMP, all signatories to the CUWCC would need to implement the plan review program if it is found to be cost-effective to the agency, is legal, and funding can be made available.

### Task 6

*What:* The implementation of a one-year CII plan review pilot program to evaluate water savings and administrative issues.

*How:* The study participants will implement a pilot CII plan review program in its service area for at least one year and will evaluate water savings and administrative issues. This effort will include coordinating program implementation with 23 public agencies. The pilot plan review program would involve the review of construction plans for approximately 200 new businesses. A report will be issued on the findings of the pilot program which will evaluate water savings and administrative challenges/barriers.

### Task 7

*What:* A training program for CII plan review

*How:* The study participants will provide funding for the CUWCC and BAWAC to provide workshops on the CII Plan Review Program.

This proposal has two primary phases. Phase 1 involves the development of material to be incorporated into a guidebook and Phase 2 involves the implementation of a pilot CII plan review program. Since EBMUD serves 21 cities and two counties, EBMUD is proposing to implement a pilot CII plan review program involving coordination with 23 public agencies to test the Phase 1 material including administrative issues/barriers.

This proposal also represents the first of a two part effort. The second part involves the possible statewide implementation of a CII Plan Review Program as a Best Management Practice under the auspices of the CUWCC, subject to the results of the proposed pilot study and the program's cost-effectiveness.

### **Innovative Elements of the Proposal**

This proposal represents a study of a potential new water conservation measure. No known water agency in the United States has implemented a broad-based CII plan review program for new businesses. This is primarily due to a lack of technical expertise and perceived administrative barriers: issues this proposal will address. . However, many water utilities offer incentives for businesses to improve urban use efficiency in existing facilities after construction is completed. Unfortunately, paying for product or process changes after a facility is constructed is far less cost-effective and results in less water savings than if the new facility were designed with water efficiency in the planning and construction phases of the project. Water utilities have been reluctant to require plan review for water use efficiency for new businesses primarily due to concerns over

perceived institutional barriers and various administrative issues such as the lack of technical expertise and guidance.

Innovative elements of this project include:

- Potential new water conservation measure/program
- Significant water savings potential
- Cost-effectiveness to be assessed
- Program eliminates/reduces need for incentive retrofit programs for newly constructed facilities
- Development of new educational material
- Reduction or removal of institutional barriers hindering program implementation
- A marketing plan that includes the creation of a WaterStar<sup>TM</sup>/WaterSmart<sup>TM</sup> and Green Industry certification as a business incentive
- A training program via workshops for plan reviewers.
- A broad-based cooperative/collaborative effort with support from other utilities

### **Relevance and Importance**

This proposal represents a potential new water conservation measure with significant statewide water savings and therefore supports CALFED Bay-Delta program goals. The products of this proposal are transferable statewide and nationally. If CII plan review programs are adopted statewide as a BMP, the potential water savings in California over 20 years would be over 300,000 AF based upon a savings assumption of 10% in the CII sector.

### **Monitoring and Assessment**

This proposal includes the following monitoring and assessment components:

- A survey of water utilities and public agencies to assess administrative issues and potential implementation barriers
- A one-year CII plan review pilot program to assess water savings, administrative issues and potential implementation barriers in the EBMUD service area which includes 21 cities and two counties
- A report that will include study findings, conclusions, and recommendations
- A team of qualified consultants to develop technical material, conduct surveys, evaluate the CII plan review pilot program and to write the final report

## **COSTS AND BENEFITS**

The estimate of saved water is based upon the assumption shown below and will be tested through the evaluation of the proposed pilot CII plan review program. Water savings resulting from the implementation of a CII Plan Review Program is based upon certain assumptions and data derived from the EBMUD database. That information was used to project statewide potential savings which is based upon full-scale implementation of a CII plan review program. The EBMUD account information, assumptions and calculations are presented below.

### **EBMUD database information, assumptions and calculations**

#### *EBMUD Database Information:*

Average daily water use for commercial and institutional accounts: 1,500 gallons/day  
Average daily water use for industrial accounts: 4,000 gallons/day  
Number of new CII accounts annually (20 year average): 190  
Percent of new industrial accounts in CII sector: 9.8% (19)  
Percent of new commercial and institutional accounts in CII sector: 90.2% (171)  
Average daily use per new CII account: 1745 gallons

#### *Assumptions:*

Average savings from plan review program: 10% (or 175 gallons/day/plan review)  
Length of Plan Review Program: 20-years  
Length of savings: 20-year life cycle  
Number of new CII accounts per one million population: 146  
California population: 36 million  
Number of new CII accounts in California each year: 5,256  
Annual District cost of plan review, including overhead, per 200 plans: \$100,000  
Cost per plan review: \$500  
Days of business operation per year: 275  
Value of saved water to utility: \$350/AF

#### *Calculations:*

Water savings per plan review in acre-feet (20 years): 2.95 AF  
(175 gallons/day x 275 days/year x 20 years ÷ 325851 gallons/AF = 2.95 AF)

Value of saved water per plan review: \$1033  
(2.95 AF x \$350/AF = \$1033)

CII Plan Review Program Cost-effectiveness:  
Cost-effectiveness = Net Present Value – Net Present Cost  
\$1033 - \$500 = \$533 (Program is cost-effective)

Benefit to Cost Ratio:  
\$1033/\$500 = 2.1 (Benefits exceed costs by a factor of about 2:1)

Based upon information gleaned from other studies, it is estimated that the development and implementation of a model CII Plan Review Program would result in 10% water savings for new industrial, commercial, and institutional facilities. A 20-year plan review program in California would result in saving an estimated 310,000 AF if a 20-year product life cycle is assumed. Assuming an avoided utility cost value of \$350/AF, the saved water would have a value of \$108.5 million to water utilities at a 20-year implementation cost of \$54 million.

Program Benefit: \$108.5 million (avoided agency cost)  
 Program Cost: \$54 million (staff and material)  
 Benefit/cost ratio: 2.0

Based upon these assumptions, the program benefits would exceed program costs by a factor of 2 to 1: a very cost-effective program for utilities to implement. The project would result in the EBMUD service area saving approximately .5 MGD (430 AF per year), which is .25% of the District’s annual use of 215 MGD (240,000 AF). An important component of this proposal involves testing the technical material and evaluating the water saving assumptions through a one-year pilot program.

**PROJECT COST**

It is estimated that the project tasks can be completed for \$300,000. The bulk of the costs are contractual for:

- Technical research on water saving fixtures and processes for the businesses: \$50,000
- A survey of water utilities and governmental agencies regarding institutional issues and a report on the findings: \$50,000.
- Writing and publishing of 500 guidebooks: \$70,000
- Four CUWCC and two BAWAC workshops: \$10,000
- Project Management: \$20,000.
- One-year CII plan review pilot program: \$100,000

The study participants propose to fund 50% of the project cost with possible in-kind contributions. Due to funding constraints this project will probably not be able to move forward without a cooperative effort involving funding assistance and a broad base of support.

**PROJECT TIMELINE**

TIME FROM EXECUTION OF AGREEMENT:

	Year 1	Year 2	Year 3
Development of Technical material: 8 months	-----		
Development of Administrative Guidelines: 12 months	-----		
Development of Guidebook and printing: 8 months		-----	
Pilot program: 12 months			-----

## **PROJECT ORGANIZATION**

EBMUD will serve as project administrator for the grant and will enter into agreements with qualified consultants to manage the project and develop the proposed work products. A Project Advisory Committee (PAC) will be formed to help guide the process and provide peer review for all phases of the project.

Project Administrator: EBMUD

Project Manager: Consultant

Technical Research: Consultant(s)

Administrative Plan: Consultant

Guidebook, Marketing and Implementation Plan: Consultants

Workshops: CUWCC, BAWAC, EBMUD

One-year Pilot Program: EBMUD

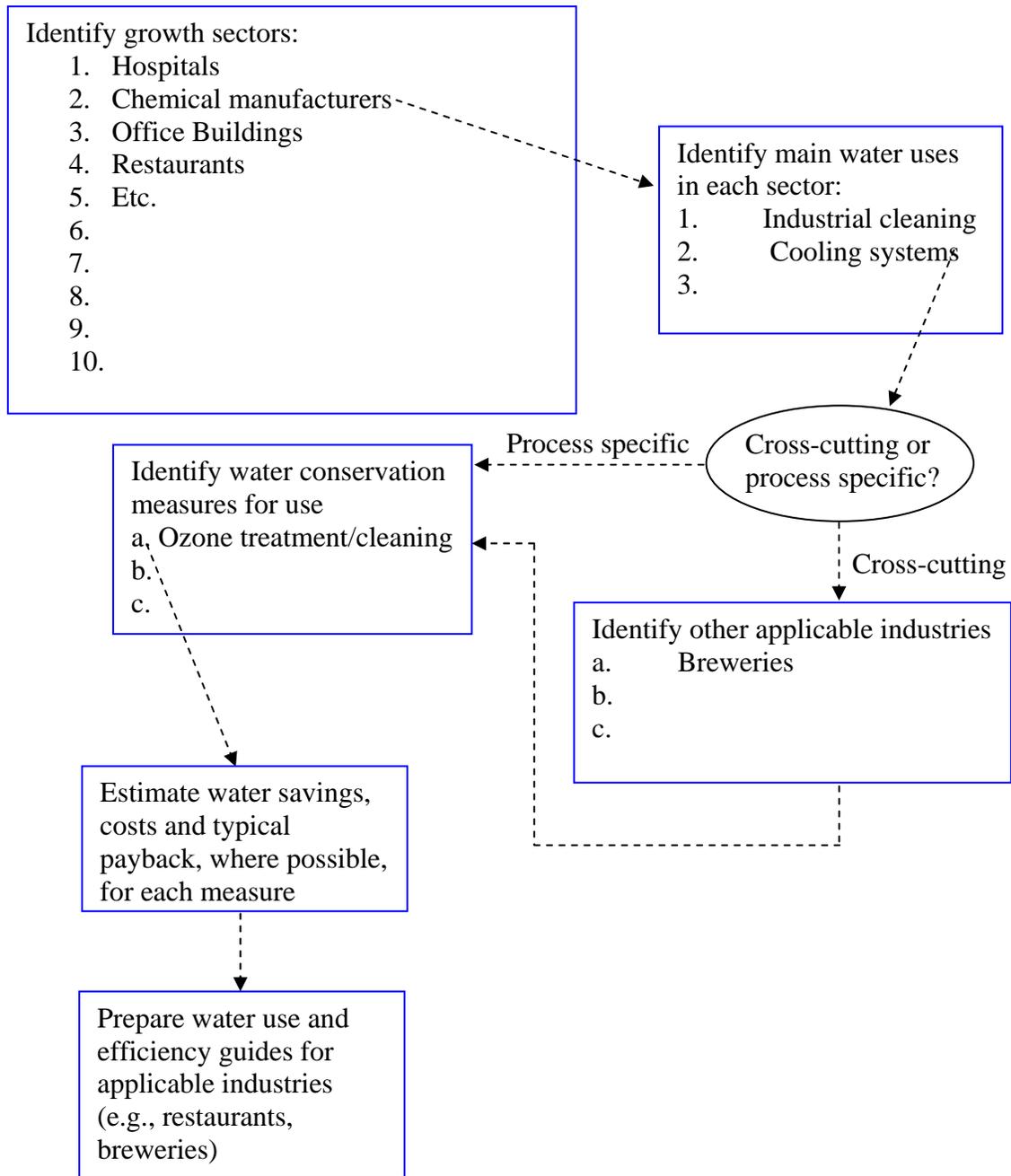
## **REGULATORY COMPLIANCE**

EBMUD will submit a “Finding of No Significant Impact (FONSI)” for this project prior to project initiation since this project will result in water savings and have a positive environmental impact. The proposed project is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The project activities would result in no possibility of significantly impacting the physical environment. As such, the proposed project qualifies under Class 1 Categorical Exemption (Section 15301 of the California CEQA Guidelines).

## **FUNDING PLAN AND BOARD RESOLUTION**

EBMUD has an approved budget for FY05 that includes funds for this research. The Board has adopted Resolution No. 33021-02 authorizing the General Manager to submit grant applications. The proposal for funding and the terms of agreement shall be submitted to the Board of Directors for approval subsequent to grant proposal approval.

Figure 1. Process of development of technical material



w:bureau/2025grants/CIIPlanreviewfy05

# APPENDIX A

## Project Information Form

## 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, # \_\_\_\_\_

(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):

East Bay Municipal Utility District

4. Project Title:

New Business Plan Review Program  
For Water Use Efficiency

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

Name, title

Dennis M. Diemer  
General Manager

Mailing address

375 Eleventh Street

Oakland, CA 94607

Telephone

510-287-0101

Fax.

510-287-0188

E-mail

dennisd@ebmud.com

6. Contact person (if different):	Name, title.	Richard Bennett Water Conservation Administrator
	Mailing address.	P.O. Box 24055-MS: 48 Oakland, CA 94623
	Telephone	510-287-0597
	Fax.	510-287-1883
	E-mail	dbennett@ebmud.com

7. Grant funds requested (dollar amount): **\$150,000**  
*(from Table C-1, column VI)*

8. Applicant funds pledged (dollar amount): \$150,000

9. Total project costs (dollar amount): \$300,000  
*(from Table C-1, column IV, row n)*

10. Percent of State share requested (%): 50%  
*(from Table C-1)*

11. Percent of local share as match (%): 50%  
*(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.*  
*(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.)*

(a) yes  
**No box is checked: The purpose of this pilot study is to determine program cost effectiveness**

(b) no

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

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.*

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12. Duration of project (month/year to month/year):	<b>07-2005 to 06-2008</b>
13. State Assembly District where the project is to be conducted:	<b>District 16</b>
14. State Senate District where the project is to be conducted:	<b>District 9</b>
15. Congressional district(s) where the project is to be conducted:	California 9 <sup>th</sup> District
16. County where the project is to be conducted:	Alameda
17. Location of project (longitude and latitude)	37° 48'04"N 122° 16' 15"W
18. How many service connections in your service area (urban)?	378,000
19. How many acre-feet of water per year does your agency serve?	250,000 AF

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

# APPENDIX B

## Signature Page

**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

Dennis M. Diemer, General Manager

Name and title



Date

## APPENDIX C

### Project Costs Table

**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	Project Costs	Contingency % (ex. 5 or 10)	Project Cost + Contingency	Applicant Share	State Share Grant	Life of investment (years)	Capital Recovery Factor	Annualized Costs
(I)	\$ (II) \$1,000	(III)	\$ (IV) \$1,000	\$ (V) \$1,000	\$ (VI) \$1,000	(VII)	(VIII)	\$ (IX)
Administration								
105	\$105	0	\$105	\$53	\$52	0	0.0000	\$0
Fringe benefits	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
Supplies	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
Equipment	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
Consulting services	\$100	0	\$100	\$50	\$50	0	0.0000	\$0
Travel	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
Other	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(a) Total Administration Costs	\$205		\$205	\$103	\$102			\$0
(b) Planning/Design/Engineering	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(c) Equipment Purchases/Rentals/Rebates/Vouchers	\$0	0	\$0	\$0	\$0	10	0.0000	\$0
(d) Materials/Installation/Implementation	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(e) Implementation Verification	\$5	0	\$5	\$2	\$3	0	0.0000	\$0
(f) Project Legal/License Fees	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(g) Structures	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(h) Land Purchase/Easement	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(i) Environmental Compliance/Mitigation/Enhancement	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(j) Construction	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(k) Workshops/training	\$10	0	\$10	\$5	\$5	0	0.0000	\$0
(l) Monitoring and Assessment	\$10	0	\$10	\$5	\$5	0	0.0000	\$0
(m) Report Preparation	\$70	0	\$70	\$35	\$35	0	0.0000	\$0
(n) TOTAL	\$300		\$300	\$150	\$150			\$0
(o) Cost Share -Percentage	50%			50	50			

1- excludes administration O&M.

Appendix C Project Costs

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

QUALITATIVE DESCRIPTION - REQUIRED OF ALL APPLICANTS <sup>1</sup>				QUANTITATIVE BENEFITS –(where data are available) <sup>2</sup>
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 <sup>3</sup> Indirect <sup>4</sup> or Both	Quantified Benefits (in-stream flow and timing, water quantity and water quality)
<b>Bay-Delta:</b> CII Plan Review - Related savings help to reduce water diversions and timing of demand thereby improving in-stream flow, quantity & quality of water supplies at local, regional, (Bay-Delta) and state levels.	In perpetuity as it matures regional and statewide.	In perpetuity as it matures.	Indirect market transformation will eventually result in <u>direct</u> local, regional and statewide water supply benefits.	Quantifiable benefits to occur over time through CII Plan review related to statewide savings, potential BMPs, & naturally occurring savings is estimated at 310,000 AF over 20 years.
<b>Local:</b> Bay-Delta: CII Plan Review- Related savings help to reduce water diversions and timing of demand thereby improving in-stream flow, quantity & quality of water supplies at local, regional, (Bay-Delta) and state levels.	Local, regional, and statewide.	Natural and local incentive water savings over long term.	<b>Not Applicable</b>	Quantifiable benefits occur overtime through CII Plan review related products tied to Statewide BMPs, potential BMPs and naturally occurring savings.

<sup>1</sup>The qualitative benefits should be provided in a narrative description. Use additional sheets to describe the benefits.

<sup>2</sup>The project benefits that can be quantified (i.e. volume of water saved or mass of constituents reduced) should be provided.

<sup>3</sup>Direct benefits are project outcomes that contribute to a CALFED objective within the Bay-Delta system during the life of the project.

<sup>4</sup>Indirect benefits are project outcomes that help to reduce dependency on the Bay-Delta system. Indirect benefits may be realized over time.

# APPENDIX D

## Letters of Support



**PACIFIC  
INSTITUTE**

January 7, 2005

*Research for People and the Planet*

Mr. Richard Bennett  
Water Conservation Administrator  
East Bay Municipal Utility District  
P.O. Box 24055  
Oakland, CA 94623  
VIA FAX: 287 1883

**RE: Support of Grant Application for Business Plan Review for Water Use Efficiency**

**Dear Mr. Bennett:**

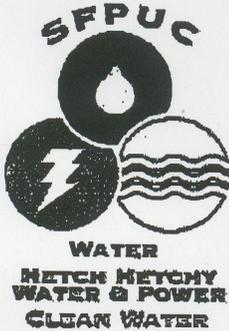
The Pacific Institute believes your proposed project to create a business plan review process for water use efficiency options for new businesses that might locate in a water service area is very worthy of grant funding. It will help to overcome implementation barriers by developing new educational materials and training water utility staff in how to use them. It is tangible and practical and seems likely to lead to real water savings.

Our work has shown that water use efficiency at the time of new equipment purchase or natural replacement of existing equipment is enormously more attractive economically than water use efficiency measures that replace equipment that is already in service. Your proposal gets at this economic opportunity by addressing business plans before the business has made equipment and other (e.g., landscape) water user decisions. This is an obvious gap in the current system of water audits by agencies, which apply only to existing businesses. So obvious that it has been overlooked previously!

Best of luck.

Sincerely,

Gary H. Wolff, P.E., Ph.D.  
Principal Economist and Engineer



## SAN FRANCISCO PUBLIC UTILITIES COMMISSION

1155 Market St., 11th Floor, San Francisco, CA 94103 • Tel. (415) 554-3155 • Fax (415) 554-3161



January 6, 2005

Richard Bennett  
Water Conservation Administrator  
East Bay Municipal Utility District  
2130 Adeline Street  
Oakland, CA 94607

GAVIN NEWSOM  
MAYOR

E. DENNIS NORMANDY  
PRESIDENT

RICHARD SKLAR  
VICE PRESIDENT

ANN MOLLER CAEN  
ADAM WERBACH  
RYAN L. BROOKS

SUSAN LEAL  
GENERAL MANAGER

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT  
APPLICATION FOR A MULTI-FAMILY SUBMETERING PILOT STUDY

Dear Ms. Dickinson:

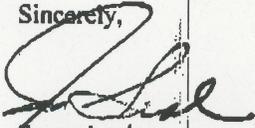
The San Francisco Public Utilities Commission (SFPUC) wishes to convey our strong support for the East Bay Municipal Utility District's (EBMUD) application for Proposition 50 Water Use Efficiency grant funding for a Multi-Family Submetering Pilot Study.

A recently completed national study on the merits of sub-metering and billing allocation programs in the multi-family sector indicated that sub-metered properties save about 15% of indoor use or about 8,000 gallons per year per dwelling unit. While the national study suggests that there is significant water saving potential from submetering, there are a number of both technical and policy questions that still need to be addressed. EBMUD's proposed study will build on the results of the previous studies to fully address and design a system to capture the potential water savings in the multi-family sector. The study will include both technical considerations and policy challenges of a successful submetering program.

The SFPUC strongly supports this application for funding under Proposition 50 and hopes to participate in the project as it proceeds. Submetering has been greatly underutilized as a conservation tool due largely to gaps in information. The results of this study will provide the conservation community with an additional tool to promote efficient use of water. This is of particular interest to the SFPUC due to our relatively large proportion of multi-family units.

We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but also direct benefits to the California Bay-Delta estuary. We look forward to being a partner with EBMUD in this important and innovative water use efficiency grant proposal.

Sincerely,



Susan Leal  
General Manager



# CITY OF TUCSON

## MEMORANDUM

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**Date:** December 27, 2004

Mr. Richard Bennett  
Water Conservation Administrator  
East Bay Municipal Utility District  
P.O. Box 24055  
Oakland, CA 94623

**RE:** Support of Grant Application for Business Plan Review for Water Use Efficiency

Dear Mr. Bennett:

The City of Tucson Water Department supports the concept proposed by the East Bay Municipal Utility District to develop a business plan review program for water use efficiency. The proposal's strength lies in its three components: development of educational material, a training program, and a pilot program.

Tucson Water staff can speak first-hand of EBMUD's ability to manage large-scale water conservation projects. Your oversight of the recently completed multi-agency submetering study shed valuable light on the merits of this conservation tool. I am confident you and other EBMUD staff would be equally effective in conducting a program aimed at new commercial/industrial properties. Many Utilities would certainly benefit from the findings of such a study. Best of luck to you.

Sincerely,

Linda S. Smith, Principal Planner  
City of Tucson Water Department

Hydrology file



STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER

SANTA FE

John R. D'Antonio, Jr. P.E.  
State Engineer

BATAAN MEMORIAL BUILDING, ROOM 101  
POST OFFICE BOX 25102  
SANTA FE, NEW MEXICO 87504-5102  
(505) 827-6175  
FAX: (505) 827-6138

December 10, 2004

Mr. Richard Bennett  
Water Conservation Administrator  
East Bay Municipal Utility District  
P.O. Box 24055  
Oakland, CA 94623

RE: Support of Grant Application for Business Plan Review for Water Use Efficiency

Dear Mr. Bennett:

I am writing to voice support of EBMUD's proposal as identified above.

The proposal takes an innovative approach to addressing the need to promote water use efficiency in the commercial sector. By inserting water conservation as a consideration in the local governmental plan review process before a business locates to a community, this approach would help ensure that conservation measures would be incorporated at the start of the facility's operations, instead of later, resulting in longer-term water savings, as well as reduced conservation implementation costs to the business.

I'm glad to see that the proposal includes the development of new educational materials and involves a training component, two necessary tools to ensure the success of this project.

This new conservation approach would be of interest to our agency, and I'm sure others as well, as a model for addressing commercial water conservation needs in this new manner. I am hopeful that it will obtain the funding support it needs.

Sincerely,

A handwritten signature in cursive script that reads "Alice Darilek".

Alice Darilek  
Water Conservation Coordinator

# APPENDIX E

## Statement of Qualifications

## Statement of Qualifications

**Project Name:** New Business Plan Review for Water Use Efficiency

**Project Manager:** Dick Bennett, Water Conservation Administrator, EBMUD

### Project Manager Qualifications

Dick has a science degree, has worked full time in water conservation for the past 22 years and has over 30 years of experience in the water and wastewater field. During that time Dick has served as a project manager for a number of successful studies and projects including one national study, two statewide projects, and several EBMUD studies, namely:

**EBMUD's *Plants and Landscapes for the Bay Area*** (Landscape book-1988)

**Sunset Films *Beautiful Gardens with Less Water*** (32 minute film with 25 contributing water utilities in California, 1992)

**EBMUD ULFT Study** (1994)

**EBMUD Baseline Study** (1995)

**Bay Area Clothes Washer Rebate Program with PG&E** (1996)

**EBMUD End Use Study** (2001)

**National Sub-meter Study** (2004)

**Prop 13 DWR Pre-Rinse Spray Valve and Dishwasher Grant** (2004-2006)

In addition to the above mentioned projects, Dick has been active in a number of statewide and national conservation committees. He co-authored an AWWA publication titled *Water-Efficient Landscape Guidelines* (1994), and has contributed to numerous other publications/projects. Dick also initiated a water conservation certification program under the auspices of the California-Nevada Section of AWWA and under his two-year chairmanship implemented the level 1 certification program.

### EBMUD Qualifications

EBMUD is a public retail water district formed in 1923 under the MUD Act. EBMUD serves approximately 1.3 million people in two counties and 22 cities and delivers approximately 250,000 AF of water annually. EBMUD has a staff of around 1600 employees and an annual operating budget of around \$240 million serving the water system. Since the early 1970's EBMUD and its customers have continued to make important strides in reducing water use and enhancing overall water supply reliability through demand management.

EBMUD's Water Conservation Division (WCD) has a full-time staff of 21 and an annual budget of approximately \$5 million and is saving about 1.1 MGD annually. In addition, the WCD has implemented numerous conservation measures, conducted many studies and is actively involved in a number of cooperative efforts. By submitting this grant application, EBMUD has committed to providing the staff and resources necessary to achieve the project goals and objectives.