

# 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, # 9

(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):

Los Angeles County Waterworks Districts

4. Project Title:

Commercial, Industrial, and Institutional Water Use Audits and Dedicated Landscape Meter Installation Program

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

Name, title

Manuel Del Real,  
Assistant Deputy Director

Mailing address

Los Angeles County  
Waterworks Districts

P.O. Box 1460

Telephone

Alhambra, CA 91802-1460

Fax.

(626) 300-3300

E-mail

(626) 300-3385

mreal@ladpw.org

6. Contact person (if different):	Name, title.	David Rydman Associate Civil Engineer
	Mailing address.	Los Angeles County Waterworks Districts P.O. Box 1460 Alhambra, CA 91802-1460
	Telephone	(626) 300-3351
	Fax.	(626) 300-3385
	E-mail	drydman@ladpw.org

7. Grant funds requested (dollar amount): **\$329,776**  
*(from Table C-1, column VI)*

8. Applicant funds pledged (dollar amount): \$245,484

9. Total project costs (dollar amount): **\$575,260**  
*(from Table C-1, column IV, row n )*

10. Percent of State share requested (%): **57%**  
*(from Table C-1)*

11. Percent of local share as match (%): **43%**  
*(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  
 (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.*

The Districts are signatories to the California Urban Water Conservation Council. This project is consistent with the goals outlined in the voluntary MOU.

12. Duration of project (month/year to month/year): **Spring 2005 to Spring 2009**
13. State Assembly District where the project is to be conducted: **36, 37, 38, 41, 53**
14. State Senate District where the project is to be conducted: **20, 23, 17, 17, 17, 28**
15. Congressional district(s) where the project is to be conducted: **24, 25, 26, 27, 36**
16. County where the project is to be conducted: **Los Angeles**
17. Location of project (longitude and latitude) **34°, -117°**
18. How many service connections in your service area (urban)? **50,000**
19. How many acre-feet of water per year does your agency serve? **63,000**
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, \$38,471-Region 38 and \$36,662-Region-35 median household income (DISTRICT 40. See attached Census Tract Maps.)

(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

\_\_\_\_\_  
Name and title

\_\_\_\_\_  
Date

## **STATEMENT OF WORK, SECTION 1: Relevance and Importance**

### **INTRODUCTION**

The Los Angeles County Waterworks Districts (Districts) propose to conduct a Commercial, Industrial, and Institutional (CII) Water Use Audits and Dedicated Landscape Meter Installation Program to increase water use efficiency and reduce wasteful use of water throughout the Districts' service area.

The Districts are the primary water retailer to five water districts within Los Angeles County, including 1) Kagel Canyon (District 21), 2) the City of Malibu, Topanga Canyon and the Marina Del Rey Water System (District 29), 3) Val Verde (District 36), 4) Acton (District 37), and 5) the Antelope Valley (District 40). See Map 1 for a location of Districts. These Districts, which provide potable water to about 150,000 people, use a combination of approximately 25 percent local groundwater for Districts 21, 36, 37, and 40, and imported water supplies from the State Water Project. District 29 uses 100 percent imported water.

### **GOALS AND OBJECTIVES OF PROJECT**

The goal of this project is to reduce water use by 10 percent, a savings of 400 acre-feet per year. To meet this goal, the Districts will conduct water use audits for all CII customers. The following is the estimated number of audits to be conducted by district:

- District No. 21: 0 audits
- District No. 29: 122 audits
- District No. 36: 0 audits
- District No. 37: 23 audits
- District No. 40: 1,921 audits

The objective of the audit will be to improve existing indoor and outdoor water use efficiency practices in commercial, industrial and institutional facilities. A trained water use auditor will schedule a visit to each CII customer. The auditor will visit the facility and will identify all indoor and outdoor water use with the customer, including bathroom, kitchen, laundry, irrigation, and any operations that require the use of water. All data collected during water use audit will be input into a database. The Districts will provide each customer with a report within one week after the audit. This report will describe the water usage, suggests specific recommendations to increase water use efficiency, and calculate monthly and annual water and cost savings associated with each recommendation.

The second goal of the program is to market dedicated landscape meters to appropriate CII customers that do not already have a meter on the premises. Since landscaping is typically the highest water use, a dedicated landscape meter allows the facility and the Districts to track water use for landscaping purposes.

A consultant will be hired to implement the program and develop a marketing strategy. The Districts will consider only those consultants that provide an excellent marketing plan and display exemplary knowledge and experience in water conservation practices, landscaping techniques, and water use efficiency.

The Districts will track the changes in water use on a monthly basis for one year following each audit. Follow-up phone calls will be made to customers who do not exhibit a decrease in water use. If necessary, an additional audit will be conducted and discussed with the customer.

### CONSISTENCY WITH CALFED PROGRAM ELEMENTS

If funded, this program will indirectly reduce demand on the San Francisco Bay/Sacramento-San Joaquin Delta (Bay Delta) estuary by reducing the Districts' demand on the State Water Project (SWP), a tributary of the Bay Delta. The Districts utilize two sources of water supply, groundwater and imported water drawn from the SWP. Because the Districts use a fixed amount of groundwater each year, any reduction in water use will result in a decreased demand on imported water from the SWP.

The proposed Commercial, Industrial, and Institutional Water Use Audits and Dedicated Landscape Meter Installation Program will increase water use efficiency and promote water conservation. Water conservation and water use efficiency are interrelated and interdependent with all aspects of the CALFED Bay-Delta Program. The goal of this program is to reduce water use by 400 acre-feet per year throughout the Districts' service area, thereby reducing the Districts' demand on the SWP.

### NEED FOR THE PROJECT

The Districts' serve some of the fastest growing areas in Los Angeles County. Since both the Districts' imported water and groundwater supplies are limited, there is a critical need for this project. Conserving water is critical in order to meet the growing demands associated with population growth.

The Districts' largest service area is District 40 within the Antelope Valley, which has a high desert climate. According to the Southern California Association of Governments, the population of the Antelope Valley is expected to more than double in the next 20 years.

The Districts' water use data demonstrates many CII customers in the Antelope Valley use significantly more water than the average use for these desert areas. In addition to the Districts' quarterly newsletter, official website, public events, and printed messages on customer water bills, District 40 has used radio advertisements to promote water conservation. To expand these efforts, we believe the only effective way to stimulate efficient water use is through in-person contact, reaching customers at their place of business where the water is being used. The Districts plan to accomplish this goal through the proposed CII Water Use Audits and Dedicated Landscape Meter Installation

Program. As more businesses locate in the high desert areas, it is imperative that both small and large businesses alike, understand how to use water efficiently in order to conserve the supply of both groundwater and imported water.

The Districts also serve a large portion of CII customers that are supplied entirely with imported water. These customers served by District 29, are highly motivated about protecting the environment due to their close proximity to the Santa Monica Bay. State regulations in the form of Total Maximum Daily Load (TMDL) requirements and the National Pollutant Discharge Elimination System (NPDES) Permit require nuisance dry weather flows in storm drains to be treated prior to reaching the ocean. Field investigations have revealed that much of these nuisance flows result storm water runoff. By investing time and resources in face-to-face water audits with CII customers that either over irrigate or use excessive amounts of water, the Districts will promote the importance of efficient water use by helping CII customers a) recognize how wasting water negatively affects the environment, b) understand the behavioral adjustments they can make to use water more efficiently, and c) recommend tools and methods that will result in water conservation. We anticipate that the implementation of the CII Water Use Audits and Dedicated Landscape Meter Program will result in reduced water demand and will help eliminate dry weather nuisance flows in the storm drains and reduce water demand, thereby improving the local and Bay Delta environment.

#### CONSISTENCY WITH WATER MANAGEMENT PLANS

The Districts are signatories to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU) 1991, 2004. The purpose of the MOU is to expedite implementation of reasonable water conservation measures in urban areas to conserve water, which could be used for the protection of streams, wetlands and estuaries and/or urban water supply reliability.

One primary responsibility of the signatories is to implement water conservation best management practices (BMP) set forth by the CUWCC. Signatories also submit BMP reports annually. The CUWCC defines a BMP as “an established and generally accepted practice among water suppliers that results in more efficient use or conservation of water.” This project is “BMP 9” in the CUWCC MOU.

Urban Water Management Plans (UWMP) are a requirement by the California Urban Water Management Planning Act of 1984. The Act requires urban water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP. The UWMP, which must be updated at least once every five years, must address water supply, use, reliability, shortage, recycling, and other water related issues over 20 years.

- The *2000 Urban Water Management Plan for Los Angeles County Waterworks District 29* was prepared solely by the Districts for the Malibu, Topanga and Marina Del Rey water systems. This plan addresses the above mentioned requirements and discusses the need for water conservation due to District 29’s total reliability on imported water. This plan discusses the District’s commitment to implement water

conservation best management practices is outlined in the CUWCC MOU described above. The updated *2005 UWMP for Los Angeles County Waterworks District 29* will be closely coordinated with our water wholesaler, West Basin Municipal Water District, to ensure coordinated plans regarding water conservation and water demand management.

- The *2000 Urban Water Management Plan Los Angeles County Waterworks District 40* was prepared solely by the Districts for the District 40 service area. This plan addresses the above mentioned requirements and identifies water conservation as a primary method to ensure water supply reliability. Implementation of water conservation best management practices by satisfying the requirements of the CUWCC MOU “increases the Districts’ commitment toward implementing water conservation projects to prepare the service area for potential water shortages.” The CII Water Use Audits and Dedicated Landscape Meter Installation Program is consistent with our commitment.
- The updated *2005 Integrated Urban Water Management Plan for the Antelope Valley*, which has not yet been adopted, is being developed. This UWMP will be unique compared to previous plans in that it will serve as the UWMP for several agencies, including Los Angeles County Waterworks District 40, the Quartz Hill Water District, the Littlerock Creek Irrigation District, the Rosamond Community Services District, the Antelope Valley East Kern Agency, and the County Sanitation Districts of Los Angeles County for the entire Antelope Valley. See Map 2 for a map of District 40 and unofficial boundaries of the entire Antelope Valley. The Districts will work closely with the above agencies to develop the *2005 Integrated UWMP for the Antelope Valley* to incorporate water conservation and water use efficiency as important strategies for water demand management and water supply reliability. In addition to water conservation, this joint effort will address, but not be limited to, aquifer storage and recovery, in-lieu groundwater recharge, and the distribution of recycled water.

The Commercial, Industrial, and Institutional Water Use Audits and Dedicated Landscape Meter Installation Program is consistent with the Districts’ goal to address water conservation best management practices.

The *North Santa Monica Bay Watersheds Regional Watersheds Implementation Plan* is still in the development phase. The purpose of the plan will be to identify and implement projects to comply with regulatory requirements related to storm water and urban runoff including, the National Pollutant Discharge Elimination System (NPDES) Permit and Total Maximum Daily Loads (TMDLs). Waterworks District 29 is a stakeholder of the North Santa Monica Bay Watersheds and is a member of the Task Force responsible for preparing the plan. The Task Force has identified water conservation as an essential component of protecting beneficial uses of water bodies and reducing storm water pollution.

## HOW THIS PROJECT WILL FURTHER IMPLEMENT EXISTING WATER MANAGEMENT ACTIVITIES

The Districts are already committed to implementing water conservation and water use efficiency programs. The Districts track and analyze all water use, consumption, and water supply on a monthly basis. Leak detection is an integral part of the Districts operations to locate water use efficiency problems in our systems. In addition, the Districts have many public outreach efforts currently in place, including:

- “Splash” quarterly newsletter
- Radio advertisements
- Public service announcements
- Landscaping brochures
- Kids water conservation activity books
- Water conservation materials distributed at District field offices and public events i.e., toothbrushes with a useful message, “Save Gallons. Turn the water off while brushing your teeth”; hose nozzles with automatic shut-off valves; landscaping moisture sensors; toilet tumblers; leak detection dye tablets; and low-flow shower heads with shut off valves .
- Public events such as environmental fairs and garden shows
- Official Waterworks Website linked to the County of Los Angeles environmental resources website [www.888CleanLA](http://www.888CleanLA)
- Water conservation messages on 888CleanLA hotline
- District 29 monthly water use banner displayed near Malibu City Hall
- Seasonal news releases
- Public workshops for County of Los Angeles Smart Gardening Program
- Water conservation complaints procedure (field staff coordinates site visit with customers where an over-irrigating complaint has been made).

The Commercial, Industrial, and Institutional Water Use Audits and Dedicated Landscape Meter Installation Program will enhance existing public outreach efforts by providing more one-on-one interaction with customers. During audits, customers will be made aware of existing programs and will be encouraged to take advantage of these resources.

### **STATEMENT OF WORK, SECTION 2: Technical/Scientific Merit/Feasibility**

#### **Project Plan**

A trained water use auditor will schedule a visit to each customer that requests an audit. The auditor will discuss the reasons and benefits for conserving water, recommend changes that will improve water use efficiency, and identify the cost savings associated with each recommendation. The following is a brief task list for the program:

- Rank all CII customers according to water usage and water savings potential. This list will include property owners, contact information, and type of facility.

- Contact CII customers by phone in order of priority to request voluntary participation in an on-site CII water use survey. The Districts will maintain a phone log to record the contact at each location, whether a survey was requested, and the date the survey was conducted.
- Schedule site visits for CII customers, in order of priority established by the District, who are willing to participate in water use surveys. Each customer will be provided with the evaluation results and water saving recommendations. Surveys will include, but not be limited to, the following:
  - Recording the number of toilets in the facility and the number that are ultra low flush, waterless, or dual flush.
  - Recording the number of clothes washing machines in the facility and the number that are not high efficiency.
  - Recording the number of dishwashing stations in the facility and the number of pre-rinse spray valves installed.
  - Recording the number of sinks in the facility and whether they are equipped with aerators.
  - Observing and recording other water demanding procedures undertaken by the individual customer.
  - Distributing pertinent vendor information concerning high-efficiency washing machines, ultra-low flush toilets, waterless urinals, faucet aerators, pre-rinse spray valves and dual flush toilets to customers during site visits, as appropriate.
- Target and market dedicated landscape meters to appropriate CII customers.
- Conduct an outdoor landscape audit for customers who have landscaping and provide each of them with a report including, but not limited to:
  - Area of landscaping;
  - Existing seasonal or monthly watering schedule;
  - Historical use;
  - Existing irrigation methods, such as sprinklers, or drip irrigation;
  - Recommended watering schedule based on the type of vegetation, soil, and weather conditions;
  - Potential annual water savings;

- Landscape maintenance procedures;
- Broken sprinkler heads;
- Hose nozzle on hoses;
- Recommended irrigation and landscaping alternatives, such as:
  - i. Evapotranspiration controllers
  - ii. Alternative lawns
  - iii. Native landscaping

If requested, the Districts will provide information on vendors for any of the above alternatives.

- Sprinkler overspray and over-watering; and
  - Other outdoor practices, such as sweeping driveways and sidewalks instead of hosing them down.
- Prepare and distribute information regarding the incentives and payback period for the above-mentioned high-efficiency measures to customers during site visits.
  - Follow-up via phone or site visit with the customer regarding facility water use and water saving improvements within one year of completing each survey.
  - Track the number of CII customers offered a water use survey, the number of surveys completed, the type and number of water saving recommendations, and the estimated reduction in annual water use for each customer in a database.

#### PROJECT PLAN, TASK LIST, AND COST

See Exhibit I. The planned program start date is Spring 2005.

#### **Preliminary Plans and Specifications and Certification Statements (for construction projects only)**

This is not a construction project.

#### **Environmental Documentation**

The proposed program is not subject to the California Environmental Quality Act as the proposed program does not meet the definition of a project and it can be seen with certainty that this program will not result in a direct or reasonably foreseeable indirect physical change in the environment (Public Resources Code Section 21065; Section 15061(b)(3) of the California Environmental Quality Act Guidelines).

## **STATEMENT OF WORK, SECTION 3: Monitoring and Assessment**

The Districts' goal is to reduce CII water use by 10 percent, or 400 acre-feet per year, by conducting voluntary audits for all CII accounts. As a result 2,066 audits will be conducted. Assuming a ten-year project life, this is a water savings of 4,000 acre feet. The 10 percent reduction is based on the baseline year of 1998, a requirement outlined in the CUWCC MOU. It is assumed based on published data (*Water Use and Water Conservation*, Amy Vickers 2001), that each audit will reduce water use by 10 percent per customer, which is consistent with our goal. Audits for are estimated to result in annual water savings of 400 acre feet valued at \$195,548 (see Table C-9). In ten years, the Districts will save 4,000 acre feet of water reducing the demand on the SWP and Bay Delta. When analyzing annual savings, the Districts will consider weather conditions such as temperature and rainfall data for that year along with population growth. Statistical analysis will be used to report water conservation benefits.

Currently, the Districts track all the water consumption for each customer. Since the data from each audit will be entered into and stored in Microsoft Access and Excel databases, it will be relatively easy for the Districts to compare and track the water usage and reduction for each customer on both a monthly and an annual basis. Staff will be dedicated to tracking this information for one year after the completion of the audit. As part of this project, follow-up phone calls will be made to customers who do not display a decrease in water use; and, if necessary, an additional audit will be conducted to help ensure the overall success. . Tracking and analysis are not included in the budget. Only the follow-up phone calls and follow-up audits are built into the Districts' administrative costs.

Information collected as a result of this program will be reported to the Department of Water Resources on a quarterly basis. The data will be available to other interested parties as requested.

### **QUALIFICATIONS OF THE APPLICANTS AND COOPERATORS**

1. Resume of Project Manager (See attached)
2. External Cooperators

The Districts will manage and oversee the program and will hire a consultant to conduct the work. The Districts will follow the County of Los Angeles procedures and guidelines for hiring a consultant. The project will be advertised as an open bid. Interested and qualified consultants will submit proposals to the County. A selection committee consisting of qualified professionals will be established to evaluate the proposals. Proposals will be evaluated based on price, references, and work plan. The proposal with the lowest proposed cost may not necessarily be awarded the contract. Consideration will be given to consultants with the most experience in water conservation projects and water use audit programs and a detailed and relevant work plan. The most qualified consultant will be selected based on the overall evaluation criteria, scoring, and an optional interview.

### 3. Water Use Efficiency Projects In Which the Applicant Has Participated

No prior grants for water use efficiency projects have been awarded to the Districts. However, the Districts have conducted and are currently conducting many public outreach efforts targeting water conservation and water use efficiency projects as previously noted.

### 4. Water Use Efficiency Projects In Which the Applicant Has Participated

No prior grants for water use efficiency projects have been awarded to the Districts.

## **OUTREACH, COMMUNITY INVOLVEMENT, AND ACCEPTANCE**

In order to reach our goal of saving 4,000 acre-feet of water over a ten-year period, the Districts will develop and implement the Commercial, Industrial, and Institutional Water Use Audits and Dedicated Landscape Meter Installation Program, which focuses on extensive public outreach. Because this Program will target 100 percent of CII customers, each customer will be contacted individually by phone, mail, or in person. The Districts will also advertise optional participation through flyers distributed with customer water bills, on a message line printed on the water bills, the Districts' quarterly newsletter, radio announcements, press releases, and posting on the official Waterworks Districts Website. The Districts will encourage customers to join this effort by offering free water conservation kits in return for their participation. Typical cost savings will also be published in order to peak interest.

Once the customers agree to participate in the program, they will be visited on-site and given in-person training on water conservation and water efficiency tools and methods that can be undertaken. In addition, each customer will be informed of the direct economic benefits they will receive by implementing water efficiency practices and how their individual actions impact the environment.

The Districts will continue to work closely with other agencies to meet water conservation goals and objectives set by the community. Staff from the Districts will discuss this program opportunity at meetings with watershed groups, such as the North Santa Monica Bay Task Force.

The attached letters of support demonstrate the Districts' ongoing efforts to promote water conservation and water use efficiency to the community. Letters of support were provided by City of Malibu, Resource Conservation District of the Santa Monica Mountains, Las Virgenes Municipal Water District, Antelope Valley East Kern Water Agency, and the City of Lancaster. These letters demonstrate our consistency with other agencies' efforts.

## **INNOVATION**

Innovation takes many forms. First, this program is innovative to the Los Angeles County Waterworks Districts because no similar program has been implemented in any of our Districts service areas.

Second, and more importantly, the program is innovative since it will change the way of thinking of thousands of Districts' customers. There will a shift in priorities among our CII customers. Water conservation and water use efficiency will become second nature. Common practices such as over irrigating landscape areas will diminish. Some of the recommended hardware and technology will include:

- Pre-rinse spray valves
- High efficiency clothes washers and dish washing machines
- Ultra low flush and dual flush toilets
- Waterless urinals
- Low flow faucet aerators
- Showerheads will be recommended
- Lower flow sprinklers
- Hose nozzles
- Drip irrigation
- Evapotranspiration controllers
- New irrigation timers
- Alternative landscaping (e.g. rock gardens, native landscaping, waterless lawns)

## **BENEFITS AND COSTS TABLES NEXT PAGE**

**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) CII WATER USE AUDITS-LOS ANGELES COUNTY WATERWORKS DISTRICTS**

	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 <sup>1</sup>								
	Salaries, wages	\$49,584	10	\$54,542	\$25,362	\$29,180	0	0.2886	\$15,741
	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	\$473,380	10	\$520,718	\$220,122	\$300,596	4	0.2886	\$150,279
	Travel	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Other	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(a)	Total Administration Costs	\$522,964		\$575,260	\$245,484	\$329,776			\$166,020
(b)	Planning/Design/Engineering	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(c)	Equipment Purchases/Rentals/Rebates/Vouchers	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(d)	Materials/Installation/Implementation	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(e)	Implementation Verification	\$0	0	\$0	\$0	\$0	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)	Other	\$0	0	\$0	\$0	\$0	4	0.2886	\$0
(l)	Monitoring and Assessment*	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(m)	Report Preparation	\$0	5	\$0	\$0	\$0	0	0.0000	\$0
(n)	<b>TOTAL</b>	\$522,964		\$575,260.4	\$245,483.92	\$329,776.48			\$166,020
(o)	Cost Share -Percentage **				42.7	57.3			

1- excludes administration O&M.

\*Monitoring and Assessment is included in consulting services cost analysis.

\*\*Applicant Share < 50% due to District 40, Regions 35 & 38 (disadvantaged community-no cost share required)

\*\*\*Capital Recover Factor of 0.2886 was used based on a 4-year investment. The program will be conducted over four years

Administration

\$100/hour

10% of Consulting Services

2.4 hours per survey, 2066 surveys

\$49,584

Consulting Services

\$170/Survey x 2066 Surveys

\$5,000 Create Flyers and Manual

\$125/Dedicated Landscape Meter x 100

\$50/Progress Report & Follow-ups x 2066

\$1,360 Quarterly meetings with Districts

Applicant:

**LOS ANGELES COUNTY WATERWORKS DISTRICTS**

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)
\$166,020	\$0	\$166,020

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

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

Applicant:



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

**Table C-6 Project Annual Local Monetary Benefits**

ANNUAL LOCAL BENEFITS	ANNUAL QUANTITY	UNIT OF MEASUREMENT	ANNUAL MONETARY BENEFITS
(a) Avoided Water Supply Costs (Current or Future Source)	400	AF	\$126,310
(b) Avoided Energy Costs	0		\$0
(c) Avoided Waste Water Treatment Costs	0		\$0
(d) Avoided Labor Costs	0		\$0
(e) Other (Avoided O & M costs)	0		\$69,238
(f) Total [(a) + (b) + (c) + (d) + (e) ]			\$195,548

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

(a) Total Annual Monetary Benefits [(Table C-6, row (f))		\$195,548
(b) Total Annual Project Costs (Table C-3, column III)		\$166,020

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

Applicant's cost share %: (from Table C-1, row o, column V)	<b>42.7</b>
Describe how the cost share (based on relative balance between Bay-Delta and Local Benefits) is derived. (See Section A-7 for description.)	
Provide Description in a narrative form.	

This project is not locally cost effective. The cost to implement exceeds the benefits (See Table C-7). Therefore, this project is eligible for a 50% match. Two regions in District 40, Regions 35 and 38, are exempt because they are considered disadvantaged communities (at least 80 percent of the annual median income is less than \$38,000). These regions make up 7% of the population of the Districts, which was subtracted from the eligible cost share match.

Applicant: **LOS ANGELES COUNTY WATERWORKS DISTRICTS**

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 <sup>1</sup>				Quantitative Benefits - where data are available
	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)
Bay Delta	The Districts import approximately 75% of its water supply. This project would result in less water being used by the Districts' customers. Therefore, The State Water Project and Bay Delta will indirectly benefit by having less water exported to this region.	There would be indirect benefits to the Bay Delta and could be identified monthly after the project is implemented.	10 Years	The Bay Delta benefit is indirect. If water is conserved, the dependency on the Bay Delta is reduced. There is no direct dependency on the Bay Delta by our Districts. Sources of water for the Districts are groundwater supplemented by imported water via the State Water Project provided by wholesale water agencies.	4000 acre-feet
Local	This project would reduce the demand for imported water.	The benefits would reduce water demand daily by commercial, industrial, and institutional customers throughout all of the Districts' service area.	10 Years	<b>Not applicable.</b>	0

<sup>1</sup> The qualitative benefits should be provided in a narrative description. Use additional sheet.

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

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

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

**ble<sup>2</sup>**

**Table C-9**

**Commercial, Industrial, and Institutional Water Use Audits Program Benefits**

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
District-Region	Size of District (Meters-CII)	CII Use AFY	Cost to Purchase (excludes O&M costs) \$/AF	Rate (includes O&M costs) \$/HCF	Reduction per District AFY	Annual Savings to Districts excluding O&M 10%	Annual Savings including O&M 10%
21	0	0	\$ 1,293	\$ 4.56	0	\$ -	\$ -
29 (Malibu & Topanga)	22	78	\$ 550	\$ 4.00	8	\$ 4,262	\$ 13,502.95
29 (Marina Del Rey)	100	600	\$ 540	\$ 2.50	60	\$ 32,191	\$ 64,918.03
36	0	0	\$ 183	\$ 1.44	0	\$ -	\$ -
37	23	45	\$ 280	\$ 1.04	4	\$ 1,252	\$ 2,025.44
40-4	1175	3000	\$ 270	\$ 0.77	298	\$ 80,477	\$ 99,973.77
40-24	7	54	\$ 270	\$ 0.84	5	\$ 1,449	\$ 1,963.12
40-27	6	13	\$ 270	\$ 0.84	1	\$ 349	\$ 472.60
40-33	7	15	\$ 270	\$ 0.84	1	\$ 402	\$ 545.31
40-34	700	180	\$ 270	\$ 1.36	18	\$ 4,829	\$ 10,594.62
40-35	0	0	\$ 270	\$ 1.05	0	\$ -	\$ -
40-38	23	40	\$ 270	\$ 0.86	4	\$ 1,073	\$ 1,488.79
40-39	3	1	\$ 270	\$ 1.46	0	\$ 27	\$ 63.19
<b>Total:</b>	<b>2066</b>	<b>4026</b>			<b>400</b>	<b>\$ 126,310</b>	<b>\$ 195,548</b>

Assumptions

Each audit will reduce water use by 10% (*Water Use and Water Conservation*, Amy Vickers 2001, page 152)

10% Reduction equals 400 acre-feet per year

Operations and Maintenance is the difference between Column (G) total and Column (H) total \$ 69,238

Abbreviations

Acre-feet per year (AFY)

Acre-feet (AF)

Hundred Cubic Feet (HCF)

**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.