

Water Softener Rebate Program

**PROPOSITION 50
Water Code Chapter 7
2004 WATER USE EFFICIENCY**

GRANT APPLICATION

**California Department of Water Resources
Office of Water Use Efficiency
1416 Ninth Street, Room 338
Sacramento, CA 95814
Attention: Debra Gonzalez (916) 651-7026**

Submitted by

San Benito County Water District (Lead Agency)

&

Santa Clara Valley Water District

January 14, 2005

Debra Gonzalez
California Department of Water Resources
Office of Water Use Efficiency
PO Box 942836
Sacramento, California 94236-0001

Dear Ms. Gonzalez:

It is an honor for the Santa Clara Valley Water District and the San Benito County Water District (lead agency) to submit an application to the California Department of Water Resources 2004 Water Use Efficiency Grant Program. The enclosed application includes a request for a grant to fund, along with San Benito County Water District, a Regional Water Softener Rebate Program.

Please contact us if you have questions or if we can provide additional information.

Thank you for your consideration.

Sincerely,

Hossein Ashktorab, Ph.D.
Manager, Water Use Efficiency Unit

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2004 WATER USE EFFICIENCY PROPOSAL

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, **PBMP #3-Replacement of Existing Water Using Appliances (Except Toilets and Showerheads Whose Replacements are Incorporated as Best Management Practices) and Irrigation Devices.**

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

(c) implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # if applicable _____

(d) Specify other: _____

(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

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

3. Principal applicant
(Organization or affiliation):

San Benito County Water District

4. Project Title:

Water Softener Rebate Program

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

Name, title

John S. Gregg, District
Manager

Mailing address

30 Mansfield Road

Hollister, CA 95023

Telephone

831-637-8218

Fax.

831-637-7267

	E-mail	igregg@sbcwd.com
6. Contact person (if different):	Name, title.	Shawn Novack, SBCWD, Water Conservation Program Manager
	Mailing address.	P.O. Box 899
	Telephone	Hollister, CA 95024
	Fax.	831-637-4378
	E-mail	831-637-7267

7. Grant Funds requested (dollar amount):	\$300,000.00
8. Applicant funds pledged (dollar amount):	\$305,560
9. Total project costs (dollar amount):	\$605,560
10. Percent of State share requested (%)	49.55%
11. Percent of local share as match (%)	50.45%
12. Is your project locally cost effective? <i>Locally cost effective means that the benefits to an entity (whether in dollar terms or qualitatively) of implementing a program exceed the costs of that program within the boundaries of that entity.</i>	<input type="checkbox"/> (a) yes <input checked="" type="checkbox"/> (b) no
13. Is your project required by regulation, law or contract?	<input type="checkbox"/> (a) yes <input checked="" type="checkbox"/> (b) no
14. Duration of project (month/year to month/year):	12/05 to 6/08
15. State Assembly District where the project is to be conducted:	20,21, 22, 23, 24, 27 & 28
16. State Senate District where the project is to be conducted:	10, 11, 13 & 15
17. Congressional district(s) where the project is to be conducted:	14, 15, 16 & 17
18. County where the project is to be conducted:	San Benito County, Santa Clara County

19. Location of project (longitude and latitude)

-121.42428 / 36.77865 (San Benito Co.) & -121.87333 / 37.24806 (Santa Clara Co.)
Maps of the service areas are attached.

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

12,650 (San Benito Co.) & 407,481 (Santa Clara Co.)

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

63,814 AF (San Benito Co.) & 400,000 AF (Santa Clara Co.)

22. Type of applicant (select one):

- (a) City
- (b) County
- (c) City and County
- (d) Joint Powers Authority
- (e) Public Water District
- (f) Tribe
- (g) Non Profit Organization
- (h) University, College
- (i) State Agency
- (j) Federal Agency
- (k) Other
- (i) Investor-Owned Utility
- (ii) Incorporated Mutual Water Co.
- (iii) Specify _____

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

- (a) yes, _____ median household income
- (b) no

(Provide supporting documentation.)

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

Project Summary

This project consists of providing a financial incentive program to customers for replacing existing old, inefficient water softeners installed prior to 1998 with new water- and energy-efficient water softeners in the service areas of San Benito County Water District (SBCWD) and Santa Clara Valley Water District (SCVWD). The watershed within this service area is one of the largest in the state, encompassing more than 1,100 square miles.



Statement of Work - Section 1: Relevance and Importance

The groundwater in the SBCWD and SCVWD service areas is characterized as hard to very hard. This has resulted in large numbers of customer-installed water softening devices in particular areas. Residential surveys completed by both the SBCWD and SCVWD have confirmed the prevalence of water softening devices, many of which are old and inefficient. The water softening technology developed more recently is intrinsically more efficient—the resin is regenerated as needed, requiring less water and salt.

Between 2003 and 2004, the SCVWD conducted a Water Softener Rebate Pilot Program with a goal of issuing 400 rebates of \$150 each for customers to replace their old, inefficient water softener to a new water- and energy-efficient water softener. The program was very successful, meeting its goal of 400 residential rebates and receiving positive feedback from customers. Building on the experience and lessons learned from this Program, SBCWD and SCVWD would like to propose a larger scale, joint Water Softener Rebate Program to be implemented in San Benito County and Santa Clara County.

The overall objectives of the project are to contribute to CALFED, state, regional, and local water conservation goals by implementing an incentive-based program to achieve water savings with the experience and knowledge gained from SCVWD's pilot rebate program. The two main project goals include saving water, thereby reducing demand for water imported from the Bay-

Delta ecosystem through the State Water Project and the Central Valley Project; preventing water pollution; and improving recycled water quality by reducing dissolved solids in wastewater treatment plant inflows and groundwater.

This project is strongly needed because the Bay-Delta ecosystem, as well as regional groundwater supplies, is stressed in terms of the balance between supply and demand, water quality in recycled water and groundwater, salt water intrusion, and habitat management. It has become increasingly clear that careful planning is needed to avoid and mitigate problems surrounding salinity management as well as water supply. Water, wastewater, groundwater, environmental, and planning agencies need to work in a coordinated fashion to effectively address issues such as salinity management. This project will further regional efforts to develop and implement water supply programs and projects that address common issues, including water conservation and salinity management programs.

Although there have been major recent advances in the efficiency of water conditioning equipment, there still needs to be greater awareness of the existence or benefits of the new technologies among the relevant customer populations.

This project will have many important positive impacts on the Bay-Delta ecosystem including:

- Replacing old water softeners will reduce demand for water imported from the Bay-Delta to urban water agencies;
- Replacing old water softeners will reduce Total Dissolved Solids (TDS), detergents, and other cleaning chemical compounds discharged into wastewater flows and potentially to ground and surface water supplies;
- Increasing energy efficiency because new water softeners are also more energy efficient, saving the Bay-Delta ecosystem an increment of environmental damage resulting from energy production and distribution;
- Speeding the introduction of these improved water softening technologies and their benefits to the Bay-Delta watershed at large.

This project is consistent with the CALFED objectives in that it:

- Contributes to water quality by reducing TDS (salts);
- Reduces demand allowing for improvements in habitat and ecosystem functions;
- Maximizes local supplies and regional water supply development opportunities;
- Uses incentive-based rather than regulatory based action, by offering a rebate;
- Builds on existing water use efficiency programs, building on an earlier pilot program.

The project is consistent with local Water Management Plans:

- The Water Softener Rebate Program is a component of the SBCWD salt management plan that is outlined in the Groundwater Management Plan Update for the San Benito County portion of the Gilroy-Hollister Basin (August, 2003). The rebate program also dovetails with the conservation efforts of the SBCWD. By replacing older technology-based water softeners with newer ones, both water and salt use is reduced, benefiting

both efforts. The Water Resources Association of San Benito County (WRASBC) administers the current water conservation programs for the SBCWD. The WRASBC has established multi-agency cooperation that will make for a smooth transition for the Water Softener Rebate Program.

- SCVWD's Integrated Water Resources Planning document is the District's primary water supply management planning tool. This Plan has identified water conservation as one of the recommended ways to help meet future water supply goals. By helping to reduce water demand, this program is consistent with these conservation goals.

Statement of Work - Section 2: Technical/Scientific Merit, Feasibility

A rebate of \$150 will be offered to customers who agree to replace their pre-1999 inefficient water softener system with a more efficient, newer system. Older water softeners have clocks or electronic timers that automatically recharge the unit at a preset time and day. This type of water softener wastes water, energy and salts because it regenerates whether or not recharging is necessary. A newer method, called demand-initiated regeneration (DIR), senses when the resin must be recharged, either electronically or with a meter that measures and calculates usage.

This program is targeted at overcoming institutional and customer hurdles toward the replacement of inefficient water softener devices. Through detailed tracking of customer surveys in the last few years, SBCWD has identified 353 customers using older inefficient water softeners. These customers will serve as the first contact of outreach programs and incentive offers required to best effectuate market transformation to efficient softening technology.

In addition to the promotion of rebates to customers that have already been identified as possessing older water softening technology, this program also proposes a component of outreach and information for the benefit of retail distributors of water softeners. This outreach component will not only inform distributors of the existence of rebates for customers possessing and using inefficient water softeners; it will also provide informational brochures on the advantages of potassium chloride as an alternative ion-exchanger. (Potassium softened water not only does not harm plants, it provides an important nutritional component for plants.)

Task List and Schedule

The following is a list of tasks that will be completed throughout the program. Figure 1 and Table 1, at the end of this section, elaborate on milestones, dates and projected costs of tasks for project completion.

Task 1: Develop and Design Program

The task is to identify and clarify goals and objectives of this Program. Based on the results of SCVWD's Water Softener Pilot Rebate Program (in particular the lessons learned and recommendations for future programs) SBCWD and SCVWD will jointly develop and design a full scale Water Softener Rebate Program.

Task 2: Market Program

The database from SBCWD and SCVWD's historical customer surveys and SCVWD's Water Softener Pilot Program will be used to develop a target list of customers who have been identified as possessing and using the older inefficient timer-based water softeners. In addition, SBCWD and SCVWD will work closely with water retailers and water softener contractors and develop marketing materials to reach out to customers who may have an old inefficient water softener but have not participated in the previous survey and the Pilot Rebate Program. By doing so, the program implementation effectiveness and cost-effectiveness can be increased.

Task 3: Evaluate Program

The evaluation component of this program assesses costs, savings, and implementation effectiveness. Data will be collected throughout program on water savings and costs. Also, the Program will be periodically evaluated for the numbers of customer participation, with marketing methods adjusted if necessary as the program progresses.

Task 4: Report and Dissemination

Produce a draft and final report, including evaluation and program summaries. Allow adequate time for review and input from participating agencies and customers.

Task 5: Coordination and Administration

This task involves the coordination and administration for completion of the program tasks.

Preliminary Plans and Specifications and Certification Statements

Not applicable.

Environmental Documentation

Not applicable. This is not a "project" as defined by CEQA.

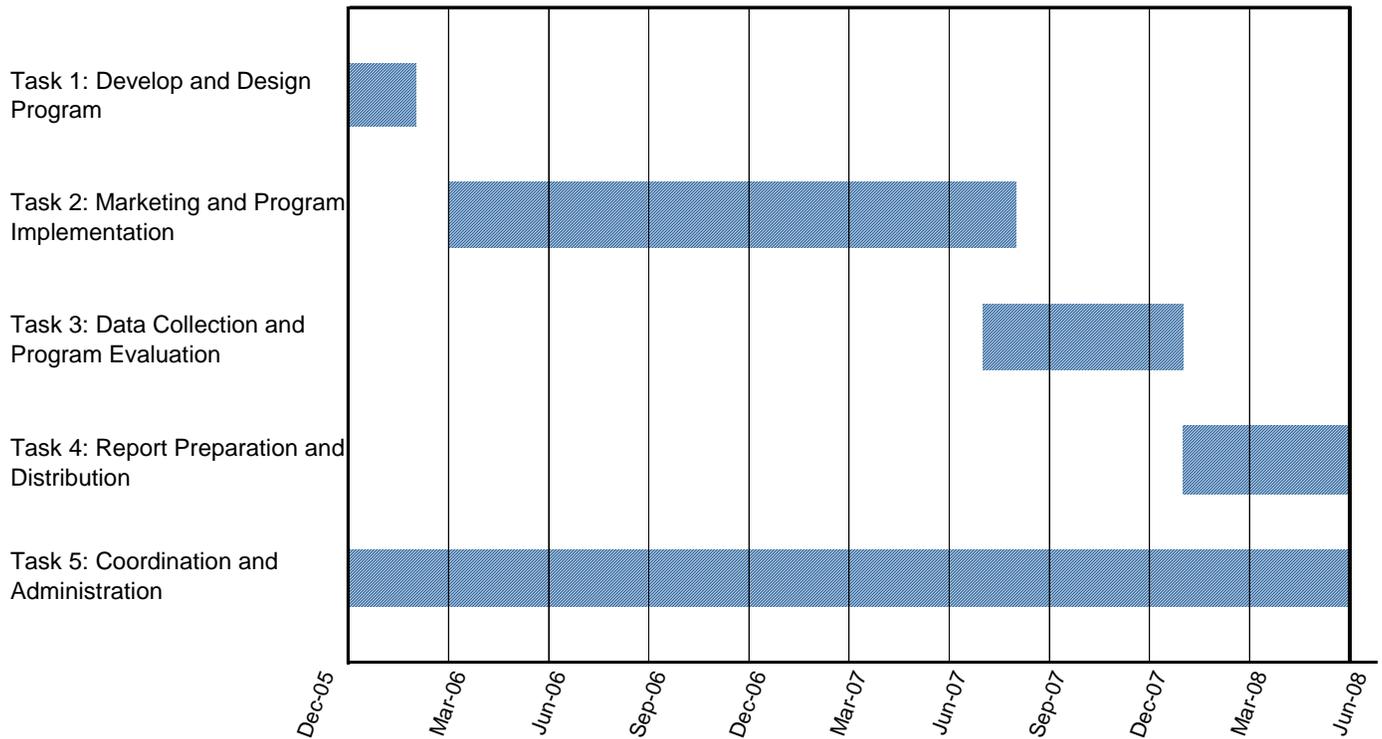


Table 1 – Schedule Dates and Projected Costs

Task	Start Date	End Date	Projected Cost
Task 1: Develop/Design Program	Dec. 05	Feb. 06	\$25,472
Task 2: Marketing/Program Implementation	March 06	Aug. 07	\$78,423
Task 3: Data Collection/Program Evaluation	Aug. 07	Jan. 08	\$101,574
Task 4: Report Preparation/Distribution	Jan. 08	June 08	\$87,933
Task 5: Coordination and Administration	Dec. 05	June 08	\$12,158
Costs for Tasks 1-5			\$305,560
Rebate Costs			\$300,000
TOTAL PROGRAM COSTS			\$605,560

Statement of Work - Section 3: Monitoring and Assessment

Description of how pre-project conditions and data baselines will be determined, and the anticipated accuracy of the data to be produced

Both of the agencies in this grant application, San Benito County Water District and the Santa Clara Valley Water District, have been collecting data from their customer surveys for several years through their respective programs. Each agency has identified how many of their customers are using old, inefficient water softeners versus the newer, more efficient models. This data will serve as a baseline for pre-project conditions. The SCVWD also has information to use from their Water Softener Rebate Pilot Program, which will build on the data from their water use survey program

Furthermore, the SCVWD recently completed a Residential Baseline Study, which specifically examined whether residents were using a water softener in Santa Clara County, and if so, what kind (efficient model or inefficient model). This study was completed by an independent consultant and is considered to have a high rate of accuracy.

Basic Assumptions Being Used

Assumptions used to calculate expected savings include:

- | | |
|--|-------|
| • Base use per person | 75gpd |
| • Persons per household (SF) | 4 |
| • Gallons per regeneration (old softener) | 20 |
| • Gallons per regeneration (new softener) | 9 |
| • Gallons flow between recharge (256 ppm, 15 grains/gal) | 300 |
| • Days per week @ 300 gpd use on average | 4 |
| • Percent replacements with filter or off-site recharge | 50% |

Explanation of the monitoring methodologies that will be used and the project monitoring data that will be collected to assess project results. Explanation of how the above data will be used to evaluate success in relation to project goals and objectives.

The Water Softener Rebate Program will monitor the participation levels on a monthly basis, to make sure that participation goals for the program are being met. Along with program participation levels, staff will review costs and benefits of the program, examining customers billing histories to determine water savings and cost data, such as advertising costs, printing costs, staff time, etc. This data will be analyzed against the original program assumptions and goals to evaluate its success.

Description of how external factors such as changes in weather, cropping programs, social conditions will be taken into account

External factors such as these should have very little effect on the success of the program. The success of the program is contingent upon residents purchasing water softening equipment.

Information about how the data and other information will be handled, stored, and reported and made accessible to DWR and others

All data will be collected, stored and reported. SCVWD has developed and utilized a customer database with appropriate fields for all relevant information, which will be used again for this program. SCVWD will share the database with SBCWD.

All data and information will be made available to DWR that do not violate confidentiality agreements, whenever it is requested. Quarterly and annual reports will be submitted to DWR (see "Reporting" below).

Reporting

Both SBCWD and SCVWD will be continually collecting water use data as part of this program. The data will be reported to DWR on a quarterly and annual basis, during the duration of the program and for five years after the completion of the program. SBCWD and SCVWD will submit this data to DWR annually for information during the post-program five year period.

Qualifications: Applicants and Cooperators

1. Applicant Qualifications

The Water Softener Rebate Program was initiated to encourage consumer purchase of water and energy efficient water softeners and encourage water conservation and pollution prevention in the Santa Clara/San Benito County regions. San Benito County Water District will serve as the Program Authorizing Agency.

San Benito County Water District brings substantial qualifications to this project. Water conservation efforts for the District are administered through the Water Resource Agency of San Benito County (WRASBC). A cooperative relationship has been established among several agencies through the WRASBC and these relationships have lead to several successful programs. The WRASBC has incorporated water use efficiency grants for funding some of these programs. All of the programs follow the Best Management Practices of the California Urban Water Conservation Council (CUWCC).

Previous grants are as follows:

U.S. Bureau of Reclamation
FY 99/00 Study of Blending Imported Water with Local Groundwater \$25,000.00

DWR 4600002448 (AB303)
 FY 02/04 Basin-wide Water Quality Monitoring Program \$200,000.00

U.S. Bureau of Reclamation, Field Services Program
 FY 02/03 Toilet Replacement Program (ULFT) \$15,000.00

FY 02/03 High-Efficiency Clothes Washer Rebate Program \$5,000.00

City of Hollister, Supplemental Funds
 FY03/04 Commercial and Residential Toilet Replacements \$126,000.00

DWR
 FY03/04 Regional Water Recycling Facilities Planning Study Grant \$350,000.00

Commercial Clothes Washer Rebates (Energy Solutions)
 FY03/04-FY04/05 Regional CPUC grant
 Regional grant to promote high-efficiency clothes washers through rebates \$2,000.00

Santa Clara Valley Water District also brings to this project a wealth of experience and qualifications, having managed a successful pilot Water Softener Rebate Program, and many other water use efficiency grant programs. The table below briefly describes the previous water use efficiency grant projects in which the SCVWD has participated.

Resumes of key SBCWD and SCVWD staff participating in this project are attached to the back of this proposal.

Santa Clara Valley Water District Past Grant Projects

Program	\$ Amount FY 01/02	\$ Amount FY 02/03	\$ Amount FY 03/04	\$ Amount FY 04/05
Regional Irrigation and Fertilizer Management Program - Regional Prop 13 grant - SCVWD is the lead agency in this five county regional program to disseminate technical assistance in the areas of agricultural irrigation and fertilizer management.				\$900,000
Residential Clothes Washer Rebates (EGIA) - Regional CALFED grant - SCVWD participated in this regional grant program to promote the purchase of high-efficiency clothes washers.	\$675,000			
Landscape and Agricultural Area Measurements - CALFED grant - A multi-spectral image mapping project to design optimum water budgets and promote irrigation efficiency.	\$406,000			
Commercial Clothes Washer Rebates (Energy Solutions) - Regional CPUC grant - Regional grant to promote high-efficiency clothes washers through rebates.		\$150,000		
Dedicated Landscape Meters - DWR Prop 13 grant - Promotes the retrofitting of mixed use landscape meters with dedicated landscape meters.		\$100,000		
Water Softener Rebate Program - DWR Prop 13 grant - This program offers a financial incentive to residents who replace their old timer-based water softeners with efficient, demand-based ones.		\$60,000		

Pre-Rinse Sprayers (CUWCC) - Regional CPUC grant - Regional program that provides free efficient pre-rinse spray valves to restaurants and commercial kitchens.		\$60,000		
Commercial, Industrial and Institutional Water Use Surveys - DWR funded - This program offered free water use surveys for businesses, recommending improvements.		\$100,000		
ET Controllers (EBMUD) - Regional DWR Prop 13 grant - This regional program offers funding for weather-based irrigation controller retrofits.			\$475,000	
Residential Clothes Washer Rebates (EGIA) - Regional DWR Prop 13 grant - This regional program promotes the purchase of high-efficiency clothes washers for residents.			\$618,750	
Irrigation Retrofits - DWR Prop 13 grant - This project is targeted at installing upgraded irrigation hardware for sites previously identified as having high, unrealized conservation potential.			\$100,000	
Pre-Rinse Sprayers - Regional CPUC grant - This regional program offers free high-efficiency pre-rinse spray valves for restaurants and commercial kitchens.			\$75,000	
CII Washers (Energy Solutions) - Regional CPUC grant - This regional program promotes high-efficiency clothes washers through rebates.			\$100,000	
CII Innovative Retrofits - DWR Prop 13 grant - This program promotes innovative high-efficiency equipment, such as High-Efficiency Toilet installations and medical equipment rebates.			\$496,000	

Totals \$1,081,000 \$470,000 \$2,314,750 \$450,000

2. Role of External Cooperators

This project as proposed in this grant application would be administered and conducted by the Santa Clara Valley Water District and the San Benito County Water District. As regional water wholesaler and groundwater management agencies, there are strong reasons for the two agencies to conduct this program. However, since the water and wastewater systems are complex in the region, water softener technology has potential benefits across a number of agency jurisdictions. SCVWD and SBCWD expect to approach a number of potential beneficiary agencies as the project moves forward to seek collaboration and coordination.

External cooperators such as appliance retailers, product manufacturers, water retailers, water customers, wastewater agencies and the regional energy service providers will be utilized for this project. External cooperators embrace and support the project primarily because the incentives enhance the benefits of promoting product acceptance. Letters of Support are included as attachments.

Outreach, Community Involvement, and Acceptance

Through detailed tracking of customer surveys in the last few years, both water agencies have identified customers using older inefficient water softeners. These customers will serve as the first contact of outreach programs and incentive offers required to best effectuate market transformation to efficient softening technology.

The SCVWD and SBCWD will actively seek partnerships with cities and water retailers to promote the rebate to residents and customers. This strategy worked well for SCVWD during its pilot water softener rebate program – the SCVWD marketed the program through one of the regions largest water retailers, San Jose Water Co., which included the information on their customer's water bills.

The SBCWD will seek to expand this program beyond the agencies and water retailers that participate in other water conservation programs administered by the WRASBC.

Additionally, both agencies will work closely with water softener retailers, such as Home Depot and Sears, and manufacturers of water softeners to market the rebate program and provide them with rebate applications.

The program will target single-family and multi-family sites with special consideration given to low-income residents. This program will aid in helping reduce water costs to low-income residents.

Most of the training and employment potential of this project are from the vendors and contractors that install and service the equipment.

This program has been crafted to first reach out to customers that have voluntarily agreed to participate in one of the customer water use home surveys. It is expected that this program will have a good level of acceptance among this group.

Innovation

In November 2003, the SCVWD began its Water Softener Rebate Pilot Program, providing residents rebates for the replacement of their old, inefficient old water softeners. This program was innovative in that it provided a way to save water and prevent pollution all in one rebate program. This successful program was a win/win situation for all parties: water agencies realized water savings; residents realized cost savings, from reduced need for water, energy and salts for their softeners; waste water that was lower in TDS; and manufacturers and retailers of efficient water softeners had another marketing tool for their product.

This proposed program is innovative because it not only builds on the lessons learned from the initial pilot program, it also takes it further by expanding it to the Santa Clara County/San Benito County region. These areas have a great deal in common, including a shared groundwater basin and shared imported water facilities. In recognition of our shared facilities and interests in regional water management, SBCWD and SCVWD, along with Pajaro Valley Water Management Agency, have entered into a MOU for coordination of water resource planning. This Water Softener Rebate Program is an outgrowth of our agreement to coordinate and collaborate on projects and programs, including water conservation programs. Regional programs have advantages that others do not, including combining resources and knowledge, and economies of scale. In this case, the regional program also contributes to the development

of regional water use efficiency/demand management efforts and is part of a larger effort to development regional water supplies.

Benefits and Costs

The project outcomes include the following physical results:

- Old water softeners will be replaced, resulting in a reduction of water use, with less water imported from the Bay-Delta to urban water agencies;
- The new softeners will reduce the introduction of TDS and salts into wastewater flows and potentially to ground and surface water supplies.
- Non-regeneration water softener softeners that replace old water softeners will completely eliminate the need of regeneration water, and no salt will be loading into the wastewater stream.
- New water softeners are also more energy efficient, saving the Bay-Delta ecosystem an increment of environmental damage resulting from energy production and distribution.
- The experience will allow the collection of information on the most cost-effective means to maximizing point-of-use water softener efficiency—such as device settings to optimize efficiency for local water quality conditions and plumbing configuration.
- Cost saving to customers will be reflected in their water, salt, and energy bills, and potentially reduced wastewater bills if they are tied to water consumption.

Quantified Project Outcomes And Benefits

Quantified benefits include:

- Water savings;
- Wastewater volume savings; and
- Reduction of salt loading in the wastewater stream
- Reduction of TDS is essential for effective recycle projects

Water savings accrued from the proposed program derives from three potential outcomes: 1) Replacement of old water conditioners with high efficiency models; 2) replacement of old water conditioners with water filters; or 3) replacement of old water conditioners with off-site regeneration services.

The water savings benefits will occur on a year round basis, contributing fully to the reduction of peak season demand.

The benefits quantified in this grant will accrue to water and wastewater agencies.

Non-Quantified Project Outcomes and Benefits

Benefits and outcomes that are not quantified or not fully quantified include the following:

Table 2: Combined Cost and Benefit (\$2004)

Year	Costs	Savings (gpd/device)	Savings AFY all devices	Supply Benefits (\$/AF)	Wastewater Benefits (\$/AF)	All Agency Benefits (\$)	PV Costs	PV Benefits	Annual NPV	Annual NPV
0	\$ 302,780	0.0	-	\$ 430	\$ -	\$ -	\$ 302,780	\$ -	\$ (302,780)	\$ (302,780)
1	\$ 302,780	17.4	38.98	\$ 439	\$ -	\$ 17,097	\$ -	\$ 16,129	\$ 16,129	\$ (589,431)
2	\$ -	17.4	38.98	\$ 447	\$ -	\$ 17,439	\$ -	\$ 15,521	\$ 15,521	\$ (573,910)
3	\$ -	17.4	38.98	\$ 456	\$ -	\$ 17,788	\$ -	\$ 14,935	\$ 14,935	\$ (558,975)
4	\$ -	17.4	38.98	\$ 465	\$ -	\$ 18,143	\$ -	\$ 14,371	\$ 14,371	\$ (544,604)
5	\$ -	17.4	38.98	\$ 475	\$ -	\$ 18,506	\$ -	\$ 13,829	\$ 13,829	\$ (530,775)
6	\$ -	17.4	38.98	\$ 484	\$ -	\$ 18,876	\$ -	\$ 13,307	\$ 13,307	\$ (517,468)
7	\$ -	17.4	38.98	\$ 494	\$ -	\$ 19,254	\$ -	\$ 12,805	\$ 12,805	\$ (504,663)
8	\$ -	17.4	38.98	\$ 504	\$ -	\$ 19,639	\$ -	\$ 12,322	\$ 12,322	\$ (492,341)
9	\$ -	17.4	38.98	\$ 514	\$ -	\$ 20,032	\$ -	\$ 11,857	\$ 11,857	\$ (480,484)
10	\$ -	17.4	38.98	\$ 524	\$ -	\$ 20,433	\$ -	\$ 11,409	\$ 11,409	\$ (469,075)
11	\$ -	17.4	38.98	\$ 535	\$ -	\$ 20,841	\$ -	\$ 10,979	\$ 10,979	\$ (458,096)
12	\$ -	17.4	38.98	\$ 545	\$ -	\$ 21,258	\$ -	\$ 10,565	\$ 10,565	\$ (447,531)
13	\$ -	17.4	38.98	\$ 556	\$ -	\$ 21,683	\$ -	\$ 10,166	\$ 10,166	\$ (437,365)
14	\$ -	17.4	38.98	\$ 567	\$ -	\$ 22,117	\$ -	\$ 9,782	\$ 9,782	\$ (427,583)
15	\$ -	17.4	38.98	\$ 579	\$ -	\$ 22,559	\$ -	\$ 9,413	\$ 9,413	\$ (418,170)
16	\$ -	17.4	38.98	\$ 590	\$ -	\$ 23,010	\$ -	\$ 9,058	\$ 9,058	\$ (409,112)
17	\$ -	17.4	38.98	\$ 602	\$ -	\$ 23,471	\$ -	\$ 8,716	\$ 8,716	\$ (400,396)
18	\$ -	17.4	38.98	\$ 614	\$ -	\$ 23,940	\$ -	\$ 8,387	\$ 8,387	\$ (392,009)
19	\$ -	17.4	38.98	\$ 626	\$ -	\$ 24,419	\$ -	\$ 8,071	\$ 8,071	\$ (383,938)
20	\$ -	17.4	38.98	\$ 639	\$ -	\$ 24,907	\$ -	\$ 7,766	\$ 7,766	\$ (376,172)

Assumptions:

Number Softeners Replaced	2000
Cost per Replacement	\$150.00
Savings (gpd) per device	17.4
Avoided Supply Cost (Year 0 \$/AF)	\$430.00
Real Supply Cost Escalation (annual)	2.0%
Real Discount Rate	6%

- Reduced demand for water imported from the Bay-Delta. This grant application does not quantify the specific share of imported and local water.
- Reduced demand on groundwater resources. This includes both less demand pressure and less potential for introduction of TDS into groundwater due to reduced TDS in wastewater inflows.
- Reduced TDS load into wastewater system (not fully quantified)
- Reduced amount of detergents and cleaning agents into wastewater system
- Reduced water cost (on average)
- Reduced energy bills and reduced water heater repairs
- Increases the reliability and sustainability of water supplies

List of Major Assumptions

Assumptions used to calculate expected savings include:

- | | |
|--|-------|
| • Base use per person | 75gpd |
| • Persons per household (SF) | 4 |
| • Gallons per regeneration (old softener) | 20 |
| • Gallons per regeneration (new softener) | 9 |
| • Gallons flow between recharge (256 ppm, 15 grains/gal) | 300 |
| • Days per week @ 300 gpd use on average | 4 |
| • Percent replacements with filter or off-site recharge | 50% |

With these assumptions, the expected savings are 17.4 gallons per day per replacement

Budget

As presented in the budget section of this proposal, the estimated project cost is \$605,560. The SCVWD and SBCWV propose to fund the project using a combination of water district and grant funding. An award of the requested grant of \$300,000 would allow implementation of the proposed project.

The SCVWD and SBCWV intend to use in-house forces and contracted services to complete the work described in this proposal.

Salaries and Wages

The program manager shall be Shawn Novack, Water Conservation Program Manager of the Water Resources Association of San Benito County under the supervision of John S. Gregg, District Manager (Grant Administrator). The hourly rate and hourly committed shown for these two positions are shown on the attached budget summary. Specific tasks shall be focused on implementing the water softener rebate and education/audit tasks for the project. The hourly rate and hours are to be expended evenly between both major tasks. The salaries are good

through October 2005 at which point they shall be adjusted for the cost of living in the area. This shall also occur on October 2006.

Fringe Benefits

The fringe benefit rate shown in the attached budget is for this proposal only. It is a composite estimate of the two position classifications to be used on this project. These costs include the cost of insurance, workmen's compensation, social security, and other payroll costs.

Operations and Maintenance

There are no anticipated annual operations and maintenance costs for this program.

Total Cost

The total cost for this project is \$605,560. The SCVWD and SBCWD are providing \$305,560 total in in-kind services for the program. \$300,000 in total grant funding is being requested for this program. Table 3 lists the budget for the program.

Table 3: Budget for SBCWD/SCVWD Joint Water Softener Rebate Program

(A) SCVWD/SBCWD Budget on Each Task

Task	SBCWD/SCVWD: Conservation Unit Manager		SBCWD/SCVWD: Conservation Specialist 1		SBCWD/SCVWD: Conservation Specialist 2		Total	
	Hours	\$63.73/hr.	Hours	\$36.66/hr.	Hours	\$40.47/hr.	Hours	\$/Task
Task 1: Develop/Design of Softener Rebate Program	40	\$2,549	120	\$4,399	120	\$4,856	280	\$11,805
Task 2: Marketing/Implement Rebate Program	60	\$3,824	400	\$14,664	400	\$16,188	860	\$34,676
Task 3: Data Collection/Evaluate Rebate Program	80	\$5,098	400	\$14,664	400	\$16,188	880	\$35,950
Task 4: Report Preparation/Dissemination	220	\$14,021	160	\$5,866	160	\$6,475	540	\$26,361
Task 5: Coordination and Administration	40	\$2,549	40	\$1,466	40	\$1,619	120	\$5,634
Total	440	\$28,041	1,120	\$41,059	1,120	\$45,326	2,680	\$114,427

(B) Consultant Budget On Each Task

Task	Evaluation Consultant		Total	
	Hours	\$120.00/hr.	Hours	\$/Task
Task 1: Develop/Design of Alternative Rebate Program	-	\$0	-	\$0
Task 2: Marketing/Implement Rebate Program	30	\$3,600	30	\$3,600
Task 3: Data Collection/Evaluate Rebate Program	200	\$24,000	200	\$24,000
Task 4: Report Preparation/Dissemination	240	\$28,800	240	\$28,800
Task 5: Coordination and Administration	-	\$0	-	\$0
Total	470	\$56,400	470	\$56,400

Total Budget

Summary	SBCWD/SCVWD	Evaluation Consultant	Total
Raw Labor	\$114,427	\$56,400	\$170,827
Overhead (@115.78%)*	\$132,483	included	\$132,483
Local Travel and Transportation	\$2,250	\$0	\$2,250
Softener Costs	\$300,000	\$0	\$300,000
Total Project Costs	\$549,160	\$56,400	\$605,560
Participant Agency Costs	\$249,160	\$56,400	\$305,560
Requested Grant Funding	\$300,000	\$0	\$300,000

*FY 2002 SCVWD's Federal Office of Management & Budget (OMB) Circular A-87 Overhead Rate. (The SCVWD uses a 2-year cycle application of its OMB A-87 Overhead Rate).

**APPENDIX C
PROJECT IMPLEMENTATION COSTS TABLE**

APPLICANT: San Benito County Water District / Santa Clara Valley Water District
Project Title: Water Softener Rebate Program

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)

	Category (I)	Project Costs \$	Contingency % (ex. 5 or 10)	Project Cost + Contingency \$	Applicant Share \$	State Share \$	Life of investme nt (Years)	Capital Recovery Factor (Table C-4)	Annualized costs \$
		(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)
	Administration (for initiation of project)								
	Salaries, wages	\$114,427	NA	\$114,427	\$114,427	NA	20	0.0872	\$9,978
	Fringe benefits	\$132,483	NA	\$132,483	\$132,483	NA	20	0.0872	\$11,552.52
	Supplies	NA	NA	NA	NA	NA			
	Equipment	NA	NA	NA	NA	NA			
	Consulting services	\$56,400	NA	\$56,400	\$56,400	NA	20	0.0872	\$4,918.08
	Travel	\$2,250	NA	\$2,250	\$2,250	NA	20	0.0872	\$196.20
	Other (Water Softener Rebate Cost)	\$300,000	NA	\$300,000		\$300,000	20	0.0872	\$26,160.00
(a)	Total Administration Costs ¹	\$605,560	NA	\$605,560	\$305,560	\$300,000	20	0.0872	\$52,804.83
(b)	Planning/Design/Engineering	NA	NA	NA	NA	NA	NA	NA	NA
(c)	Equipment Purchases/Rentals/Rebates/Vouchers	NA	NA	NA	NA	NA	NA	NA	NA
(d)	Materials/Installation/Implementation	NA	NA	NA	NA	NA	NA	NA	NA
(e)	Implementation Verification	NA	NA	NA	NA	NA	NA	NA	NA
(f)	Project Legal/License Fees	NA	NA	NA	NA	NA	NA	NA	NA
(g)	Monitoring and Assessment	NA	NA	NA	NA	NA	NA	NA	NA
(h)	Report Preparation	NA	NA	NA	NA	NA	NA	NA	NA

(i)	Structures	NA	NA	NA	NA	NA	NA	NA	NA
(j)	Land Purchase/Easement	NA	NA	NA	NA	NA	NA	NA	NA
(k)	Environmental Compliance/Mitigation/Enhancement	NA	NA	NA	NA	NA	NA	NA	NA
(l)	Construction	NA	NA	NA	NA	NA	NA	NA	NA
(m)	Other (Specify)	NA	NA	NA	NA	NA	NA	NA	NA
(n)	TOTAL (=a+...+m)	\$605,560	NA	\$605,560	\$305,560	\$300,000	NA	NA	\$52,804.83
(o)	Cost Share Percentage	NA	NA	NA	50.45%	49.55%	NA	NA	\$52,804.83

1 (Excludes administration O & M costs)

Table C-2: Annual Operations and Maintenance Costs

Operations (1) <i>(I)</i>	Maintenance <i>(II)</i>	Other <i>(III)</i>	Total <i>(IV)</i> <i>(I + II + III)</i>
NA	NA	NA	NA

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

Table C-3: Total Annual Project Costs

Annual Project Costs (1) <i>(I)</i>	Annual O & M Costs <i>(2)</i> <i>(II)</i>	Total Annual Project Costs <i>(III)</i> <i>(I + II)</i>
\$52,804.83	NA	\$52,804.83

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

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

Table C-4: Capital Recovery Factor

(for a discount rate of 6%)

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

Life of Project (in years)	Capital Recovery Factor
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

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

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

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:		20 Years		780.90 Acre-Foot
Local:			Not Applicable	

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

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

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

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

Table C-6. Project Annual Local Monetary Benefits

ANNUAL LOCAL BENEFITS	ANNUAL QUANTITY ⁴	UNIT OF MEASUREMENT	ANNUAL MONETARY BENEFITS (Thousands \$/yr)
(a) Avoided Water Supply Costs (Current or Future Sources)	38.98	Acre-Foot	\$ 38.98
(b) Avoided Energy Costs	0	Kw-Hr	\$ 0
(c) Avoided Waste Water Treatment Costs	0	Acre-Foot	\$ 0
(d) Avoided Labor Costs	0	\$/hr	\$ 0
(e) Other (describe)			
(f) Total [(a)+(b)+(c)+(d)+(e)]	NA	NA	\$ 38.98

⁴Examples include avoided cost of current water supply (or future supply if available), energy savings, labor savings, waste water treatment.

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

(a) Total Annual Monetary Benefits (Table C-6, row(f))	\$ 38,980.00
(b) Total Annual Project Costs (Table C-3, column III)	\$ 52,804.83

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

Applicant's cost share (%): (from Table C-1, row o, column V)	\$ 50.45%
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.	

BIO DATA: John S. Gregg

District Manager/Engineer, San Benito County Water District; 1995 to Present
Registered Civil Engineer, State of California
B.S. Civil Engineering and Mechanics

Over 40 years of professional engineering experience in both private and public sector including engineering consulting, United States Bureau of Reclamation, Contra Costa Water District and San Benito County Water District.

Over 20 years experience in water district senior management, including both general management and technical management positions.

While with the Contra Costa Water District, Mr. Gregg was responsible for management of that District's Los Vaqueros Project; the largest public works project in the history of Contra Costa County and the first major water supply reservoir to be approved in the State of California under the California Environmental Quality Act, National Environmental Protection Act, Endangered Species Act and Section 404 of the Clean Water Act.

Mr Gregg provided managerial support for the development and formation of the Water Resources Association of San Benito County; a mutual benefit non-profit corporation of which the water and wastewater agencies are members. The Association provides oversight for the planning and implementation of water resource management programs in a cooperatively developed and maintained groundwater management plan. Mr Gregg has served as the Association Coordinator of the Association since its formation.

Mr. Gregg has been recognized for his ability to develop cooperative working relationships among agencies and organizations and maintain a steady and evenhanded influence on issues of mutual concern.

EXPERIENCE

Managed through utility organizational units:

Countywide water resource management programs for both surface water and groundwater including two water supply dams and reservoirs, and groundwater and surface water systems for the delivery of approximately 70,000 acre feet annually to irrigators, industries and municipal agencies in a service area of 60,000 acres and small water systems for providing drinking water in rural areas..

Development and implementation of a cooperatively developed groundwater management plan and programs for water quality monitoring, water conservation, and urban, rural and agricultural water and wastewater education.

Operation and maintenance of raw water facilities for the delivery of approximately 100,00 acre-feet annually to irrigators, industries and municipal agencies in a service area of about 110,000 acres.

Operation and maintenance of facilities for the treatment, distribution and retail of potable water to about 55,000 services in a service area growing at 2,000 services per year.

Planning, design and construction / rehabilitation of water supply and distribution facilities including canals, pipelines, pumping plants, dams reservoirs, and treatment plants.

Development and implementation of water conservation and water use efficiency programs for both urban water users and agricultural water user. Agricultural water user support programs included nutrient and soil and water amendment management.

Financial and administrative activities including customer services, personnel and safety, banking, investments, debt management, financial reporting, accounting, budgeting, financial planning and rate setting.

Managed the development, project approval, funding, design and state and federal permitting of the Los Vaqueros Project. Approvals include CEQA, NEPA, State and Federal Endangered Species Acts, 404 and water rights, including amendment of Central Valley Project water rights. The majority of this work was accomplished through consulting contracts.

Negotiated final Endangered Species Act and Fish and Wildlife Coordination Act agreements.

Represented the Los Vaqueros Project in public presentations, special presentations (financial, regulatory, legislative, etc.), negotiations and coordination with public and private interests.

Development and implemented the project organization and office integrating District Departments, project staff and consultant staff for the Los Vaqueros Project.

Managed land acquisition for about 12 miles of public road, 20 miles of large diameter pipelines, and 20,000 acres of watershed lands.

Negotiated, as District representative, the first major water supply contract amendment with the Bureau of Reclamation under the Central Valley Project Improvement Act. Also, and represents the San Benito County Water District as District representative in it's Bureau of Reclamation water supply, water system operations and repayment contract matters..

Organized and implemented the transfer from the Bureau of Reclamation to a new District organizational unit of all operation and maintenance activities for the Contra Costa Canal system. That system was approximately 60 miles of canal (350 cfs – 40 cfs), four major pumping plants (approx, 400 cfs), two small dams, substation and transmission lines, and associated operating facilities and equipment.

Negotiated, implemented and administered labor contracts with Utility Workers of California, Public Employees Union, Local 1, and Service Employee International Union (SEIU).

Develop basis for Los Vaqueros Project Labor Agreements.

Provided managerial, technical, and administrative assistance to General Managers, Boards, of Directors and various local government Boards and Committees.

HOSSEIN ASHKTORAB

EDUCATION:

Ph.D., University of California, Davis, 1989. Plant, Soil and Water Science.
Master of Science, California State University, Chico, 1981. Irrigation.
Bachelor of Science, University of Mazandaran, 1979. Agriculture Engineering.

PROFESSIONAL EXPERIENCE:

Unit Manager, Water Use Efficiency Unit, Santa Clara Valley Water District, Jan. 2001- Present

Responsible for managing the District's Water Use Efficiency Unit, providing technical direction, coordinating its activities with other District units, and external stakeholders including 11 water retailers. The water conservation program is a long-term commitment of the District, which provides the highest quality programs and educational opportunities to residents, businesses and agriculture in Santa Clara County.

Managing the implementation of all 14 BMPs required by the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU). In addition, managing the adopted Water Conservation Plan (including an agriculture water conservation program) to comply with US Bureau of Reclamation mandate as required by the Central Valley Project Improvement Act (CVPIA).

Manage and participate in the development, implementation and administration of the water conservation and water recycling programs with more than \$9 million annual budget in Santa Clara County. Additionally, managed numerous grant funded programs, which, in FY 03/04 alone, totaled over \$2.8 million.

Develop partnership with local and regional cities, including various water conservation programs with City of San Jose, with more than \$3 million cost-sharing budget.

Participate and engage in the recycled water partnership such as the South Bay Water Recycling cost sharing agreement for the \$50 million in projects in the Santa Clara County.

Participate and coordinate with local, regional and statewide water conservation and recycling organizations. Member of CUWA water conservation committee and CUWCC steering committees.

Responsible for implementation of CALFED grants for the District Agricultural and Urban Water Use Efficiency programs. Developed proposals and received grant fund for two District's water recycling projects from Proposition 13 grant funding.

In partnership with the Santa Clara County Farm Bureau, UC Cooperation Extension, Department of Agriculture, Department of Water Resources, and Santa Clara County Natural Resource Conservation Service, developed and conducted nine Agricultural Irrigation and Nutrient Management seminars for the County growers and interested groups

Water Conservation Specialist, Water Conservation & Recycling Unit, Santa Clara Valley Water District, Jan. 1997 - Jan.2001

Developed and managed water conservation programs including programs for agricultural and large landscape water users.

Technical staff to District Landscape Water Advisory Committee, and District Agriculture Water Advisory Committee.

RESEARCH AND TEACHING EXPERIENCE:

Researcher/ Assistant professor, University of California, Davis. June 96 - Dec 1997.

Crop water requirement and water management
3-D Aerodynamic latent heat flux research studies
Field research study on irrigation systems and evaluations.

Assistant Professor, Dept. of Irrigation Eng., Shiraz University. Sept.93-June 96.

Lectured on urban water use and conservation
Lectured on crop water requirements and evapotranspiration.
Lectured on irrigation systems and design.
Directed related laboratories and field trips.

Associate Land Water Use Analyst, California Department of Water Resources, December 1986 to September 1993.

Technical coordinator for the Assembly Bill 325 Task Force Advisory Committee in 1991 and 1992 and facilitated the development of the State Landscape Water Conservation Model Ordinance. Assisted water agencies, cities and counties to develop and implement landscape water conservation guidelines and ordinances.

As a member of the State Water Conservation Advisory Committee, participated in the development of the Best Management Practices (BMPs) in water conservation.

Participated in the negotiation with the agricultural stakeholders and U.S. Bureau of Reclamation for the State Department of Water Resources Drought Water Bank. Developed a new method using nonlinear regression model to estimate crop water requirement values for major crops in the Delta's agricultural area which was the bases for the negotiation of the irrigation water use.

Supported agencies in the development of their water management plan, implementation and evaluation of various water conservation programs such as the ULF toilet replacement, toilet displacement devices, low flow shower heads and outdoor water audits.

Developed a new method using nonlinear regression model to estimate historical ETo values in the Delta's agricultural area.

Member of the 1989 and 1992 Xeriscape Conferences Steering Committee and chaired the Award Subcommittee meetings.

Research Assistant, University of California, Davis. September 1981 to May 1982 and April 83 - Dec.86

Field laboratory investigations related to the separation of soil evaporation and transpiration of tomato plants. Studied the evaporation rate under different plant growth stages and soil moisture contents using highly sensitive Lysimeter.

Collected and interpreted weather station data at U.C. Davis field station. Worked extensively with instruments, soil moisture and particle size analysis.