2004 Water Use Efficiency Proposal Solicitation Package
Proposal Part One:
Project Information Form

Applying for (select one):	☑ Urban ☐ Agricultural
1. (Section A) Urban or Agricultural Water Use Efficiency Implementation Project	☐ (a) implementation of Urban Best Management Practice:. #_____ ☐ (b) implementation of Agricultural Efficient Water Management Practice, # _____ ☐ (c) implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # or Quantifiable Objective #, if applicable _____ ☐ (d) Specify other: _____
2. (Section B) Urban or Agricultural Research and Development; Feasibility Studies, Pilot, or Demonstration Projects; Training, Education or Public Information; Technical Assistance	☑ (e) research and development, feasibility studies, pilot, or demonstration projects ☐ (f) training, education or public information programs with statewide application ☐ (g) technical assistance ☐ (h) other
3. Principal applicant (Organization or affiliation)	California Urban Water Conservation Council
4. Project Title:	**Empirical Analysis of Rate Impacts on Urban Water Consumption**
5. Person authorized to sign and submit proposal and contract	Name, title: Mary Ann Dickinson Mailing address: 455 Capitol Mall, #703, Sacramento, CA 95814 Telephone: 916-552-5885 Fax: 916-552-5877 E-mail: maryann@cuwcc.org
6. Contact person (if different):	Name, title: _____ Mailing address: _____ Telephone: _____ Fax: _____ E-mail: _____
7. Funds requested (dollar amount) *(from Table C-8, column II)*	$399,704

2004 Water Use Efficiency Proposal Solicitation Package
Proposal Part One:
Project Information Form (continued)

8. Applicant funds pledged (dollar amount): $147,414

9. Total project costs (dollar amount *(from Table C-1, column II, row l)* $547,118

10. Is your project locally cost effective?

☐ (a) yes

☑ (b) no

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.)

11. Is your project required by regulation, law or contract? If no, your project is eligible.

☐ (a) yes

☑ (b) no

If yes, the project is eligible if it is not currently required? Provide a description of the regulation, law or contract and an explanation of why the project is not currently required.

2004 Water Use Efficiency Proposal Solicitation Package
Proposal Part One:
Project Information Form (continued)

12. Duration of project (month/year to month/year):	10/05 to 10/07
13. State Assembly District where the project is to be conducted:	Statewide
14. State Senate District where the project is to be conducted:	Statewide
15. Congressional district(s) where the project is to be conducted:	Statewide
16. County where the project is to be conducted:	Statewide
17. Location of project (longitude and latitude)	Statewide
18. How many service connections in your service area (urban)?	Statewide
19. How many acre-feet of water per year does your agency serve?	Statewide

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 _____

2004 Water Use Efficiency Proposal Solicitation Package
Proposal Part One:
Project Information Form (continued)

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

    (Provide supporting documentation.)

☐ (a) yes, _____ median household income
☑ (b) no

2004 Water Use Efficiency Proposal Solicitation Package
Proposal Part One:

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.

_____	Mary Ann Dickinson Executive Director	January 11, 2005
Signature	Name and title	Date

Statement of Work, Section One: Relevance and Importance

The goal of this proposal is to improve the understanding of water rates as a conservation measure and to encourage more widespread implementation of Best Management Practice #11 (Conservation Pricing). Although a number of water agencies have adopted conservation pricing, a large majority have not done so due to the perceived revenue loss and political equity issues of amending rate structures in the water supply arena. In nearly every instance of non-utility action, a root cause has been a perception that credible proof does not exist that conservation rate pricing will be technically, financially, and politically supportable and ultimately successful. This project will conduct a study to help ameliorate these perceptions.

In order to do this, the project proposes to conduct an in-depth statistical analysis of two large water supply agencies that have implemented conservation-oriented water rate structures to analyze the actual effects of that rate structure change.

One of the key barriers to implementation of water rate reform is a lack of understanding on the part of water agency managers as well as their customers of exactly what effect a change in rate structure will have upon water consumption *in the near term.* This project will, in the first phase, develop statistically reliable and practically detailed parameter estimates; the second phase of the analysis will apply the empirical estimates to water rate problems that confront all California water utilities. Finally, the project proposes to conduct a series of public workshops to introduce the statistical findings of the first phase, the water rate models adapted in the second phase, and the case studies of their application in at least two small utilities.

There is a great chasm between theoretical literature and practical working knowledge that water engineers know and trust. Water agencies must be concerned not only about water flows, but also about revenue flows. There is a considerable literature that focuses on long run price elasticities. Unfortunately, much of this literature is not very comprehensive or useful.

To form a complete picture of how future consumption will change with respect to water rates, one must have an understanding of the demand for water. The key issue for water supply and demand balance is the “firmness” of demand—how willing are customers demanding potable water services to *pay* for the service rendered? A frequently-cited technical measure of demand response is termed *price elasticity*—the percentage change in quantity demanded brought about by a percent change in price.

As noted above, empirical studies of price elasticity have produced results of uneven quality and usability. There are several meta studies that document statistical estimates of price elasticity for water demand that have an unhelpfully

wide range. The better studies have estimated that water demand responds very little to fluctuations in price, i.e., water demand is very price inelastic[1].

Interestingly, water utilities do not, in practice, make adjustments for response of water consumption to changes in rates. When changes in water rates are relatively small, this practice may carry little risk. When large changes in water rates are necessary, this practice can result in cost under-recovery and a greater perceived risk to changing water rates.

Even under assumed conditions of revenue neutrality, rate reform to more efficiency-oriented water rates can result in large customer-specific rate changes and the attendant rate design risks. To accurately design water rates, knowledge of the effect of rates on the entire distribution of consumption is required. The vast preponderance of empirical price elasticity studies presumes a constancy of price response throughout the distribution; this leads to unrealistic and risky revenue prediction.

The proposed research directly addresses these information shortcomings. It builds on previous applied modeling work to focus on detailed and statistically reliable estimates of price response parameters that can be generalized to water utilities across California. Specifically, a recent American Water Works Research Foundation study drew a stratified sample of 8,000 accounts and developed models and methods for their depiction.[2] This modeling work would be extended to include structural models to also capture the direct effect of water conservation programs, in addition to water rates. The project team has assembled technical experts to bring the latest advances in methodological rigor.[3]

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[1] There are two examples set in California illustrate the point. Renwick, et al., "Measuring the Price Responsiveness of Residential Water Demand in California's Urban Areas," prepared for the California Department of Water Resources, May 1998, using aggregate data on eight California water agencies estimated a price elasticity of about -0.16. This implies that a 10 percent increase in price would reduce the aggregate quantity demanded by about 1.6 percent. Chesnutt et al., *Ultra Low Flush Toilet Programs*, a report for the Metropolitan Water District of Southern California, July 1995, used disaggregate data on approximately 23,000 individual households in Southern California and a structural random coefficients model to estimate a price elasticity of -0.09 for single family households and even less for multiple family complexes.

[2] See Chesnutt, *Spatial Demand Allocation for Distribution System Design*, Report No. 1P-4C-9093402/03-CM, Awwa Research Foundation, 2003.

[3] See Nauges, C. and R. Blundell, "Estimating residential water demand under block rate pricing: a nonparametric approach" (with Richard Blundell), forthcoming *Journal of Applied Econometrics*.

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

Issues

There are several practical hypotheses to be tested in this research:

- How does the consumption of different customers respond differently to water rate changes?
- What are the determinants of differences in price response?
- What is the interaction between water rate levels and participation in conservation programs?
- What is the effect of deterministic trends in income and home values on water consumption and price response?
- How does consumption differ among newly constructed homes? Inland versus coastal areas? Northern versus southern climate zones?

Methods

The methods proposed in this research are statistical (panel data regression) and analytical (quantitative and qualitative):

- **Retrospective Statistical Analysis – Descriptive and Structural Models.** This research will build on prior work that developed a stratified-sampling approach to generating inference from water utility billing system-derived consumption data. The research would construct a large sample of historical account level water use records that would serve as the basis for reliable inference and generalization about the effect of water rates on water consumption. These data would be carefully merged with multiple climatic measures, customer-specific characteristics from tax assessor data and billing systems, and historical information on water rates and conservation program participation. Then two distinctly different types of statistical models would be applied. First, descriptive panel data and robust regression models would be applied to diagnose, validate, and describe the dataset. Second, a set of structural models would be developed in collaboration with several technical advisors. The partitioning of inference between description (what were the changes in consumption) and explanation (what explains changes in consumption) is an extremely useful device to separate the many valid questions that can be asked of these data.

- **Prospective Water Revenue Analysis – Policy Simulations.** This portion of the research will seek to generalize the results of the retrospective analysis. It will do so by building on the publicly-sponsored construction of spreadsheet-based planning tools for predicting the *distributional* effects of multiple water rate structure alternatives on the distribution of customer water consumption and the revenue thereby derived. The policy simulations treat the estimated parameters from the statistical analysis as a given, and

allow water consumption and the revenue generated to vary across rate structures. Many water agencies decision makers have not had a full range of rate choices presented in traditional rate setting approaches. This portion of the research will give them that.

- **Case Studies of Application.** The results of the application of rate models to the prediction of future revenue will be documented in at least two case studies. The utility settings for the case studies would be selected to illustrate different utility characteristics (built-out with rehabilitation issues versus fast growing new development, municipal versus special district, coastal versus inland). In this way, the power and limits of the underlying models and methods can be explored and explained in ways that reduce the risks of misapplication. Examples taught through case studies are a readily-grasped, generalized way to communicate findings, qualifications, and limitations to inference of the research.

This proposal seeks to conduct much more in-depth research into the affect of water rates on water consumption. Outcomes will be:

- Statistically reliable and generalizable parameter estimates;
- Empirical analysis of the direct effect of rates and conservation programs in two large agencies that have successfully implemented conservation oriented rates;
- Assessable and user-friendly rate models to depict the effect of water rates on consumption and revenue;
- Case studies of applications of these tools;
- A report summarizing the findings; and
- Daylong public workshops to explain results of the statistical analysis and teach applications of the rate models.

The following statement of work provides a summary of the research approach to be followed in this project.

Project Initiation, Management, and Administration

This element includes all project management activities and administration, including meetings, quality control and assurance, budgeting and scheduling, and other general project management activities, which will be coordinated by the Council staff. The project will be initiated at a preliminary scoping meeting with a Project Advisory Committee composed of participant water agencies and other Council representatives. At this meting the project objectives and a draft work plan to meet those objectives will be presented. Based on feedback from the Project Advisory Committee, the work plan will be revised and contracts negotiated.

Task 1 - Compilation of Prior Research and Review of Existing Practices

In addition to existing knowledge provided by project participants and work cited in this proposal, other knowledge and studies will be researched in this task. A comprehensive literature review will be conducted and a utility survey will be generated to obtain information on rate models used for revenue prediction practiced throughout the region.

Task 2 - Data Assessment, Collection, Manipulation, and Validation

In many demand models, too little attention is paid to what can and cannot be done with available data. This research project pays special attention to the strengths and limits of data typically available to water utilities. A sample design will be developed for historical water consumption data, data for the sample will be acquired from billing systems, and these data will be validated and cleaned.

Spatial categories of interest will be identified and used to develop what scientific sampling terms “strata.” In the following discussion the term ”strata” and “category” will be used interchangeably. A stratified sample will then be designed where the sampling strata come from the desired spatial aggregation. Appropriate stratification weights will be developed to permit scientific inference from the sampled connections to the entire population of service connections. In this way, a formal basis is preserved for inference about the means and distributions surrounding spatial parameters.

The next subtask involves validation of the consumption data. “Validity” in scientific inference refers to the question of how a measure (meter-read consumption) relates to the object of interest (demand). The most important deliverable from this task will be the documentation of data strengths, limits, and workarounds.

a) *Design Consumption Data Sample*
   - *Determine Sample Time Period and Region*
   - *Select Spatial Data Categories (Strata) – Land Use, Customer Class, etc.*
   - *Develop Stratification Weights*

b) *Acquire Spatial Category (Strata) Data (Historic and Existing)*
   - *Identify individual Parcels, Tracts, Land Areas in Data Sample*
   - *Perform GIS and database analysis to join data to Sample*

c) *Acquire Consumption Data (Download from Mainframe Tapes, Relational Databases)*

d) *Create Consistent Consumption Histories/Time Series (Data cleaning)*

e) *Populate Consumption Histories Data Sample with Spatial Category Data (Historic and Existing)*

f) *Develop Data Documentation*

Task 3 - Modeling – Retrospective Analysis

Task 3 involves the formal estimation of all consumption factors associated with categories (strata) identified in Task 2.

This task will explain the estimation task in terms understandable to and accessible by working water professionals. The work will involve development of a computerized statistical consumption model, which can be used to predict consumption for alternative sets of spatial categories.

a) *Define Model Development Process*
   - *Specification*
   - *Estimation*
   - *Testing*
   - *Limitations/Applicability*
   - *Model Form*

b) *Define Development Approach for Different Consumption Types (Urban, Agricultural, Municipal & Industrial)*

c) *Develop Descriptive Statistical Consumption Models*
   - *Formally Aggregate Individual Connection Consumption Data to Categories (Strata)*
     - *Land Use Categories*
     - *Customer Class Categories*
     - *Climate Zone Categories*
     - *Combinations*
   - *Test Sample for Service Connection Heterogeneity*
   - *Incorporate the Effect of Weather*

- *Develop consistent time history of participation records and water rates*

d) *Develop Structural Models of Water Demand*
- *Fixed Effects Panel Data Model*
- *Random Effects Panel Data Model*
- *Random Coefficient Panel Data Model*
- *Nonparametric estimates of customer-specific price response.*

e) *Develop Model Documentation*

Task 4 - Model Application -- Prospective Revenue Forecasting

In this task, the parameters from the retrospective statistical models developed in Task 3 will be applied in a prospective sense to address rate design issues in at least two smaller water utilities. This work will use previous predictive rate modeling tools sponsored by utility participants. These tools allow for price elasticities to vary across the distribution of water consumption. The combination of tools, detailed price response parameters, and real world application in small utilities fits the problem of generalizing results to other utilities across the state.

A user manual will be developed and provided with the models developed in this task. The application of these tools will be presented in at least two case studies. As currently envisioned, we would like to develop case studies that represent the varied situations confronted by California utilities:

Case Study 1 - Small Built-out Water Utility
Case Study 2 - Fast Growing Water Utility

Task 5 - Reports and Publications

Extensive documentation is included in the deliverables of this project:

a) *Finalized Workplan*

b) *Technical Memoranda*
   - *(i) Data Documentation*
   - *(ii) Preliminary Results--Descriptive Models*
   - *(iii) Preliminary Results--Structural Modeling*

c) *Draft Case Studies*

d) *Users manual to rate models*

e) *Draft Report Preparation*

f) *Final Report Preparation*

Task 6 - Workshops on Rates as a Conservation Measure

Two public daylong workshops—*Water Rates as a Conservation Measure*--covering presentation of the statistical findings, introduction to the rate models, and presentation of the case studies applications will be hosted in Northern and Southern California. This outreach component of this research should broaden and depth the communication of usable results from this work, and will build on the interest generated from two Rates and Revenue Impact Workshops held by the Council in October, 2004

Project Deliverables

1. Quarterly fiscal and programmatic reports for the duration of the project (on January 15, April 15, July 15, October 15 of each year)
2. Summary report, literature review
3. Technical memoranda summarizing the utility data assessments and alternatives.
4. Draft and final data analyses.
5. Draft and final recommendations.
6. Draft final report, for review by the PAC
7. Final report, in both electronic (PDF) and printed formats (100 copies, 8-1/2 x 11, spiral bound).
8. Draft and final applied rate models and user manual for improved prediction of revenue effects by financial managers at water utilities. These spreadsheet models will reduce the cost of improved technical depictions of conservation-oriented rate structure alternatives.
9. PowerPoint presentation of project results to DWR at one public workshop in Sacramento.
10. Two public daylong workshops—*Water Rates as a Conservation Measure*--covering statistical findings and rate model applications for rate prediction.
11. Summary report for journal publications

Statement of Work, Section 3: Monitoring and Assessment

This section is required of all Section B project proposals, including those involved in research and development. Our proposal is basic research, coupled with development of potential tools for gaining an increased level of urban water conservation savings over what might occur otherwise. This is a difficult area to quantify, since neither DWR nor the Bay-Delta Authority has yet addressed implementation of BMP11. This is a great contrast with other water management tools such as additional storage, conveyance infrastructure, desalination, etc. for which there has been substantial public dialogue over implementation issues.

We propose to monitor the progress of this study through requirements for intermediate products and the active engagement of a Project Advisory Committee. The study organizational structure is set forth at the end of "Section 2, Statement of Work". We will gauge success of the project through direct feedback of the PAC, quality of the deliverables (including intermediate deliverables) and published outcomes of study results.

CUWCC will be responsible for primary project management and administrative activities and will be assisted by its chosen contractor. Project management will consist of the list of commitments is below:

- CUWCC will sign and execute the contract with the funding agency and submit additional information, if required. CUWCC will also execute a contract with the contractor.

- The contractor, in coordination with the CUWCC, will oversee all data development and modeling procedures to ensure that the project objectives are met and that all deliverables listed in Section 1 are completed on schedule. All project oversight and decisions will be coordinated with CUWCC.

- CUWCC will prepare and submit quarterly fiscal and programmatic reports (January 15, April 15, July 15, October 15) to the funding agency as well as a final report at the end of the project. The quarterly reports will describe the fiscal and programmatic status during each three month period. These reports will include (1) the total amount of money awarded to the project, (2) the amount invoiced to the granting agency, (3) description of activities performed during the three month period and the percentage of each task completed, (4) deliverables produced to date of the report, (5) problems encountered that may delay the progress of the project, and (6) description of amendments or modifications to the grant agreement.

CUWCC will prepare and submit invoices inclusive of all project expenses, including contractor services, to the funding agency on a monthly basis.

CUWCC will participate in relevant stakeholder groups such as the Bay-Delta Public Advisory Committee Water Use Efficiency Subcommittee to inform interested parties regarding progress and solicit feedback. Acquiring feedback and recommendations from group members will ensure that the project is able to address as many areas of interest as feasibly possible and is complementary to ongoing and future efforts.

Qualifications of the Applicants

The CUWCC is a non-profit organization composed of 328 member urban water supply agencies, environmental groups, and other entities.

The mission of the CUWCC is to improve water use efficiency statewide. The CUWCC and the Memorandum of Understanding that created it represent a unique approach to urban water conservation through collaboration between water agencies, regulators, public interest groups, and other interested organizations. The approach relies on a consensus partnership to simultaneously improve the state of the art in urban water conservation while moving forward on recognized Best Management Practices (BMPs) in a timely and cost-effective manner. The CUWCC supports the water conservation efforts of its member organizations through assistance in implementing the BMPs, collaborative research and development among the membership, and through monitoring and evaluation of the urban water conservation programs and activities undertaken by the membership. A special interest of the CUWCC is the overall integration of urban water conservation BMPs into the planning and management of California's water resources.

The role of the CUWCC in this proposal will be as project administrator to provide knowledge, expertise and historical perspective of BMP implementation, since it is the organization recognized by DWR and the Bay-Delta Authority as the entity central to urban water conservation best management practices and programs. CUWCC will also organize and market the two daylong workshops presenting project results. Executive Director Mary Ann Dickinson will oversee these roles, and will participate in this study as a member of the PAC as well as direct communication with the Principal-in-Charge. Her detailed bio is attached.

The feasibility of this study relies on the success of the data construction, the strength of the statistical analysis, and the active engagement of consultants and appropriate advisors. The proposed study structure will include a project team and a project advisory committee. The CUWCC shall recruit a contractor with a specific expertise in water conservation rate structures. A likely candidate is Dr. Thomas Chesnutt of A&N Technical Services, who has performed a considerable number of rate studies across the country and who is currently under contract with the Council for Rates and Revenue Impact Research.

The CUWCC will establish and manage a Project Advisory Committee consisting of members selected from among its signatories. This group will offer suggestions regarding conduct of the study including research questions, data analysis, modeling results, and development of recommendations. Final decision-making authority will rest with the Executive Director of the Council.

Finally, as a condition of this application we certify that there will be no volunteers on this project and that we will meet all prevailing wage requirements under State law.

Bio for Executive Director, Mary Ann Dickinson

With over 16 years of conservation experience, Mary Ann Dickinson has a diverse background in water efficiency program design, implementation, marketing, and management. She has over 30 years of experience in project management. Her goal is to bring water efficiency to its highest possible level statewide by bringing new products to market as well as implementation of statewide retrofit programs. An example of her stewardship is the CUWCC Rinse and Save Program, operating since 2002. Under Mary Ann's watchful eye the Rinse and Save Program, a statewide spray valve retrofit program, has delivered 25,850 AF of savings to 20,000 customer sites.

Mary Ann is also involved in State water policy issues. She serves on the California Bulletin 160 State Water Plan Advisory Committee, and also serves on the California Bay-Delta Water Use Efficiency Subcommittee, where she has been an active participant working closely on programs and issues benefiting the Bay Delta watershed. In particular, the issue of landscape water efficiency has been flagged in these two forums as a clear example of the multiple benefits to the Bay Delta watershed.

Prior to joining the Council in January of 1999, Mary Ann was a Branch Manager for the Metropolitan Water District of Southern California, where she worked on planning, legislative, conservation, and community conservation programs since 1992.

From 1989 to 1992 served as Deputy Director for Public and Governmental Affairs at the South Central Connecticut Regional Water Authority. In that capacity she coordinated state and local government activities and managed a statewide water conservation program involving 63 water utilities.

Mary Ann has a depth of experience as a resource manager, having worked at the Connecticut Department of Environmental Protection for 18 years as a coastal management regulator, planning specialist, and legislative lobbyist. She is a graduate of the University of Connecticut with a bachelor's degree in environmental planning.

Outreach, Community Involvement & Acceptance

The results from this project will hold great interest for many water supply agencies in California. The CUWCC, in addition to holding the workshops described in Task 6, will publish the results of this research and widely disseminate the information. The study results and recommendations will be published in hard copy form as well as posted on the CUWCC website.

Outreach will be especially important to water agencies considering changing their rate structures. The CUWCC will make a special effort to reach these agencies. The letters of support attached to this proposal make it clear that a number of water suppliers in California desire and need this information, and would actively support such a project.

The CUWCC's track record on developing studies to meet the needs of water agencies has been excellent. Examples of prior studies have been funded by the Department of Water Resources as well as the U.S. Bureau of Reclamation and the California Bay Delta Authority.

For additional information on these projects and on how to Council conducts outreach to its constituency, please visit the Council's website at www.cuwcc.org.

Innovation

Our approach to this project is to evaluate barriers to conservation implementation, and to identify means of overcoming such barriers though a combination of statistical estimation and model application, development of case studies, and presentation of day-long workshops to introduce this work to potential users. We believe people and organizations learn best by successful examples, and this has long formed the basis of the Innovations in American Government program jointly sponsored by the Ford Foundation and the J.F. Kennedy School of Government at Harvard.

Our "innovation" is to focus on empirical studies and practical tools to reducing the cost and fear factor of implementing efficiency-oriented water rates. Water rates form the basis for informed consumptive decisions about how to use California's increasingly scarce water supplies. We believe our proposal is unique, and has a high probability of providing a useful product to DWR and its many partners in water use efficiency. Without such an analysis, it is unlikely that conservation rate pricing will advance any further in California.

Project Benefits and Costs

While the PSP does not require cost sharing on Category B projects, we are proposing a cost share. Significant time will be needed to manage this project, involving time and resources from the executive director of CUWCC and its contractor. In addition, a utility finance director will be recruited as Principal-in-Charge. Finally, CUWCC will contribute the staff costs of a contract manager to manage the contract and its work components. Total "in kind" CUWCC support is estimated to be $83,414 per year for the two years of the study. We also estimate that the participating utilities will each provide $64,000 of support for the two years of the study.

Contract management will include but not be limited to:

(1) administering the contract with DWR for funding of this study;

(2) convening the Project Advisory Committee and following through on their recommendations;

(3) arranging and marketing the day-long workshops;

(4) developing and administering consultant contracts, including progress reports and payments, and

(5) assuring the completion and distribution of all deliverables.

Costs and assumptions for this project are set forth in the attached cost tables and spreadsheets. The benefits description follows below and is also set forth in Table C-5 Project Annual Physical Benefits (Quantitative and Qualitative Description of Benefits).

Project Benefits

Because of the broad nature of how water rates affect conservation, we do not in this proposal attempt to quantify the Statewide benefits derived over time from water rates designed as a result of this project. Benefits will be derived indirectly as more effective conservation rates are designed and deployed over time. However, this proposal will provide the following qualitative benefits to water customers, water supply agencies, wastewater treatment agencies, local and Bay-Delta watersheds, and water supply reliability planning in general. These benefits are enumerated below.

- **Benefits to water customers.** For residential customers, conservation rate structures typically provide the opportunity to reduce their water bill if water is saved—or if they are already water efficient. All of the benefits of conservation follow if the rates are effective at inducing conservation activities. The existence and degree of benefits to the customer depend on the design of the rate structure, and this project is intended to produce empirical evidence of the customer conservation induced by rate structures and thus to provide the data needed properly determine customer benefits.

- **Benefits to water and wastewater agencies.** Benefits to water and wastewater agencies can be categorized into benefits on their cost side and benefits on their revenues side. Regarding costs, rates have the potential to reduce demand and thus allow for the deferral or downsizing of capital infrastructure investments. Reduced demand also results in reduced O&M costs of electricity (pumping) and volume-correlated chemicals. On the revenues side, conservation rates potentially allow the supplier to better match revenues with costs in terms of timing and magnitude. So, if the commodity water rates are associated with variable costs, then reduced demand will allow fulfillment of fixed cost obligations. This potential depends on the cost structure of the supplier (how much supply is purchased with a commodity rate from a wholesaler, for example). Alternatively, if conservation rates are coupled with mechanisms to cope with revenue instability, rates can provide the intended incentive without problematic financial consequences.

- **Benefits to governments, community organizations, and environmental and resource groups.** By aligning water rates with conservation objectives, the community at large benefits because the level and timing of consumption is better aligned with its resource cost, improving efficiency. Governments (aside from their role as water or wastewater agency) benefit in terms of their responsibility toward regulating the quality of the environment. Likewise, environmental and resource groups may view the outcome as beneficial ecologically. Finally, community groups

may—if the rates are coupled with appropriate outreach—view conservation rates as a way to reduce their constituent's costs by reducing demand most particularly in the peak rate conditions.

- **Benefits to water supply and reliability.** Water rate structures have the potential to achieve not just immediate savings, but continued savings over time as conservation methods be come standard practice. The incentive remains in place as long as the rate structure is in force. Further, rate structures may contribute to supply reliability by inducing conservation during peak or drought periods. For example, landscape irrigation needs peak in the summer gives conservation savings in this sector particular leverage in terms of benefits. Summer peak needs are at the low point of seasonal rainfall in California. Summer savings reduce the likelihood of shortage during the time when it is most needed. Further, since many components of the supply system are sized at a maximum capacity, peak demand reduction can have substantial infrastructure benefits.

  Improved water rate-setting can stretch the reliability of existing water supplies by ensuring that consumptive decisions are based on full-cost pricing of the water delivered. Full-cost pricing, such as would be brought about by aggressive implementation of BMP 11, provides a synergistic effect with other Best Management Practices; when customers are sent accurate price signals as to the high value of California's scarce water supplies, their participation in water conservation programs is much easier to obtain.

  The impact of water rates on the implementation of urban water conservation measures has a significant impact on water supply reliability at the local, regional and state levels. By providing a solid empirical basis to design better water rates, and putting those tools in the hands of financial managers and analysts, the likelihood of successful water rate reform is in great improved. This increased water conservation will result in increased local water supply reliability and may decrease the dependency on imported supplies. In turn, this results in additional water supply reliability in the Bay-Delta.

- **Benefits to water quality.** Water conservation induced by rate structures can also have the effect of reducing landscape runoff, which is a significant vehicle for contaminant transportation into sewer drains, creeks, and rivers. Fertilizer, pesticides, animal waste, motor oil and other road dirt all can be carried by runoff. Additional implementation of water rates as a conservation measure will reduce discharges of treated sewage or untreated urban runoff into the state's waterways and, therefore, increase water quality.

- **Benefits to ecosystems**. More generally, reducing water demand has the potential to allow more water to support natural ecosystems, including not

just the local environments, but the whole Bay Delta region. Less water withdrawn from source watersheds enables more flow to remain in these systems, thus benefiting fisheries and other aquatic species. Peak time conservation achieved as a result of seasonal rates and other conservation pricing mechanisms also have the benefit of producing flow at a critical **time** of the year when normal hydrologic flows at their lowest.

- **Benefits to the Bay-Delta Region specifically.** Urban water conservation is a key component of the CALFED Water Use Efficiency Program, particularly as urban water suppliers are reviewed for their compliance with Best Management Practices. Conservation rates are strongly consistent with CALFED objectives because they can be an important tool to reduce sources of irrecoverable losses. For example, to the extent landscape irrigation efficiency is improved, losses to evaporation are reduced because of the distribution and exposure to water of seasonal high temperatures and winds.

Emprical Analysis of Rate Impacts on Urban Water Consumption - Budget

As of: 1/10/05

	Task	ED Hours	Exec. Dir	Katie Hours	Katie	ED Benefits	Katie Benefits	Consultant 1	Travel	Expenses	Subtotal	Council 39% Admin	Water Utility Expenses	Total	Council Admin Cost Share	Water Utility In Kind Contribution	State Share
	Project Initiation & PAC Meeting	4	$ 239	10	$ 350	$49	$43	$6,512	$1,000	$200	$8,393	$3,273		$11,666	$2,014		$9,652
1	Compile Prior Research		$ -		$ -	$0	$0	$5,720			$5,720	$2,231		$7,951	$1,373		$6,578
2	Data Assessment/Collection		$ -		$ -	$0	$0	$67,460			$115,460	$45,029	$48,000	$208,489	$27,710	$48,000	$132,779
	PAC Meeting	3	$ 179	6	$ 210	$37	$26	$4,332	$500	$200	$5,484	$2,139		$7,622	$1,316		$6,306
3	Modeling		$ -		$ -	$0	$0	$82,680	$2,000		$84,680	$33,025		$117,705	$20,323		$97,382
	PAC Meeting	3	$ 179	6	$ 210	$37	$26	$4,332		$200	$4,984	$1,944		$6,927	$1,196		$5,731
4	Application (Case Studies)		$ -		$ -	$0	$0	$33,800	$1,500		$51,300	$20,007	$16,000	$87,307	$12,312	$16,000	$58,995
	PAC Meeting	3	$ 179	6	$ 210	$37	$26	$4,332	$500	$200	$5,484	$2,139		$7,622	$1,316		$6,306
5	Reports and Publications	2	$ 119	6	$ 210	$25	$26	$17,130			$17,510	$6,829		$24,339	$4,202		$20,136
	PAC Meeting	3	$ 179	6	$ 210	$37	$26	$4,332	$500	$200	$5,484	$2,139		$7,622	$1,316		$6,306
	Print/Publish		$ -	2	$ 70	$0	$9			$12,000	$12,079	$4,711		$16,789	$2,899		$13,890
6	Outreach & Workshops	8	$ 477	32	$ 1,120	$98	$139	$15,880	$6,000		$23,714	$9,248		$32,962	$5,691		$27,271
	Monitor/Assess: Workshop Summary	1	$ 60	8	$ 280	$12	$35	$5,000			$5,387	$2,101		$7,487	$1,293		$6,195
	Contract Management and Reporting		$ -	48	$ 1,680	$0	$208				$1,888	$736		$2,625	$453		$2,172
		27	$ 1,610	130	$ 4,550	$331	$564	$251,510	$12,000	$13,000	$347,567	$135,551	$64,000	**$547,118**	$83,414	$64,000	**$399,704**

Empirical Analysis of Rate Impacts: Payment Schedule by Quarter

As of: 1/10/05

	State	Year 1				Year 1	Year 2				Year 2	State
Task	**Share**	**Q1**	**Q2**	**Q3**	**Q4**	**Subtotal**	**Q1**	**Q2**	**Q3**	**Q4**	**Subtotal**	**Share**
Project Initiation & PAC Meeting	$9,652	X										
Compile Prior Research	$6,578	X										
Data Assessment/Collection	$132,779	X	X									
PAC Meeting	$6,306		X									
Modeling	$97,382			X	X		X					
PAC Meeting	$5,731						X					
Application (Case Studies)	$58,995						X	X	X			
PAC Meeting	$6,306							X				
Reports and Publications	$20,136				X					X		
PAC Meeting	$6,306								X			
Print/Publish	$13,890								X			
Outreach & Workshops	$27,271									X		
Monitor/Assess: Workshop Summary	$6,195									X		
Contract Management and Reporting	$2,172	X	X	X	X		X	X	X	X		
	$399,704	$82,891	$72,967	$32,732	$37,732	$226,322	$38,463	$26,242	$40,132	$68,538	$173,376	$399,699

Applicant: California Urban Water Conservation Council

Empirical Analysis of Rate Impacts

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

	Category (I)	Project Costs $ (II)	Contingency % (ex. 5 or 10) (III)	Project Cost + Contingency $ (IV)	Applicant Share $ (V)	State Share Grant $ (VI)	Life of investment (years) (VII	Capital Recovery Factor (VIII)	Annualized Costs $ (IX)
	Administration[1]								
	Salaries, wages	$0	0	$0	$0	$0	0	0.0000	$0
	Fringe benefits	$0	0	$0	$0	$0	0	0.0000	$0
	Supplies	$0	0	$0	$0	$0	0	0.0000	$0
	Equipment	$0	0	$0	$0	$0	0	0.0000	$0
	Consulting services	$0	0	$0	$0	$0	0	0.0000	$0
	Travel	$0	0	$0	$0	$0	0	0.0000	$0
	Indirect Expenses	$135,551	0	$135,551	$83,414	$52,137	0	0.0000	$0
(a)	Total Administration Costs	$135,551		$135,551	$83,414	$52,137			$0
(b)	Project Initiation/PAC Meeting	$8,393	0	$8,393	$0	$8,393	0	0.0000	$0
(c)	Compile Prior Research	$5,720	0	$5,720	$0	$5,720	10	0.0000	$0
(d)	Data Assessment/Collection & PAC Mtg	$168,944	0	$168,944	$48,000	$120,944	0	0.0000	$0
(e)	Modeling & PAC Meeting	$89,664	0	$89,664	$0	$89,664	0	0.0000	$0
(f)	Application Dev & PAC Meeting	$72,784	0	$72,784	$16,000	$56,784	0	0.0000	$0
(g)	Reports, Publications & PAC Meeting	$22,994	0	$22,994	$0	$22,994	0	0.0000	$0
(h)	Print/Publish	$12,079	0	$12,079	$0	$12,079	0	0.0000	$0
(i)	Outreach/Workshops	$23,714	0	$23,714	$0	$23,714	0	0.0000	$0
(j)	Construction	$0	0	$0	$0	$0	0	0.0000	$0
(k)	Other (Specify)	$0	0	$0	$0	$0	0	0.0000	$0
(l)	Monitoring and Assessment	$5,387	0	$5,387	$0	$5,387	0	0.0000	$0
(m)	Report Preparation & Contract Mgmt	$1,888	0	$1,888	$0	$1,888	0	0.0000	$0
(n)	**TOTAL**	$547,118		$547,118	$147,414	$399,704			$0
(o)	Cost Share -Percentage				27	73			

1- excludes administration O&M.

Applicant: California Urban Water Conservation Council

Empirical Analysis of Rate Impacts on Urban Water Consumption

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	*Reduced water demand throughout the year; *Avoided costs associated with demand reduction (supply, distribution, energy, etc.) *Improved reliability for Bay Delta region *Reduction of runoff nonpoint contaminants *Reduced unrecoverable water losses due to evaporation *General improvements to ecosystem related to reduced drought stress	*Time pattern: year round with special emphasis during dry summer months *Location: statewide	Indefinite life span. Improving implementation will yield benefits as long as more effective implementaion is carried out into the future.	The majority of benefits are indirect in that they accrue upon dissemination of the study results and adoption of its recommendations for years to come.	This project is designed to quantify the effects of conservation rate structures using a sound and defensible method. Upon implementation--or improved implementation--of conservation rate structures quantifiable savings will be derived in the covered service areas.
Local	*Reduced water demand throughout the year; *Avoided costs associated with demand reduction (supply, distribution, energy, etc.) *Improved reliability *Reduction of runoff nonpoint contaminants *General improvements to ecosystem related to reduced drought stress	*Time pattern: year round with special emphasis during dry summer months *Location: statewide	Indefinite life span. Improving implementation will yield benefits as long as it is carried out into the future.	The majority of benefits are indirect in that they accrue upon dissemination of the study results and adoption of its recommendations for years to come.	This project is designed to quantify the effects of conservation rate structures using a sound and defensible method. Upon implementation--or improved implementation--of conservation rate structures quantifiable savings will be derived in the covered service areas.

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

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

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

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

Applicant: California Urban Water Conservation Council

Empirical Analysis of Rate Impacts on Urban Water Consumption

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)	0		$0
(b) Avoided Energy Costs	0		$0
(c) Avoided Waste Water Treatment Costs	0		$0
(d) Avoided Labor Costs	0		$0
(e) Other (describe)	0		$0
(f) Total [(a) + (b) + (c) + (d) + (e)]			$0

Table C-7 Project Local Monetary Benefits and Project Costs

(a) Total Annual Monetary Benefits [(Table C-6, row (f)]		$0
(b) Total Annual Project Costs (Table C-3, column III)		$0

Table C-8 Applicant's Cost Share and Description

Applicant's cost share %: (from Table C-1, row o, column V)	**27**
Describe how the cost share (based on relative balance between Bay-Delta and Local Benefits) is derived. (See Section A-7 for description.)	
The California Urban Water Conservation Council (Council) will provide 24% of its indirect costs to this project. Our overhead rate for 2004 is 39% and includes salaries, benefits, contractors not funded by grant programs, equipment, supplies, travel, printing, telephone, rent, parking, training and other administrative expenses. Our overhead rate appears to be high since we perform many functions in-house rather than through consultants. This percentage was developed by our on-contract Chief Financial Officer. The Council utilizes a separate auditing firm to perform voluntary annual audits. We provide many services to member water agencies, state and federal agencies, and others in the areas of technical assistance, research, and information services.	
The Water Utility in-kind contribution is the estimated cost for participation of four water utilties providing 20 days each of a dedicated staff member to participate in data gathering, analysis and testing of the rates model. The Council did not apply its overhead rate to the in-kind contribution.	

EAST BAY
MUNICIPAL UTILITY DISTRICT

January 10, 2005

Mary Ann Dickinson
Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: CALIFORNIA DEPT. OF WATER RESOURCES PROP 50 GRANT APPLICATION FOR *EMPIRICAL ANALYSIS OF RATE IMPACTS ON URBAN WATER CONSUMPTION*

Dear Ms. Dickinson:

East Bay Municipal Utility District wishes to covey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for *EMPIRICAL ANALYSIS OF RATE IMPACTS ON URBAN WATER CONSUMPTION.*

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMPs), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

East Bay Municipal Utility District strongly supports this application for funding under Proposition 50. We believe an empirical understanding of water rates will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but direct benefits to the California Bay-Delta estuary. We look forward to being a partner with the Council and other community organizations in this applied and practical water use efficiency grant proposal.

Sincerely,

Gary Breaux
Director of Finance

375 ELEVENTH STREET . OAKLAND . CA 94607-4240 . (510) 287-0404
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January 7, 2005

Mary Ann Dickinson, Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

Subject: California Department of Water Resources Prop 50 Grant Application for Empirical Analysis of Rate Impacts on Urban Water Consumption

Dear Ms. Dickinson:

The Eastern Municipal Water District (EMWD) wishes to covey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for *EMPIRICAL ANALYSIS OF RATE IMPACTS ON URBAN WATER CONSUMPTION.*

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMP's), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

J:\WORDPROC\WORD\Res_dev\Garner\Prop50 Rates_Letter of Support Template_.doc

Mailing Address: Post Office Box 8300 Perris, CA 92572-8300 Telephone: (909) 928-3777 Fax: (909) 928-6177
Location: 2270 Trumble Road Perris, CA 92570 Internet: www.emwd.org

EMWD strongly supports this application for funding under Proposition 50. We believe an empirical understanding of water rates will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but direct benefits to the California Bay-Delta estuary. We look forward to being a partner with the Council and other community organizations in this applied and practical water use efficiency grant proposal.

Sincerely,

Anthony J. Pack
General Manager

AJP:lar

Cc: Tom Chestnutt, A & N Technical Services

El Dorado Irrigation District

In Reply Refer To: WP0105-30

January 6, 2005

Mary Ann Dickinson, Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT APPLICATION FOR CALIFORNIA URBAN WATER CONSERVATION COUNCIL

Dear Ms. Dickinson:

El Dorado Irrigation District wishes to covey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funds.

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMPs), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

2890 Mosquito Road, Placerville, California 95667 • (530) 622-4513

The track record of the Council has been impressive. As a result, El Dorado Irrigation District strongly supports this application for funding under Proposition 50. We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but direct benefits to the California Bay-Delta estuary.

We look forward to being a partner with the Council and other community organizations in this important and innovative water use efficiency grant proposal.

Sincerely,

David Witter
Director of Water Policy Coordination

DW:clr

4699 HOLLISTER AVENUE
GOLETA, CALIFORNIA 93110-1999
TELEPHONE 805/964-6761
FAX 805/964-7002

January 3, 2005

Mary Ann Dickinson
Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT APPLICATION FOR EMPIRICAL ANALYSIS OF RATE IMPACTS ON URBAN WATER CONSUMPTION

Dear Ms. Dickinson:

The Goleta Water District wishes to covey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for Empirical Analysis of Rate Impacts on Urban Water Consumption.

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMPs), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

The track record of the Council has been impressive. As a result, the Goleta Water District strongly supports this application for funding under Proposition 50. We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but also direct benefits to the California Bay-Delta estuary.

We look forward to being a partner with the Council and other community organizations in this important and innovative water use efficiency grant proposal.

Sincerely,

GOLETA WATER DISTRICT

Misty Gonzales

Misty Gonzales
Water Conservation Coordinator

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

10500 Ellis Avenue
P.O. Box 20895
Fountain Valley, California 92728
(714) 963-3058
Fax: (714) 964-9389
www.mwdoc.com

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City of Seal Beach
Serrano Water District
South Coast Water District
Southern California Water Co.
Trabuco Canyon Water District
City of Tustin
City of Westminster
Yorba Linda Water District

January 5, 2005

Mary Ann Dickinson
Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT APPLICATION FOR AN EMPIRICAL ANALYSIS OF RATE IMPACTS ON URBAN WATER CONSUMPTION

Dear Ms. Dickinson:

The Municipal Water District of Orange County wishes to covey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for an Empirical Analysis of Rate Impacts on Urban Water Consumption.

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMPs), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

The track record of the Council has been impressive. As a result, the Municipal Water District of Orange County strongly supports this application

for funding under Proposition 50. We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but also direct benefits to the California Bay-Delta estuary.
We look forward to being a partner with the Council and other community organizations in this important and innovative water use efficiency grant proposal.

Sincerely,

Kevin P. Hunt

Kevin P. Hunt
General Manager
Municipal Water District of Orange County

SFPUC
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HETCH HETCHY WATER & POWER
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SAN FRANCISCO PUBLIC UTILITIES COMMISSION
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ADAM WERBACH
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SUSAN LEAL
GENERAL MANAGER

January 6, 2005

Mary Ann Dickinson
Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT APPLICATION FOR AN EMPIRICAL ANALYSIS OF RATE IMPACTS ON URBAN WATER CONSUMPTION

Dear Ms. Dickinson:

The San Francisco Public Utilities Commission (SFPUC) wishes to covey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for an Empirical Analysis of Rate Impacts on Urban Water Consumption.

This application will measure the effect of water rates on water consumption in several California water utilities that have implemented rate reforms. Water utility planners wanting to incorporate the effects of conservation-oriented water rate structures have long been hampered by lack of solid empirical estimates of rate-induced changes in water consumption. This study will provide the long-needed work in this area.

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMPs), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

The track record of the Council has been impressive. As a result, the SFPUC strongly supports this application for funding under Proposition 50. We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but also direct benefits to the California Bay-Delta estuary. We look forward to being a partner with the Council and other community organizations in this important and innovative water use efficiency grant proposal.

Sincerely,

Susan Leal
General Manager

Santa Clara Valley
Water District

5750 ALMADEN EXPWY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACIMILE (408) 266-0271
www.valleywater.org
AN EQUAL OPPORTUNITY EMPLOYER

January 11, 2005

Mary Ann Dickinson
Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT APPLICATION FOR THE EMPIRICAL ANALYSIS OF RATE IMPACTS ON URBAN WATER CONSUMPTION

Dear Ms. Dickinson:

The Santa Clara Valley Water District wishes to covey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for Empirical Analysis of Rate Impacts on Urban Water Consumption Program.

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMPs), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

The track record of the Council has been impressive. As a result, Santa Clara Valley Water District strongly supports this application for funding under Proposition 50. We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but direct benefits to the California Bay-Delta estuary.

We look forward to being a partner with the Council and other community organizations in this important and innovative water use efficiency grant proposal.

Sincerely,

H Ashktorab

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

BAWSCA
Bay Area Water Supply & Conservation Agency

January 5, 2005

Ms. Mary Ann Dickinson
Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: SUPPORT FOR CALIFORNIA URBAN WATER CONSERVATION COUNCIL'S APPLICATIONS FOR CALIFORNIA DEPARTMENT OF WATER RESOURCES PROPOSITION 50 GRANTS

Dear Ms. Dickinson:

The Bay Area Water Supply and Conservation Agency (BAWSCA) wishes to covey its strong support for the California Urban Water Conservation Council's applications for Proposition 50 Water Use Efficiency grant funding for these programs:

- Statewide Urban Water Agency One-Stop Rebate Program,
- Statewide Turf Buy Back Program,
- Statewide Urban Rebate Program for Cooling Tower Conductivity Meters,
- Urban Water Efficiency Technical Assistance Program,
- Urban Water Efficiency Agency Training Program,
- Water Saving Home Website Customer Feedback Program,
- Empirical Analysis of Rate Impacts on Urban Water Consumption, and
- "Smart From the Start".

Since its creation in December 1991, the California Urban Water Conservation Council has become a leading force in the promotion and implementation of water conservation programs in California. Through the execution of the Council's 14 Best Management Practices (BMPs), urban water agencies across the state are now saving an estimated 750,000 acre-feet of water annually, and all at a cost far less than the cost of procuring new water supplies.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs. The Council provides training programs, manuals and technical help to assist in

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developing conservation programs. The Council has also directly managed implementation of successful conservation programs on behalf of its members.

The track record of the Council has been impressive. As a result, BAWSCA strongly supports this application for funding under Proposition 50. We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but direct benefits to the California Bay-Delta estuary.

We look forward to being a partner with the Council and other community organizations in these important and innovative water use efficiency grant proposals.

Sincerely,

Nicole Sandkulla

Nicole Sandkulla, P. E.
Senior Water Resources Engineer

MONO LAKE
COMMITTEE
P.O. Box 29
Hwy 395 and Third Street
Lee Vining, CA 93541
Phone (760) 647-6595
Fax (760) 647-6377

Board of Directors
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Richard Atwater
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Executive Directors
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Frances Spivy-Weber, Policy

Southern California Office
322 Culver Blvd.
Playa Del Rey, CA 90293
(310) 316-0041

On the Internet
www.monolake.org
www.monobasinresearch.org

January 5, 2005

Mary Ann Dickinson
Executive Director
California Urban Water Conservation Council
455 Capitol Mall, Suite 703
Sacramento, CA 95814

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT APPLICATION FOR Empirical Analysis of Rate Impacts on Urban Water Consumption.

Dear Ms. Dickinson:

On behalf of our 15,000 members, the Mono Lake Committee strongly supports the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for Empirical Analysis of Rate Impacts on Urban Water Consumption.

The Council is a unique organization, for its 328 members are not only water agencies, but also environmental advocacy groups as well as state agencies, academic institutions, and private consulting and product firms. In signing the Memorandum of Understanding, this assortment of entities provides the Council with a broad view of three key areas of water conservation: the needs of urban water suppliers, the development of water efficient technologies, and the impact of water usage on the environment through water conservation programs.

The needs of urban water suppliers are the primary concern of the Council. California's increasing demand for water can be met in part by successful, cost-effective conservation programs, and the Council provides training programs, manuals and technical help to assist in developing conservation programs. The Council has also directly managed – very successfully – conservation implementation programs on behalf of its members.

The track record of the Council has been impressive. As a result, the Mono Lake Committee strongly supports this application for funding under Proposition 50. We believe this proposal will provide great benefit to our urban water efficiency community in addition to providing water savings to help enhance not only our own watershed but direct benefits to the California Bay-Delta estuary.
We look forward to being a partner with the Council and other community organizations in this important and innovative water use efficiency grant proposal.

Sincerely,

Frances Spivy-Weber

Frances Spivy-Weber
Executive Director, Policy

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