

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

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Applying for (select one):

1. (Section A) Urban or Agricultural Water Use Efficiency Implementation Project

- Urban     Agricultural
- (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 \_\_\_\_\_

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

- (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

3. Principal applicant (Organization or affiliation)

California Urban Water Conservation Council

4. Project Title:

**Smart From the Start**

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](mailto:maryann@cuwcc.org)

6. Contact person (if different):

Name, title                    Katie Shulte Joung  
Mailing address            455 Capitol Mall, #703  
   Sacramento, CA 95814  
Telephone                    916-552-5885  
Fax                              916-552-5877  
E-mail                         [Katie@cuwcc.org](mailto:Katie@cuwcc.org)

7. Funds requested (dollar amount) (from Table C-8, column II)

\$314,250

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8. Applicant funds pledged (dollar amount): \$65,583

9. Total project costs (dollar amount *(from Table C-1, column II, row I)*) \$379,833

10. Is your project locally cost effective?  (a) yes

*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.*

(b) no

*(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.*

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12. Duration of project (month/year to month/year): 12/1/05 - 11/30/07
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 \_\_\_\_\_

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

- (a) yes, \_\_\_\_\_ median household income  
 (b) no

However, the proposal will also serve water supply agencies in disadvantaged communities.

(Provide supporting documentation.)

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**Signature Page**

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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

Mary Ann Dickinson  
Executive Director \_\_\_\_\_  
Name and title

January 11, 2005  
Date

## **Statement of Work, Section 1: Relevance and Importance**

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The impact of growth on California's natural resources has become a major planning and policy challenge during the past decade. Eight of the ten fastest growing counties in California are in the CALFED solution area. By 2030, Merced County is anticipated to grow by 108%; San Joaquin County anticipates a 117% increase in population to 1,229,757, to cite just two examples.<sup>1</sup> More people require more land, more roads, more jobs and more water.

Each year over 100,000 new homes are built in California. Despite gains in public awareness of the need for water efficiency, most of these homes and their surrounding landscapes are not based upon designs and building elements that maximize the water conservation opportunity. As a result, these 100,000+ new homes are added to the tens of millions of existing homes that consume more water supply resources than necessary.

This significant annual addition to the "retrofit later" universe of homes only serves to exponentially increase the cost of conservation programs. It makes sense to incorporate conservation in new home construction, as the costs are typically 75 – 90% less than those for conservation retrofits to existing homes. Furthermore, much of California's anticipated growth is not in the relatively mild coastal areas but in the more arid inland areas in the CALFED solution area - thus creating an even higher demand for water than demand of former growth along the coast.

Historically, water has been used to entice development and agriculture to come to California. To do so, state and federal agencies built an unprecedented number of dams, reservoirs and conveyance facilities. This practice continued through the 1970s when environmental concerns and public pressure halted the expansion of water supply development on a grand scale. Through the 1990s, water suppliers continued to see their role primarily as service providers.

Water suppliers and land-use planners have always had very separate and distinct planning practices. Land use decisions – general plan updates and amendments, specific plans, subdivision approval, zoning – critically affect the level of community water demands today and in the future. These decisions fall under the jurisdiction of cities and counties, and are analyzed primarily by planning departments.

Meanwhile, responsibility for water supply planning and management lies with water purveyors, which may or may not coordinate with local land use planning agencies. Since January 2002, the "show me the water" laws (Senate Bill 610 and Senate Bill 221) have required cities and counties to provide detailed information on long-term water supply and demand before large development projects can be approved. While the "show me the water" laws have done much to highlight the need for greater

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<sup>1</sup> State of California, Department of Finance, Population Projections by Race/Ethnicity for California and its Counties 2000-2050 (Report 03 P01), May 2004.

coordination between water and land use planners, there is very little guidance on effective ways to coordinate and integrate early in the planning process.

### ***Why is this project necessary?***

Water conservation has advanced considerably over the past decade. Numerous rebate and retrofit programs combined with solid progress in water education, technology, and research have produced significant water savings. Most of these water conservation programs have been directed towards *existing* homes and commercial, industrial, and institutional buildings. Only a small portion of this effort has addressed water conservation in new homes. Why?

- **Compared to the tens of millions of existing structures, 100,000 new homes is a small number.** This is true, but each of these new homes only compounds the problem to be faced later. It is a well established fact that water conservation retrofits to exiting buildings can cost up to ten-times what the cost would have been had conservation been incorporate at initial construction.
- **The construction of new homes implies growth, which implies increased water consumption.** By “participating” with homebuilders, some water conservation professionals believe that they are aiding and abetting growth and increasing rather than decreasing statewide water consumption. The reality is that California is growing and these homes are going to be built with or without incorporated conservation. We would rather see conservation included in all homes at the time of their delivery to the homebuyers.
- **Homebuilders are reluctant to adopt conservation.** Homebuilders are a risk averse group. The financial and legal climate that they operate within, particularly in California, does not reward risk taking. However, like any industry, there are homebuilders who are leaders and others who are followers. The homebuilding leaders have already recognized that conservation and the environment are important to 75% of Americans – particularly among the educated and wealthy – the ideal home buying customer. One of the primary goals of this project is to help homebuilders cost-effectively offer conservation to homebuyers and create a self-sustaining market for conservation in new homes.

This project proposes to develop guidelines that incorporate water efficient practices, programs and technologies at the beginning of the planning and development process to achieve the highest potential water savings at the lowest practical cost. This “*Smart from the Start*” approach is intended to assist planners and developers in designing communities and projects that incorporate existing Green Building standards as well as the most advanced water efficient practices.

By incorporating early on higher standards for water use efficiency, *Smart from the Start* will accelerate adoption of water efficient home design, landscaping, appliances and related programs. Providing guidance to land use and water supply planners, as well as

their respective Boards and senior management, on how to more effectively integrate water supply planning and conservation into their planning process will help achieve the full potential for urban water conservation in the CALFED solution area and throughout the State.

*Smart from the Start* will use the CALFED Water Use Efficiency Program Approach, “Think Globally, Act Locally” (Water Use Efficiency Program Plan, page 2-1). Land use decisions significantly affect water demand based on the type, density and location of a proposed project. Unfortunately, water supply and conservation are not among the primary considerations in the land use decision-making process nor in the home design and construction process. This project proposes to develop case studies, model programs, and guidance to facilitate *Smart from the Start* planning and building.

### ***Project Description***

This proposal contains three projects related to improving water conservation input in the planning, development, and new home construction process. First, research will be done to provide guidance on better incorporating water issues into land use planning, and a “Practical Planner’s Handbook” will be written. Second, a draft Water Element will be written that communities can add to their General Plans if they so wish. Third, research will be conducted in conjunction with the California Energy Commission and the U.S. Green Building Council to come up with model home specifications for both indoor and outdoor water use and home design improvements to make the new home even more water efficient than the typical new home (including special design for the hot water system to reduce wastage to less than one cup per use). A partnership will be created with homebuilders to encourage these models to be built, and a special rating or certification given to these homes with perhaps also special financing packages. A large homebuilder in northern California has already agreed to participate in the program.

This project will have three major components that will provide approaches to integrated planning and building that incorporate Green Building design concepts and standards beginning with land-use planning and continuing through construction. This project would utilize “*Smart from the Start*” principles to develop the following:

1. **Water Element in the General Plan:** The General Plan is a land-use planning document that provides a long-term blueprint for growth in a city or county. In 2003, the Governor’s Office of Planning and Research (OPR) incorporated brief guidance on the development of an optional “Water Element” that could be incorporated into a city or county general plan in its update to the General Plan Guidelines. OPR’s guidance provides a great foundation upon which this project would expand. Land-use planners need additional guidance on how to integrate efficient water management strategies and practices into their General Plan. For this project, the Council will develop a comprehensive Water Element Guide with case studies, a template for a model “Water Element” and strategies for implementation using case studies and guidance from experts in the field.

2. **New Home Construction Guidelines:** Each year over 100,000 new homes are built in California. Regrettably, most of these homes and their surrounding landscapes are not based upon designs and building elements that maximize the conservation opportunity. For example, perhaps as much as \$1,000,000,000 worth of water and energy is wasted in California residences every year because of poorly designed hot water distribution systems (HWDS). For this project, the Council proposes to develop *Smart from the Start* home building standards, homebuyer materials to market *Smart from the Start* options, and a pilot program.
3. **Practical Planning Handbook:** Water supply planners and land-use planners have very different planning processes and often do not understand the process, content and intent of the other entity. This Handbook would provide an overview of the planning process, legislation, model ordinances and *Smart from the Start* new home construction information. This Handbook is intended to be a useful reference for planners, general managers, and members of local boards to enable them to understand the relationships between water and land use decision-making. It will also integrate the recommendations and findings from the other *Smart from the Start* components (New Home Construction Guidelines and the Water Element Guide).

### ***Benefits to CALFED***

The CALFED Water Use Efficiency program identifies urban water conservation as a key element. Planning that more effectively incorporates water efficient design, programs, technologies and practices will benefit both the CALFED Solution Area as well as the rest of the state.

## **Statement of Work, Section 2: Technical/Scientific Merit**

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Unlike energy consumption, water availability and consumption are often among the primary factors that determine how homebuilders may develop land. In areas where water resources are particularly tight, homebuilders usually face limits based upon the water consumption profiles of the homes to be built. Regional energy availability typically does not restrict homebuilders. Ironically, energy efficiency is a prominent consideration in current green building efforts.

The California Energy Commission (CEC) has made significant strides in reducing the life cycle cost of energy consumption in new homes. These include meaningful changes to building codes that impact electricity and natural gas consumption as well as rebates for programs such as grid-tied solar generation. Unfortunately, the pace of water conservation in new home construction has lagged behind that of energy conservation. Fortunately, there has been increased recognition by energy and environmental organizations that water conservation provides not only the inherent benefits of increased water resources, but also a tremendous savings in energy consumption.

To date, there have been extensive research and pilot projects conducted on water and energy efficient programs that, regrettably, are not widely implemented. This project proposes to provide guidance, case studies, model ordinances, homebuilder templates and programs, and other reference materials to promote **Smart from the Start** planning. The following provides more detailed information on the scope of the three major components:

### **Smart from the Start: Water Element**

Each county or incorporated city in California must prepare a “comprehensive, long term general plan”<sup>2</sup> that provides a blueprint for future development within that entity’s jurisdiction. There are seven mandatory elements that must form “an integrated, internally consistent and compatible statement of policies for the adopting agency.”<sup>3</sup> These elements include: land-use, circulation, housing, conservation, open-space, noise, and safety. Information related to watershed management, floodplains, water supply and demand -- including conservation programs -- is interspersed throughout these elements but there is no specific and comprehensive section in which to address the impacts of proposed development and ways to respond to - and plan for - those impacts.

In 2001, water supply planning legislation (SB 610 and SB 221) was enacted that requires coordination between land use and water supply agencies for large development projects. These agencies must work together to provide detailed water supply and demand information related to a development project before that project can

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<sup>2</sup> California Government Code, Section 65300 (2005)

<sup>3</sup> California Government Code, Section 65300.5 (2005)

be approved. A comprehensive Water Element that addresses projected growth, along with supply and demand projections will improve planning at the beginning of the process, rather than on a project by project basis. The *Smart from the Start Water Element* will also provide the foundational information to assist agencies in preparing the necessary documentation for SB 610 and SB 221.

This project will develop a technical guidebook (Guide) for use by local planning agencies and water supply planners as they work together to develop a Water Element in a local general plan. The Governor's Office of Planning and Research (OPR) released a final *2003 General Plan Guidelines* in October 2003 which will be used as the primary guidance for the structure and content of the Guidebook. This Water Element Guide will include the following (note: a more detailed Outline is included in the Appendix):

- I. Overview of California Water**
- II. The Process for Coordination and Integration**
- III. Case Studies**
- IV. Innovative Approaches**
- V. Summary**
- VI. Resources**

The existing Model Water Efficient Landscape Ordinance will be included along with other relevant recommendations from the AB 2717 Task Force.

The benefits of incorporating a Water Element into the General Plan include:

- Help land use agencies to understand the water supply issues they may face as California, and their community, continues growing;
- Coordinate land use planning and water supply planning process and, therefore, lead to more meaningful and integrated planning documents (e.g. the Urban Water Management Plan and the General Plan);
- Inform the public, decision makers, and developers of water supply challenges and outlining possible solutions;
- Promote beneficial and efficient water use;
- Promote sustainable planning that benefits integrated regional planning and watershed protection;

- Recognition that water is a finite resource even with implementation of desalination and recycled water projects; and
- Consolidate implementation and communication of water supply and conservation policies (e.g. ordinances).

### **Smart from the Start: New Home Construction**

The traditional approach to new home construction does not emphasize water efficient design and plumbing. As an example, the waste of water while waiting for hot water to get to the desired fixture costs Californian's roughly \$1 Billion per year for water, waste water treatment and energy combined and is growing at almost 3 percent per year. Additional energy is used by the water and wastewater treatment utilities. The reason to work closely with builders and developers to improve the in-home hot water systems is to reduce the growth of the waste.

Cost effective technologies are available that can reduce the waste of water by 90 percent and that use no more energy than is currently associated with running water down the drain. In particular, we plan to work with the builders and developers to implement the concept of Structured Plumbing. Structured Plumbing includes an insulated circulation loop with small volume branch lines and an on-demand circulation system with activation mechanisms in the hot water using locations throughout the house. Additionally we will introduce double wall drain heat recovery systems and show how to specify hot water systems that provide customers the desired service of hot water, with the expected levels of safety, convenience and reliability as water-and-energy-efficiently as possible. We will provide training and technical assistance to the builders in the design, construction, commissioning, and customer validation phases of the implementation effort. Specific deliverables include:

- Provide the initial research and financial modeling that helps homebuilders understand the conservation opportunity;
- Develop programs for homebuilders to market water conserving homes to homebuyers including a methodology to ensure that building systems are installed and operated as planned;
- Provide a \$500-1,500 per single family residence incentive to incorporate water efficient design (e.g. landscape and plumbing) and install the most water efficient appliances from a menu of options developed as part of this *Smart from the Start* program. The incentive would vary according to the options chosen. It is anticipated that 5-8 homebuyers will participate in the pilot project;
- Develop homebuyer and homeowner education on the benefits of water conservation; and

- Develop Case Studies highlighting the water savings of the projects and implementation strategies that could be used in other new home projects

This proposal will incentivize the development of programs for homebuilders to ensure that water conservation is incorporated into the design and construction of new homes in California, and will help expand the body of knowledge related to water consumption and conservation on a “whole-building” perspective.

This grant will convincingly demonstrate how homebuilders can increase their profitability by incorporating water conservation into new home construction and offering homebuyers water conserving options upgrades. All *Smart from The Start* options will include both water and the embodied energy included with consumed water.

*Smart from the Start* will incorporate both indoor and outdoor water consumption in new homes. Indoor components include:

- Dual flush toilets
- High-efficiency clothes washers
- Tankless hot water heaters
- Hot water on demand
- High-efficiency dishwashers
- Sink and showerheads

Outdoor components include:

- Thoughtful landscape design and plant selection
- Robust irrigation controllers with sensor technology
- Dedicated landscape metering
- Storm water and hardscaping/impervious surface issues

Most of the indoor components have a significant installed history and many have gone through several product design cycles. Indoor water conservation is often a matter of equipment substitutes (low flow instead of high-flow; high-efficiency in place of low-efficiency). As a result, indoor water conservation products will be easier to promote to homebuilders and homebuyers.

Conservation efforts outside of the home have lagged behind those of inside the home. The outdoor components would constitute more than half of the effort of *Smart from The Start*.

- Outdoor water use typically exceeds indoor water use, particularly in new homes that have modern indoor water-consuming products.
- Improvements in landscape water conservation rely heavily on landscape design and management practices.

- In general, landscape design is a complicated endeavor.
- Historically, homebuilders have not offered homebuyers many landscape “options.” As a result, the knowledge and experience from which to draw is not significant.
- Most of the homes being built in California are located in inland, non-coastal locations where Evapotranspiration is much higher, thus making outdoor water consumption more relevant.

This program will initially focus on home construction where there is a highly repetitive design element. This represents the vast majority of production homes being built in California. We believe that this repetitive quality will provide economies of scale to leverage the value of this program.

### **LEED and Existing Green Building Programs**

The results from this program will supplement and support residential green building, LEED, and other emerging residential building standards. Although this grant application is not immediately tied to the LEED program, it embraces the concepts and tenets of this well conceived program. Other than residential high-rise, most LEED work has not focused on residential home construction. LEED continues to evolve with LEED for Homes and LEED for Neighborhood Development.

The US Green Building Council’s LEED scoring system uses 34 performance-based credits worth up to 69 points as well as seven prerequisite criteria divided into six categories:

1. Sustainable Sites
2. Water Efficiency
3. Energy and atmosphere
4. Materials and resources
5. Indoor Environmental Quality
6. Innovation & Design Process

Although the second category, Water Efficiency, is specifically dedicated to water resources, other categories include considerations for water usage. For example, category one, Sustainable Sites, includes points for Storm Water Rates and Treatment as well as Natural Habitat.

Green building water conservation strategies under LEED and other similar programs typically fall into four categories:

- Efficiency of potable water through better design/technology.

- Capture of gray water – non-fecal waste water from bathroom sinks, bathtubs, showers, washing machines, etc. – and use for irrigation.
- On-site storm water capture for use or groundwater recharge.
- Recycled/reclaimed water use.

*Smart from the Start* will incorporate the lessons learned from LEED programs wherever appropriate.

Commonly, there is a perception that green-built buildings costs are 10-15% more than traditionally constructed buildings. An October 2003 Report to California's Sustainability Building Task Force titled "*The Costs and Financial Benefits of Green Buildings*" showed that green construction costs to be on average only 2% higher. The green premium is lower than perceived and a good value to many homebuyers.

Again, it is worthwhile to remember that LEED and many other existing LEED-like green building programs have targeted commercial and institutional construction projects. Much of the knowledge gained to date in these areas is applicable to residential construction. *Smart From The Start* will draw from commercial and institutional programs where the parallels are apparent.

In fact, we believe that water conservation plays an even greater role in residential green building than in commercial and institutional green building. Residential indoor water use is two to three times greater than commercial and institutional indoor per capita water usage (25 gallons per day). Additionally, commercial and institutional landscapes typically have dedicated irrigation meters, use higher-end irrigation controllers, are maintained by landscape professionals, and are operated at times other than typical energy and water peak loads.<sup>4</sup>

The U.S. Green Building Council estimates that a 30% indoor and a 50% outdoor water savings is possible and commonly achieved. Irrigation and Water Use Reduction are two of the most common "points" earned by LEED aspirants.<sup>5</sup>

We believe that water conservation is doubly important in any California green building program. California's state and municipal codes (Title 24 being the most prominent) already exceed the federal codes and address many of the energy related requirements of green building programs. Regrettably, there are no comparable California water codes that exceed the federal water standards. Thus, the opportunity for water conservation in green building is more relevant in California.

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<sup>4</sup> This is in no way meant to imply that these factors guarantee greater water use efficiency in commercial and institutional landscapes – only that these factors greatly improve the odds of conservation.

<sup>5</sup> Costing Green: A Comprehensive Cost Database and Budgeting Methodology; Lisa Fay Matthiessen and Peter Morris; Davis Langdon; July 2004.

## **Smart from the Start: Practical Planning Handbook**

Land use planners and water supply planners use very different language and approaches in their planning processes. Integration between these planning entities in the development of a General Plan or an Urban Water Management Plan (and other planning documents) is critical to planning for long term resource demands. The *Practical Planning Handbook* would provide an informational link for use by Board members, policy makers, and the general public.

Understanding the legal requirements linking water and land use planning is imperative to understanding and managing this scarce resource. The *Practical Planning Handbook (Handbook)*. Section 3.4 of the Council's Memorandum of Understanding recognizes the connection between land-use planning decisions and water supply planning and conservation:

“...each signatory water supplier will inform all relevant land planning agencies at least annually of the impacts that planning decisions involving projected growth would have upon the reliability of its water supplies for the water supplier's service area and other areas being considered for annexation.”

The Council will use the opportunity to work with its members to ensure the Handbook is relevant, innovative and useful to water utilities, land use planners, environmental and community groups and others. The information presented by this Handbook would describe how to effectively integrate the planning processes of water suppliers and land use planning agencies. This Handbook would include some of the integrated planning solutions from the Water Element but would have a much broader scope that would include information on a wide range of planning issues. Specific sections would include:

- a general overview of the Urban Water Management Plan and General Plan development processes
- a summary of recent legislation related to water and land-use planning
- model ordinances including the Model Water Efficient Landscape Ordinance that will be developed by the AB 2717 Landscape Task Force.
- water conservation, Green Building, LEED resources that would be useful to planners
- case studies that illustrate success in implementing *Smart from the Start* and Green Building principles

### ***Project Plan, Task List and Schedule***

Please refer to the “Preliminary Payment Schedule by Quarter” for additional information on the Task List and Schedule. The following represents the project plan:

## **Smart from the Start: Water Element**

1. **Convene Project Advisory Committee:** The Council will utilize a Project Advisory Committee (PAC) to guide the project and invite participants from: Department of Water Resources, the Governor's Office of Planning and Research, Attorney General's Office, urban water suppliers, California State Association of Counties, League of Cities, Local Government Commission, environmental and community organizations, and city/county planning departments.
2. **Prepare Outline and Workplan and Present to PAC:** This Guidebook would have four major components: 1) a very brief overview of existing law and case law; 2) a process or "cookbook" section that provides step-by-step guidance on how to develop a water element that expands on the information on the Optional Element from the recently updated General Plan Guidelines prepared by the Governor's Office of Planning and Research (OPR); 3) Case Studies from jurisdictions that have adopted a water element; 4) innovative approaches to preparing a Water Element.
3. **Research/Interviews:** interviews will be conducted with representatives of the PAC, city and county planning departments, water suppliers, and community groups to ascertain local issues and approaches; research on statutory requirements, case law, and field studies will be conducted.
4. **Findings:** Results of the research and interviews will be compiled and presented to the PAC for review and comment.
5. **Prepare Draft:** A Draft Guide will be prepared that will, at a minimum, include the information contained in the Preliminary Outline (see Appendix)
6. **Revise Draft:** The draft Guide will be revised in response to PAC comments.
7. **Publish Guidebook:** Publish and print 1,000 copies of the Water Element Guide and disseminate press releases and other announcements to organizations and outlets throughout the state; post the Guide on our website: [www.cuwcc.org](http://www.cuwcc.org); deliver at least 5 copies to DWR.
8. **Outreach:** Attend Water and Planning seminars/conferences to promote Guidebook and its concepts (please refer to Outreach section of this application for additional information); prepare and distribute a press release and at least one summary article for publication in an industry publication (e.g. the *Environmental Monitor* published by the Association of Environmental Professionals, the *Cal Planner* published by the California Chapter of the American Planning Association).
9. **Workshops and Presentations:** The Council will host at least two workshops for water supply planners, land-use planners, consultants and other interested parties on the Water Element Guidebook. A PowerPoint presentation will be developed. Participants will be asked to complete a Workshop Evaluation form developed by the

Council. The Council will present the Water Element Guide at water and planning conferences throughout the state.

10. **Monitoring and Assessment:** The Council will prepare a workshop summary that will include questions and issues raised by participants, participant lists, copies of the presentations and other materials. Summary information from the Workshop Evaluation forms will also be included.
11. **Quarterly Reports:** Quarterly reports containing information on the progress of the project will be prepared at the beginning of each quarter.

### **Smart from the Start: New Home Construction**

1. **Develop Construction Guidelines:** This task will develop a series of guidelines for homebuilders that show how water conservation can be incorporated into new home designs and construction. These include proven methodologies for reducing water demand, particularly in the area of indoor hot water and landscape water. These guidelines will demonstrate how conservation can cost effectively be incorporated into construction and effectively marketed to perspective homebuyers. As an example, three to five landscape designs will be prepared for each pilot home. Each design will be water conserving to a differing degree, aesthetically pleasing, and matched with a homebuyer profile. Included with the water conservation data will be financial data showing the economics of marketing these options to homebuyers.
2. **Develop Homebuyer Materials:** Homebuyers will embrace conservation when they understand what they are buying and the economics of their choices. This task will develop materials that homebuyers will use in the decision making process. These materials will be supported with knowledgeable assistance from the homebuilder's selling agent. Most of the customization to new homes is accomplished through a series of "options" that buyers pick and choose from in much the same way as car options are selected. Conservation "options" will be marketed to homebuyers using polished marketing materials that show the benefits of each option.
2. **Report: Integrating with Green Building:** *Smart from the Start* will achieve its highest measure of success when it becomes scalable and institutionalized. Green Building and the LEED programs have become the de facto standards for the scalability and institutionalization that we seek. Since new residential construction is part of the developing LEED standards, the lessons-learned under this program will be valuable to the LEED program. A report will be developed for the LEED program showing how water conservation can be incorporated into new homebuilding. Water conservation has not figured prominently into the existing non-residential LEED programs. This report will increase water conservation's profile in the upcoming residential programs.

3. **Work with Pilot Homebuilder:** Using the Construction Guidelines and Homebuyer Materials, this task will pilot *Smart from the Start* in an actual homebuilding setting. An incentive of \$500 to \$1,500 per home will be offered to those participating in the program. This incentive will help us identify the price points for each option and reward the early adopters of this program. We will select a homebuilder and a neighborhood that typify, to the extent practical, California homebuilding. This selection will provide us data that is useful to other homebuilders evaluating *Smart from the Start*.
4. **Monitoring and Assessment/Case Studies:** A series of cases studies will be developed that show the successes and shortcoming of the pilot studies. These will serve as real-world references for homebuilders to use in developing options for future homes. Homebuilders will welcome these case studies since they will show the choices made by real homebuyers in real homebuying situations. In situations where water use monitoring is possible with meters and submeters, these case studies will include actual water use data. In situations where submetering is not possible, water conservation estimates will be prepared for each of the options chosen.
5. **Outreach:** In order to increase the adoption of *Smart from the Start*, outreach will be conducted to other homebuilders and homebuilding organizations. The objective is to increase the profile of *Smart from the Start* and give builders reason to embrace the success of the program. Organizations such as the National Association of Homebuilders (NAHB) and the Building Industry Association (BIA) will be useful to increasing marketplace adoption of *Smart from the Start*.
6. **Quarterly Reports:** Quarterly reports containing information on the progress of the project will be prepared at the beginning of each quarter.

### **Smart from the Start: Practical Planning Handbook**

1. **Prepare Outline and Workplan:** Prepare outline and distribute tasks among the Council's project team.
2. **Research:** The Council will conduct research on legislation, case studies, model ordinances, and recommendations from agencies in which integrated planning has been successfully implemented.
3. **Findings:** Results of the research will be compiled.
4. **Prepare Draft:** A Draft Handbook will be prepared that will, at a minimum, include the information contained in the Preliminary Outline (see Appendix)
5. **Publish Handbook:** Publish and print 1,000 copies of the Handbook and disseminate press releases and other announcements to organizations and outlets

throughout the state; post the Handbook on our website: [www.cuwcc.org](http://www.cuwcc.org); deliver at least 5 copies to DWR.

6. **Outreach:** Attend Water and Planning seminars/conferences to promote Handbook and its concepts (please refer to Outreach section of this application for additional information); prepare and distribute a press release and at least one summary article for publication in an industry publication (e.g. the *Environmental Monitor* published by the Association of Environmental Professionals, the *Cal Planner* published by the California Chapter of the American Planning Association). This outreach would include information on all *Smart from the Start* components.
7. **Workshops and Presentations:** The Council will host at least two workshops for water supply planners, land-use planners, consultants and other interested parties on the Handbook. A PowerPoint presentation will be developed. Participants will be asked to complete a Workshop Evaluation form developed by the Council. The Council will present *Smart from the Start* at water and planning conferences throughout the state.
8. **Monitoring and Assessment:** The Council will prepare a workshop summary that will include questions and issues raised by participants, participant lists, copies of the presentations and other materials. Summary information from the Workshop Evaluation forms will also be included.
9. **Quarterly Reports:** Quarterly reports containing information on the progress of the project will be prepared at the beginning of each quarter.

### **Environmental Documentation**

This research and reports that will result from this proposal do not constitute a “project” as defined by the California Environmental Quality Act, California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15378.

### **Statement of Work: Section 3: Monitoring and Assessment**

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This section is required of all Section B project proposals, including those involved in training, education or public information programs. Our proposal is basic education combined with development of planning and construction guidelines and recommendations.

By working with a Project Advisory Committee, we will be able to evaluate the feasibility of our proposed approach and the recommendations contained in each element of *Smart from the Start*. Acquiring feedback and recommendations from PAC 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.

We propose to monitor the progress of this study through requirements for intermediate products and the active engagement of a Project Advisory Committee. 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.

The Council 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:

- The Council will sign and execute the contract with the funding agency and submit additional information, if required. The Council will also execute a contract with the contractor.
- The contractor, in coordination with the Council, will oversee all data development and modeling procedures to ensure that the project objectives are met and that all deliverables listed in are completed on schedule. All project oversight and decisions will be coordinated with the Council.
- The Council 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.
- The Council will prepare and submit invoices inclusive of all project expenses, including contractor services, to the funding agency on a monthly basis.

The Council will also monitor and assess the *Smart from the Start* program by soliciting feedback from workshop participants to gauge their existing or planned implementation of the program elements. Case Studies that will be included in this project will provide a baseline understanding of the results of successful implementation of *Smart from the Start* principles.

## Qualifications of the Applicants and Cooperators

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The mission of the **California Urban Water Conservation Council** is to improve water use efficiency statewide. The California Urban Water Conservation Council 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 Council 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 Council is the overall integration of urban water conservation BMPs into the planning and management of California's water resources.

The Council's 319 member organizations include 181 water supply agencies that deliver nearly 80 percent of California's urban water; 29 environmental groups; and 109 other organizations interested in water efficiency issues.

**The Council** was created to oversee the 1991 *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU), which sets forth Best Management Practices (BMP's) for the efficient use of water in urban areas of the state. In becoming signatories to the MOU, Council members agree to implement the 14 BMP's and comply with all requirements of the MOU. Members submit bi-annual progress reports to the Council, which reports annually to the State Water resources Control Board.

The California Urban Water Conservation Council is a nonprofit corporation formed pursuant to the Nonprofit Public Benefit Corporation Law (Division 2 (commencing with Section 5000) of Title 1 of the Corporations Code) and qualified under Section 501(c)(3) of the United States Internal Revenue Code.

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.

### ***Project Managers/Principles - Qualifications***

**Mary Ann Dickinson, Executive Director.** (Please refer to full resume in Appendix) 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. For five years she managed a natural resources and land use program for training local officials. She is a graduate of the University of Connecticut with a bachelor's degree in environmental planning.

**Katie Shulte Joung, Project Manager.** (Please refer to full resume in Appendix)  
Katie Shulte Joung is a Project Manager with the California Urban Water Conservation Council. Katie's work at the Council includes managing sixteen research and local assistance projects as part of a \$1.9 million three-way cooperative agreement (see item 3 below) with the California Department of Water Resources, CALFED, and the Bureau of Reclamation. For the first two years of this 3-year cooperative agreement, all projects funded by DWR were completed on time and within budget; we are currently on track to complete the remainder of work in year three before the April 30, 2005 deadline in the contract. Katie has extensive experience in coordinating public outreach, facilitating and organizing workshops, and providing training and technical assistance on water supply and land use planning linkages as well as numerous conservation activities.

Prior to joining the Council, Katie was with the Governor's Office of Planning and Research (OPR) where she was an Associate Planner specializing in land-use planning and water policy issues and providing local agencies with technical assistance regarding the California Environmental Quality Act and state planning law, and water supply planning legislation (SB 221 and SB 610). Also, as a member of DWR's working group, she helped develop and provided advice on land-use planning for the *Guidebook*

for Implementation of Senate Bill 610 and Senate Bill 221 of 2001. She has a B.A. from U.C. Berkeley with an emphasis on environmental policy and planning.

Katie Shulte Joung's role in this project: Katie will be the Contract/Project Manager for the entire *Smart from the Start* project as well as be the principal researcher for the Water Element portion. She will direct the consultants, oversee the schedule and scope of work, and facilitate review of the reports through a Project Advisory Committee process.

**Kevin Rumon, Project Manager.** (Please refer to full resume in Appendix)

Kevin Rumon will serve is a career operations and consulting professional and spent most of his time in the construction and manufacturing fields. He is currently a principal at Copper Beech, where he is a licensed California contractor, #805430. With Copper Beech, he also serves as a management and technical consultant with the California Urban Water Conservation Council on issues related to green building, home construction, and landscape irrigation. He completed a management analysis for the Council and is currently working with the California Energy Commission on joint energy and water issues.

Earlier in his career, Rumon was Vice President of Engineering and Operations for PhatPipe, Inc. of Carlsbad, California, an installer of industrial data and telecommunications networks. He also was Vice President of Operations for HomeSquared, Inc., a homebuilder options provider that was sold to Shea Homes in 2001. Rumon also worked for Textron Inc, and IBM in several operations and engineering related functions. Kevin Rumon has BS and MS degrees from Rensselaer Polytechnic Institute and an MBA from Stanford University.

Kevin Rumon's role in this project: Kevin will provide policy and technical guidance on the New Home Construction Guidelines.

**External Cooperators**

The Council will utilize a Project Advisory Committee to guide development of the *Smart from the Start* elements. Several of the Council's member agencies have expressed a strong interest in participating in the Project Advisory Committee for this project. The Council has already secured a commitment from one homebuilder to participate in this project.

**Previous Water Use Efficiency Grant Experience**

In 2002, a landmark cooperative agreement was signed awarding \$1.7 million over three years to the California Urban Water Conservation Council (Council). The funding comes from three entities: the Department of Water Resources (DWR), the U.S. Bureau of Reclamation, and the CALFED Bay-Delta Authority (CBDA). This agreement

represents a significant commitment to assist urban water agencies across California to reach water use efficiency goals.

During the first two years of the project, the Council provided technical assistance to water agencies on understanding the Council's memorandum of understanding (MOU), implementing the 14 Best Management Practices (BMPs), and using the BMP reporting website. Our goal is to achieve 100% reporting by water agencies and, if not, to determine the types of additional assistance or information needed to complete the BMP reports. The funding also supports maintenance and upgrades to the Council's website and BMP reporting database. Additional projects include:

- **Integrating Water Supply and Land Use Planning:** In the Spring of 2004, the Council conducted workshops for water suppliers, land-use planners, engineers, consultants and other interested parties on the implementation of Senate Bill 221 and Senate Bill 221 (States of 2001). Using DWR's *Guidebook for Implementation of SB 221 and SB 610* as a resource, the workshops provided information on: a) integrating the legislative requirements of with the California Environmental Quality Act and the Subdivision Map Act process; preparing a Water Supply Assessment or Verification; and using the Urban Water Management Plan as a source document.
- **CALFED Year 4 Report:** The Council assisted CBDA in the preparation of the Year 4 Comprehensive Report for CALFED's Water Use Efficiency program. This included compiling information, by hydrologic region, on conservation implementation by device or program, extracting data from Urban Water Management Plans, and developing a model to calculate statewide water savings and costs.
- **UWMP Workshops:** In early 2005, the Council will host Urban Water Management Plan (UWMP) workshops throughout the State to provide support to water suppliers on meeting new legislative requirements. A guidebook on the preparation of UWMPs is being developed along with a sample plan and a checklist of necessary components. The Council will also assist member agencies in using the Council's Best Management Practices reporting database to complete the demand management measures section of the UWMP. .
- **Avoided Cost and Environmental Benefit:** In September 2004, the Council began a research project of significant proportions: How to best quantify the avoided costs and capital costs associated with new water supply - costs which are avoided when water conservation programs produce "saved water" - and how to estimate the environmental benefits and costs connected to those water conservation programs. Until now, there has not be an easy or standardized way to estimate these number that are important to assessing the true value of water conservation in California. A methodology and model will be available by the end of 2005.

- Certification Support: provide support for CBDA in defining protocols for implementation of a BMP program certification process.
- Water Savings Calculation Model: a software program to estimate statewide water savings from BMP activities has been developed. This database relies on the data provided by water agencies on the implementation of quantifiable BMPs. The water savings calculations will likely be used in the State Water Plan (Bulletin 160) and in various CBDA planning documents. The model also provides enables water suppliers to calculate their agency's water savings potential for use in program planning.
- Cost-Effectiveness Workshops: In the Fall of 2002 and 2004, the Council hosted a series of workshops to provide guidance on how to conduct cost-effectiveness analysis. Signatory water suppliers are expected to implement an applicable BMP only when it is cost-effective to do so. The workshops provided a general analytic framework from which to assess BMP benefits and costs, guidance on analysis time horizons, use of discounting and selection of discount rates, perspectives of analysis, use of sensitivity analysis, and an overview utility avoided costs.
- Revenue Impacts: In the Fall of 2004, the Council hosted workshops for water agency general managers, finance directors, rate managers, and other interested parties. The Workshops provided information on: managing revenue stability through rate design; the effect of pricing on water consumption and conservation; incorporating future capital investment in rate structure design; adaptive pricing benefits for drought management; equity versus efficiency; and the benefits to wastewater utilities in adopting a conservation oriented rate structure
- BMP Costs and Savings Study: The Council updated its *BMP Costs and Savings Study*, a reference document summarizing the best available estimates of BMP-related program costs and water savings and added a new chapter on Program Cost Accounting. This publication is an integral resource to water agencies in analyzing and developing conservation programs. Additional updates on technologies, data and case studies will be incorporated in the publication in Year 3 of the project.
- PBMP Research: In 2003, the Council commenced work on the first of three annual research projects to analyze possible new and existing Potential Best Management Practices (PBMPs). The following four devices were analyzed in the first year of the project: a) pre-rinse spray valves for the food service industry; b) x-ray film processor recycling units (medical industry); c) steam sterilizer retrofits; and d) weather-based irrigation controllers for residential and small commercial. Each device represents an opportunity to increase water conservation in the residential or commercial, industrial and institutional sectors. Research on 5 new PBMPs is now under way.
- Large Landscape Technical Assistance: the Council will provide technical assistance and training on BMP 5 - Large Landscape Conservation implementation,

including providing expert assistance in the field for water agencies developing landscape programs. This will include: review of water district landscape customer data; on-site landscape technical assistance; guidance on the linkages between water pricing, billing, and landscape water use; and demonstration of landscape efficiency technologies to reduce drainage and erosion as well as water waste.

These projects will facilitate even greater urban water conservation efforts by California's water suppliers and help meet the needs of our growing population while preserving important natural resources. This partnership among state and federal agencies has worked very well to promote coordinated water conservation efforts and we would like to see this collaboration continue in future projects. The Cooperative Agreement has given the Council the ability to provide needed work products to DWR, the Bureau, and CBDA while also supporting the Council's mission and objectives.

### ***Disadvantaged Community Participation/Status***

The Council as a applicant is not a disadvantaged community. However, the Council will conduct outreach and workshops throughout the State and at conferences addressing issues of interest to the entire state to ensure the greatest possible participation and dissemination of information throughout all communities. The final work products will be available for free download from the Council's website at: [www.cuwcc.org](http://www.cuwcc.org).

## **Outreach, Community Involvement and Acceptance**

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### **Outreach**

The deliverables in this proposal include at least four workshops throughout the state. For the workshops, copies of the Practical Planning Handbook, the Water Element Guide, and the Case Study findings from the new home construction project will be disseminated; these materials will also be available for free download from the Council's website at [www.cuwcc.org](http://www.cuwcc.org). The workshops will be full day workshops with PowerPoint presentations.

We will also prepare press releases and several articles on *Smart from the Start* and endeavor to have the articles published in the quarterly journals/newsletters. Our outreach will target the following organizations (a partial list):

- Environmental Justice Coalition
- California Chapter of the American Planning Association
- Association of Environmental Professionals
- Association of California Water Agencies
- American Water Works Association (Cal/Neva Chapter)
- Professional Environmental Marketing Association
- American Water Works Association
- League of Cities
- Chamber of Commerce
- National Association of Home Builders
- Building Industry Association
- California Landscape Contractors Association
- Irrigation Association

We also anticipate presenting these findings and recommendations from these projects at conferences throughout the state in the final two quarters of this grant term. As part of the Council's ongoing outreach will continue through continued discussions and presentations at conferences well beyond the term of this contract.

### **Community Involvement and Acceptance**

Since its inception in 1991, the Council has a solid and successful history of working within diverse stakeholders and guiding the development of complex, often controversial, studies, research and pilot programs among its Group 1 (water supplier), Group 2 (environmental and community organizations), and Group 3 (consultants, academics and other interested parties) members. We will apply this expertise to the deliverables in this proposal through the use of a Project Advisory Committee (PAC) to oversee the work and ensure it will meet the needs of the affected constituencies. Stakeholders who will be invited to participate in the PAC include state agencies (e.g. Department of Water Resources, the Governor's Office of Planning and Research, the

State Water Resources Control Board), water suppliers, city and county planners, developers, homebuilders, environmental groups, and other organizations involved in land use and water supply planning and education. We will also seek the advice of academics and other experts in the land-use planning and natural resource management fields to make certain the *Smart from the Start* handbooks and guidance represent the most progressive and current practices in these fields. *Smart from the Start* will also assist water supply and land use agencies in disadvantaged communities to improve planning processes--better resource planning provides benefits to everyone in a community.

***This project will also facilitate implementation of the following state initiatives:***

In September 2004, Governor Arnold Schwarzenegger signed Assembly Bill 2717. This bill, authored by Assemblyman John Laird, asks the California Urban Water Conservation Council (the Council) to set up a stakeholder Task Force to review and evaluate landscape water issues statewide and to make recommendations for improvements. The Task Force will include representatives from water agencies, landscape contractors, the green industry, cities and counties, environmental groups, and state and federal agencies. The main purpose of the Task Force is to examine the existing Model Water Efficient Landscape Ordinance, recommend changes, and to look at other landscape issues. All three components of *Smart from the Start* will incorporate and be consistent with the recommendations from this Task Force.

In August 2000, Governor Gray Davis signed Executive Order D-16-00 establishing sustainable building as a primary goal for state construction and tasking the State and Consumer Services Agency with its implementation. D-16-00's objectives include: "to site, design, deconstruct, construct, renovate, operate, and maintain state buildings that are models of energy, water and materials efficiency; while providing healthy, productive and comfortable indoor environments and long-term benefits to Californians." A Sustainable Building Task Force was established with as a partnership between forty governmental agencies. The study showed that upfront costs increased 2% to incorporate green building and resulted in a 20% life cycle savings.

On December 14, 2004, Governor Arnold Schwarzenegger issued Executive Order S-20-04 requiring increased energy efficiency for state-owned buildings and encouraging cities, counties and private businesses to reduce their energy use. Governor Schwarzenegger stated a goal of reducing electricity used in existing government and private commercial buildings by 10% per square foot by 2010 and 20% per square foot by 2015. He also mandated that all new and renovated buildings paid for with state funds be certified as Leadership in Energy and Environmental Design (LEED) Silver standard or higher, and that office spaces and office equipment leased or purchased by the state be ENERGY STAR-qualified where cost-effective.

## Innovation

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This *Smart from the Start* program is the first of its kind in California to provide guidance and marketing materials that promote water efficient planning from the General Plan stage through building.

### Water Element Guide

In 2001, water supply planning legislation (SB 610 and SB 221) was enacted that requires coordination between land use and water supply agencies for large development projects. These agencies must work together to provide detailed water supply and demand information related to a development project before that project can be approved. A comprehensive Water Element that addresses projected growth, along with supply and demand projections will improve planning at the beginning of the process, rather than on a project by project basis. The *Smart from the Start Water Element* will also provide the foundational information to assist agencies in preparing the necessary documentation for SB 610 and SB 221. The Water Element will include innovative approaches to coordinating these planning processes and the provide case studies for solutions to water supply planning challenges.

### Practical Planning Handbook

As development projects are presented to land-use planning and water supply agencies, there is no comprehensive guide for decision makers to understand the issues, challenges, and solutions. The *Smart from the Start Practical Planning Handbook* will provide comprehensive information in one resource to streamline the decision making process.

### New Home Construction Standards

By nearly all measures, green building and the LEED program have been a staggering success. In little more than a decade, the tide has shifted from building design and construction being one of the most wasteful industries on earth to one that is responding to real market demand for innovation and environmental concern.

Even the original skeptics who wrote-off green building as a passing trend have been proven wrong. A perusal of the member list of the US Green Building Council will show that most of the largest construction companies have embraced green building.

While it may be tempting to laud construction companies for their adoption of the environment, the reality is that most are responding to the demands of the real estate marketplace. When states like California and cities like San Francisco proclaim and require that new government buildings meet LEED standards, the construction marketplace will listen.

For a variety of good reasons, green building has focused on non-residential construction. Residential construction has always been part of the green vision, but it has issues that made non-residential construction initially more attractive.

We believe that the time is now right to foster the creative innovation of green building in the residential construction marketplace. *Smart from the Start* is an innovative approach to water conservation. It adopts the tenets of green building and combines them with the successes of past water conservation programs.

Most water conservation programs have focused on the retrofit of existing buildings, whether residential or commercial. Although these retrofits are successful, they are expensive when compared against new construction.

*Smart from the Start* is a program that is grounded in the realities of homebuilding and is very scalable. We believe that homebuilders will innovate when they recognize the homebuyer interest in conservation and the environment. *Smart from the Start* will help homebuyers offer conservation to new homebuyers in a manner that helps both parties succeed.

## Costs and Benefits

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By facilitating early incorporation of higher standards for water use efficiency, *Smart from the Start* will accelerate adoption of water efficient home design, landscaping, appliances and related programs. Providing guidance to land use and water supply planners, as well as their respective Boards and senior management, on how to more effectively integrate water supply planning and conservation into their planning process will help achieve the full potential for urban water conservation in the CALFED solution area and throughout the State.

The multiple benefits of *Smart from the Start* are as follows:

- **Will provide economies of scale through a statewide program.** By providing a comprehensive set of guidelines that address water efficient planning we are enabling many public and private entities, including small and medium sized water suppliers and rural areas that are likely to experience exponential growth, to participate and gain from the knowledge presented.
- **Benefits to planning agencies, community organizations, and environmental and resource groups.** Planning agencies, both water and land use, 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 view integrated and coordinated planning as a way to reduce their constituent's costs by providing water efficient planning resources on a statewide level.
- **Will capture savings from a formerly hard-to-reach customer.** This highly innovative initiative is designed to capture savings from a risk averse group: Homebuilders. One of the primary goals of this project is to help homebuilders cost-effectively offer conservation to homebuyers and create a self-sustaining market for conservation in new homes.
- **Will reduce peak demands.** All three *Smart from the Start* components will address irrigation design, timing and quantity. Reduction of irrigation watering provides the highest value savings: peak savings. By shaving the peak demand, we are delaying the costly need for system expansion and capital investments.
- **Will minimize the need for pesticides and fertilizers.** With design changes, installation of weather based irrigation controllers, and reduction in average turf size will result in a reduced requirement for fertilizer and pesticides.
- **Will reduce water use overall.** A redesigned home will result in optimal water use – this means that excessive water use will be minimized. For example, an upgraded landscaping and irrigation system would be designed to apply water in the exact locations needed. This reduces also run off flows.

- **Will reduce contamination of nearshore waters.** By reducing run off, less water will flow into the storm drains and directly in the Bay-Delta watershed or other receiving bodies such as the ocean. Because storm drain water contains high levels of trash, bacteria, oil and other pollutants, reduced irrigation water means less pollution discharged into these waters.
- **Will provide multiple benefits to the Bay-Delta region.** Water savings provide relief and multiple benefits to the overextended Bay-Delta region in several ways. First, demand for water from the Delta will be reduced in peak summer and fall months when flow through the Delta is lowest. Second, runoff discharges into the Delta will be reduced, thus decreasing the contaminant load or Total Maximum Daily Load (TMDL) into the Bay-Delta watershed. Third, if more flow is left in the Delta because of reduced peak demands for water, that flow can benefit fisheries and other aquatic species. Finally, reduced landscape irrigation means reducing excessive growth of turf which gets mowed and contributes to the “green waste” solid waste load within the Bay-Delta watershed.

### **Description of Labor Costs**

The Council will manage this project and prepare all reporting, monitoring and assessment documentation and invoices. While cost sharing is not required for Category B projects, the Council will provide a cost share of a portion of our indirect expenses. Our overhead rate has been calculated to be 39% by our on-contract Chief Financial Officer. The Council will provide \$65,583.00 (24% of project expenses, excluding overhead) to this project resulting in a 17% cost share. The attached Payment Schedule by Quarter and the Budget provide additional information on costs.

Smart From the Start - Budget

As of: 1/10/05

Project	ED Hours	Exec. Dir	Staff Hours	Staff (PM & Research)	ED Benefits	Staff Benefits	Consult # Hours	(Staff) PM Consult	Consult/Expert	Travel	Supply Print/Post	Incentives	Subtotal	Council 39% Admin	Total	Council Admin Cost Share	State Share
<b>Water Element Guidebook</b>																	
Develop Workplan and Outline	1	\$ 60	11	\$ 385	\$ 12	\$ 48	5	\$700					\$1,205	\$470	\$1,674	\$289	\$1,385
PAC Review of Project/Workplan	4	\$ 239	10	\$ 350	\$ 49	\$ 43	4	\$560	\$2,500				\$3,741	\$1,459	\$5,200	\$898	\$4,302
Revise Workplan		\$ -	2	\$ 70	\$ -	\$ 9	2	\$280					\$359	\$140	\$499	\$86	\$412
Research/Interviews/Case Studies		\$ -	230	\$ 8,050	\$ -	\$ 998	70	\$9,800		\$5,000			\$23,848	\$9,301	\$33,149	\$5,724	\$27,425
Summarize Findings	2	\$ 119	20	\$ 700	\$ 25	\$ 87	8	\$1,120					\$2,051	\$800	\$2,850	\$492	\$2,358
PAC Review of Findings	4	\$ 239	6	\$ 210	\$ 49	\$ 26	4	\$560	\$2,500				\$3,584	\$1,398	\$4,981	\$860	\$4,121
Prepare Preliminary Draft	3	\$ 179	80	\$ 2,800	\$ 37	\$ 347	40	\$5,600					\$8,963	\$3,496	\$12,458	\$2,151	\$10,307
PAC Review of Preliminary Draft	4	\$ 239	8	\$ 280	\$ 49	\$ 35	4	\$560					\$1,162	\$453	\$1,616	\$279	\$1,337
Prepare Draft	3	\$ 179	12	\$ 420	\$ 37	\$ 52	10	\$1,400					\$2,088	\$814	\$2,902	\$501	\$2,401
PAC Review of Draft	4	\$ 239	8	\$ 280	\$ 49	\$ 35	4	\$560					\$1,162	\$453	\$1,616	\$279	\$1,337
Prepare Final Report		\$ -	30	\$ 1,050	\$ -	\$ 130	40	\$5,600					\$6,780	\$2,644	\$9,424	\$1,627	\$7,797
Print/Publish		\$ -	10	\$ 350	\$ -	\$ 43		\$0			\$10,000		\$10,393	\$4,053	\$14,447	\$2,494	\$11,952
Outreach & Workshops		\$ -	190	\$ 6,650	\$ -	\$ 825	87	\$12,180	\$5,000	\$8,000	\$4,000		\$36,655	\$14,295	\$50,950	\$8,797	\$42,153
<b>Monitor/Assess: Workshop Summary</b>		\$ -	20	\$ 700	\$ -	\$ 87		\$0					\$787	\$307	\$1,094	\$189	\$905
<b>Contract Management and Reporting</b>		\$ -	30	\$ 1,050	\$ -	\$ 130		\$0					\$1,180	\$460	\$1,640	\$283	\$1,357
	25	\$ 1,491	667	\$ 23,345	\$ 306	\$ 2,895	278	\$38,920	\$10,000	\$13,000	\$14,000	\$0	\$103,957	\$40,543	\$144,500	\$24,950	\$119,550
<b>New Home Construction Standards</b>																	
Develop Construction Guidelines	2	\$ 119	5	\$ 175	\$ 25	\$ 22	40	\$4,000	\$15,000				\$19,340	\$7,543	\$26,883	\$4,642	\$22,242
Develop Homebuyer Materials	2	\$ 119		\$ -	\$ 25	\$ -	25	\$2,500	\$8,000		\$8,000		\$18,644	\$7,271	\$25,915	\$4,475	\$21,440
Report: Integrating with Green Bldg	4	\$ 239	20	\$ 700	\$ 49	\$ 87	20	\$2,000	\$12,000		\$12,000		\$27,074	\$10,559	\$37,633	\$6,498	\$31,135
Work with Pilot Homebuilder		\$ -		\$ -	\$ -	\$ -	60	\$6,000	\$4,000	\$2,000		\$8,000	\$20,000	\$7,800	\$27,800	\$4,800	\$23,000
<b>Monitor/Assess: Case Studies</b>	2	\$ 119	20	\$ 700	\$ 25	\$ 87	30	\$3,000	\$10,000				\$13,931	\$5,433	\$19,363	\$3,343	\$16,020
Outreach	20	\$ 1,193		\$ -	\$ 245	\$ -	20	\$2,000	\$15,000	\$1,000			\$19,438	\$7,581	\$27,018	\$4,665	\$22,353
<b>Contract Management and Reporting</b>		\$ -	36	\$ 1,260	\$ -	\$ 156	5	\$500					\$1,916	\$747	\$2,664	\$460	\$2,204
	30	\$ 1,789	81	\$ 2,835	\$ 368	\$ 352	200	\$20,000	\$64,000	\$3,000	\$20,000	\$8,000	\$120,343	\$46,934	\$167,277	\$28,882	\$138,394
<b>Practical Planning Handbook</b>																	
Develop Workplan	1	\$ 60	5	\$ 175	\$ 12	\$ 22	5	\$700					\$969	\$378	\$1,346	\$232	\$1,114
Research & Case Studies	2	\$ 119	70	\$ 2,450	\$ 25	\$ 304	100	\$14,000					\$16,898	\$6,590	\$23,488	\$4,055	\$19,432
Summarize Findings	2	\$ 119	20	\$ 700	\$ 25	\$ 87	20	\$2,800					\$3,731	\$1,455	\$5,185	\$895	\$4,290
Prepare Draft	4	\$ 239	40	\$ 1,400	\$ 49	\$ 174	40	\$5,600					\$7,461	\$2,910	\$10,371	\$1,791	\$8,580
Prepare Final Report	2	\$ 119	20	\$ 700	\$ 25	\$ 87	20	\$2,800					\$3,731	\$1,455	\$5,185	\$895	\$4,290
Print/Publish		\$ -	5	\$ 175	\$ -	\$ 22		\$0			\$8,000		\$8,197	\$3,197	\$11,393	\$1,967	\$9,426
<b>Monitor/Assess: Outreach &amp; Sur</b>	12	\$ 716	40	\$ 1,400	\$ 147	\$ 174	24	\$3,360		\$1,000			\$6,796	\$2,651	\$9,447	\$1,631	\$7,816
<b>Contract Management and Reporting</b>		\$ -	30	\$ 1,050	\$ -	\$ 130		\$0					\$1,180	\$460	\$1,640	\$283	\$1,357
	23	\$ 1,371	230	\$ 8,050	\$ 282	\$ 998	209	\$29,260	\$0	\$1,000	\$8,000	\$0	\$48,961	\$19,095	\$68,056	\$11,751	\$56,306
<b>Project Totals:</b>								<b>\$88,180</b>	<b>\$74,000</b>	<b>\$17,000</b>	<b>\$42,000</b>	<b>\$8,000</b>	<b>\$273,261</b>	<b>\$106,572</b>	<b>\$379,833</b>	<b>\$65,583</b>	<b>\$314,250</b>

Smart from the Start: Payment Schedule by Quarter

As of: 1/10/05

Project	Budget	Year 1				Year 1	Year 2				Year 2	Total
		Q1	Q2	Q3	Q4	Subtotal	Q1	Q2	Q3	Q4	Subtotal	
<b>Water Element Guidebook</b>												\$0
Develop Workplan and Outline	\$1,385	X										
PAC Review of Project/Workplan	\$4,302	X										
Revise Workplan	\$412	X										
Research/Interviews/Case Studies	\$27,425	X	X									
Summarize Findings	\$2,358		X									
PAC Review of Findings	\$4,121		X									
Prepare Preliminary Draft	\$10,307		X	X								
PAC Review of Preliminary Draft	\$1,337			X	X							
Prepare Draft	\$2,401				X							
PAC Review of Draft	\$1,337				X							
Prepare Final Report	\$7,797				X							
Print/Publish	\$11,952				X							
Outreach & Workshops	\$42,153						X					
Monitor/Assess: Workshop Summary	\$905						X					
Contract Management and Reporting	\$1,357						X					
<b>Water Element Guidebook</b>	<b>\$119,550</b>	<b>\$11,371</b>	<b>\$29,176</b>	<b>\$11,915</b>	<b>\$23,759</b>	<b>\$76,221</b>	<b>\$43,329</b>				<b>\$43,329</b>	<b>\$119,550</b>
<b>New Home Construction Standards</b>												
Develop Construction Guidelines	\$22,242	X	X									
Develop Homebuyer Materials	\$21,440	X		X								
Report: Integrating with Green Bldg.	\$31,135							X	X			
Work with Pilot Homebuilder	\$23,000		X		X			X				
Monitor/Assess: Case Studies	\$16,020						X	X				
Outreach	\$22,353		X	X					X			
Contract Management and Reporting	\$2,204	X	X	X	X		X	X	X			
<b>New Home Construction Standards</b>	<b>\$138,394</b>	<b>\$12,315</b>	<b>\$29,007</b>	<b>\$28,206</b>	<b>\$13,315</b>	<b>\$82,843</b>	<b>\$5,315</b>	<b>\$11,335</b>	<b>\$38,901</b>		<b>\$55,551</b>	<b>\$138,394</b>
<b>Practical Planning Handbook</b>												
Develop Workplan	\$1,114				X							
Research & Case Studies	\$19,432				X		X	X				
Summarize Findings	\$4,290							X				
Prepare Draft	\$8,580							X	X			
Prepare Final Report	\$4,290								X			
Print/Publish	\$9,426								X			
Monitor/Assess: Outreach & Summary	\$7,816										X	
Contract Management and Reporting	\$1,357				X		X	X	X	X		
<b>Practical Planning Handbook</b>	<b>\$56,306</b>				<b>\$1,385</b>	<b>\$1,385</b>	<b>\$19,704</b>	<b>\$13,142</b>	<b>\$13,988</b>	<b>\$8,087</b>	<b>\$54,920</b>	<b>\$56,306</b>
<b>Total</b>	<b>\$314,250</b>	<b>\$23,686</b>	<b>\$58,184</b>	<b>\$40,122</b>	<b>\$38,459</b>	<b>\$160,450</b>	<b>\$68,348</b>	<b>\$24,477</b>	<b>\$52,889</b>	<b>\$8,087</b>	<b>\$153,801</b>	<b>\$314,250</b>

**Applicant: California Urban Water Conservation Council**

**SMART FROM THE START**

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

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

	Category  (I)	Project Costs  \$ (II)	Contingency % (ex. 5 or 10) (III)	Project Cost + Contingency  \$ (IV)	Applicant Share  \$ (V)	State Share Grant  \$ (VI)	Life of investment (years) (VII)	Capital Recovery Factor (VIII)	Annualized Costs  \$ (IX)
	Administration <sup>1</sup>								
	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
	All Indirect Costs	\$106,572	0	\$106,572	\$65,583	\$40,989	0	0.0000	\$0
(a)	Total Administration Costs	\$106,572		\$106,572	\$65,583	\$40,989			\$0
(b)	Water Element Guidebook	\$101,990	0	\$101,990	\$0	\$101,990	0	0.0000	\$0
(c)	New Home Construction Standards	\$104,496	0	\$104,496	\$0	\$104,496	10	0.0000	\$0
(d)	Practical Planning Handbook	\$40,985	0	\$40,985	\$0	\$40,985	0	0.0000	\$0
(e)	Implementation Verification	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(f)	Project Legal/License Fees	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(g)	Structures	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(h)	Land Purchase/Easement	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Environmental								
(i)	Compliance/Mitigation/Enhancement	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(j)	Construction	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(k)	Other (Specify)	0	0	\$0	\$0	\$0	0	0.0000	\$0
(l)	Monitoring and Assessment	\$21,514	0	\$21,514	\$0	\$21,514	0	0.0000	\$0
(m)	Report Preparation	\$4,276	0	\$4,276	\$0	\$4,276	0	0.0000	\$0
(n)	<b>TOTAL</b>	\$379,833		\$379,833	\$65,583	\$314,250			\$0
(o)	Cost Share -Percentage				17	83			

1- excludes administration O&M.

**Applicant: California Urban Water Conservation Council**  
**Smart from the Start**

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

	Qualitative Description - Required of all applicants <sup>1</sup>				Quantitative Benefits where data are available <sup>2</sup>
	Description of physical benefits (in-stream flow and timing, water quantity and water quality) for:	Time pattern and Location of Benefit	Project Life: Duration of Benefits	State Why Project Bay Delta benefit is Direct <sup>3</sup> Indirect <sup>4</sup> or Both	Quantified Benefits (in-stream flow and timing, water quantity and water quality)
Bay Delta	<ul style="list-style-type: none"> <li>*Reduced water demand throughout the year;</li> <li>*Avoided costs associated with demand reduction (supply, distribution, energy, etc.)</li> <li>*Improved reliability for Bay Delta region</li> <li>*Reduction of runoff nonpoint contaminants</li> <li>*Reduced unrecoverable water losses due to evaporation</li> <li>*General improvements to ecosystem related to reduced drought stress</li> </ul>	<ul style="list-style-type: none"> <li>*Time pattern: year round with special emphasis during dry summer months</li> <li>*Location: statewide</li> </ul>	Indefinite life span. Improving implementation and planning will yield benefits as long as more effective planning and implementation is carried out into the future.	The majority of benefits are indirect in that they accrue upon dissemination of the guidance materials and workshops and adoption of the Smart from the Start recommendations for years to come.	This project is designed to improve planning and construction to facilitate effective water supply planning and incorporation of water efficient design and technology at the lowest practical cost. Upon implementation of the recommendations--or improved implementation--quantifiable savings will be derived in the covered service areas.
Local	<ul style="list-style-type: none"> <li>*Reduced water demand throughout the year;</li> <li>*Avoided costs associated with demand reduction (supply, distribution, energy, etc.)</li> <li>*Improved reliability</li> <li>*Reduction of runoff nonpoint contaminants</li> <li>*General improvements to ecosystem related to reduced drought stress</li> </ul>	<ul style="list-style-type: none"> <li>*Time pattern: year round with special emphasis during dry summer months</li> <li>*Location: statewide</li> </ul>	Indefinite life span. Improving implementation and planning will yield benefits as long as it is carried out into the future.	Same	Same.

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

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

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

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

**Applicant: California Urban Water Conservation Council**  
**Smart from the Start**

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

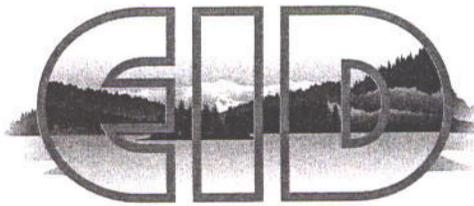
<b>ANNUAL LOCAL BENEFITS</b>	<b>ANNUAL QUANTITY</b>	<b>UNIT OF MEASUREMENT</b>	<b>ANNUAL MONETARY BENEFITS</b>
(a) Avoided Water Supply Costs (Current or Future Source)	0		\$0
(b) Avoided Energy Costs	0		\$0
(c) Avoided Waste Water Treatment Costs	0		\$0
(d) Avoided Labor Costs	0		\$0
(e) Other (describe)	0		\$0
<b>(f) Total [(a) + (b) + (c) + (d) + (e)]</b>			<b>\$0</b>

**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)	<b>17</b>
Describe how the cost share (based on relative balance between Bay-Delta and Local Benefits) is derived. (See Section A-7 for description.)	
<p>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.</p>	



## 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 convey 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.

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,

A handwritten signature in black ink, appearing to read 'David Witter', written over a horizontal line.

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 "SMART FROM THE START"**

Dear Ms. Dickinson:

The Goleta Water District wishes to convey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for "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, 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  
Water Conservation Coordinator



## SAN FRANCISCO PUBLIC UTILITIES COMMISSION

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



January 6, 2005

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

GAVIN NEWSOM  
MAYOR

E. DENNIS NORMANDY  
PRESIDENT

RICHARD SKLAR  
VICE PRESIDENT

ANN MOLLER CAEN  
ADAM WERBACH  
RYAN L. BROOKS

SUSAN LEAL  
GENERAL MANAGER

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50 GRANT  
APPLICATION FOR THE "SMART FROM THE START" PROGRAM

Dear Ms. Dickinson:

The San Francisco Public Utilities Commission (SFPUC) wishes to convey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for "Smart From the Start" program which undertake a number of projects related to improving water conservation input in the planning, development, and construction process for new homes.

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; its 328 members include water agencies, 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 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

DIRECTOR'S OFFICE

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  
"Smart From the Start".

Dear Ms. Dickinson:

The City of San Jose wishes to convey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for "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, 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 City of San Jose 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,

Linden Skjeie, Manager  
Water Efficiency Program  
City of San Jose

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  
"SMART FROM THE START" PROGRAM

Dear Ms. Dickinson:

The Santa Clara Valley Water District wishes to convey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for "Smart from the Start" 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,



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 convey 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

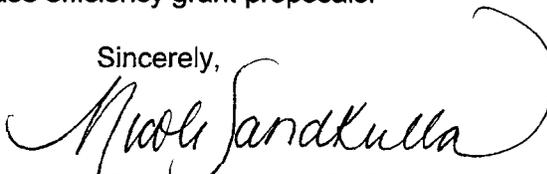
Ms. Mary Ann Dickinson  
January 5, 2005  
Page 2 of 2

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,

A handwritten signature in cursive script that reads "Nicole Sandkulla". The signature is fluid and includes a large loop at the end of the last name.

Nicole Sandkulla, P. E.  
Senior Water Resources Engineer



January 10, 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 SMART FROM THE START

Dear Ms. Dickinson:

Falcon Waterfree Technologies wishes to convey our strong support for the California Urban Water Conservation Council's application for Proposition 50 Water Use Efficiency grant funding for 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, 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, Falcon Waterfree Technologies 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,

A handwritten signature in blue ink, appearing to read "D. Gleiberman", is written over the word "Sincerely,".

Daniel Gleiberman, AICP  
Vice President-Government Affairs  
Falcon Waterfree Technologies



## MONO LAKE

### COMMITTEE

P.O. Box 29  
Hwy 395 and Third Street  
Lee Vining, CA 93541

Phone (760) 647-6595

Fax (760) 647-6377

January 5, 2005

Mary Ann Dickinson

Executive Director

California Urban Water Conservation Council

455 Capitol Mall, Suite 703

Sacramento, CA 95814

#### Board of Directors

Co-Chairs:  
Sally Gaines  
Ed Manning

Richard Atwater  
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Tom Soto  
Doug Virtue

#### Directors Emeriti

Helen Green  
Ed Grosswiler  
Grace de Laet  
Genny Smith

#### Executive Directors

Geoffrey McQuilkin, Operations  
Frances Spivy-Weber, Policy

#### Southern California Office

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

#### On the Internet

[www.monolake.org](http://www.monolake.org)  
[www.monobasinresearch.org](http://www.monobasinresearch.org)

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROP 50  
GRANT APPLICATION FOR "Smart From the Start."

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 "Smart From the Start," projects related to improving water conservation input in the planning, development, and new home construction process.

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  
Executive Director, Policy

**Mary Ann Dickinson**  
**P.O. Box 162370**  
**Sacramento, California 95816**

---

**PROFESSIONAL QUALIFICATIONS**

- 1/99 to present      **Executive Director, California Urban Water Conservation Council**  
Director of California's only professional conservation organization, composed of 266 water agencies, environmental organizations, and professional firms. Responsible for the implementation of 14 Best Management Practices for water use efficiency, and for reporting to the State Water Resources Control Board on the State's progress on these practices. Other duties include managing Council staff, preparing reports and publications, public speaking, technical assistance to members, and coordinating with governmental agencies.
- 7/93 to 1/99      **Branch Manager, Legislative and Policy Development, Planning and Resources Division, Metropolitan Water District of Southern California**  
Manager of a branch of 20 staff members and four technical consultants on a variety of policy and legislative initiatives. Responsibilities included developing Metropolitan's position on legislation, developing new policy initiatives and legislation in a consensus process with member agencies and other outside organizations, coordinating the District's public outreach program on planning policy issues in concert with the member agencies, and managing the Division's administrative functions.
- 10/92 to 7/93      **Section Head, Agency and Local Government Support Section, Conservation Branch, Metropolitan Water District of Southern California**  
Managed a section of five employees working closely with member agencies to implement conservation programs throughout the service area. Managed a budget of \$18 million for conservation incentive programs and negotiated and mediated with member agency managers and staff.
- 7/89 to 10/92      **Deputy Director of Public and Government Affairs, South Central Connecticut Regional Water Authority**  
Directed all Authority activities relating to state, regional and local governments, including legislative representation on water supply and water quality issues. Managed all public affairs, communications, and education programs. Handled a water quality public notification on biofilm.
- 9/85 to 7/89      **Principal Environmental Analyst, Connecticut Department of Environmental Protection**  
**Executive Assistant, Office of the Commissioner**  
(10/87 to 7/89) Directed problem resolution for Commissioner of Environmental Protection and represented the Commissioner in negotiating sessions. Coordinated major policy issues and projects.

Created DEP's Land Acquisition Priority Rating System, copied widely around the country. Invited as consultant on US/UK Exchange Program on public participation and land use planning.

**Supervisor, Coastal Programs Section**

(9/85 to 10/87) Responsible for all management and regulatory functions as head of eight-person municipal coastal management section, the heart of Connecticut's coastal area management program. Supervised staff coastal site plan reviews in 36 coastal towns, provided technical and legal assistance to municipalities during the planning and zoning process, and managed policy concerns regarding coastal resource allocation, including drafting of legislation.

6/79 to 9/85

**Environmental Consultant**

- Designed and implemented for four years under contract with the Connecticut Dept. of Environmental Protection a 7-course educational workshop series for annual elected officials on land use and natural resources
- Provided focused research, writing, and public participation projects for environmental organizations such as the Farmington River Watershed Association, CT Hazardous Waste Management Service, Nature Conservancy, CT League of Women Voters, and ELECT
- Researched permit requirements for several development firms
- Designed and managed numerous resources conferences, including a major flooding conference for the U.S. Army Corps of Engineers and a week-long annual meeting of state geologists from the fifty states held in Mystic, CT
- Directed a two-year "offset" pilot air quality program composed of six staff people for the Conn. Department of Economic Development
- Authored various publications on planning and zoning law, site plan review, groundwater quality, coastal management, and hazardous materials spills.

3/78 to 6/79

**Executive Director, Connecticut Council on Environmental Quality**

Directed staff work for Governor-appointed board charged with overseeing environmental quality and resolving environmental problems. Prepared detailed annual report on the State's environment. Managed budget and supervised staff.

1/72 to 3/78

**Senior Environmental Analyst, Connecticut Department of Environmental Protection**

Held various positions during the six-year period

**EDUCATION**

Graduate of Grosse Pointe High School, Grosse Pointe, Michigan

Undergraduate coursework at University of Michigan, Ann Arbor, MI

Bachelor's Degree Environmental Planning, University of Connecticut, Storrs, CT

Master's coursework in Renewable Natural Resources, Univ. of Connecticut, Storrs, CT

## **KATIE SHULTE JOUNG**

3420 Grant Park Drive, Carmichael, California 95608

(916) 552-5885 office; (916) 284-0988 cell

Katie@cuwcc.org

**SUMMARY:** Broad-based experience in Project and Contract Management, Environmental Policy Analysis and Research, Public Relations and Communications. Comprehensive knowledge of water policy, environmental regulations, the legislative process, web site development, commercial real estate and construction, media relations, contract negotiation and cost management. Project driven with proven ability to work effectively and diplomatically with both internal and external stakeholders at all levels. Solid analytical and research writing background.

### **PROJECT MANAGEMENT & ADMINISTRATION**

- Prepared Requests for Proposals, coordinated consultant interview and selection processes, wrote contracts, developed schedules and budgets, and managed 17 projects for \$1.9 million CALFED Cooperative Agreement
- Managed activities of multiple Project Advisory Committees (e.g. Potential Best Management Practices, BMP Cost and Savings Study, BMP 11 Revision, Avoided Costs and Environmental Benefits) and Council Subcommittees (Research & Evaluation, Communications) and facilitated resolution of policy issues
- Managed projects and contracts for statewide environmental and planning information database development ([www.ceganet.ca.gov](http://www.ceganet.ca.gov) and [www.calpin.ca.gov](http://www.calpin.ca.gov)) and academic research on environmental policy
- Secured operating contract with a vendor that provided more efficient and technologically advanced services at a lower price and incurred a 30% savings by negotiating preferential lease buyout terms
- Developed an organized, systematic process for tracking and collecting past due accounts resulting in an 87% reduction of past due accounts in ten months

### **POLICY ANALYSIS & RESEARCH**

- Integrated the policies of the CALFED Bay Delta Authority's Record of Decision, the State Water Plan (Bulletin 160), and the Council's Memorandum of Understanding regarding Urban Water Conservation into project planning and implementation
- Developed a water policy strategy for the Governor's Office of Planning and Research integrating water use efficiency, land-use planning, and sustainability principles
- Researched tax, zoning and other pertinent subject and market information
- Published in *California Legal Studies Journal* for environmental policy paper entitled, "Selenium Emissions into San Francisco Bay"
- Responded to constituents' inquiries; researched and analyzed current issues with an emphasis on water policy and the California Environmental Quality Act (CEQA)

### **COMMUNICATIONS & OUTREACH**

- Facilitated workshops and presented information on water and planning issues; topics included the Council's BMPs, water supply planning (SB 221 and SB 610), CEQA, and land-use planning
- Wrote advisory publications, technical manuals, press releases, and marketing materials

- Represented organizations at water and planning conferences and as a member of the State Water Plan Advisory Committee and the Public Information and Outreach working group of the state's Recycled Water Task Force
- Provided information to columnists, editors, writers and customers regarding software programs
- Disseminated information regarding environmental issues, initiatives, regulations and organizations as a representative of several community based associations
- Created marketing and presentation materials including: designing brochures, preparing tenant surveys and compiling demographic surveys/analyses

## **PROFESSIONAL EXPERIENCE**

**California Urban Water Conservation Council, 2002-Present**  
Project Manager

**Governor's Office of Planning and Research (OPR), 1999-2002**  
Associate Planner/Policy Analyst

**Dome Construction Corporation, 1998-1999**  
Marketing Coordinator

**CB Commercial Real Estate Group, Inc., 1995-1998**  
Research Assistant/Software Specialist, 1996-1998  
Marketing Specialist/Project Coordinator, 1995-1996

**California State Assembly, A.D. 18, 1994**  
Legislative Assistant

**MCR Agency, Inc., 1984-1994**  
Office Manager

## **COMMUNITY ACTIVITIES**

**San Francisco Baykeeper, The Bay Institute and Save the Bay, 1991-1994**  
Public Outreach, Community Relations

**Richardson Bay Audubon Sanctuary, 1993-1995**  
Boat Patrol, Bay Shore Studies Docent

**California Coastal Cleanup, 1990-1999**  
Beach Captain

## **EDUCATION AND PROFESSIONAL ORGANIZATIONS**

- B.A. Environmental Policy and Planning, U.C. Berkeley, 1994
- California Chapter of the American Planning Association
- Association of Environmental Professionals
- American Water Works Association

## KEVIN RUMON

230 San Rafael Avenue  
San Rafael, CA 94901

H: 415.455.9269  
M: 415.515.1600  
kevin@copperbeech.net

### Experience

- 2002-2005 **Copper Beech, Principal** *San Rafael, CA*
- Licensed contractor, Lic. #805430. Supervise and perform a wide range of commercial and residential projects. Responsible for consultation, estimation, construction, and compliance.
- 2003-2005 **California Urban Water Conservation Council** *Sacramento, CA*
- Management and technical consulting for a consortium of water agencies and wholesalers and environmental organizations throughout California.
  - Technical services focusing on landscape irrigation and new home construction.
  - Negotiating Memorandum of Understanding with the California Energy Commission on the bundling of water and energy conservation programs.
- 2001-2002 **PhatPipe, Inc., Vice President, Engineering & Operations** *Carlsbad, CA*
- Designed and installed campus area networks in industrial building complexes using fixed wireless equipment. Company sold to ProLogis Trust (NYSE: PLD).
- Built the engineering and operations teams responsible for network design, deployment, and network support in several hundred industrial buildings.
  - Wrote all installation specifications, negotiated Master Service Agreements, and managed the construction process to a 70% installation cost reduction.
  - Developed installation schemas using point-to-point and point-to-multipoint wireless equipment and 802.11, ATM, and DSL hardware from multiple vendors.
  - Managed the installed network through direct management of NOC, customer service, WAN carrier relations, and sales engineers in three time zones.
  - Senior executive responsible for the corporate transition to ProLogis Trust.
- 1999-2001 **HomeSquared, Inc., Vice President of Operations** *Carlsbad, CA*
- Co-Founder of 22-person technology provider for the homebuilding and building materials industries. Products optimize communication between builder and buyer, enable greater customization of homes, and expand the market for high-end architectural finish materials. Company sold to Shea Homes
- Raised \$2M in venture capital.
  - Wrote functional specifications for product design and development.
  - Developed staffing plan and hired top-tier management and technical team.
- 1997-1999 **Linbeck Corporation, Consulting Engineer** *Menlo Park, CA*
- Consulting engineer to a national commercial builder on high-profile building projects in the Bay Area. Buildings included a 280-room residential facility designed by Mexico City architect Ricardo Legorreta and a 250,000-sqft. laboratory

by London architect Lord Norman Foster. Projects totaled over \$100 million. Worked closely with clients, architects, subcontractors, inspectors, and field personnel to ensure the timely delivery. 95% of time on site.

- 1994-1997 **Turnstone, Inc., Chief Operating Officer** *Houston, TX / Menlo Park, CA*  
Founded a merger and acquisition firm pursuing the consolidation of manufacturing companies. Targeted fragmented, sustainable businesses with \$5-50MM in revenue. Performed business valuations and provided operations consulting services to industries ranging from optical glass coating to building fabrication. Production Manager for 75 person automated metal finishing / anodizing facility.
- 1987-1993 **Textron Lycoming, Production & Process Manager** *Stratford, CT*  
Front-line operations in a million sqft. gas turbine engine manufacturing facility.
- *Production Manager:* Management of production workers and supervisors producing welded, brazed, and machined fabrications.
  - *Process Engineering Manager:* Production floor management of process engineers responsible for over machined, welded, and brazed assemblies.
  - *Tool Design Supervisor:* Managed tool design staff, 67,000 tools, and CAD equipment.
- 1983-1986 **International Business Machines, Engineer** *Yorktown Heights, NY*  
Design and fabrication of complex research prototypes at the IBM Thomas J. Watson Research Center.

## Education

- Stanford University
- Masters in Business Administration 1994
- Rensselaer Polytechnic Institute
- M.S. Mechanical Engineering 1986
  - B.S. Mechanical Engineering / Computer Science 1983
- Licensed California Contractor - #805430

## Interests

Endurance trail running. Competed in several 100-mile trail runs and won several races ranging in length from 50 to 100 kilometers.  
Restoration of the 1865 Elliott House in San Rafael.

## APPENDIX

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### **Preliminary Outline - Smart from the Start: Water Element Guide**

The purpose of the Water Element Guide would be to assist local city and county planning agencies to develop a comprehensive Water Element as part of their local General Plan. This Guide would have four major components: 1) a very brief overview of existing law and case law; 2) a process or “cookbook” section that provides step-by-step guidance on how to develop a water element that expands on the information on the Optional Element from the recently updated General Plan Guidelines prepared by the Governor’s Office of Planning and Research (OPR); 3) Case Studies from jurisdictions that have adopted a water element; 4) innovative approaches to preparing a Water Element. The following outline describes the proposed Guide in greater detail:

#### **I. Overview of the state of California’s Water**

##### **A. Describe why coordinated planning between water and planning agencies is important**

1. Growth and the impact of land-use changes on scarce or dwindling resources
  - a) impact on water supply
  - b) impact on water quality
2. Benefits
  - a) Good planning will reduce likelihood of lawsuits
  - b) Helping land use agencies to prepare, in advance, for the informational requirements of SB 610/221
  - c) Helping land use agencies to understand the water supply issues they may face as California, and their community, continues growing;
  - d) Coordinating land use planning and water supply planning processes;
  - e) Informing the public, decision makers, and developers of water supply challenges and outlining possible solutions;
  - f) Promote beneficial and efficient water use;
  - g) Recognition that water is a finite resource even with implementation of desalination and recycled water projects.
3. Purpose of this Guidebook

##### **B. Brief overview of relevant law**

1. General Plan law
2. The Urban Water Management Planning Act
3. The California Environmental Quality Act (as it relates to the development of a General Plan and related analyses)
4. Zoning/Ordinances
  - a) AB 325
  - b) Water Recycling
  - c) others
5. Other laws (recommendations)

### C. Recent Legislation

1. SB 221, SB 610 and SB 901
2. AB 857 (Smart Growth and the Environmental Goals and Policies Report) – this relates to sustainable development and relates to efficient water resource planning
3. Other related legislation (recommendations?)

### D. History and Case Law

1. Castaic Lake Water Agency
2. El Dorado County
3. EBMUD case that was catalyst for SB 901 in 1994 (Dougherty Valley)

## II. The Process Piece

### A. Step-by-Step Recommendations for a City or County – see the *General Plan Guidelines* developed by OPR as a starting point for guidance to ensure that the Water Element Guidebook is consistent with OPR's

1. Identify your water supplier(s)
2. Review water supplier planning documents (especially regarding projected water supplies and demands)
  - a) UWMP
  - b) Facilities Master Plan
  - c) Capital Improvements Plan
3. Set up an early planning meeting
4. Include community groups in early discussions
5. etc.

### B. Step-by-Step Recommendations for a Water Supplier

### C. Relationship to other elements of the General Plan

1. Land Use
2. Open Space (including agricultural land)

### D. Resource Integration (impact of water decisions on related resources)

1. groundwater
2. watersheds
3. etc.

### E. Integration with Other Planning Processes

1. State and Federal
  - a) DWR (State Water Plan)
  - b) State Water Resources Control Board
  - c) Dept. of Fish and Game
  - d) Dept. of Forestry (for watershed issues)
  - e) Others?
2. Regional/Local
  - a) Councils of Government
  - b) Local Agency Formation Commission (LAFCO)
  - c) Other regional planning bodies

### **III. Case Studies – Who has done a water element?**

- A. Describe the experiences of several jurisdictions that have adopted a Water Element
- B. What other states are doing; examples might include:
  - 1. Florida
  - 2. Maryland
  - 3. Colorado
  - 4. Texas
  - 5. Arizona
  - 6. Others TBD

### **IV. Innovative Approaches**

- A. This section would describe possible creative approaches and solutions to the challenges of developing a comprehensive Water Element.
  - 1. Water Conservation and the Use of New Technology
  - 2. Developer Perspective – work with developers to understand their concerns and seek their recommendations on possible solutions
  - 3. Planning - use existing model ordinances (e.g. water recycling) to guide development of the Water Element and, conversely, to adopt ordinances as an implementation measure for the Water Element
  - 4. Public Relations – working with the community and marketing the advantages of coordinated planning (see Community Value-Based decision making model outlined in Recycled Water Task Force recommendations)
  - 5. Regionalism – develop a water element in coordination with regional planning bodies
  - 6. The Watershed Approach

### **V. Summary – Tying the Pieces Together (e.g. different approaches)**

### **VI. Resources**

- A. Publications
- B. Web Sites
- C. Agencies

### **VII. Appendices**