Inland Empire
UTILITIES AGENCY*

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* A Municipal Water District

January 10, 2005

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

Reference: **2004 Urban Water Use Efficiency (TYPE B) Proposal**
Proposal Title: Southern California Water-Efficient Landscape (WERL) Facility

Dear Debra,

The Inland Empire Utilities Agency is hereby submitting the complete proposal for the 2004 Agricultural and Urban Water Use Efficiency Implementation Project PSP. This proposal package includes one original, eight photocopies and one electronic copy of PDF format, on CD-ROM, and it consists of the following for your review:

1. Project Information Form
2. Signature Page
3. Statement of Work
   - 3.1 Relevance and Importance
   - 3.2 Technical/Scientific Merit, Feasibility
   - 3.3 Monitoring and Assessment
4. Qualifications of the Applicants and Cooperators
5. Outreach, Community Involvement, and Acceptance
6. Innovation
7. Benefits / Costs

If you have any questions regarding this submittal, please do not hesitate to contact me at (909) 993-1740 or email at atwater@ieua.org. If am not available, please contact Jason Gu at (909) 993-1636 or email at jgu@ieua.org.

Sincerely,

Richard W. Atwater
CEO/General Manager

Agricultural and Urban Water Use Efficiency Implementation Project (Section B) Proposal

1 - Project Information Form

Applying for: ■ Urban ❑ Agricultural

1. (Section A) **Urban or Agricultural Water Use Efficiency Implementation Project**
   - ■ (a) implementation of Urban Best Management Practice, #_____3,5,7,8_____
   - ❑ (b) implementation of Agricultural Efficient Water Management Practice, #_____
   - ❑ (c) implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # or Quantifiable Objective #, if applicable _____
   - ❑ (d) Specify other: _____

2. (Section B) **Urban or Agricultural Research and Development; Feasibility Studies, Pilot, or Demonstration Projects; Training, Education or Public Information; Technical Assistance**
   - ❑ (e) research and development, feasibility studies, pilot, or demonstration projects
   - ■ (f) training, education or public information programs with statewide application
   - ❑ (g) technical assistance
   - ■ (h) other (career development opportunities for college interns)

3. Principal applicant (Organization or affiliation): Inland Empire Utilities Agencies

4. Project Title: **IEUA Water-Efficient Residential Landscape Facility**

5. Person authorized to sign and submit proposal and contract:
   - Name, title: Richard W. Atwater
   - Mailing address: P.O. Box 9020
     Chino Hills, CA 91709
   - Telephone: (909) 993-1740
     (909) 597-8875

	Fax.	atwater@ieua.org
	E-mail	

6. Contact person (if different):	Name, title:	Harlan Delzer, Water Resources Analyst / Contracts and Programs Administrator
	Mailing address.	P.O. Box 9020
		Chino Hills, CA 91710
	Telephone	909-993-1707
	Fax.	909-606-7547
	E-mail	hdelzer@ieua.org

7. Grant funds requested (dollar amount): *(from Table C-1, column VI)*	**$1,000,000**
8. Applicant funds pledged (dollar amount):	**$684,000**
9.Total project costs (dollar amount): *(from Table C-1, column IV, row n)*	**$1,684,000**
10. Percent of State share requested (%) *(from Table C-1)*	59%
11. Percent of local share as match (%) *(from Table C-1)*	41%
12. Is your project locally cost effective? *Locally cost effective means that the benefits to an entity (in dollar terms) of implementing a program exceed the costs of that program within the boundaries of that entity.* *(If yes, provide information that the project in addition to Bay-Delta benefit meets one of the following conditions: broad transferable benefits, overcome implementation barriers, or accelerate implementation.)*	❑ (a) yes ■ (b) no

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

    If yes, your project may be eligible only if there will be accelerated implementation to fulfill a future requirement and is not currently required.

    Provide a description of the regulation, law or contract and an explanation of why the project is not currently required.

- ❑ (a) yes
- ■ (b) no

12. Duration of project (month/year to month/year): **Sept 2005 to Sept 2008**

13. State Assembly District where the project is to be conducted: **61st and 63rd**

14. State Senate District where the project is to be conducted: **29th, 31st, and 32nd**

15. Congressional district(s) where the project is to be conducted: 41st and 42nd

16. County where the project is to be conducted: San Bernardino County

17. Location of project (latitude and longitude) 34.03.° North (latitude) and 117.36° West (longitude)

18. How many service connections in your service area (urban)? 178,335 meters

19. How many acre-feet of water per year does your agency serve? 229, 454 (FY 03/04)

20. Type of applicant (select one):

- ❑ (a) City
- ❑ (b) County
- ❑ (c) City and County
- ❑ (d) Joint Powers Authority
- ■ (e) Public Water District
- ❑ (f) Tribe
- ❑ (g) Non Profit Organization
- ❑ (h) University, College
- ❑ (i) State Agency
- ❑ (j) Federal Agency

❑ (k) Other

❑ (i) Investor-Owned Utility

❑ (ii) Incorporated Mutual Water Co.

❑ (iii) Specify _____

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

(Provide supporting documentation.)

❑ (a) yes median household income

■ (b) no

2. Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form has the legal authority to submit the proposal on behalf of the applicant;

There is no pending litigation that may impact the financial condition of the applicant or its ability to complete the proposed project;

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant;

The applicant will comply with all terms and conditions identified in this PSP if selected for funding; and

The applicant has legal authority to enter into a contract with the State.

Richard W. Atwater
CEO/General Manager

Signature: Richard W. Atwater Date: January 10 2005

3. Statement of Work

3.1 Relevance and Importance

Describe how this project will contribute toward or support California Bay-Delta Program goals.

Introduction
The Inland Empire Utilities Agency (IEUA) is a municipal water agency that distributes imported water, provides industrial/municipal wastewater collection and treatment services, recycled water, and other services to the cities of Chino, Chino Hills, Ontario, and Upland, as well as to the Monte Vista Water District, the Cucamonga Valley Water District, the Fontana Water Company and the San Antonio Water Company. IEUA serves these sub-agencies and a population of approximately 700,000 within it's 242-square mile service area located in southwest San Bernardino County. The IEUA service area is also part of the Santa Ana River Watershed with growth rates in the 1990's of over 3 percent annually. The Santa Ana River Watershed continues to be one of the most rapidly urbanizing areas in the United States. Several cities in the IEUA service area continue to see growth rates of between 2 and 3 percent each year (6,000-8,000 new homes per year). By 2020, the IEUA service area is expected to have a population that exceeds 1 million people.

IEUA is a signatory to the California Urban Water Conservation Council's memorandum of understanding regarding urban water use best management practices (BMPs). IEUA is committed to implementing the BMPs in partnership with its seven (7) local retail water agencies and other multiple regional agencies. During an average year, IEUA will purchase and wholesale approximately 70,000 acre-feet of imported water from the Metropolitan Water District of Southern California. All of that imported water, brought into the IEUA service area, is delivered by the California State Water Project. Therefore this water-use-efficiency project will provide, Gallon-for-gallon, direct benefits to the California Bay-Delta. This is an essential element of the CALFED Water Use Efficiency Program and the Record of Decision (ROD).

In Southern California, the largest use of urban water is the irrigation of landscapes. When a landscape irrigation system is poorly designed, poorly installed, poorly maintained, or the landscape consists of plants not well suited to the dry and often hot California climate, water demand increases dramatically. The increase is a result of the combined increases in transpiration by the plants, evaporation from soil and leaves, irrigation system leaks, runoff, and percolation (of water escaping below the root zone). The source for much of Southern California's residential landscape water is the Bay Delta. The proposed project will construct up to 20 full-sized, water-efficient, residential landscapes on a 5-acre site and thus provide multiple examples of water-efficient residential landscape for the public and residential developers to emulate. The example landscapes will display a wide variety of design motifs that will be fully monitored with regard to water demand, greenwaste production, and

maintenance (labor) requirements. Each of the full-sized (8,000 - 10,000 square feet) residential landscapes will utilize modern irrigation equipment and weather-based irrigation control systems. The anticipated results of the project include providing aesthetic residential landscape using 50%-70% less water than standard turf-based landscapes. The anticipated goals of the project are to document and compare the water demands of the various designs, document the public's acceptance and appreciation of the designs, to educate the IEUA service area's residential property owners of the water-savings potential of retro-fitting their existing landscapes, and to educate the residential developers active in the area of the potential for installing water-efficient landscapes for new homes (6,000-8,000 annually) to mitigate SB 220 and SB 610 issues.

Water consumption can be greatly reduced with careful planning, good plant selection, efficient irrigation systems, and good water management and maintenance practices. The proposed Southern California Water-Efficient Residential Landscape (WERL) Facility project will provide, by real examples, the aesthetic potential of such water conserving landscapes. The WERL Facility will also quantitatively document how to reduce the demand for imported water through the implementation of water-efficient residential landscape motifs. Reducing the demand for imported water decreases demand on the Bay Delta supplies and improves water quality and quantity for the preservation of identified critical habitat. Conversely, without the implementation of array of water conservation activities associated with water-efficient landscapes, the anticipated population growth in the western San Bernardino County will continue to increase its demand on the Bay-Delta for more imported water.

Goals and Objectives

With funds from IEUA and Prop 50 Water Use Efficiency grant funds from the Department of Water Resources, the first goal will be for IEUA to design and build the the (20) full-sized "lots" for the landscapes. That will be followed by the design and construction of the first ten (10) individual example landscapes. They will reflect designs based on such themes as California Heritage, Italian County, French Riviera, Japanese, Chinese, and Southern Mediterranean styles. The selected designs will display the rich variety of color, texture, and form of both native California plants and plants that have been successfully adapted to California's climate. During the second year of the grant, the remaining ten sites would be developed and the public education program would begin in earnest. Extensive outreach opportunities exist to deeply penetrate the residential "market" the information being developed by the WERL Facility. The anticipated result of constructing, maintaining, operating, and aggressively marketing the WERL Facility would be the water conservation savings from residential property owners adopting and installing water-efficient landscapes that will benefit the region's water supply reliability and other Water Use Efficiency elements of the CALFED program. If fully implemented, across the IEUA service area, the water conservation savings could total nearly 28,000 acre-feet per year.

Need For This Project

In 1994, various state and federal resource agencies signed an agreement that led to the formation of CALFED. The focus of this cooperative organization, working with other governmental and water and environmental agencies, was to find long-term solutions to the competing demands for water across the State of California and the five other states adjoining it. To accomplish this, CALFED and its staff have focused on reliable quality water supply, ecosystem restoration, levee rehabilitation, increased water storage, and improved water conveyance. In 2000, a comprehensive plan, and an official Record of Decision, were approved to meet CALFED's goals to ensure reliable quality water supplies for the State's environment and economy.

One of the four CALFED program elements is Water Supply Reliability. The first goal of this program element is to reduce water demand through "measurable" conservation. The CALFED program requires conservation projects that deliver real water savings. For proper long-term management of the water supply available from the Bay-Delta, there is a significant need for the WERL Facility project. Since this proposed project will deliver "measurable" water conservation, the proposed project and goals of the CALFED program are consistent.

Consistency with Local and Regional Plans

The IEUA adopted an Urban Water Management Plan (UWMP) in December 2000. The IEUA 2000 UWMP is on file with the Department of Water Resources. The UWMP was adopted by the local water retail agencies in 2000 as a water conservation plan for the Chino Basin area. (The Chino Groundwater Basin is the largest groundwater basin in Southern California with an "unused" storage capacity of at least 1,000,000 acre-feet.) The water conservation goal in the UWMP is to reduce water use in the region by 1,000 acre-feet per year over the next twenty years. Since this proposed project would result in a net reduction of water use in the region, the project is consistent with stated goals of the UWMP. (**Note:** With 6,000-8,000 new homes being built annually within the IEUA service area, the 1,000 AFY goal could be met by designing and installing water-efficient residential landscapes alone; see the calculation on page 27.)

The Metropolitan Water District of Southern California (MWD) completed an UWMP in December 2000 and an update of their Integrated Resources Plan (IRP) in 2004. These two plans call for water savings through active conservation programs of 300,000 acre-feet for the MWD region. Since the proposed WERL Facility will be an active water conservation program and will result in a net reduction in landscape irrigation demand within the MWD service area, it is consistent with the goals of these two regional plans.

Additionally, the WERL Facility is consistent with the goals of the *Optimum Basin Management Plan* adopted by the Chino Basin Water Master, the *Maximum Benefit Plan* approved by the Santa Ana Regional Water Quality Control Board and the State Water Resources Control Board, and the regional *Integrated Resources Plan* adopted by the Santa Ana Watershed Project Authority.

Water Demand Activities

The basis for water demand reduction activities in the IEUA service area is the Memorandum of Understanding (MOU) regarding Urban Water Best Management Practices (BMP). The MOU was created in 1990 as an alternative to legislative mandates for water conservation to help protect the water quality within the California Bay Delta, the source of supplemental water supplies for two-thirds of all Californians. The MOU is a voluntary agreement among several hundred urban water supply agencies throughout the state. IEUA is an original signatory agency to the MOU. Water agencies that sign the MOU are required to provide "good-faith" efforts to implement the 14 water-use-efficiency BMPs associated with the MOU. Locally, most of the water agencies, within the IEUA service area are also signatories. This includes the Cities of Ontario and Upland, the Cucamonga Valley Water District and the Monte Vista Water District. All of the conservation activities that have taken place in the IEUA service area are consistent with the list of BMP. Figure 1 provides a list of the 14 BMPs and when initial implementation of each BMP has taken place in the IEUA service area.

Figure 1
BMP Implementation

Best Management Practices	Implementation	Year
BMP 1 - Water Survey Programs For Single Family Residential and Multi-Family Residential Customers	Pilot Program	2004
BMP 2 - Residential Plumbing Retrofit	Implemented	2002
BMP 3 - System Water Audits	Implemented	1990
BMP 4 - Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections	Implemented	1990
BMP 5 - Large Landscape Conservation Programs	Pilot Program	2004
BMP 6 - High Efficiency Clothes Washing Machine Financial Incentive Programs	Implemented	2002
BMP 7 - Public Information Programs	Implemented	2001
BMP 8 - School Education Programs	Implemented	2001
BMP 9 - Conservation Program for Commercial, Industrial, and Institutional (CII) Accounts	Implemented	2002
BMP 10 - Wholesale Agency Assistance Programs	Implemented	2001
BMP 11 - Conservation Pricing	Implemented	1990
BMP 12 - Conservation Coordinator	Implemented	1990
BMP 13 - Water Waste Prohibition	Implemented	1990
BMP 14 - Residential ULFT Replacement Programs	Implemented	1992

The WERL Facility will further the implementation of BMPs #1, #3, #5, and #7 thus allowing IEUA and the local agencies to meet their coverage requirements as part of their commitment to implementing all of the BMP's as well as meeting the local conservation goals and the water efficiency goals of the CALFED program.

The purpose of the Southern California Water-Efficient Residential Landscape (WERL) Facility is very straight-forward. Use approximately five acres of land, divided into residential lot-sized plots, to create up to 20 sites for water-efficient residential landscape examples. There are many motifs to implement; California Heritage, Italian Mediterranean, French Riviera, American Southwest, Australian, and

many Asian themes, all in different color palettes. Each of the sites would have it's own irrigation system and water meter. All of the activities at each site, beginning with the initial soil test will be recorded in a logbook. The logbook will also record all of the costs associated with the creation and on-going maintenance of the landscape established on the site. The planting and irrigation plans for each site will be available for visitors to take home. Additionally, the plant list for each site will be provided for visitors, thus supporting their growing familiarity with native and water-efficient species; and thus supporting their ability to be 'informed purchasers' and implementers of the example landscapes at their homes.

There are multiple goals for this project. Similarly, there is an array of objectives that will be simultaneously supported by the project as it is currently proposed. Initially, the WERL Facility will serve as a 'pilot' for attracting and documenting the installation of up to 20 different motifs of water-efficient residential landscaping. Once the landscapes are installed, the WERL Facility will transition into a public educational and training site that will provide essential information to multiple audiences (such as K-12 students – and their parents, garden clubs, Chamber of Commerce members, college and university students, new home development professionals, landscape maintenance professionals, elected officials, international visitors). Additionally, the WERL Facility will provide vital technical assistance to home owners and landscape maintenance professionals alike. In total, it is a long-term investment with a long-term mission, serving as an example facility to decrease the water used in landscape irrigation in Southern California. An exciting aspect of the project is it's potential to serve as a template for additional "similar" facilities located throughout the State.

This project is needed because there are very few good examples of water-efficient residential landscapes continuously available to the public. There are several "annual" tours of 8-10 family homes that a home-owner may be able to attend, but the driving distances can be intimidating. There are a few good examples of larger, "park-like" venues (i.e.: the Maloof Foundation site in City of Rancho Cucamonga, the Western Municipal Water District's Demonstration Garden in the City of Riverside, or the Chino Basin Water Conservation District in the City of Montclair) that are not "scaled" to the size of a single-family residence, which makes it very challenging for the public to know how to apply what they see. Within the IEUA service area, there is substantial interest by homeowners and builders alike in the implementation of water-efficient residential landscapes. MWD is sponsoring an innovative Model Home Program together with Lewis Operating Corp and its builders that will result in some model homes landscaped with California native plants and more sophisticated irrigation systems.

The WERL Facility would provide similar opportunities to "view" residential landscapes and much more. The WERL Facility will provide the real "nuts and bolts" information that is critical to the sequence of decisions that will turn well-intentioned or curious visitors into motivated customers that will actively draw on the carefully crafted message of the WERL Facility and the resources gathered there. Once the WERL Facility is constructed and operational:

A. **Schools will be invited to send classes.** There are 200 schools (grades K-12) within the Agency's service area. Visiting the WERL Facility will catalyze interest in creating similar landscapes on their "home" campuses. Additionally, there are multiple environmental messages that could be taught. The curriculum integration provided by the University of California Cooperative Extension's Garden-In-Every-School Program could be showcased. Finally, children would be encouraged to go home and bring their parents to the WERL Facility.

B. **Garden Clubs will be invited.** As the Master Gardeners movement expands into the IEUA service area, the establishment of local garden clubs will accelerate. Their members are very motivated and have proven to be master "change agents" that would further amplify the impact of the WERL Facility. IEUA plans to host Master Gardener classes beginning in the fall of 2005. This is a "natural fit" for DWR to support the Master Gardeners program and for Master Gardeners to accelerate water conservation in residential landscape.

C. **Chambers of Commerce members will be invited.** Because the members of the Chambers represent many of the community leaders, as well as the business leaders, there is a "triple benefit" from addressing the WERL Facility message to them. First, many of the businesses represented by Chamber members also have landscape needs. Second, many of the Chamber members have direct communication with their customers and can therefore carry the WERL Facility experience to them on a daily basis. Third, Chamber members are accustom to leading by example; they are people of action and would very likely be the "early adopters" so vital to successful long-term programs.

D. **Colleges and universities will be invited to send their students.** There are several colleges and universities within 10-15 miles of the IEUA service area (i.e. The Claremont Colleges, Cal Poly-Pomona, and Chaffey College) .In particular Landscape Architects and Landscape Design students will be invited. Additionally, Horticulture and Soil Science students will be invited. These students will be challenged to improve the aesthetics of the many landscape designs. They will also be offered the opportunity to serve as interns and docents, to allow the "other" visitors to benefit from their education and expertise; while developing the student's career skills.

E. **Landscape maintenance professionals will be invited.** As more and more residential landscapes are converted from conventional turf-based designs into "more complicated" water-efficient landscapes, the professional maintenance companies will need a facility for training their service delivery staff. The WERL Facility will provide the "community benefit" of being the site for such training; hosting MWD's 5-class Commercial Protector Del Agua (PDA) series.

F. **New construction (development) professionals will be invited.** Its 2005, the western United States has endured one of the deepest and longest droughts in recent history; and the vast majority of new development (residential, commercial, and industrial) is ***still*** being "equipped" with traditional turf-based landscapes. These turf-based designs are the result of business decisions that have historically served to expedite sales. The paradigm needs to be refocused and the men and women currently in these decision-making positions are the individuals that will be implementing the "WERL message" within the new construction marketplace. The WERL Facility will provide the visual reassurances to support those real estate marketing decisions and the water-efficiency data to support their documentation of a lowered "environmental footprint" regarding the water demand (SB 610 and SB 220) as well as the reduction of AB939 solid waste (ie landscape clippings and trimmings) compliance issues.

G. **The public will be invited.** First of all, the public would be able to see all of the different possibilities. Water-efficient residential landscapes come in many variations on multiple motifs. There are Mediterranean motifs, Southwestern motifs, Asian motifs, and Californian motifs; and each motif can be varied to stress specific colors and/or textures. More importantly, the public will receive an education (both passive and active) regarding water-efficient landscape design, construction, and on-going maintenance. All of these factors must be addressed in the "cycle" that starts with an idea and ends with a landscape that someone will either enjoy or change. This public out-reach/public education facet of the WERL Facility is one of its true strengths. The WERL Facility will, consequently, provide better consumers for the water-efficient landscape retro-fit services (companies) marketplace.

H. **Other invitees could and should be regional politicians, government officials, and international representatives.** Water-efficient landscapes are an issue world-wide. All of the example landscapes will be fully labeled. Each site will have copies of a scaled drawing that shows the location and spacing of the individual species planted at that site to achieve the designs intention. The design sheets will also specify the details of the irrigation system and the irrigation control technologies needed to support each element of the design. Water use will be tracked, as well as green-waste production and labor hours. Water use savings, reduced green-waste production, and fewer labor hours are all "touted" as being the benefits of opting for water-efficient landscapes, but there is very little, if any, available documentation supporting such claims. The WERL Facility will provide this much needed data.

CEQA documentation is complete. One of the key benefits of proposing the development of the WERL Facility at IEUA is the fact that all of the CEQA documentation needed has been put into place. Both the Programmatic EIR for the Chino Groundwater Basin's Optimum Basin Management Plan (the OBMP) and the Programmatic EIR for IEUA's Regional Water Recycling Plant No. 5 site more than

cover the proposed uses. This means the project is "ready-to-proceed" on a very short, optimal, timeline.

The concept of the WERL Facility can be duplicated throughout Southern California, Central California, Northern California, and the Western United States. This exciting facet of this proposal would lead to satisfying the need for many more WERL Facilities. Within the IEUA service area there are, easily, three distinct areas that present unique landscaping challenges. Down on the flat tight clay soils of Chino and Chino Hills there is one set of educational and example needs. Conversely, "up" on the decomposed granite foothills of the Cities of Rancho Cucamonga and Northern Fontana there is a second set of different needs (and educational opportunities). The third WERL Facility would focus on the needs unique to the mature urban forest of the stately older portions of the Cities of Upland, Montclair, and Ontario.

Expanding the concept to other Water Agencies would also be an option. Southern California's coastal climate zones provide more planting options than inland climates do; they also have a set of distinct restrictions. Providing the resources and the organized delivery of WERL Facility "products" and services would provide a benefit to all of Southern California.

By conserving water in landscape irrigation, demand for imported water is reduced. Reducing the demand for imported water decreases demand on the Bay Delta supplies and improves water quality and quantity for the preservation of identified critical habitat.

Providing sound residential "water budget" data is critical in the long-range strategic planning and the development of long-term public opinion that will directly affect perceptions about the value of personal real estate. A WERL Facility may not be the only mechanism to maintain and enhance private property values, but it is capable of doing just that. When the "potential cost (as much as $200/mo) of the water needed to maintain a turf-based landscape" is made part of the real estate purchasing decision, then the first half of the "WERL equation" is understood. When the public comes to understand that a home with a water-efficient landscape can save as much as $200 per month, and they can consequently afford "more houses," then the second half of the WERL Facility "equation" will be understood.

The WERL Facility would be a key element in the development of target residential landscape water conservation goals that would become integrated into the municipal codes, ordinance, and resolutions of IEUA's member agencies. Similarly, the implementation of the "cost steps" in tiered rate structures would have a data-based footing. Additionally, other MWD-member agencies could use WERL Facility data (modified for their individual climate zones) to support their own water use efficiency regulation promulgation.

Regional, as well as statewide, water management plans would also benefit from the water-efficiency data developed at the WERL Facility. Perhaps, more importantly, the critical information relating to the rate that water-efficient landscapes are actually installed would have the most bearing on water use and water delivery planning.

Provide estimates of total expected water saving for proposals that are designed to lead to quantifiable water savings. Provide an explanation for all assumptions, methodologies, and computations used to arrive at the values.

The current estimates of residential water demand in Southern California (provided by MWD) is that one acre-foot (325,900 gallons) of water will meet the needs of two typical Southern California families.

(325,900 gallons/acre-foot divided by two = 162,950 gallons per family per year)

Additionally, within the inland Southern California residential areas, it is estimated that 60%-70% of that water is dedicated to supporting turf-based residential landscapes.

(162,950 gallons x 60% = 97,770 gallons per year for residential landscape)
(162,950 gallons x 70% = 114,065 gallons per year for residential landscape)

Water-efficient landscapes, replacing turf-based landscapes typically conserve, at least, 50% of the usual irrigation demand.

Estimated annual water saving per residence = approximately 50,000 gallons

The WERL Facility will only construct 20 full-sized example landscape sites, but it will conserve more than 1,000,000 gallons (20 sites X 50,000 gallons per site) of water per year, compared to turf-based residential landscapes of the same size. However, the anticipated potential for water conservation in water-efficient residential landscapes that are installed subsequent to their owners visiting the WERL Facility is more interesting. There are more than 180,000 homes within the IEUA service area and 6,000-8,000 new homes are being built each year; to meet the needs of an expanding economy and population. If all of these homes implemented water-efficient residential landscapes, then approximately 1,100,000 AFY would be saved!

Provide a plan for project monitoring and evaluation that will be used to document the benefits, to mark progress, and to determine the success of the project in relation to project goals and objectives.

Each, of the 20, example landscape sites will have a logbook, a water meter and a kiosk with photocopies of the irrigation plan, the planting plan, and the plant list. The logbook will be used to keep accurate records of the design costs, the construction costs, the water demand and cost, the labor demand and cost for routine maintenance, and finally any plant replacement costs.

The data collected in the logbooks would be centralized in a computer database for tracking, analysis, and comparison to turf-based landscapes (similarly constructed and monitored).

Public opinion and appreciation would also be evaluated with a periodic survey of visitors.
The sale of plants and residential design services will be measured in dollars. The success of the project would be determined, and established when the sales of plants and residential design services cover the operating costs of the WERL Facility.

Water Code Chapter 7, Section 79553 of Proposition 50, sets a priority for projects that achieve multiple benefits across CALFED program elements consistent with the CALFED Programmatic Record of Decision.

a. Describe the goals and objectives of the project. Include an explanation of the need for the project as related to critical local, regional, Bay-Delta, State, or federal water issues.

As the WERL Facility is implemented, critical water supplies (up to 28,000 AFY within the IEUA service area) will be significantly conserved and made available for multiple local, regional, Bay-Delta, State, and Federal water needs. The project directly addresses the public's need for accurately designed, sized, and monitored sites that provide excellent examples of water-efficient residential landscapes that they can readily emulate and to quantify the benefits they can anticipate

Further, implementing the WERL Facility will provide the critical data on which to base targeted residential "water budgets" and local tiered water rates. Best management practices will effectively be developed and distributed as well (including activities that include storm water management, groundwater infiltration). Locally, this project will support more aggressive efforts to actively reduce the need for costly imported water, and help "drought-proof" the local economy. Regionally, the project will encourage landscape (and related activities) that will enhance the Santa Ana River Watershed and provide downstream benefits to Orange County, consistent with regional plans. For the Bay-Delta, the WERL Facility will reduce the need for imported water within the CALFED solution area, directly reducing conflicts within the Bay-Delta system, as well as State and Federal systems. The transferability of this project concept will provide opportunities to develop similar direct benefits thoughout the western United States.

b. Describe how this project would be consistent with local or regional water management plans or other integrated resource management plans.

Please see page 9 "Consistency with Local and Regional Plans."

c. Document the implementation of water demand management activities that have been identified in urban or agricultural water management plans.

Please see page 9-10 "Water Demand Activities."

d. Describe how the project will further implement existing water management activities or initiate new ones.

Please see page 23-24 “The Innovation Section”

The success of the WERL Facility, funded by this DWR grant, would serve as the prototype for additional WERL Facilities throughout California and the Western U.S.

3.2 Statement of Work - Technical/Scientific Merit, Feasibility

a. Describe methods, procedures, equipment, and facilities.

In Southern California, about 60-70% of the imported urban water is used for landscape irrigation. The WERL Facility consists of 5-acre site (at the corner of El Prado Road and Flower Avenue, a small portion of IEUA’s 90-acre Regional Plant No. 5 as the home for a new Water-Efficient Residential Landscape (WERL) Facility.

The WERL Facility would be the home for at least 20 full-sized (8,000 – 10,000 square feet) lots with water-efficient landscapes of different designs. Some would have California Heritage motifs; others would have Mediterranean (Italian, French, etc.) themes, others would stress the aesthetic use of succulent species, and others could display examples of Asian themes, etc. However, all would be very stingy with regard to irrigation water demand and all would look great (have curb appeal).

During the first three years of the WERL Facility’s operation, it would transition from a newly constructed series of example landscapes into a fully functional public outreach facility that would focus on training and supporting property owner’s efforts to retro-fit their home landscapes into more water-efficient assets around their homes. This would be accomplished by (the innovation) bringing together the four aspects of water-efficient landscaping at one location:

1. Attractively designed and installed full-sized residential landscapes.
2. Planting plans (for each of the 20 examples).
3. Modern irrigation equipment, site plans, and training in its use.
4. Ready stocks of the plants used in the examples – for promotion.

The operational concept is straightforward. Construct 20 beautiful landscapes that are very water-efficient, separately meter the water supplied to each site, record all the costs of construction and maintenance, invite the public to “become inspired” to retro-fit their existing water-thirsty turf-based landscape, and invite new home developers to “become inspired” to install water-efficient landscapes for the new homes they are constructing (at a rate of 6,000-8,000 per year with in the IEUA service area). The per resident water saving will be approximately 50,000 gallons of water per year (when compared to turf-based landscapes). The amount of water conservation, assuming the public will adopt and install the water-efficient motifs is

remarkable. The WERL Facility will have a "potential" for saving 28,700 acre-feet per year; if all of the residential landscapes within the IEUA service area were eventually converted to variations of the water-efficient examples provided at the facility. The dollar value of that water would be in excess of $9,750,000 annually (at today's MWD Tier 1 pricing).

The WERL Facility presents a unique combination of powerfully convincing elements. The beautiful landscapes attract visitors (water customers) and they are allowed to study the sites; each site has a kiosk with the planting design, the irrigation plans that support the landscape they are looking at, and they could ask questions of a two-person staff. Having the plants available at reasonable prices makes the WERL Facility a "one-stop-shop" versus the current situation where people must struggle to find a functional example of a water–efficient landscape, then struggle to learn the names and planting habits of the plants involved, then struggle with the irrigation technology, only to then struggle to find locations where the plants are available to purchase.

Grades K-12 school classes would be invited to come visit for education (and to bring they parents on week ends). Seven other 'audiences' would be invited; see pages 11-13 for discussion).

CEQA documentation is complete. One of the key benefits of proposing the development of the WERL Facility at IEUA is the fact that all of the CEQA documentation needed has been put into place. The Programmatic EIR for the OBMP and the Programmatic EIR for IEUA's RP-5 Site more than cover the proposed uses. This means the project is "ready-to-proceed" on a very short, optimal, timeline.

The concept of the WERL Facility can be duplicated throughout Southern California, Central California, Northern California, and the Western United States. This exciting facet of this proposal would lead to satisfying the need for many more WERL Facilities. Within the IEUA service area there are, easily three distinct areas that present unique landscaping challenges. Down on the flat tight clay soils of Chino and Chino Hills there is one set of educational and example needs. Conversely, "up" on the decomposed granite of the Rancho Cucamonga and Northern Fontana there is a second whole set of different needs. The third WERL Facility would focus on the needs unique within the mature urban forest of the older portions of Upland, Montclair, and Ontario.

Expanding the concept to other Water Agencies would also be an option. Southern California's coastal climates provide more planting options than inland climates; they also have a set of distinct restrictions. Providing the resources and the organized delivery of WERL Facility "products" and services would provide a benefit to much of Southern California.

By conserving water in landscape irrigation, demand for imported water is reduced. Reducing the demand for imported water decreases demand on the Bay Delta supplies and improves water quality and quantity for the preservation of identified critical habitat.

Providing sound residential "water budget" data is critical in the long-range strategic planning and the development of long-term public opinion that will directly affect perceptions about the value of personal real estate. A WERL Facility may not be the only mechanism to maintain and enhance private property values, but it is capable of doing just that. When the "potential cost (as much as $200/mo) of the water needed to maintain a turf-based landscape" is made part of the real estate purchasing decision, then the first half of the "WERL equation" is understood. When the public comes to understand that a home with a water-efficient landscape can save as much as $200 per month, and they can consequently afford "more houses," then the second half of the WERL Facility "equation" will be understood.

The WERL Facility would be a focal point in the development of target water conservation goals that would become integrated into the municipal codes, ordinance, and resolutions of IEUA's member agencies. Similarly, the implementation of the "cost steps" in tiered rate structures would have a data-based footing. Additionally, other MWD-member agencies could use WERL Facility data (modified for their individual climate zones) to support their own water use efficiency regulation promulgation.

Regional, as well as statewide, water management plans would also benefit from the water-efficiency data developed at the WERL Facility. Perhaps, more importantly, the critical information relating to the rate that water-efficient landscapes are actually installed would have the most bearing on water use and water delivery planning.

Facilities: A five-acre site will be developed with 20 full-sized water-efficient residential landscapes. Each of the 20 example landscape sites will have a logbook, a separate irrigation system and water meter, and a kiosk with photocopies of the irrigation plan, the planting plan, and the plant list.

Methods and Procedures: The water-efficient residential landscape designs with be developed to reflect the broad variety of water-efficient motifs available. The construction will include the use of modern irrigation equipment and weather-based irrigation system controls. Each site will have it's own logbook.

The logbook will be used to keep accurate records of the design costs, the construction costs, the water demand and cost, the labor demand and cost for routine maintenance, and finally any plant replacement costs.

The data collected in the logbooks would be centralized in a computer database for tracking, analysis, and comparison to turf-based landscapes (similarly constructed and monitored).

Public opinion and appreciation would also be evaluated with a periodic survey of visitors.

The sale of plants and residential design services will be measured in dollars. The success of the project would be determined, and established when the sales of plants and residential design services cover the operating costs of the WERL Facility.

Provide enough information to permit evaluation of the feasibility and technical adequacy of the approach to satisfy the objectives and the applicant's readiness to proceed.

The feasibility of the WERL Facility is related to the experience that IEUA's staff has with the cultivation and use of water-efficient species in landscape situations. The IEUA Headquarters (an award-winning Platinum LEED Building) is currently surrounded with approximately six acres of commercial-scaled water-efficient landscape that emphasizes California's native plants. The logical progression to residential-scaled examples, at a site close to the Headquarters, has grown out of the successful experience gained to-date.

The technical adequacy of the proposed WERL Facility will be ensured by relationships with San Bernardino County Master Gardeners (Ms. Janet Hartin), Cal Poly, Pomona School of Horticulture and Soil Science (Dr. Mitra), Cal Poly, Pomona School of Landscape Architecture (Dr. Sutton), Irrigation Consultant (Joseph Kissinger), Excel Landscape Maintenance Regional Manager (Hector Lopez), the Rancho Santa Ana Botanic Garden (Susan Jett), and the California Native Plant Society.

IEUA has an existing Public Information Officer (PIO) and an Assistant PIO. The coordination and scheduling of the programs at the WERL Facility will initially rest with them.

Readiness-to-proceed is ensured by the current ownership of the land being dedicated to this project by IEUA (versus leasing the land out for commercial revenue). Further, all of the CEQA documentation has been completed for this site and the proposed project is consistent with the Program Environmental Impact Report currently on file with both the State Water Resources Control Board and the Department of Water Resources.

WERL Facility Schedule

	Task Description	Deliverable(s)	Start Date	End Date
1	**Administration**			
	1.1 Kick-off Meeting	Proposal Structure	9/1/05	09/02/05
	1.2 Assemble the Design Team	Participant Information	10/1/05	12/1/05
	1.3 Develop Contracts	Draft Contracts	10/1/05	12/1/05
	1.4 Review CEQA	Finding by Brd	12/1/05	12/30/05
	1.5 Budget Amendment	Board Minutes	12/1/05	12/30/05
	1.6 Progress Meetings	Progress Reports	9/1/05	9/1/08
2	**Technical Tasks**			
	2.1 Preliminary Design	Preliminary Design Report	1/1/05	1/31/05
	2.2 Final Design	Final Design for 10 sites	1/1/05	3/30/05
	2.3 Phase 1 Construction	Progress Reports	4/15/05	9/30/05
	2.4 Phase 2 Construction	Progress Reports	11/1/05	2/28/06
3	As-built Documents	Copies	4/15/05	3/31/06
4	PowerPoint Tour	Presentation	4/15/05	5/30/06

Preliminary Plans and Specifications and Certification Statements (for construction projects only). Submit Final Plans and Specifications or Preliminary Plans and Specifications for the proposed project if Final Plans and Specifications are not complete. The Preliminary Plans should indicate, at a minimum, types and quantities of materials, dimensions, and location. Certification Statements verify that the project is feasible. A California registered civil engineer must prepare the Plans and Specifications and Certification Statements.
The concept drawing is attached and signed. As shown above, the preliminary designs and designs will follow the grant application approval be DWR. Because this project does not address “the core mission” of the civil engineering department, it will not be assigned until it is “earns” separate, independent funding.

Environmental Documentation

Include a plan for compliance with all applicable environmental requirements. The plan should address all the potential environmental, social, and economic impacts of the proposed project, including mitigation, required under the California Environmental Quality Act (CEQA) and, if applicable, the National Environmental Policy Act (NEPA). The plan should also address compliance with local, county, State, and federal permitting requirements.

All environmental documentation is in place.

Submit the following items:

- A detailed plan for compliance with all applicable environmental laws……..N/A
- A schedule for completion of all appropriate environmental documentation….N/A
- A completed Environmental Impact Checklist ……...N/A

All environmental documentation is in place.

3.3 Statement Work – Monitoring and Assessment

Provide a plan for project monitoring and evaluation that will be used to document water savings and other benefits to mark progress and to determine the success of the project. Monitoring and evaluation costs are expected to be an integral part of each project and may be assigned to the California Bay-Delta Program share. Monitoring plans should include:

- A description of how pre-project conditions and data baselines will be determined, the basic assumptions being used, and the anticipated accuracy of the data to be produced.

In Southern California, the residential landscapes are, for the most part, designed around turf-based motifs. Very few, if any, have dedicated water meters that only measure irrigation water. Historically, landscape irrigation demand has been calculated. IEUA's Pilot Landscape Audit Program is in the process of accumulating site-specific residential landscape irrigation information and developing a database of existing residential landscape irrigation delivery efficiency. The basic assumption of the WERL Facility is that water-efficient landscapes will require 50-70% less irrigation water than turf-based landscapes. By installing an accurate water meter to measure the amount of water applied to each (of the 20) landscapes constructed for the WERL Facility, that much needed data will be captured by weekly readings.

Visitor surveys will be periodically initiated to determine (and adjust if necessary) the appropriate public message and the structure of the training offered at the Facility.

- An explanation of the monitoring methodologies that will be used and the project monitoring data that will be collected to assess project results.

Each of the water-efficient landscape sites will be tracked separately. In addition to the water data from the individual water meters, each site will have a logbook. The logbook will record all of the activities associated with the development and on-going maintenance of that particular landscape. From the cost of the initial soil test, through the design and construction phases, to recording the weight of any greenwaste produced by (and removed from) the site, all costs and the labor hours required will be recorded. After the initial establishment period, the hours and cost of ongoing maintenance will be captured. The data in the individual logbooks will be transferred to a central computer database for analysis and comparison.

- An explanation of how the above data will be used to evaluate success in relation to project goals and objectives.

The data generated by the WERL Facility will be used to address the underlying hypothesis of the venture. Specifically, will the water-efficient residential landscapes, that are presented, attract and motivate home owners to initiate the conversion of the residential landscape they currently have. The water savings data will allow the customer to quantify their potential monthly dollar savings. The cost information for each landscape will allow home owners to determine the affordability of the conversion and whether they would approach it "incrementally" or on a "complete retro-fit" basis. The evaluation of success would hinge on the number of homeowner landscapes that were subsequently converted from turf-based designs to water-efficient residential landscape sites. It is estimated that each residential property retro-fit would net water conservation savings of 50,000 gallons per year.

- A description of how external factors such as changes in weather, cropping programs, or social conditions will be taken into account.

One of the facets of the WERL Facility's approach to water-efficient landscape will be the use of modern irrigation control technology. This technology is weather-based and automatically adjusts the amount of water delivered to the site based on daily weather factors. As much as the agri-business of California is accustomed to this technology, urban Californians need to be educated and trained in its use. Further, most of the weather-based irrigation controllers need very careful programming to adequately address the needs of water-efficient plants. (They have been designed for agricultural crops and for turf-based landscapes.) As IEUA's customer base becomes more aware of the benefits available at the WERL Facility, and as monthly water rates are increased, more time and effort will be focused on the associated social needs that are generated.

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

All of the data produced at the WERL Facility will be reduced into reports that will be made available to the visitors to the site. Each of the individual landscapes will have a kiosk where copies of the planting plan, the irrigation plan, the plant list (with both common and scientific names), the irrigation components, and the site specific logbook will be available. All of this material will be available to DWR staff as well. Archive copies will be maintained for comparison as new developments in the field of water-efficient landscape evolve.

- The estimated costs associated with the implementation of the monitoring and evaluation plan.

Applicants will be asked to re-evaluate project cost/benefit analysis as part of the final report. Applicants will also be asked to submit annual reports of benefits and costs for five years after the completion of the project.

4. Qualifications of the Applicants and Cooperators

1. Include a resume(s) of the project manager(s). Resumes may be attached to the end of the proposal and shall not exceed two pages.

Please see attached resume of Project Manager on page 30.

2. Identify and describe the role of any external cooperators that will be used for this project.

2.1 Letter of Support from Los Angeles County Sanitation District (attachment A)
2.2 Letter of Support from Mono Lake Committee (attachment B)

3. Describe briefly any previous water use efficiency grant projects in which the applicant has participated. Consideration will be given to the applicant's performance in prior water use efficiency programs.

IEUA currently has two outstanding grant projects. The first project is an X-Ray Film Processor retrofit program scheduled to be completed through June 2005 (Contract #E67010). The program is scheduled to complete the installation of up to 50 X-Ray film processors. All of the hospital, clinics and diagnostic facilities that qualify have retrofitted their X-Ray Film Processors except for one company. Eleven processors have been installed to date. IEUA is working closely with DWR to compel Kaiser Hospital to upgrade their X-Ray facilities prior to June 2005.

The other project is the Chino Prison Water Conservation Program. This grant was awarded in the last round of Proposition 13 funding and is now scheduled to begin retrofit work in April 2005. The retrofit work is anticipated to take about 4 months to complete.

4. If applicant is a disadvantaged community, provide the source of information documenting annual median household income. – N/A

5. Outreach, Community Involvement, and Acceptance

This project is supported by collaboration between the IEUA and the following eleven local retail water agencies in and around the IEUA service area.

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Upland
- Monte Vista Water District
- Cucamonga Valley Water District
- Fontana Water Company

- San Antonio Water Company
- Metropolitan Water District of Southern California
- Los Angeles County Sanitation District
- Mono Lake Committee

The WERL Facility will provide multiple regional benefits as well as local benefits as a result of its implementation. In addition to the collaborative outreach (pages 11-13) the WERL Facility will provide opportunities to implement, discuss, and showcase mitigation measures that will prevent urban runoff, both from storm events and poor landscape irrigation practices. On site "micro-percolation" designs will be incorporated into all of the water-efficient residential landscape examples to additionally support groundwater quality (and quantity) enhancement. The goals of providing local water quality and quantity benefits extends to Orange County (downstream along the Santa Ana River) and the Pacific Ocean communities. To date, there has been NO opposition to this proposed project and none is anticipated.

Please see page 11-13 for addition information.

6. Innovation

Describe innovative technologies or methodologies to be employed in the project that could contribute to improved efficiencies in projects throughout the State.

There are several levels of innovation folded into the WERL Facility. First, it will showcase a wide variety of water-efficient residential landscape motifs; thus providing confidence for customers that water-efficient landscaping can be counted on to be an aesthetic alternative to turf-based landscapes, and to preserve curb appeal and property value.

Second, by providing planting plans, irrigation plans, construction costs, and water use data, customer acceptance (and excitement) will be optimized. If a homeowner is unable or unwilling to attempt an entire landscape retro-fit, perhaps, they would be willing to attempt a partial retro-fit and incrementally approach the rest of their property's needs.

Third, by providing a WERL Facility with a plant sales floor, the customer's enthusiasm for the presented water-efficient residential landscapes can be rapidly "crystallized" in action and commitment. Additionally, the cash-flow from the plant sales will help off-set the annual operation costs. (As a note: Local retail nurseries, that do not offer water-efficient plants will not be infringed by the WERL Facility sales, nor will the wholesale nurseries that are supplying the WERL Facility inventory – it's a win-win-win situation).

Fourth, the WERL Facility will provide "real people" (staff) of whom customers can ask questions and from whom customers can expect assistance, when requested. Taken together, the innovations of the WERL Facility concept will allow motivated customers interested in lowering their water bills, beautifying their landscapes,

maintaining (and enhancing) their property values, and actively participating in the mitigation of the water resources management issues highlighted the recent extended drought; to take effective action as "good citizen" of California.

The anticipated implementation of water-efficient landscapes would be foster by having all of the plants used within the example landscapes available for visitors to purchase at the WERL Facility. By addressing the public's concern that "it is difficult to find and buy the plants showcased in other garden tours," the WERL Facility will have the promotional water-efficient plants, used in an example landscape, at the site to market the Facility. This is a critical component of the WERL Facilities mission. Additionally, the cash flow from the sales area should cover the on-going operational cost of the WERL Facility, thus limiting the need for additional public sector support.

Young plants and seeds, particularly water-efficient species and California natives, have very restrictive optimal planting "windows". Visitors, turned enthusiastic customers, would be educated and prompted to make adequate preparations during the time leading up to the optimum planting time; further increasing the probability of success.

The WERL Facility will address all of the goals and objectives mentioned above. In addition, it will serve as a fully functional (and fully documented) site for other goals and objectives, yet to be articulated.

7. Benefits and Costs

Important: (the requirements for this part is different from (A) type project)

The current estimate of residential water demand in Southern California provided by MWD is that one acre-foot (325,900 gallons) of water will meet the needs of two typical Southern California families for one year or 162,950 gallons per family per year**.** Within the inland Southern California residential areas, it is estimated that 60%-70% or about 100,000 gallons of that water is dedicated to supporting turf-based residential landscapes.

Water-efficient landscapes, replacing turf-based landscapes typically conserve, at least, 50% of the usual irrigation demand. Therefore, **Estimated annual water saving per residence = approximately 50,000 gallons.** The most important factor in the calculation is that once a water-efficient residential landscape is installed, the water savings will continue year after year. The WERL Facility will be the catalyst of that conversion.

The WERL Facility will only have 20 example landscape sites, but it will conserve more than 1,000,000 gallons (20 x 50,000) of water per year. However, the anticipated potential for water conservation in water-efficient residential landscapes that are installed subsequent to their owners visiting the WERL Facility is more interesting. There are more than 180,000 homes within the IEUA service area and

6,000-8,000 new homes are being built each year. The table below shows the water savings potential within IEUA service for new and existing homes:

	New Homes	Existing Homes	Total Water Saving within IEUA Service Area
Homes	7,000	180,000	187,000
Gallons/Year Saved	50,000	50,000	50,000
Total Gallons/Year	350,000,000	9,000,000,000	9,350,000,000
Gallon/AF 325,900	325,900	325,900	325,900
Total AF/Year	1,074	27,616	28,690
MWD Tier 1 Price	$340	$340	$340
Total Value	**$365,143**	**$9,389,383**	**$9,754,526**

The goal of the WERL Facility is to promote Water-Efficient Residential Landscape throughout the entire region of Southern California, starting at IEUA. Imagine, if 50 similar WERL Facilities were constructed and effectively operational in Southern California, then the estimated total water conservation could exceed 1,100,000 AF per year.

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

	Category (I)	Project Costs $ (II)	Project Cost $ (IV)	Applicant Share $ (V)	State Share Grant $ (VI)
	Administration				
	Salaries, wages	$90,000	$90,000	$90,000	$0
	Fringe benefits	$40,000	$40,000	$40,000	$0
	Supplies	$0	$0	$0	$0
	Equipment	$0	$0	$0	$0
	Consulting services	$19,000	$19,000	$19,000	$0
	Travel	$1,000	$1,000	$1,000	$0
	Other	$0	$0	$0	$0
(a)	Total Administration Costs	$150,000	$150,000	$150,000	$0
(b)	Planning/Design/Engineering	$75,000	$75,000	$0	$75,000
(c)	Equipment Purchases Rentals Rebates Vouchers	$5,000	$5,000	$5,000	$0
(d)	Materials Installation Implementation	$600,000	$600,000	$0	$600,000
(e)	Implementation Verification	$0	$0	$0	$0
(f)	Project Legal/License Fees	$1,000	$1,000	$1,000	$0
(g)	Structures	$0	$0	$0	$0

(h)	Land Purchase Easement	$500,000	$500,000	$500,000	$0
(i)	Environmental Compliance Mitigation/Enhancement	$28,000	$28,000	$28,000	$0
(j)	Construction	$300,000	$300,000	$0	$300,000
(k)	Other (Specify)	$0	$0	$0	$0
(l)	Monitoring and Assessment	$20,000	$20,000	$0	$20,000
(m)	Report Preparation	$5,000	$5,000	$0	$5,000
(n)	**TOTAL**	$1,684,000	$1,684,000	$684,000	$1,000,000
(o)	Cost Share -Percentage			41	59

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

	Qualitative Description - Required of all applicants[1]				**Quantitative Benefits - where data are available [2]**
	Description of physical benefits (in-stream flow and timing, water quantity and water quality) for:	Time pattern and Location of Benefit	Project Life: Duration of Benefits	State Why Project Bay Delta benefit is Direct[3] Indirect [4] or Both	Quantified Benefits (in-stream flow and timing, water quantity and water quality)
Bay Delta	This project, when initially implemented, will immediately provide qualitative benefits. As the data from the project is collected, quantitative water savings will be calculated. When additional, (at other state-wide locations) WERL Facilities are constructed, the water savings will be amplified.	The most significant saving will be realized during the summer months, when the water-efficient residential landscapes. The location of the benefits will accrue "upstream" to the Bay Delta as less water will need to be exported to the south.	The projected life of the benefits will potentially, be permanent. Once a water-efficient landscape has been established, returning to a turf-based landscape would combine the design cost, the construction cost, and the additional monthly water cost.	***BOTH*** - The direct benefits will be related to the actual water savings resulting from the installation of the water-efficient residential landscapes based on the examples provided by the WERL Facility. The indirect benefits will be related to enhanced flexibility with regard to the options available for the water not sent south for residential landscape irrigation.	Data will be collected and made available for multiple "outreach" audiences. A 50% saving in residential landscape irrigation would result in approximately 60,000 gallons of water per year per house (or roughly one acre-foot per year for the every five installations).

Local	This project, when initially implemented, will immediately provide qualitative benefits. As the data from the project is collected, quantitative water savings will be calculated. When additional, (at other IEUA service-wide locations) WERL Facilities are constructed; because of the several landscape environments within the IEUA service area, the water savings will be amplified.	The most significant saving will be realized during the summer months, when the water-efficient residential landscapes will require significantly less water that turf-based residential landscapes. The location of the benefits will accrue both "upstream" to the Bay Delta as less water will need to be exported to the south and locally as the flexibility for the "assignment" o available water resources will be enhanced; most notably the MWD-related groundwater storage (for Dry-Year-Yield) program.	The projected life of the benefits will potentially, be permanent. Once a water-efficient landscape has been established, returning to a turf-based landscape would combine the design cost, the construction cost, and the additional monthly water cost.	**Not applicable.**	Data will be collected and made available for multiple "outreach" audiences. A 50% saving in residential landscape irrigation would result in approximately 60,000 gallons of water per year per house (or roughly one acre-foot per year for the every five installation).

Harlan D. Delzer
2094 Bronson Way
Riverside, CA 92506

General Resume

An administrative professional with eighteen years of experience, working in multi-faceted roles for a dynamic Southern California Water District.

Key capabilities and work experience include:

* Administrative Management: MBA, Financial Analyst, Budget Development
* Strategic Planning: Ten-Year Capital Improvement Plans, SWRCB Grants
* Computer Skills: Financial Models, Simulations, Applications, Presentations
* Technical Knowledge: Laboratory Experience, Consultant Management
* Water Resources: Conservation Program Administration, Grant Management
* Landscape Maintenance: 6-acre site at IEUA Platinum LEED Headquarters

EDUCATION

MASTERS OF BUSINESS ADMINISTRATION, 1988
California State Polytechnic University, Pomona, CA

BACHELOR OF ARTS, BIOLOGY, 1976
Minors in Chemistry and Mathematics
Mankato State University, Mankato, MN

EMPLOYMENT SUMMARY

INLAND EMPIRE UTILITIES AGENCY **1986-present**

Contract and Program Administrator	2004
Water Resources Analyst:	2000
Legislative Grants Analyst:	1998
Financial Analyst:	1992
Planning Analyst:	1989
Senior Chemist/Laboratory Supervisor:	1987
Trace Metals Chemist:	1986

WHITEWORTH, TOWNE-PAULSEN AND COMPANY, Gardena, CA **1980-1986**

Chief Chemist for Quality Control – Schedule and coordinate a staff of eighteen chemists and technicians to meet the quality control goals of the pharmaceutical manufacturing company within State and Federal FDA regulations. Responsible for all procedural revisions and the implementation of revisions. Responsible for MSDS program, chemical inventory, solvent storage, and the training for all new staff.

CITY OF HOPE NATIONAL RESEARCH INSTITUTE, Duarte, CA **1978-1980**

Research Technician/Biochemist – Isolation and purification of immunologically significant proteins. Established the nation's largest single source of *beta-2 microglobulin*. Responsible for the radioisotope inventory and training new staff.

January 7, 2005

Richard Atwater, CEO
Inland Empire Utility Agency
6075 Kimball Ave.,
Chino, CA 91710

Dear Rich Atwater,

This letter is in support of the of Inland Empire Utility Agency's (IEUA) application for funds for its "Water-Efficient Residential Landscape Facility" (WERL Facility) for Proposition 50 grant money. The Sanitation Districts of Los Angeles County (LACSD) is itself independently investing some "seed money" towards the development of an analogous project within the LA County service area. Our view is that for water efficient landscapes to truly have an impact throughout California, there will need to be literally dozens of WERL Facility type sites throughout the State, such that the millions of potential water efficient landscape customers will have active example landscape sites near residential development locations from which they can learn and purchase all the necessary components easily.

We would specifically support a cooperative marketing arrangement between our respective projects. Because each of the sites would be optimized by coordinating their efforts both within and between our respective service areas, we would want to ensure that our prospective site and the proposed IEUA site both complimented the meaning of the messages, as well as pooled marketing dollars, used for public outreach. In this way, the moneys that are invested for market development of each site (i.e. public outreach) will be leveraged by both agency's respective programs.

Once the LACSD project is also funded, it will be likely that it would effectively match, or more than match the marketing dollars invested by IEUA for co-op marketing purposes. This would effectively double the marketing money available, as well as doubling the number of locations that landscape owners and contractors would have available for their efficient use throughout the region. This will represent a significant leveraging of the Proposition 50 grant money being used for public outreach and market development purposes.

We support the positive consideration and project award, and look forward to potentially working with IEUA further in the future on the cooperative marketing of our related projects.

Sincerely,

Mike Sullivan, Bob Horvath

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 6, 2005

Ms. Debra Gonzales
California Department of Water Resources
Office of Water Use Efficiency
1416 Ninth Street, Room 338
Sacramento, CA 95814

CALIFORNIA DEPARTMENT OF WATER RESOURCES
PROP 50 GRANT APPLICATIONS

Dear Ms. Gonzales:

On behalf of the 15,000 members of the Mono Lake Committee I strongly support the following Proposition 50 Water Use Efficiency project proposals being submitted the California Department of Water Resources by the Inland Empire Utilities Agency (IEUA):

- Ultra-Low Flush (ULF) Toilet Multi-Family Direct-Install Program – This project will provide the necessary funding to install up to 22,500 ULF toilets in apartment complexes through the region and reduce water demand by over 1,200 acre-feet annually.

- Landscape Audit "Tune Up Program – This is a research and development project to determine the benefits of conducting follow-up landscape audits to enhance water conservation savings achieved an earlier audit.

- Southern California Water Efficient Residential Landscape (WERL) Facility – This facility will provide a series of example landscapes that demonstrate water efficiency products and practices for the benefit of the general public.

The Mono Lake Committee is committed to helping water agencies implement water efficiency projects statewide and particularly to meet regional water conservation goals in Southern California. Therefore, the Committee strongly supports these applications for funding under Proposition 50. We believe these proposals will provide tremendous benefits to our urban water efficiency programs, help reduce our local dependence on imported water, and provide direct benefits to the California Bay-Delta.

Sincerely,

Frances Spivy-Weber

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Executive Director, Policy