



WESTLANDS WATER DISTRICT

Water Measurement Enhancement Project

California Department of Water Resources
Office of Water Use Efficiency
1416 Ninth Street, Room 338, Sacramento, CA 95814
Attention: Marsha Prillwitz



**Consolidated Water Use Efficiency 2002 PSP
 Proposal Part One:
 A. Project Information Form**

1. Applying for (select one): (a) Prop 13 Urban Water Conservation Capital Outlay Grant
 (b) Prop 13 Agricultural Water Conservation Capital Outlay Feasibility Study Grant
 (c) DWR Water Use Efficiency Project

2. Principal applicant (Organization or affiliation): Westlands Water District

3. Project Title: Water Measurement Enhancement Project

4. Person authorized to sign and submit proposal:

Name, title	<u>Dave Ciapponi, Assistant General Manager</u>
Mailing address	<u>3130 North Fresno St. Fresno, CA 93703</u>
Telephone	<u>(559) 241-6202</u>
Fax.	<u>(559) 241-6277</u>
E-mail	<u>dciapponi@westlandswater.org</u>

5. Contact person (if different):

Name, title.	<u>George Brunetti</u>
Mailing address.	<u>3130 North Fresno St. Fresno, CA 93703</u>
Telephone	<u>(559) 884-2523</u>
Fax.	<u>(559) 884-2789</u>
E-mail	<u>gbrunetti@westlandswater.org</u>

6. Funds requested (dollar amount): \$82,500.00

7. Applicant funds pledged (dollar amount): \$18,832.00

8. Total project costs (dollar amount): \$101,332.00

9. Estimated total quantifiable project benefits (dollar amount): \$101,332.00
 Percentage of benefit to be accrued by applicant: \$101,332.00
 Percentage of benefit to be accrued by CALFED or others: _____

**Consolidated Water Use Efficiency 2002 PSP
 Proposal Part One:
 A. Project Information Form (continued)**

10. Estimated annual amount of water to be saved (acre-feet): **10,000 AF**
-
- Estimated total amount of water to be saved (acre-feet): **100,000 AF**
-
- Over ___ years **10**
-
- Estimated benefits to be realized in terms of water quality, instream flow, other: **N/A**
-
11. Duration of project (month/year to month/year): **10/02 – 02/04**
-
12. State Assembly District where the project is to be conducted: **30th**
-
13. State Senate District where the project is to be conducted: **16th**
-
14. Congressional district(s) where the project is to be conducted: **20th**
-
15. County where the project is to be conducted: **Fresno**
-
16. Date most recent Urban Water Management Plan submitted to the Department of Water Resources: **1999 (Ag Water Management Plan submitted to USBR)**
-
17. Type of applicant (select one):
- Prop 13 Urban Grants and Prop 13 Agricultural Feasibility Study Grants:
- (a) city
- (b) county
- (c) city and county
- (d) joint power authority
- (e) other political subdivision of the State, including public water district
- (f) incorporated mutual water company
- DWR WUE Projects: the above entities (a) through (f) or:
- (g) investor-owned utility
- (h) non-profit organization
- (i) tribe
- (j) university
- (k) state agency
- (l) federal agency
18. Project focus:
- (a) agricultural
- (b) urban

**Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form (continued)**

19. Project type (select one):
Prop 13 Urban Grant or Prop 13
Agricultural Feasibility Study Grant
capital outlay project related to:

- (a) implementation of Urban Best Management Practices
- (b) implementation of Agricultural Efficient Water Management Practices
- (c) implementation of Quantifiable Objectives (include QO number(s))

.....
 (d) other (specify)
.....

DWR WUE Project related to:

- (e) implementation of Urban Best Management Practices
 - (f) implementation of Agricultural Efficient Water Management Practices
 - (g) implementation of Quantifiable Objectives (include QO number(s))
 - (h) innovative projects (initial investigation of new technologies, methodologies, approaches, or institutional frameworks)
 - (i) research or pilot projects
 - (j) education or public information programs
 - (k) other (specify)
-

20. Do the actions in this proposal involve physical changes in land use, or potential future changes in land use?

- (a) yes
- (b) no

If yes, the applicant must complete the CALFED PSP Land Use Checklist found at http://calfed.water.ca.gov/environmental_docs.html and submit it with the proposal.

**Consolidated Water Use Efficiency 2002 PSP
Proposal Part One
B. Signature Page**

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form is authorized to submit the proposal on behalf of the applicant; and

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.

Dave Ciapponi, Assistant General Manager

Date

PROPOSAL PART TWO

Project Summary

This Water Measurement Enhancement Project (Proposal) is to investigate the feasibility of transmitting all agricultural water meter readings, within the District, via cellular phones or high frequency radio to a centralized computer system at the District's administration office. Currently, the District has over 3,000 meters that must be read manually, and since this is labor intensive, it can only be done monthly. As a result, the District and water users must estimate use of water supplies and remaining balances of water supplies, which in some years, may result in loss of supplies or inefficient use of supplies. The objective and expected outcome of this Proposal is that the installation of remote meter reading devices will increase the efficiency of water meter readings and provide real time measurements to the District and water users. This Proposal will be used in conjunction with the District's website to allow water users to login to their account and know in "real time" how water is being used. By accessing real time information, water users can make more effective decisions in their water management which should lead to improved water efficiency. The cost of this Proposal will be \$101,339 which includes the cost of direct labor hours by District staff which will oversee the project and install field devices. If remote metering is feasible and the District proceeds to modify all meters in the District, approximately 10,000 acre-feet can be conserved each year.

A. Scope of Work: Relevance and Importance

1. The scope of this Proposal is to enhance water measurement in the District by developing specifications for an RFP, identifying and contracting with a Consultant, identifying pilot projects, conducting pilot project tests, evaluating the results, and preparing a report. The objective is to determine a remote metering system that can be used for the 3,000+ meters in the District.
2. The District has realized during the last few years the need for new methods to improve water efficiency. To date, the District has participated in Water Management Programs for its water users, offering over \$6 million in low interest equipment lease to water users, and website development to allow users to access district information via the Internet. The District receives the majority of its water supply from the Central Valley Project (CVP) and for the last two years has had its supply decreased due to environmental and regulatory restrictions. For the 2001-02 water year, Westlands received only a 49% supply due to severe decreases in water exports south of the Bay-Delta. Westlands believes that this Proposal will assist water users to better manage their water supply and become increasingly more efficient. By providing real time meter readings to individual water users, water supply and field application can improve such that potentially 10,000 acre-feet of water can be conserved annually reducing the need to pump groundwater or transfer new water supplies into the district. Through this proposal, the District and its water users can save more than \$1,000,000 annually.

B. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment

1. Currently, several water meter reading systems are available that provide real time readings. The system the District would like to pursue would utilize a radio or cellular phone connection to a computer in the Districts Administrative office. The District is over 70 miles long and 15 miles wide with topography changes, climatic differences, high voltage power lines, and other challenges that could make system installation a challenge. This Proposal would allow the District to have a metering consultant come to the District and investigate the best system to use and install pilot sites that would be tested over 6 months to insure system compatibility. In addition, the District will use existing staff to take this data which will be real time and make accessible through the District's website by water users who have encrypted access. The District has the necessary field pilot sites that can be used and the necessary web hardware, software, and staff to implement the system. Upon notification that this proposal has been accepted, the District will be ready to proceed immediately.
2. Task List and Schedule. Provide a work schedule with tasks, deliverable items, due dates, and projected costs for each task, along with a quarterly expenditure projection. Identify start and completion dates of each task and identify which tasks are considered to be inseparable if only a portion of the project would be funded. This plan will form the basis of the required quarterly and annual project fiscal and programmatic reports. Tasks listed in the work schedule should match those in the budget.

See next page.

Task Description and Deliverables	Start & Completion Dates	Task Budgeted Cost	District Cost	Grant Cost
Develop Specifications and Request RFP's	10//01/02 – 12/31/02	\$4,310.00	\$4,310.00	\$0.00
Identify and Contract with Consultant	01//01/03 – 02/28/03	\$6,500.00	\$1,500.00	\$5,000.00
	1st Quarter Report	\$10,810.00	\$5,810.00	\$5,000.00
Identify and Install Pilot Projects	03/01/03 – 05/30/03	\$9,000.00	\$4,000.00	\$5,000.00
Program Host Computer and Web Access	03/01/03 – 05/30/03	\$7,810.00	\$2,810.00	\$5,000.00
	2nd Quarter Report	\$16,810.00	\$6,810.00	\$10,000.00
Conduct Pilot Test	06/01/03 – 12/30/03	\$54,000.00	\$4,000.00	\$50,000.00
	4th Quarter Report	\$54,000.00	\$4,000.00	\$50,000.00
Evaluate Results/Prepare Report	01/01/04 – 02/28/04	\$10,500.00	\$500.00	\$10,000.00
	5th Quarter Report	\$10,500.00	\$500.00	\$10,000.00
Total Direct Costs.		\$92,120.00	\$17,120.00	\$75,000.00
Indirect Costs – 10% Overhead		\$9,212.00	\$1,712.00	\$7,500.00
Total Costs.		\$101,332.00	\$18,832.00	\$82,500.00

3. Monitoring and assessment. (*Prop 13 Agricultural Feasibility Study Grant* proposals are not required to submit a monitoring and assessment component.)
Not Applicable, this is a Prop 13 Agricultural Feasibility Study Grant.

4. Preliminary Plans and Specifications and Certification Statements (for *Prop 13 Urban Grant* construction projects only).
Not Applicable, this is a Prop 13 Agricultural Feasibility Study Grant.

C. Qualifications of the Applicants and Cooperators.

The Project Manager for this proposal will be George Brunetti. For the past 16 years, Mr. Brunetti has been the Director of Operations and Maintenance for the District. Prior

to that, he was a senior manager responsible for the District's Office Operations that included water ordering, Reclamation law compliance, water billings etc. In addition, he supervised Field Operations that included reading and maintaining the 3,000+ agricultural water meters in the District and maintenance, repair, and replacement of the 1,035 mile pipeline distribution system. He has been with the District for more than 30 years.

D. Benefits and Costs.

1. Budget Breakdown and Justification.

Budget Item Cost	Labor Hours	District Cost	Grant Cost
a & b. Direct Labor/Salaries: George Brunetti, Director of O&M Jim Carter, Information Officer	100 hours 100 hours	\$4,700.00 \$3,000.00	\$0.00
c. Benefits George Brunetti, Director of O&M Jim Carter, Information Officer		\$560.00 \$360.00	\$0.00
d. Travel (To/from Site locations and consultant meetings).		\$1,000.00	\$0.00
e. Supplies and Expendables		\$0.00	\$0.00
f. Consultants (perform work in the RFP).		\$0.00	\$40,000.00
g. Equipment (Remote Metering Units 10 @ \$2,000/ea & Host site).		\$0.00	\$35,000.00
h. Other Direct Costs (modification of metering structures for pilot projects, inspection of work in progress, and project oversight).		\$7,500.00	\$0.00
i. Total Direct Costs. Total items (a) through (g).		\$17,120.00	\$75,000.00
j. Indirect Costs – 10% Overhead (general staff, hardware, etc).		\$1,712.00	\$7,500.00
k. Total Costs.		\$18,832.00	\$82,500.00

2. Cost-Sharing.

The District will cost share on this project in the amount of \$18,832 by providing existing staff services, computer hardware and software to run website applications, and field personnel and material to assist with installation of metering at the pilot test sites.

3. Benefit Summary and Breakdown.& 4. Assessment of Costs and Benefits.

For **Prop 13 Agricultural Feasibility Study Grants ONLY**, provide the following abbreviated Benefits and Costs information in place of Sections D3 and D4:

Potential Benefits to be Realized and Information to be Gained

The District is very interested in the installation of a remote metering system for all meters in District, which is in excess of 3,000. The potential benefits of this Proposal are that a system can be designed, tested, and evaluated to prove that such a system can be installed throughout the District. No other District in the State of similar area and meter turnouts has such a system in place, and this grant Proposal would prove the feasibility of such a system. The District is very optimistic that this Proposal will provide valuable information for remote metering and determining the volume of water that can be conserved annually.

Benefit Realized and Information Gained versus Costs

The potential benefits and information that are anticipated far outweigh the anticipated costs. As mentioned previously, this Proposal will be \$101,332 to evaluate some pilot tests. If the tests are favorable and a system can be installed, the District will pursue the system installation on all meters in the District. As a result, over 10,000 acre-feet and \$1,000,000 could be conserved annually by the District and its users. In addition, this system would be a catalyst for other District's to pursue a similar system which could lead to even more water being conserved in the State.

E. Outreach, Community Involvement and Acceptance

Westlands continues to publish the Irrigator newsletter as part of its Water Management Information Program which is distributed to landowners, water users, community interests, other public agencies, and local, State, and Federal entities. In addition, the District publishes monthly newsletters to its landowners and water users. These efforts include the weekly Irrigation Guide (real-time ET information) to all water users and more recently daily ET information on the web site. A complete revision of the Water Management Handbook has been implemented on Westlands' web site.

This Feasibility Program will be publicized in all District communications so all interests can be informed of the District progress in the water conservation arena. If the program is successful, the District will also provide details to larger program which will involve remote metering of all turnouts.