PROPOSAL FOR FUNDING OF PROPOSITION 13 AGRICULTURAL WATER CONSERVATION CAPITAL OUTLAY FEASIBILITY STUDY GRANT

PANOCHE WATER DISTRICT HERNDON AVENUE LATERAL FEASIBILITY STUDY

Submitted By:

PANOCHE WATER DISTRICT
52027 West Althea Avenue
Firebaugh, California 93622

FEBRUARY 2002

Consolidated Water Use Efficiency 2002 Proposal Solicitation Package

Including:
Proposition 13 Urban Water Conservation Program
Proposition 13 Agricultural Feasibility Study Program
Department of Water Resources' Water Use Efficiency Program

January 4, 2002

CALFED BAY-DELTA PROGRAM

DEPARTMENT OF WATER RESOURCES STATE OF CALIFORNIA

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

CONSOLIDATED WATER USE EFFICIENCY
2002 PROPOSAL SOLICITATION PACKAGE
January 4, 2002

The California Department of Water Resources (DWR) invites you to submit a Proposal for funding of a Proposition 13 Urban Water Conservation Capital Outlay Grant, a Proposition 13 Agricultural Water Conservation Capital Outlay Feasibility Study Grant, and/or a DWR Water Use Efficiency Project.

PROPOSAL DUE DATE:

3:00 p.m., March 1, 2002
Must be received, not postmarked, by this time and date.

SUBMIT PROPOSAL TO:

Submit one original, eight photocopies, and one electronic copy for each Proposal, on 3.5 inch diskettes or CD-ROM (preferably in a PDF format, or in MS Word and/or Excel compatible format) to:

California Department of Water Resources
Office of Water Use Efficiency
P.O. Box 942836, Sacramento, CA 94236-0001
Attention: Marsha Prillwitz

or overnight carrier or hand deliver to:

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

The entire Proposal shall be in 12 point font or larger on 8 _-11 inch paper. The Proposal, Parts One and Two combined, shall not exceed 20 single-spaced, consecutively numbered pages. Resumes and letters of support attached to the Proposal are not included in the 20-page limit. Proposals that exceed the 20-page limit will be excluded from consideration. (The page limit does not apply to the Proposition 13 Urban Water Conservation Capital Outlay Proposals.)

QUESTIONS? NEED ASSISTANCE? CONTACT:

Marsha Prillwitz, (916) 651-9674 or
marshap@water.ca.gov

For an electronic copy of this Proposal Solicitation Package, please go to this website: www.water.ca.gov

Notice of Public Workshops
for the
Consolidated Water Use Efficiency
2002 Proposal Solicitation Package

Workshop Dates and Locations:

Tuesday January 22, 2002	Wednesday January 23, 2002	Thursday January 24, 2002	Friday January 25, 2002
10:00 am – 12:30 pm Modesto Irrigation District 1231 Eleventh Street Modesto, California	10:00 am – 12:30 pm Contra Costa Water District 1331 Concord Ave. Concord, California	10:00 am – 12:30 pm The Metropolitan Water District of Southern California 700 Alameda, Rm 2-145 Los Angeles, California	10:00 am – 12:30 pm Chico Municipal Center 421 Main Street Conference Room 1 Chico, California

Purpose of Workshops: These public workshops will provide information about the Proposal Solicitation Package; describe the application, review and selection process; and provide an update on water use efficiency implementation.

Workshop Agenda:
(questions will be welcomed during each agenda item)

- Welcome and Introductions — 10:00 am
- Water Use Efficiency Program: An Update — 10:20 am
- WUE Proposal Solicitation Package: How to submit a proposal — 10:40 am
- Public Comments and Questions — 11:30 am
- Adjourn — 12:30 pm

For More Information: Please direct specific questions related to the Proposal Solicitation Package to Marsha Prillwitz (916) 651- 9674, marshap@water.ca.gov, or general questions about CALFED to Tom Gohring at (916) 651-7089, gohring@water.ca.gov.

CONSOLIDATED WATER USE EFFICIENCY
2002 PROPOSAL SOLICITATION PACKAGE
January 4, 2002

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SECTION A
SUMMARY OF PROPOSITION 13 PROGRAMS IN THIS PACKAGE

PROGRAM TITLE	Urban Water Conservation Capital Outlay Grant	Agricultural Water Conservation Capital Outlay Feasibility Study Grant
DUE DATE:	3/1/02	3/1/02
ELIGIBLE APPLICANTS	Cities, counties, other political subdivisions of the State, incorporated mutual water companies, joint power authorities*	Cities, counties, other political subdivisions of the State, incorporated mutual water companies, joint power authorities*
ELIGIBLE PROJECTS	Cost effective urban capital outlay measures to improve water use efficiency	Agricultural capital outlay feasibility studies for measures to improve water use efficiency
GEOGRAPHIC SCOPE	Statewide	Statewide
TOTAL FUNDS AVAILABLE	$30 million	$1.75 million
FUNDS INCLUDED IN 2001-2002 BUDGET	$9 million	$1.5 million
PER PROJECT FUNDING LIMITATIONS	$5 million	$100,000
COST SHARING REQUIRED?	no	no

***Agencies subject to the Urban Water Management Planning Act must have adopted a plan that meets the requirements of the law and submitted it to DWR to be eligible for Proposition 13 funding (Senate Bill 610, Costa).**

A-I BACKGROUND, GOALS AND OBJECTIVES

Introduction

This Proposal Solicitation Package may be used to apply for funding of:

(a) an Urban Water Conservation Capital Outlay project (Proposition 13),
(b) an Agricultural Feasibility Study Capital Outlay project (Proposition 13), and/or
(c) a DWR Water Use Efficiency project.

Section A will describe the two Proposition 13 Programs and Section B will describe the DWR Water Use Efficiency Program. Presently there is no specific authorization or funding for the DWR Water Use Efficiency Program

The universal goal of all three programs is to reduce irrecoverable water losses, improve water quality, and attain environmental benefits through water use efficiency measures and to document those benefits.

The CALFED Bay-Delta Program, a cooperative effort of over 20 State and Federal agencies with management or regulatory responsibilities for the Bay-Delta, is committed to identifying and funding the most promising water use efficiency projects that contribute toward the goals of the CALFED Program. This Proposal Solicitation Package is being released by the California Department of Water Resources (DWR) as part of Stage One Implementation for the CALFED Water Use Efficiency Program. DWR is the CALFED State Agency designated to manage these grant programs. For more information about the CALFED Program, call (800) 900-3587 or (916) 657-2666, or visit the CALFED website at www.calfed.water.ca.gov.

URBAN WATER CONSERVATION CAPITAL OUTLAY GRANT (Prop 13 Urban Grant)

The Urban Water Conservation Program (Chapter 8, Article 6 under the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act (Proposition 13), Water Code Division 26) authorizes DWR to issue grants to public agencies and incorporated mutual water companies to finance feasible, cost effective water conservation capital outlay projects or programs to improve water use efficiency.

AGRICULTURAL WATER CONSERVATION CAPITAL OUTLAY FEASIBILITY STUDY GRANT (Prop 13 Agricultural Feasibility Study Grant)

Proposition 13 also authorizes DWR to issue feasibility study grants to public agencies and incorporated mutual water companies to investigate the feasibility and cost effectiveness of potential agricultural water conservation capital outlay projects to improve water use efficiency. The goal of this program is to produce feasibility studies to identify potential agricultural water conservation capital outlay projects that may qualify for Proposition 13 Agricultural Water Conservation loans. This may be accomplished through capital outlay projects that implement established Agricultural Efficient Water Management Practices. Agricultural water use efficiency capital outlay projects that

incorporate CALFED's Quantifiable Objectives are also eligible for ***Prop 13 Agricultural Feasibility Study Grants***.

In addition, funds are available for Agricultural Water Conservation Loans through Proposition 13. **An applicant may not use this package to apply for a loan**. The loan application package is a separate document and will be found at www.water.ca.gov in early Spring, 2002. The State Water Resources Control Board also has funding available for water use efficiency projects. For more information, contact the State Board at www.swrcb.ca.gov.

A-II. ELIGIBLE APPLICANTS

(a) cities
(b) counties
(c) cities and counties
(d) joint power authorities
(e) other political subdivisions of the State, (including public water districts, but not State Agencies)
(f) incorporated mutual water companies

If the applicant is subject to the Urban Water Management Planning Act (California Water Code Division 6, Part 2.6), the applicant must have adopted a plan that meets the requirements of the law and submitted it to DWR in order to be eligible to receive funding under ***Prop 13 Urban Grants*** or ***Prop 13 Agricultural Feasibility Study Grants*** (per Senate Bill 610, Costa, Water Supply Planning (Stats. 2001, Chapter 643, effective January 1, 2002).

Neither private individuals nor private entities may apply for either of these programs. Applicants that wish to collaborate on a proposal may elect to use a contractor-subcontractor relationship or a joint powers authority. Contracts will only be executed with one applicant. The proposal shall clearly indicate who will sign the contract and the nature of the agreement between the other participants.

A-III. ELIGIBLE PROJECTS

Prop 13 Urban Grants

This program will fund feasible, cost effective urban water conservation capital outlay projects that improve water use efficiency.

Capital outlay projects are those in which an agency builds or buys something of a permanent nature that contributes toward water use efficiency. Capital outlay expenditures shall be immediately and exclusively tied to the achievement of the project purposes. Construction, improvement, repair, and renovation projects, as well as projects involving the purchase and installation of project-specific equipment or other water saving devices may be eligible. Projects that involve the applicant's customer purchasing eligible equipment or devices for which the applicant provides a rebate after installation, may be eligible for funding.

Improvements to water distribution system controls, major improvements or replacement of leaking distribution system components, conveyance systems for recycled water, or capital outlay features of Best Management Practices, as identified by the California Urban Water Conservation Council, may be eligible. Other capital outlay water conservation projects, in addition to the Best Management Practices, may be considered for funding.

Eligibility of Urban Best Management Practices:	Eligible?
1. Water survey programs for residential customers	No
2. Residential plumbing retrofit	Yes
3. System water audits, leak detection and repair	Yes*
4. Metering with commodity rates and retrofits	Yes*
5. Large landscape (dedicated landscape meters)	Yes*
6. High-efficiency washing machines	Yes*
7. Public information programs	No
8. School education programs	No
9. Commercial, industrial, and institutional	Yes*
10. Wholesale agency assistance programs	No
11. Conservation pricing	No
12. Conservation coordinator	No
13. Water waste prohibition	No
14. Residential ultra low flush toilet replacement	Yes

Eligibility of Potential Best Management Practices:	Eligible?
1. Rate Structure and other Economic Incentives	No
2. Efficiency Standards- Appliances & Irrigation Devices	No
3. Replacement of Existing Water Using Appliances	Yes
4. Retrofit of Existing Car Washes	Yes
5. Graywater Use	Yes
6. Distribution System Pressure Regulation	Yes
7. Water Supplier Billing Records Broken Down	No
8. Swimming pool and spa covers	Yes
9. Restrictions Devices that use Evaporation	No
10. Point of Use Water Heaters	Yes
11. Efficiency Standards- Industrial & Commercial	No

* Priority will be given to system water audits, leak detection and repair; meters; dedicated large landscape meters; high-efficiency washing machines; and commercial, industrial and institutional projects. It is anticipated that these types of projects offer significant potential water savings. They must be capital outlay projects.

Prop 13 Agricultural Feasibility Study Grants

This program will fund studies to ascertain the feasibility and cost effectiveness of potential agricultural water conservation capital outlay projects that improve water use efficiency. The implementation of capital outlay projects associated with CALFED's Quantifiable Objectives may be eligible. Capital outlay features of Efficient Water Management Practices, (EWMPs) as identified by the Agricultural Water Management Council, may also be eligible.

Eligibility of Agricultural Efficient Water Management Practices:	Eligible?
List A	
1. Prepare and adopt a Water Management Plan	No
2. Designate a Water Conservation Coordinator	No
3. Support water management services to water users	No
4. Improve communications	No
5. Evaluate institutional changes	No
6. Evaluate and improve suppliers' pump efficiencies	No
List B	
1. Facilitate alternative land use	No
2. Facilitate the use of recycled water	Yes
3. Facilitate the capital improvements for on-farm irrigation	Yes
4. Facilitate voluntary water transfers	No
5. Line or pipe ditches	Yes
6. Increase flexibility in water ordering and delivery	Yes
7. Construct water supplier spill and tailwater delivery systems	Yes
8. Optimize conjunctive use	No
9. Automate canal structures	Yes
List C	
1. Water measurement	Yes
2. Pricing and other incentives	No

Other items not specifically listed as EWMPs that may be eligible projects are water meters, replacement of leaking distribution system pipelines and related appurtenances, conveyance systems for recycled water, re-regulating reservoirs to conserve already developed water, on-farm irrigation system improvements, repairing or rehabilitating leaking reservoirs, and covering or lining open reservoirs.

A-IV. INELIGIBLE PROJECTS

Projects that generate benefits that would ordinarily be accrued as a result of carrying out an existing law, regulation, or contract within the same time frame as the project described in the Proposal are not eligible for funding. For example, if Federal law requires the installation of meters by an applicant, funding of that meter program would not be eligible. However, if funding would accelerate the meter installation project, that

portion of the project that would be facilitated by funding over and above the applicant's existing commitments would be eligible.

Projects funded through the ***Prop 13 Urban Grant*** program must be locally cost effective, that is, the benefits to the applicant must be equal to or greater than the costs.

Wellhead rehabilitation, new storage tanks providing expanded capacity, water supply, water treatment, wastewater treatment, flood control, conjunctive use, or groundwater banking projects are not eligible for funding through this Proposal Solicitation Package. No funds will be available to replace existing funding sources for on-going projects, for political advocacy, for the purchase of water, for the establishment of a reserve fund, or for an applicant's litigation costs.

Prop 13 Urban Grants and ***Prop 13 Agricultural Feasibility Study Grants***
General-purpose equipment or equipment or materials used for routine operations and maintenance would not be considered eligible capital outlay costs, nor would water conservation services, public information programs, technical assistance programs, or other water conservation programs that do not involve construction, improvements, repairs, renovations, or project-specific purchases of equipment. General research projects not related to specific capital outlay projects are not eligible for funding.

A-V. GEOGRAPHIC SCOPE

Proposals from throughout the State of California will be considered for funding.

A-VI. AVAILABLE FUNDS

Prop 13 Urban Grants
Proposition 13 authorizes $30 million for Urban Water Conservation projects. Nine million dollars is included in the 2001-2002 State budget. There is a $5 million per-project funding limitation.

Prop 13 Agricultural Feasibility Study Grants
A total of $1.5 million is available for projects during this funding cycle through Proposition 13. There is a $100,000 per-project funding limitation.

A-VII. DURATION OF PROJECTS

Funds shall be expended within three years of the execution of the contract. If the project exceeds one year in duration, a budget with discrete 12-month periods shall be provided.

Projects may be multi-year efforts if necessary and appropriate, but proposal timelines and budgets that will be incorporated into the contract shall not exceed three years. In addition, since funding may be awarded for only a portion of each submitted project, the applicant should clearly show which tasks could be funded separately. When a portion of a project is funded, there is no guarantee that the remaining portions or future phases of that project will be funded. Future funding will depend on the progress of the project,

the nature and extent of competing proposals, priorities, program authorization and funding availability.

A-VIII. AGREEMENT REQUIREMENTS

The recipient of a ***Prop 13 Urban Grant*** or ***Prop 13 Agricultural Feasibility Study Grant*** must sign an agreement containing standard terms and conditions with DWR before the State can disburse funds. Funds will be delivered in accordance with the executed agreement. No work should be performed without a fully executed agreement.

A-IX. CONFLICT OF INTEREST AND CONFIDENTIALITY

All applicants and reviewers are subject to State conflict of interest laws. Failure to comply with these laws, including business and financial disclosure provisions, will result in the proposal being rejected and/or any subsequent contract being declared void. An applicant may not permit any State or Federal employee to use his or her position for a purpose that is or gives the appearance of being in conflict of interest, either by giving the applicant an unfair advantage or by a desire for private financial gain. Applicable California statutes include, but are not limited to, Government Code section 1090, Public Contract Code sections 10365.5, 10410 and 10411, and Government Code sections 87200 et seq.

All proposals will become public information once the solicitation has closed. After the initial recommendation for funding is made public, reviews from all levels of the review process will be public information. Proposals may be reviewed and discussed by members of the public under public disclosure requirements. When an applicant signs the signature page and submits the proposal for consideration, the applicant waives any rights to privacy and the confidentiality of the proposal.

A-X. PROPOSAL REVIEW, SELECTION, AND AWARD PROCESS

1. Proposals are received by DWR and initially reviewed by the CALFED Water Use Efficiency Agency Team: Department of Water Resources, United States Bureau of Reclamation, Natural Resources Conservation Service, State Water Resources Control Board, and CALFED.
2. Proposals are reviewed by the Science and Economics Technical Teams.
3. Proposals are provided to the Review Panel, (composed of CALFED Agencies, stakeholders, and subject matter experts) with reports from the Technical Teams.
4. The Review Panel members submit preliminary ratings, based on criteria established in Section XII.
5. The Review Panel convenes to discuss proposals, receive any additional clarification from the technical teams, and revise their scores, as desired.
6. The CALFED Agency Team receives final ratings and comments from the Review Panel and produces a preliminary list of projects recommendation for funding based on Review Panel ratings, geographic and categorical distribution, and availability of funds.
7. Public workshops are held and public comments received.

8. Recommendations are presented to the Water Use Efficiency Public Advisory Committee, if so assembled.
9. Final funding recommendations are presented to DWR and CALFED Policy Group, or their designee.
10. DWR makes the final funding decision.
11. A five-day appeal process begins.
12. Projects selected for funding will be posted on the DWR website at www.water.ca.gov.
13. Contract negotiations begin.
14. Final contracts are executed.
15. Projects begin.

At the applicant's discretion, proposals that do not receive funding during this cycle may be reconsidered during the next funding cycle without modification or may be revised to improve competitiveness.

A-XI. ANTICIPATED SCHEDULE

The anticipated schedule for this process is as follows:

1/4/02	Proposal Solicitation Package released.
1/22/02-1/25/02	Public workshops held.
3/1/02	Proposals due.
4/1/02	Review process completed, recommendations presented to Advisory Committee, CALFED, and Department Management.
4/15/02	DWR makes final funding decision.
4/24/02	Five-day appeal process ends.
5/1/02	Contract negotiations begin.
10/1/02	Contracts executed, projects begin.

A-XII. SELECTION CRITERIA

Proposals will be reviewed according to the following criteria:

A. Relevance and Importance: 10 Points

B. Technical/Scientific Merit, Feasibility, Monitoring and Assessment: 35 Points.

C. Qualifications of the Applicants and Cooperators: 10 Points.

D. Costs and Benefits: 35 Points.

E. Outreach, Community Involvement and Acceptance: 10 points

No project with an average total score of less than 70 points shall be funded.

A-XIII. PROPOSAL CONTENTS

The Proposal, including one original, eight photocopies and one electronic copy on 3.5 inch diskettes or CD-ROM (preferably in a PDF format or in MS Word and/or Excel compatible format) must be received by 3:00 p.m, March 1, 2002 at:

California Department of Water Resources
Office of Water Use Efficiency
P.O. Box 942836, Sacramento, CA 94236-0001
Attention: Marsha Prillwitz, (916) 651-9674

or by overnight carrier or hand delivered to:
California Department of Water Resources
Office of Water Use Efficiency
1416 Ninth Street, Room 338, Sacramento, CA 95814
Attention: Marsha Prillwitz, (916) 651-9674

The entire Proposal shall be in 12 point font or larger on 8 _-11 inch paper with consecutively numbered pages. The Proposal will be appended to the contract, if the project is selected for funding.

A complete Proposal consists of the following:

Proposal Part One:
A. Project Information Form
B. Signature Page

Proposal Part Two:
Project Summary
A. Scope of Work: Relevance and Importance
B. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment
C. Qualifications of the Applicants and Cooperators
D. Benefits and Costs
E. Outreach, Community Involvement and Acceptance

Proposal Part Three:
(Items in Part Three are required only if the project is selected for funding.)
A. Matching Funds Commitment Letter
B. Resolution
C. Environmental Documentation

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): Panoche Water District

3. Project Title: Herndon Avenue Lateral Feasibility Study

4. Person authorized to sign and submit proposal:

Name, title	Marcos Hedrick, Watermaster
Mailing address	52027 West Althea Avenue Firebaugh, California 93622
Telephone	209-364-6136
Fax.	364-6122
E-mail	mhedrick@panochewd.org

5. Contact person (if different):

Name, title.	
Mailing address.	
Telephone	
Fax.	
E-mail	

6. Funds requested (dollar amount): $ 54,545

7. Applicant funds pledged (dollar amount): $ 12,506

8. Total project costs (dollar amount): **$ 67,051**

9. Estimated total quantifiable project benefits (dollar amount): **N/A**

Percentage of benefit to be accrued by applicant: **N/A**

Percentage of benefit to be accrued by CALFED or others: **N/A**

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): **See Proposal Part Two Benefits and Costs**

Estimated total amount of water to be saved (acre-feet):

Over ___ years

Estimated benefits to be realized in terms of water quality, instream flow, other:

11. Duration of project (month/year to month/year): 12/02 to 12/03

12. State Assembly District where the project is to be conducted: 30

13. State Senate District where the project is to be conducted: 16

14. Congressional district(s) where the project is to be conducted: 18

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: N/A

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.

_____	_____	_____
Signature	Name and title	Date

PROPOSAL PART TWO

Project Summary

Provide a brief summary of the project (no more than 500 words) including location, nature, goals and objectives, methods, procedures, expected outcomes, costs and benefits, including the amount of water to be saved.

A. Scope of Work: Relevance and Importance

1. Nature, scope, and objectives of the project.

2. Statement of critical local, regional, Bay-Delta, State or federal water issues. Include an explanation of the need for the project. Describe how this project would be consistent with local or regional water management plans or other resource management plans.

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

1. Methods, procedures, and facilities. Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives and the applicant's readiness to proceed.

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.

3. Monitoring and assessment. Describe the monitoring and assessment procedures that will be used to document progress and determine the success of the project. Include a list of project-specific performance measures that will be used to assess project success in relation to its goals and objectives. For many types of projects, success is determined by measuring activities, outputs, or outcomes. Some other projects measure social and economic impact or environmental change, or use a combination of both measures. Include information about how the data and other information will be handled, stored, and made accessible. Provide a list of expected products/outcomes such as planned reports and other documentation, presentations, advances in technology, and information transfers via workshops, seminars, education programs, etc. (***Prop 13 Agricultural Feasibility Study Grant*** proposals are not required to submit a monitoring and assessment component.)

4. Preliminary Plans and Specifications and Certification Statements (for ***Prop 13 Urban Grant*** construction projects only). Submit Preliminary Plans and Specifications for the proposed project if final plans and specifications are not available.
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 Preliminary Plans and Specifications and Certification Statements.

C 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.

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

D. Benefits and Costs.
1. Budget Breakdown and Justification.
Provide a detailed budget that includes the following line items and justification for each:

For capital outlay project proposals (***Prop 13 Urban Grants***):

a. Land Purchase/Easement
b. Planning/Design/Engineering
c. Materials/Installation
d. Structures
e. Equipment Purchases/Rentals
f. Environmental Mitigation/Enhancement
g. Construction/Administration/Overhead
h. Project/Legal/License Fees
i. Contingency (up to 15%, amount must be fully justified by applicant)
j. Other

For proposals other than capital outlay projects (***Prop 13 Agricultural Feasibility Study Grants***):

a. Direct Labor Hours (hours for each individual).
b. Salaries (rate of compensation for each individual).
c. Benefits (overall rate for each category of employee).
d. Travel (purpose and estimated cost for all non-local travel).
e. Supplies and Expendables (list separately amounts for office, lab, computing, field supplies).
f. Services or Consultants (identify specific tasks, time required, hourly or daily rate).
g. Equipment (identify property having a useful life of more than one year and cost more than $5,000 per unit).

h. Other Direct Costs (including project management, planning, design, construction, maintenance, etc. Describe the specific costs associated with insuring accomplishment of the project, such as inspection of work in progress, validation of costs, report preparation, giving presentations, and necessary costs directly associated with specific project oversight).
i. Total Direct Costs. Total items (a) through (g).
j. Indirect Costs. (Explain what is encompassed in the overhead rate (indirect costs). Overhead should include costs associated with general office requirements such as rent, phones, furniture, general office staff, etc., generally distributed by a predetermined percentage of specific costs).
k. Total Costs.

2. Cost-Sharing**.** If the applicant proposes any cost sharing (it is not required by Proposition 13), cost share funds shall be obligated during the period of performance. The applicant cost share shall be met during each 12-month budget period.

The proposal shall identify other funding commitments, the status of these commitments (tentative approval, contract, etc.), source, and any cost-sharing requirements. Successful proposals that commit cost sharing funds shall have the commitment of those funds within 30 days of notification of approval. If an applicant fails to secure the cost share funds identified in the proposal, and as a result has insufficient funds to complete the project, DWR has the option to amend or terminate the contract.

3. Benefit Summary and Breakdown. List expected project outcomes (the physical changes that will occur as a result of the project) and expected benefits (the value of those outcomes).

a. Quantify project outcomes and benefits. Quantify outcomes and benefits to the degree possible. For example, if the expected outcome of a project is to reduce dry-year demands in a particular region, the amount and value (benefit) of this reduction should be listed if known.

Indicate how each quantified outcome and benefit will be shared among the project's beneficiaries. For example, if an outcome will result in an avoided cost benefit for the applicant and/or the project partners, this should be identified as an applicant benefit. Identify and delineate quantified outcomes and benefits expected to directly or indirectly contribute to CALFED goals.

b. For project outcomes and benefits that are not quantifiable, provide a qualitative description of such project outcomes and benefits. List and describe in words all outcomes or benefits that cannot be quantified at present. One way to describe the significance of a project's non-quantified benefits is in terms of institutional, public, or scientific recognition. Indicate how each non-quantified outcome or benefit will be shared among the project beneficiaries. Identify and delineate non-quantified outcomes expected to directly or indirectly contribute to CALFED goals.

4. Assessment of Costs and Benefits. Include an assessment that summarizes the costs and benefits of the proposed project. The assessment shall adhere to the following general guidelines:

a. List and explain all major analysis assumptions and methodologies. Provide enough detail for a thorough review of the assessment.

b. Express all benefits and costs in year 2001 dollars. Do not adjust future dollar values for expected general inflation.

c. Convert all costs and benefits to their present value equivalents prior to aggregating them. Use a six percent discount rate.

d. Compile a table showing the present value of the quantified costs and benefits for the applicant, each project beneficiary, CALFED, and any other parties affected by the project. Compile a summary of the non-quantified costs and benefits to the applicant, each project beneficiary, CALFED, and any other parties affected by the project.

e. Demonstrate that the ***Prop 13 Urban Grant*** project is locally cost effective to the applicant. Projects funded through the ***Prop 13 Urban Grant*** program must be locally cost effective, that is, benefits to the applicant must be equal to or greater than the costs ($B/C \geq 1$).

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
Demonstrate the potential benefits and information to be gained that the project will explore in terms of water use efficiency: water supply, water quality improvements, and environmental enhancements.

Benefit Realized and Information Gained versus Costs
Compare the potential benefits and information that are anticipated to be gained to the anticipated costs.

E. Outreach, Community Involvement and Acceptance
Applicants are encouraged to coordinate prior to submitting a proposal with local governments, and other local entities such as community based organizations and watershed groups. Proposal shall describe a plan for public outreach to the groups or individuals that may be affected by the project. Identify which local groups or other interested organizations are aware of the project and their level of support or opposition. Identify any potential third party impacts. Estimate the number of people or organizations that are expected to receive training, employment, or other social or economic benefits from the project.

PROPOSAL PART THREE

The applicant will be required to provide the following items only if the proposal is selected for funding. These items are not required to be submitted with the proposal.

A. Matching Funds Commitment Letter. The applicant shall provide an institutional cost-sharing agreement (letter) signed by an official authorized to commit the applicant to all or part of the matching share or a letter authorizing third party, in-kind contribution signed by an official authorized to commit the third party.

B. Resolution. Prior to the execution of the contract, the applicant shall provide a resolution from their governing board accepting the funds and designating a representative authorized to execute the contract and sign requests for disbursement.

C. Environmental Documentation.
Prior to the disbursement of any funds, the applicant shall provide documentation that the project complies with environmental laws and regulations and that necessary permits have been obtained. For general information about environmental compliance, refer to this website: http://ceres.ca.gov/ceqa. For information about environmental regulatory compliance for CALFED projects, please refer to the "Guide to Regulatory Compliance for Implementing CALFED Actions" at http://calfed.water.ca.gov/environmental_docs.html or contact Chuck Vogelsang at chuckv@water.ca.gov, (916) 653-2536. For assistance in establishing environmental significance of project specific impacts to farmland, refer to this website: www.consv.ca.gov/dlrp/LESA/LESA.htm.

SECTION B
SUMMARY OF DWR WATER USE EFFICIENCY PROGRAM

PROGRAM TITLE	DWR Water Use Efficiency Program**
DUE DATE:	3/1/02
ELIGIBLE APPLICANTS	Agencies eligible for Proposition 13 grants plus investor owned utilities, non-profits, tribes, universities, state or federal agencies
ELIGIBLE PROJECTS	Agricultural and urban water use efficiency projects that contribute to CALFED objectives
GEOGRAPHIC SCOPE	Projects from any areas that contribute to CALFED objectives
TOTAL FUNDS AVAILABLE	**
CURRENT YEAR FUNDS AVAILABLE	**
PER PROJECT FUNDING LIMITATIONS	No per project limits
COST SHARING REQUIRED?	yes

**** There is presently no specific authorization or funding for this program.**

B-I. BACKGROUND, GOALS AND OBJECTIVES

Presently, there is no specific authorization or funding for this program. The ***DWR WUE*** component of this PSP is modeled after the 2001 Water Use Efficiency Proposal Solicitation Package authorized by Senate Bill 23 that funded 53 projects totaling almost $12 million last year. Any projects tentatively recommended for funding under this program will be subject to the provisions of authorizing legislation. All applicants will be notified of any new developments or necessary revisions.

This program is intended to fund agricultural and urban water use efficiency projects that contribute to one or more of the CALFED objectives: reducing irrecoverable water losses; attaining water quality benefits; and attaining environmental benefits.

B-II. ELIGIBLE APPLICANTS

(a) cities
(b) counties
(c) cities and counties
(d) joint power authorities
(e) other political subdivisions of the State, (including public water districts, but not State Agencies)
(f) incorporated mutual water companies
(g) investor-owned utilities
(h) non-profit organizations
(i) tribes
(j) universities
(k) state agencies
(l) federal agencies

Neither private individuals nor private entities may apply for any of these programs. Applicants that wish to collaborate on a proposal may elect to use a contractor-subcontractor relationship or a joint powers authority. Contracts will only be executed with one applicant. The proposal shall clearly indicate who will sign the contract and the nature of the agreement between the other participants.

B-III. ELIGIBLE PROJECTS

This ***DWR WUE*** Program relates to the first action item of the CALFED Water Use Efficiency Plan: implement agricultural and urban conservation incentive programs to provide funding for water management projects that will provide multiple benefits which are cost-effective at the statewide level, including the reduction of irrecoverable water losses; attainment of water quality benefits; and the attainment of environmental benefits.

This may be accomplished through the implementation of established Urban Best Management Practices (BMPs), Agricultural Efficient Water Management Practices, (EWMPs) or Quantifiable Objectives (QOs) that demonstrate a potential for achieving CALFED objectives. Or, the applicant may propose a broader or different approach to

implementation of water use efficiency with an emphasis on linkage to CALFED objectives and the expected outcomes and benefits of the project. Priority will be given to implementation projects, and especially those that implement Quantifiable Objectives.

In addition to implementation projects, applicants may submit a proposal for another type of project. Other project types include innovative projects (initial investigation of new technologies, methodologies, approaches, or institutional frameworks), research, pilot projects, feasibility studies, and education/public information projects.

For more information about BMPs, contact the California Urban Water Conservation Council at www.cuwcc.org, or call (916) 552-5885. For more information about EWMPs, contact the Agricultural Water Management Council at (916) 651-9675. For more information about Quantifiable Objectives, contact the CALFED's Water Use Efficiency Program Manager, Tom Gohring, at gohring@water.ca.gov, (916) 651-7102 or see the CALFED website at htpp://calfed.ca.gov/current/quantifiable_objectives.html.

B-IV. INELIGIBLE PROJECTS

Projects that generate benefits that would ordinarily be accrued as a result of carrying out an existing law, regulation, or contract within the same time frame as the project described in the Proposal are not eligible for funding. For example, if Federal law requires the installation of meters by an applicant, funding of that meter program would not be eligible. However, if funding would accelerate the meter installation project, that portion of the project that would be facilitated by funding over and above the applicant's existing commitments would be eligible.

Implementation projects that are locally cost effective (where the applicant receives benefits in excess of their costs) will not be funded through the ***DWR WUE*** program.

Wellhead rehabilitation, new storage tanks providing expanded capacity, water supply, water treatment, wastewater treatment, flood control, conjunctive use, or groundwater banking projects are not eligible for funding through the ***DWR WUE*** program. No funds will be available to replace existing funding sources for on-going projects, for political advocacy, for the purchase of water, for the establishment of a reserve fund, or for an applicant's litigation costs.

B-V. GEOGRAPHIC SCOPE

Projects from throughout the State that contribute to the CALFED objectives will be considered for funding by the ***DWR WUE*** program. Consideration will be given in the selection process to the distribution of projects throughout these geographic regions of California: Southern California, Bay Area, San Joaquin Valley, or Sacramento Valley.

B-VI. AVAILABLE FUNDS

Presently, there is no specific authorization or funding for the *DWR WUE* program. By seeking proposals for funding of ***DWR WUE*** projects, the need for such funding can be demonstrated and documented. The distribution of funds will depend on the eventual authorization and funding of the program and the quality of submitted proposals. There is no per-project funding limitation.

B-VII. DURATION OF PROJECTS

Funds shall be expended within three years of the execution of the contract. If the project exceeds one year in duration, a budget with discrete 12-month periods shall be provided.

Projects may be multi-year efforts if necessary and appropriate, but proposal timelines and budgets that will be incorporated into the contract shall not exceed three years. In addition, since funding may be awarded for only a portion of each submitted project, the applicant should clearly show which tasks could be funded separately. When a portion of a project is funded, there is no guarantee that the remaining portions or future phases of that project will be funded. Future funding will depend on the progress of the project, the nature and extent of competing proposals, priorities, program authorization and funding availability.

B-VIII. AGREEMENT REQUIREMENTS

DWR WUE Projects selected for funding will be subject to standard terms and conditions as specified by authorizing legislation and DWR procedures. The recipient must sign an agreement containing standard terms and conditions with DWR before the State can disburse funds. Funds will be delivered in accordance with the executed agreement.

B-IX. CONFLICT OF INTEREST AND CONFIDENTIALITY

The same conflict of interest and confidentiality requirements apply to DWR WUE proposals as to Proposition 13 proposals as detailed in Section A-IX.

B-X. PROPOSAL REVIEW, SELECTION, AND AWARD PROCESS

The process for ***DWR WUE*** projects will be the same as the ***Proposition 13*** grants detailed in Section A-X.

B-XI. ANTICIPATED SCHEDULE

The schedule for ***DWR WUE*** projects will be the same as the ***Proposition 13*** grants detailed in Section A-XI.

B-XII. SELECTION CRITERIA

Proposals for the ***DWR-WUE*** projects will be reviewed according to the same criteria established in Section A-XII for the ***Proposition 13*** grants.

B-XIII. PROPOSAL CONTENTS

The Proposal, including one original, eight photocopies and one electronic copy on 3.5 inch diskettes or CD-ROM (preferably in a PDF format or in MS Word and/or Excel compatible format) must be received by 3:00 p.m, March 1, 2002 at:

California Department of Water Resources
Office of Water Use Efficiency
P.O. Box 942836, Sacramento, CA 94236-0001
Attention: Marsha Prillwitz, (916) 651-9674

or by overnight carrier or hand delivered to:
California Department of Water Resources
Office of Water Use Efficiency
1416 Ninth Street, Room 338, Sacramento, CA 95814
Attention: Marsha Prillwitz, (916) 651-9674

The entire Proposal shall be in 12 point font or larger on 8 _-11 inch paper. The Proposal, Parts One and Two combined, shall not exceed 20 single-spaced, consecutively numbered pages. Resumes and letters of support attached to the Proposal are not included in the 20-page limit. Proposals that exceed the 20-page limit will be excluded from consideration.). The Proposal will be appended to the contract, if the project is selected for funding.

A complete Proposal for a ***DWR WUE*** project is the same as that for a ***Prop. 13 Grant,*** consisting of the following:

<u>Proposal Part One</u>:
A. Project Information Form
B. Signature Page

<u>Proposal Part Two</u>:
Project Summary
A. Scope of Work: Relevance and Importance
B. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment
C. Qualifications of the Applicants and Cooperators
D. Benefits and Costs
E. Outreach, Community Involvement and Acceptance

<u>Proposal Part Three:</u>
(Items in Part Three are required only if the project is selected for funding.)
A. Matching Funds Commitment Letter
B. Resolution
C. Environmental Documentation

Proposal Parts One, Two and Three for a ***DWR WUE*** proposal are the same as the ***Prop. 13 Grants*** Section A-XIII, except for Part Two, D: Benefits and Costs. Following are the directions for D: Benefits and Costs for ***DWR WUE*** projects.

D. Benefits and Costs.

1. Budget Breakdown and Justification.

Provide a detailed budget that includes the following line items and justification for each, indicating the amount of cost sharing for each element:

For capital outlay project proposals:

k. Land Purchase/Easement
l. Planning/Design/Engineering
m. Materials/Installation
n. Structures
o. Equipment Purchases/Rentals
p. Environmental Mitigation/Enhancement
q. Construction/Administration/Overhead
r. Project/Legal/License Fees
s. Contingency (up to 15%, amount must be fully justified by applicant)
t. Other

For proposals other than capital outlay projects:

l. Direct Labor Hours (hours for each individual).
m. Salaries (rate of compensation for each individual).
n. Benefits (overall rate for each category of employee).
o. Travel (purpose and estimated cost for all non-local travel).
p. Supplies and Expendables (list separately amounts for office, lab, computing, field supplies).
q. Services or Consultants (identify specific tasks, time required, hourly or daily rate).
r. Equipment (identify property having a useful life of more than one year and cost more than $5,000 per unit).
s. Other Direct Costs (including project management, planning, design, construction, maintenance, etc. Describe the specific costs associated with insuring accomplishment of the project, such as inspection of work in progress, validation of costs, report preparation, giving presentations, and necessary costs directly associated with specific project oversight).
t. Total Direct Costs. Total items (a) through (g).
u. Indirect Costs. (Explain what is encompassed in the overhead rate (indirect costs). Overhead should include costs associated with general office requirements such as rent, phones, furniture, general office staff, etc., generally distributed by a predetermined percentage of specific costs).
v. Total Costs.

2. Cost-Sharing**.** The applicant cost share is based on the split between applicant benefits and CALFED benefits. The applicant cost share shall be obligated during the period of performance. The applicant cost share shall be met during each 12-month budget period.

The proposal shall identify other funding commitments, the status of these commitments (tentative approval, contract, etc.), source, and any cost-sharing requirements. Successful proposals that commit cost sharing funds shall have the commitment of those funds within 30 days of notification of approval. If an applicant fails to secure the cost share funds identified in the proposal, and as a result has insufficient funds to complete the project, DWR has the option to amend or terminate the contract.

3. Benefit Summary and Breakdown. List expected project outcomes (the physical changes that will occur as a result of the project) and expected benefits (the value of those outcomes).

a. Quantify project outcomes and benefits. Quantify outcomes and benefits to the degree possible. For example, if the expected outcome of a project is to reduce dry-year demands in a particular region, the amount and value (benefit) of this reduction should be listed if known.

Indicate how each quantified outcome and benefit will be shared among the project's beneficiaries. For example, if an outcome will result in an avoided cost benefit for the applicant and/or the project partners, this should be identified as an applicant benefit. Identify and delineate quantified outcomes and benefits expected to directly or indirectly contribute to CALFED goals.

b. For project outcomes and benefits that are not quantifiable, provide a qualitative description of such project outcomes and benefits. List and describe in words all outcomes or benefits that cannot be quantified at present. One way to describe the significance of a project's non-quantified benefits is in terms of institutional, public, or scientific recognition. Indicate how each non-quantified outcome or benefit will be shared among the project beneficiaries. Identify and delineate non-quantified outcomes expected to directly or indirectly contribute to CALFED goals.

4. Assessment of Costs and Benefits. Include an assessment that summarizes the costs and benefits of the proposed project. The assessment shall adhere to the following general guidelines:

a. List and explain all major analysis assumptions and methodologies. Provide enough detail for a thorough review of the assessment.

b. Express all benefits and costs in year 2001 dollars. Do not adjust future dollar values for expected general inflation.

c. Convert all costs and benefits to their present value equivalents prior to aggregating them. Use a six percent discount rate.

d. Compile a table showing the present value of the quantified costs and benefits for the applicant, each project beneficiary, CALFED, and any other parties affected by the project. Compile a summary of the non-quantified costs and benefits to the applicant, each project beneficiary, CALFED, and any other parties affected by the project.

e. Demonstrate that the project is not locally cost effective to the applicant, but is cost-effective from a state-wide perspective. Implementation projects that are locally cost effective (where the applicant receives benefits in excess of their costs) will not be funded through the ***DWR WUE*** program.

For ***DWR WUE*** innovation, research, pilot projects, education or public information programs ONLY:

Provide the following Benefits and Costs information in place of Sections D3 and D4:

<u>Potential Benefits to be Realized and Information to be Gained</u>
Demonstrate the potential benefits and information to be gained that the project will explore in terms of water use efficiency: water supply, water quality improvements, and environmental enhancements.

<u>Benefit Realized and Information Gained versus Costs</u>
Compare the potential benefits and information that are anticipated to be gained to the anticipated costs.

California Department of Water Resources
Office of Water Use Efficiency
P.O. Box 942836
Sacramento, CA 94236-0001

CONSOLIDATED WATER USE EFFICIENCY 2002
PROPOSAL PART TWO

Project Summary

Agriculture began in Western Fresno County in about 1880. The Panoche Water District (District) began receiving its first Central Valley Project (CVP) water supply in 1947. Since formation and construction of the first water conveyance facilities, the District has continued to improve upon its ability to provide irrigation water service diverting water from both the Delta-Mendota Canal and the San Luis Canal.

The District is in a perpetual water supply deficit situation and in an area where the soils are poorly drained. The District is in continual pursuit to increase water conveyance and irrigation efficiency, and reduce canal seepage.

In 1997, the District commissioned preparation of a water distribution system master plan. One of the components of the master plan is the Herndon Avenue Lateral (HAL). The master plan was reviewed under the Bureau of Reclamation's Technical Assistance Program which concluded that the plan was excellent and several suggestions were provided. The benefits will include reduction in seepage losses and increased irrigation efficiency resulting from stabilization of the water surface elevation. The evaluation will determine whether the HAL should be operated automatically on downstream control or upstream control. The master plan proposed utilizing regulating structures operating on downstream control. The review suggested that upstream control may provide better service.

The primary objective of the project is to refine the design concepts of the HAL, to optimize water use efficiency, and to quantify to the degree practicable the benefits which will result from the project. Seven tasks have been formulated to accomplish the feasibility study, these include:

- Ponding tests in an existing earthen ditch to quantify the seepage reduction.
- Water level monitoring to understand canal water level fluctuation and flow variations through the delivery turnout.
- Estimating water savings which will result from installation of an automated delivery system.
- Design concept refinement which will examine the question of downstream control versus upstream control and recommend design concepts for the HAL.
- Project cost estimate based on the various project components.
- Benefit/cost comparison.

- Project report.

The feasibility study is estimated to cost $67,051.00 which includes a local cost share of $12,506.00, or approximately 19% of the total project cost.

The benefits to be gained include defining the components of the HAL to achieve maximum water conservation benefits. The results of the study will provide valuable insight on canal water level fluctuation and how automation and water level control can stabilize water delivery levels and increase conveyance and irrigation efficiency. The water savings and drainage benefits resulting from the construction of the new lateral will make the proposed expenditure for design refinement very cost effective. The results of the study can be extrapolated to other projects to assist other districts in formulation of similar projects.

A. Scope of Work: Relevance and Importance

The District is a long-standing developed agriculture area primarily within the western portion of Fresno County. Agriculture ventures in the area began about 1880 with dry farming of grain. Irrigated agriculture started in 1912 utilizing shallow wells. Major development of farming began in 1939 and progressed through the 1940's. The District began receiving its first CVP water from the San Joaquin River in 1947 with the United States Bureau of Reclamation. Delivery of CVP water under a long-term contract started in August of 1949. The San Joaquin and Kings River Canal Company (now the Central California Irrigation District) transported the water from the Mendota Pool to the District until the Delta-Mendota Canal was placed into service. The gross area within the District is approximately 38,000 acres with a net irrigable area (discounting farm roadways and structures) of 37,600 acres. The District has continually developed and improved its ability to deliver water and now operates water conveyance facilities which have the capability of diverting water from the Delta-Mendota Canal and from the San Luis Canal of the San Luis Unit of the CVP.

Due to cutbacks in water supply, the District is in a perpetual water deficit situation. The soils within the District are also poorly drained. About 50% of the District is served by subsurface tile systems. The poor soil drainage characteristics result in high water table conditions. The quality of the shallow groundwater is very poor due to high salinity and elevated concentrations of selenium and boron. The drain water is managed utilizing three interrelated techniques: recirculation and blending with the CVP water supply, alternate land management whereby the drain water is utilized to grow salt tolerant crops, and discharge where a portion of the drainage water is released to the San Joaquin River pursuant to a waste discharge permit.

The District is in continual pursuit to develop ways to increase its water conveyance efficiency and irrigation efficiency, and to reduce canal seepage and deep percolation of irrigation water. In August of 1997, the District commissioned a study to evaluate improvements to the irrigation water distribution facilities entitled: "Water Distribution System Master Plan Phase 1 Improvements" (Master Plan). This work was commissioned with the knowledge that the existing water distribution system lacks flexibility and water use monitoring to support highly efficient irrigation technology and intense water management. Optimizing irrigation

efficiency is of paramount importance due to the reduced water supply and the need to minimize subsurface drainage flows. The plan set the first priority goals to be:

- Deliver irrigation water to each field with each delivery metered.
- Provide for flexibility of delivery times to accommodate new irrigation technologies.
- Maximize use of existing facilities.
- Reduce seepage loss.

Recommendations for the first phase of improvements concentrated on modification of existing water distribution facilities to achieve project goals. As part of the Bureau of Reclamation's technical assistance program, the Master Plan was reviewed by the Irrigation Training and Research Center at California Polytechnic State University, San Luis Obispo (ITRC). The review concluded that the plan was excellent and provided suggestions to consider before plan implementation.

The focal point of the plan is the installation of the Herndon Avenue Lateral (HAL). The purpose of this feasibility study is to refine the plan concept for the HAL, focusing on the comments provided by the ITRC and quantifying the water conservation and drainage reduction benefits. Completing the HAL sets the stage for implementing the other improvements. The location of the HAL is shown on Figure 1.

The Master Plan proposed that the HAL utilize regulating structures operated using downstream control. The ITRC suggested the District may be better served by operating the HAL on upstream control and installing a regulating reservoir.

This study would refine the design concepts, revise the estimated project cost, and quantify to the extent practicable, the benefits to be achieved from installation of the HAL. The reduction of seepage losses will be determined based on ponding tests along the existing earthen canal which will be replaced by the concrete-lined HAL and reduction in deep percolation will be estimated based on expectant increases in irrigation efficiency which will result from stabilization of water surface elevation in the irrigation water distribution system and the ability to better match water supply to water demand. The drainage benefits will be estimated based on the reduction of seepage losses and deep percolation, which otherwise, would become a component of the subsurface drainage flow which must be managed by the District at considerable cost.

The primary objective of the project is to refine the design concepts of the HAL to optimize water use efficiency and to quantify to the degree practicable the benefits which will result from the project. The project has statewide significance in that the District is a federal CVP water contractor and relies on water diversions from the Sacramento-San Joaquin Delta for its water supply. Increasing water use efficiency for water diverted south of the Delta is a very high priority at both the state and federal level. The project will also reduce drainage flows and loads which must be handled by the District, a portion of which is discharged at the San Joaquin River, a portion of which is recirculated for crop water use and a portion of which is used in the

alternate land management program. Decreasing of drainage flows and loads will be beneficial to all these drainage water management schemes.

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

The following tasks have been set forth to accomplish of the goals of the feasibility study:

Task 1: Ponding Test of Seepage Analysis. Ponding tests will be conducted on the approximate 2 1/2 miles of earthen ditch which will be replaced with the concrete-lined HAL. The ponding tests will be utilized to quantify the seepage being lost from the earthen channel. The results will be used to determine the benefits from both the water supply and drainage perspectives.

Task 2: Water Level Monitoring. The variability of flow and in delivery water surface elevations are the primary cause for inefficient operations of Lateral 2 which currently serves the future HAL service area. To estimate the benefits to be realized from stabilization of water levels, the water level in Lateral 2 will be monitored at three locations through most of the irrigation season between March and September. Monitoring will be done utilizing battery-operated pressure transducers and data loggers for recording water level. These data will be utilized to estimate the quantity of water expected to be saved as a result of stabilizing water delivery elevations by installation of the HAL.

Task 3: Estimate of Water Savings from Operational Improvements. This task will take the data collected in Task 2, which together with historic cropping and water delivery records will be utilized to estimate the increase in irrigation efficiency and water savings which will result from stabilization of water levels and increasing the flexibility of water delivery which will occur as a result of the project. Canal level variations will be translated into flow variations for typical turnouts off the canal. The variations will be related to the quantity of water delivered through the lateral. Increases in water levels in the canal result in unexpected increases of flow to the field which results in over irrigation. This condition will be compared with the stable pool conditions expected in the HAL to estimate the water savings benefit. This will be a cooperative effort of Stoddard & Associates and the ITRC, with results being the best estimate of water savings which would result due to the stabilization of water levels and increased flexibility of delivery.

Task 4: Design Concept Refinement. In cooperation with the ITRC, the suggested modifications of the HAL design concept will be explored. The basic question is whether to design the lateral with downstream level control as proposed in the Master Plan, or modify the design concept to operate the lateral on upstream water level control as suggested by the ITRC. Downstream water level control provides a high degree of supply flexibility to meet varying crop water demands

while precluding operational spill. Upstream control will require that the Davidson and Buick Drains be maintained to accommodate HAL operational spill. The increase in spill will increase seepage loss and result in commingling of good quality spill water with subsurface drainage flows as the spill enters the District's subsurface drainage collection system. Typically, commingling of surface and subsurface drainage is not advised since it increases costs and decreases the management options for subsurface drainage flows. The spill, and therefore the resulting impacts, may be reduced by installation of a regulatory reservoir; however, regulatory reservoirs are expensive to construct, operate and maintain, and unless the reservoir is completely lined, the seepage from the reservoir will become a significant contributor to the subsurface drainage regime. This task will evaluate the various options and set forth the recommended design concepts for the HAL.

Task 5: Project Cost Estimate. The HAL design recommendations will be translated into various project components to convey, regulate, measure, and monitor flow within the lateral. An itemized cost estimate based on the project components will be developed in this task.

Task 6: Benefit Cost Assessment. The benefits of water conservation and subsurface drainage reduction, which will result from project as quantified in Tasks 1, 2, and 3, will be set forth in terms in of dollars per year which will result from the HAL project. The cost of the project will include project construction, right-of-way, engineering, administration, legal and operation and replacement costs. These costs will be set forth as equivalent uniform annual costs utilizing an appropriate discount rate. The cost will be compared with the estimated benefit which will result from water conservation and drainage water reduction.

Task 7: Project Report. The information developed through the performance of the feasibility study will be set forth in a project report which summarizes the work performed and the results of each project task. The report will be designed to provide the decision makers with an easily understood summary of the work performed and the recommendations for project implementation.

Figure 2 presents the proposed project schedule by task. November and December are typically good months to perform ponding tests. Canal monitoring must take place March through August. The other tasks are scheduled around these critical path time lines. The quarterly expenditure projection is provided on the schedule. The project cost and time line may be reduced by eliminating the canal level monitoring, and replacing the data with best estimates provided by the canal operations. This would not significantly reduce the grant cost since the monitoring labor is being provided by the District as cost share. The data to be collected is generally not calculated and will provide valuable insight into canal operations. Elimination of the water level monitoring may be short sighted. All other tasks identified are necessary to complete the project.

C. Qualifications of the Applicants and Cooperators

The project manager for the HAL Feasibility Study will be Robert M. Stoddard, president of Stoddard & Associates. His resumé is contained in this proposal as Attachment I. Mr. Stoddard specializes in evaluations of water resource issues, development of water conservation plans, quantifying agricultural water demands and in the design of large agricultural water conveyance systems. The firm has specialized in this work for over 50 years. Mr. Stoddard will be assisted by other engineers and technical personnel within the firm.

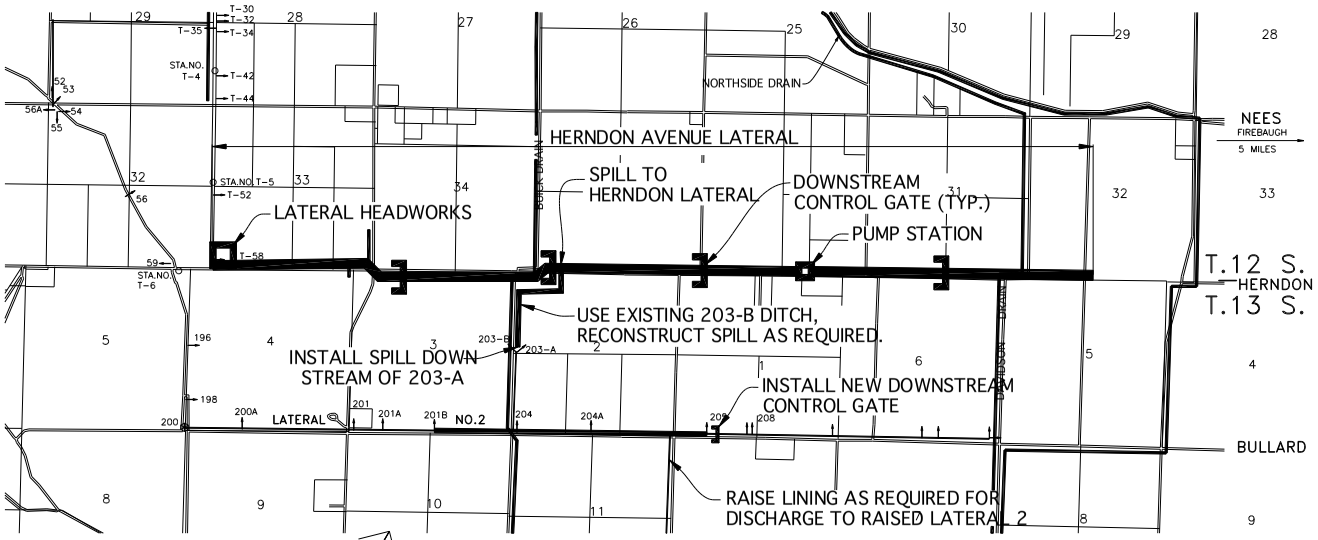
A portion of the work will be performed by District personnel. The District will perform the actual ponding tests and water level monitoring set forth in Tasks 1 and 2. This work will be performed by technicians in the District's water department and supervised by Mr. Marcos Hedrick, the District's Watermaster.

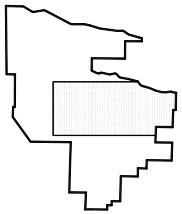
The IRTC of the BioResource and Agricultural Engineering Department at California Polytechnic State University (CalPoly), San Luis Obispo, California, will be a cooperator on the project. They will provide consultation during the estimations of water savings occurring from improved canal operations which will result from the project and will also provide consultation during development of the HAL design concepts.

D. Benefits and Costs

1. Budget Breakdown and Justification. In this section, a detailed project budget is provided based on the identified tasks to complete the work. The effort is broken down between work to be performed by Stoddard & Associates, work to be performed by District staff, and work to be performed by IRTC. Task hour evaluation is presented in Table 1. The only equipment to be purchased for completion of the study will be three water levels sensors and the necessary material to install the sensors. Labor and equipment for installation is provided by District staff. The water level sensors material cost is estimated as $3,000 per site. Labor for installation will be provided by District staff and is included in Task 2. Mileage costs have been estimated and are shown in the table. Other miscellaneous expenses include subcontractor mark-up and reimbursable expenses for such things as duplication, batteries, and postage. The total estimated project cost is $67,051.00.

FIGURE 1





PANOCHE DRAINAGE
DISTRICT

PANOCHE WATER DISTRICT

HERNDON AVENUE
LATERAL FEASIBILITY STUDY
PROPOSED HERNDON AVENUE LATERAL

STODDARD & ASSOCIATES
CONSULTING CIVIL ENGINEERS
AND LAND SURVEYORS
1120 WEST I STREET, SUITE C * LOS BANOS, CALIFORNIA 93635
TELEPHONE (209) 826-5155 * FAX (209) 826-3307

TABLE 1

PANOCHE WATER DISTRICT
HERNDON AVENUE LATERAL FEASIBILITY STUDY
TASK/LABOR EVALUATION AND PROJECT COST ESTIMATE

		STODDARD & ASSOCIATES ESTIMATED STAFF HOURS				DISTRICT ESTIMATED STAFF HOURS		ITRC ESTIMATED STAFF HOURS
TASK NO.	DESCRIPTION	PRIN 1	TECH 1	TECH 2	CLERICAL	W.MASTER	TECH	C.B.
1	PONDING TESTS	16	16			10	120	
2	LATERAL 2 WATER LEVEL MONITORING	32	60		8	28	140	
3	WATER SAVINGS EVALUATIONS	40	32	24		40		24
4	DESIGN CONCEPT REFINEMENT	48	16	24		16		24
5	PROJECT COST ESTIMATE	8	8					
6	BENEFIT/COST ANALYSIS	16	4					
7	PROJECT REPORT	50		24	24			4
	TOTAL HOURS	210	136	72	32	94	260	52
	HOURLY RATE	$110	$60	$55	$40	$39	$34	$125
	COST BY CLASSIFICATION	$23,100	$8,160	$3,960	$1,280	$3,666	$8,840	$6,500
	LABOR SUB TOTALS	$36,500.00				$12,506.00		$6,500.00

TOTAL LABOR COST		$55,506.00
WATER LEVEL SENSORS MATERIAL AND INSTALLATION	3 UNITS @ $3,000.00	$9,000.00
TRAVEL FOR SITE VISITS, MONITORING, AND MEETINGS *(20 TRIPS AT 60 MILES PER TRIP AND TWO TRIPS AT 350 MILES PER TRIP)*	1,700 MILES @ $0.45	$765.00
SUBCONTRTACTOR MARKUP @ 12%		$780.00
MISCELLANEOUS REIMBURSEABLE EXPENSES *(DUPLICATION, BATTERIES, POSTAGE ETC)*		$1,000.00
TOTAL PROJECT COST		$67,051.00
LESS LOCAL COST SHARE		-$12,506.00
GRANT REQUEST AMOUNT		**$54,545.00**

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ATTACHMENTS:

I. Robert M. Stoddard Resumé

EDUCATION

Bachelor of Science
California State University, Fresno, 1973

REGISTRATION

Professional Engineer: California, 1976

PROFESSIONAL AFFILIATION

American Society of Civil Engineers
American Water Works Association

EMPLOYMENT HISTORY

1972 To Present: Stoddard & Associates, Los Banos, California

EXPERIENCE

Mr. Stoddard has over 29 years experience as a civil engineer and has served as City Engineer and District Engineer for over 20 years. He serves as project engineer for major projects and performs many of the firm's feasibility studies. Specific experience related to water resources, agricultural water use, and water conveyance includes:

Analysis and preparation of report on the yield of water rights on the Chowchilla River.

Investigation of trends in the change of both the quantity and quality of the unconfined groundwater underlying the Central California Irrigation District.

Project Engineer for the Broadview Water District Main Drain, including developing concepts and drainage agreements, design, preparation of plans and specifications, Assessment District formation and contract administration.

Comprehensive investigation of historic diversions of water on the Kern River in support of applications to appropriate water.

Operation studies to optimize reservoir operations and project yield, Buchanan Dam, Chowchilla River.

Project Manager for conveyance system modifications to control agricultural drainage water flow within native wetlands, Grassland Water District.

Preparation of water conservation plans for numerous water districts.

Project Manager for Panoche Water District's $4.7 million water conveyance system modifications including preparation of life cycle cost analyses, and Engineer of Work for project funding.

Project Engineer for the preparation of a water loss evaluation for the Central California Irrigation District. A comprehensive study of seepage loss, water measurement systems and potential water conservation projects.

Project Engineer for preparation of Groundwater Management Plans pursuant to AB 3030 and groundwater monitoring programs.

Project Manager for 21 agricultural water needs assessments in support of Central Valley Project contractual water supplies.

Project Manager/Engineer for enlargement of major canals for conveyance of water for wildlife benefit on federal, state, and private wetlands.

Project Manager for major canal automation project including evaluation of possible operating scenarios, feasibility studies delineating costs and benefits, pre-design reports, and multiple construction contracts for Central California Irrigation District.

Evaluation of water needs and water management strategies for privately owned wetlands for Grassland Water District.

Project Manager/Engineer for drainage water desiltation basin and 1 mile of 24-inch pipeline installation to capture operational spill for Pacheco Water District.

Project Engineer for feasibility analysis, project formulation, financing, design and preparation of contract documents for drainage water regulation and recirculation project for Pacheco Water District.

Evaluation of use of the Delta-Mendota Canal for conveyance of non-project water and evaluation of alternate pumping configurations.