

**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): Sutter Mutual Water Company
3. Project Title: Irrigation Recycle Project
4. Person authorized to sign and submit proposal:
- | | |
|-----------------|--|
| Name, title | <u>Max Sakato</u> |
| Mailing address | <u>15094 Cranmore Road</u>
<u>P.O. Box 128, Robbins, CA</u>
<u>95676</u> |
| Telephone | <u>530/738-4423</u> |
| Fax. | <u></u> |
| E-mail | <u>xminusmax@aol.com</u> |
5. Contact person (if different):
- | | |
|------------------|------------------------|
| Name, title. | <u>(Same as Above)</u> |
| Mailing address. | <u></u> |
| Telephone | <u></u> |
| Fax. | <u></u> |
| E-mail | <u></u> |
6. Funds requested (dollar amount): \$100,000
7. Applicant funds pledged (dollar amount): 0
8. Total project costs (dollar amount): \$250,000
9. Estimated total quantifiable project benefits (dollar amount): Unknown until after Feasibility Study
- Percentage of benefit to be accrued by applicant: Unknown until after Feasibility Study

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Percentage of benefit to be accrued by CALFED
or others:

Unknown until after Feasibility
Study

10. Estimated annual amount of water to be saved (acre-feet): 25,000

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. State Assembly District where the project is to be
conducted: District 2

13. State Senate District where the project is to be conducted: District 4

14. Congressional district(s) where the project is to be
conducted: District 3

15. County where the project is to be conducted: Sutter

16. Date most recent Urban Water Management Plan
submitted to the Department of Water Resources: _____

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

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

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By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form 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

The proposed project, a project of the Sacramento Valley Water Management Agreement, would enhance and maximize the use of applied surface water for irrigation purposes and minimize summer drainage that must be pumped out of the Sutter Basin. The objective to increase the recapture/recycle effort entails construction of check structures and lift pumps in the RD 1500 Main Drainage Channel and return drainage to the Main Irrigation Canal for redistribution throughout the service area.

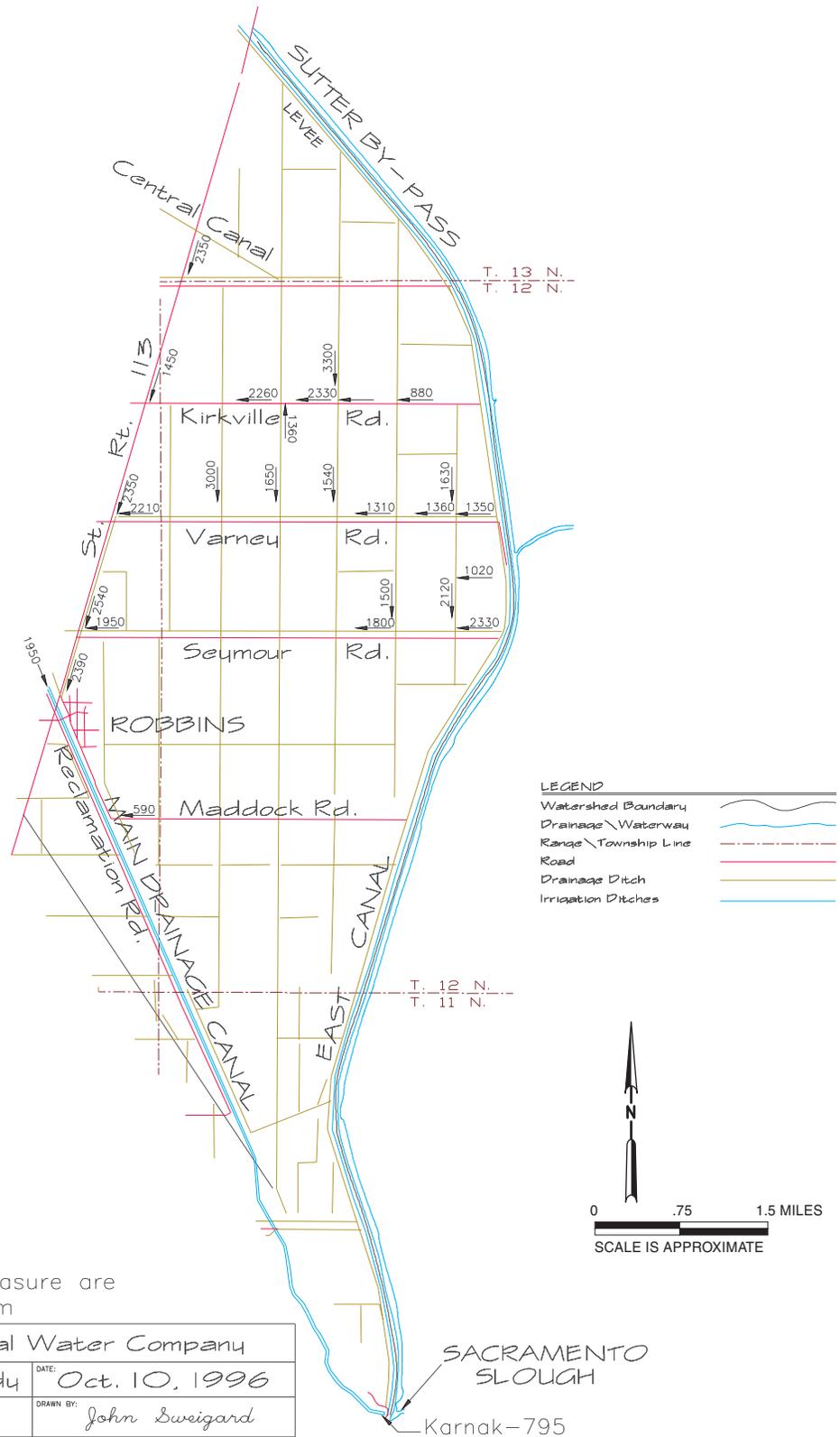
SMWC is a private mutual water company that provides irrigation water to approximately 50,000 acres within the Sutter Basin east of the Sacramento River approximately 45 miles northwest of Sacramento. The SMWC service area is within the boundaries of RD 1500 and, therefore, all summer and winter drainage is collected in the District's Main Drain and conveyed to the pumping plant in the southerly end of the District where it is pumped out of the District into the Sacramento Slough, which is tributary to the Sacramento River (See Figure 1.)

A reconnaissance investigation of the potential to recycle irrigation runoff throughout the Company service area was completed in 1997 with the finding that a formal feasibility report would be justified. The investigation found that 80 percent of the drainage water in the SMWC service area is generated upstream of the Bohannon Control Structure located in the RD 1500 Main Drain, meaning that the facility and similar structures placed upstream with lift pumps could effectively return even greater quantities of drainwater for recycle use than are currently available for recycle purposes.

Because of water quality concerns, SMWC has an ongoing program of monitoring water quality of its delivery supply and reuse water. This program will continue with promotion of additional recycle use to ensure that salt build-up in the soil is not occurring to the point where crop production and soil fertility are affected. Because minimal recapture could be accomplished from drain laterals with the previously constructed facilities, attention was focused on relift pumping plant installations on the Main Drain to return flow to the Main Canal at the north end of the service area.

A project stemming from a successful feasibility study could feature excavation of the main drainage channel; setback of lateral drainage pipes currently entering main canal; easement acquisition; installation of relift pumping structures; and installation of automated control, monitoring, and alarm systems for distribution system control and operation. Figure 1 illustrates the system features and the primary existing infrastructure.

The proposed feasibility study is expected to lead to the development of a larger-scale project that would produce direct water supply, water management, water quality, and environmental benefits. Water supply benefits are predicated upon the conclusions of the study, but potentially could be on the order of 25,000 acre-feet per year (ac-ft/yr.) Water quality benefits would generally stem from increased in-stream flows and water retention. Potential



EC units of measure are
MICROSIEMEN/cm

Sutter Mutual Water Company	
TITLE: Connate Study	DATE: Oct. 10, 1996
SCALE: As Shown	DRAWN BY: John Sweigard

FIGURE 1
PROJECT LOCATION MAP
SMWC IRRIGATION RECYCLE PROJECT

environmental benefits that have been identified thus far include increased supply to the Sacramento-San Joaquin Delta, improved aquatic/riparian habitat, and more reliable supply to wildlife refuges.

A. Scope of Work: Relevance and Importance

1. Nature, Scope, and Objectives

The objective of the proposed project is to supplement existing surface water supply and recapture efforts to provide adequate supply during critical periods of rice flooding and to fulfill irrigation requirements when surface flows are insufficient. The project is proposed as a supplemental supply under short-term reduced-allocation situations.

Periods of water shortage in the past have enhanced the awareness of water needs and demands by agricultural, urban, and environmental interests. Useful water planning must be implemented thoughtfully, realistically, and practically through coordinated efforts by all interests, giving due consideration to specific environmental settings and project economic feasibility. This project will help achieve CALFED Quantifiable Objectives 30, 33, and 34.

The initial Phase 1 work would entail preparation of a project-level feasibility report to include mapping and surveying along the Main Drain to determine control structure and lift pump locations. An analysis and quantification of drainage water availability for reuse would also be updated from the 1997 reconnaissance study to confirm the reliability of supply. Preliminary design of project features would be included to provide sufficient detail for preparation of cost estimates.

A site biological survey would be conducted to determine the potential environmental effects of the project. An environmental assessment would also be prepared to focus on site-specific issues.

Phase 2 would include an analysis of operational procedures outlining anticipated operation and maintenance tasks and costs, development of a schedule for design, and preparation of the required environmental documents.

2. Critical Local, Regional, Bay-Delta, State, or Federal Water Issues

The project is an outgrowth of the Sacramento Valley Water Management Agreement reached in April 2001 among more than 100 organizations. The Agreement was reached as part of Phase 8 of the State Water Resources Control Board Bay-Delta Water Rights Hearings by the Sacramento Valley water users, the California Department of Water Resources, the U.S. Bureau of Reclamation, and export water users. The Agreement is consistent with other water management activities and provides for managing water in a way that meets water supply, water quality, and environmental needs throughout the Sacramento Valley and the State of California.

CALFED Quantifiable Objectives

The project is consistent with the following CALFED Quantifiable Objectives for Subregion 4, the Mid-Sacramento Valley, Chico Landing to Knights Landing:

- No. 30 (provide flow to improve aquatic ecosystem conditions)
- No. 33 (decrease non-productive ET to increase water supply for beneficial uses)
- No. 34 (provide long-term diversion flexibility to increase water supply for beneficial uses)

Relation to Other Local, Regional, Bay-Delta, State, and Federal Objectives

This project is anticipated to provide benefits in the form of increased water supply, more flexible and efficient water management, and improved water quality – all of which could improve the greater Sacramento River ecosystem.

Coordination among Public and Private Entities

Strong coordination would be required among local, state, and federal entities such as USFWS, USBR, and DWR. The governmental agencies would have strong interests associated directly with the project and indirectly as it may affect other interests in the area. It is highly probable that because of the complexity and far-reaching implications of the project that competing interest may arise. Reliable communication and integrated coordination would be required to create a successful project.

Coordination between Concurrent Projects

Numerous parties are examining similar projects throughout the valley. To optimize the effectiveness of these projects, coordination between the projects would be required from the onset. The strongest motivation for such an effort is threefold: (1) to avoid duplication of effort and as a result efficiently use available funds, (2) to avoid the nullification of project benefits through competing projects, and perhaps most importantly, (3) to optimize the benefits of these projects to the watershed.

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

1. Methods, Procedures, and Facilities

The proposed method and the technical adequacy of our approach will satisfy the objectives and we are ready to proceed. The project implementation would occur in several incremental stages, each of which would have significant challenges. Many of these challenges would be inherent to any project of this size and complexity. The following lists some of the implementation challenges anticipated to be associated with this project.

Environmental Regulatory Compliance

A draft CEQA environmental checklist is not required for this phase of the project. All environmental documentation requirements will be met if and when a feasible project is identified and selected for implementation.

2. Task List and Schedule

The proposed project would be conducted in four phases. This proposal is seeking to fund the initial stages of phase 1. The four phases are briefly described below.

Phase 1

The initial phase, for which we are currently seeking funding, consists of preparation of the feasibility report, a site biological survey, an environmental assessment, a cost estimate, and the preliminary project design.

Phase 2

Phase 2 includes an analysis of operational procedures and reliability of proposed facilities by quantification of the capital, operation, and maintenance costs, development of a specific schedule for design and construction, and completion of all environmental documentation and permitting requirements.

Phase 3

The third phase would include complete engineering design, plan preparation, and specifications for construction of the project.

Phase 4

The final phase would include construction of all proposed facilities for integration of the enhanced recapture/recycle facilities with the existing SMWC distribution system.

Estimated project costs are shown in Table 1 and are based on the 1997 reconnaissance study of the recycle/reuse proposal. The estimated total project cost is \$10.9 million, which includes contingencies, engineering, construction management, environmental documentation, and administration. Figure 2 illustrates the approximate schedule for completion of the first two phases of the overall project.

3. Monitoring and Assessment

To be completed.

C. Qualifications

1. Project Manager

SMWC has an extensive history of successfully implementing large, complex capital improvements with the cooperation and funding support of state and federal agencies. The Company is currently working with the CDFG, the NMFS, the USFWS, and the USBR to develop solutions to prevent the entrainment of fish at the Company's pumping locations on the Sacramento River. SMWC's General Manager, Max Sakato, will be the project manager and administer the contract, oversee the work, and provide required documentation to DWR.

TABLE 1
 Feasibility and Capital Cost Estimate
Sutter Mutual Water Company Irrigation Recycle Project

Item	Quantity	Units	Unit Cost	Total Cost
Phase 1				
Feasibility Report, Biological Survey, Environmental Assessment, and Preliminary Design				\$250,000
Phase 2				
Operational Procedures and Environmental Compliance				\$250,000
Phases 3 and 4				
RD 1500 Main Drain:				
Channel Excavation and Material Disposal	500,000	Cubic yards	\$10	\$5,000,000
Pumping Plant Structure:				
Pump Sump, Piling , Trash Rack, Platform, and Walkway	2	Each	\$250,000	\$500,000
125-hp Motor and Pump (including pipe, fittings, and flap gates)	4	Each	\$73,000	\$292,000
100-hp Motor and Pump (including pipe, fittings, and flap gates)	1	Each	\$68,000	\$68,000
150-hp Motor and Pump (including pipe, fittings, and flap gates)	4	Each	\$79,000	\$316,000
200-hp Motor and Pump (including pipe, fittings, and flap gates)	1	Each	\$95,000	\$95,000
Electrical Equipment (including panels, switch gear, starters, and controls)	2	Each	\$100,000	\$200,000
			Subtotal ->	\$6,471,000
			Contingencies and Allowances (30%) ->	\$1,941,300
			Environmental Mitigation (5%)->	\$323,550
			Engineering, Environmental Compliance, Construction Management and Admin. (25%) ->	\$1,617,750
			Phase 1 through 4 Total Preliminary Project Cost ->	\$10,853,600

hp = horsepower

Additional beneficiaries include the State Water Project and the Central Valley Project whose supplies would be less impacted during critically dry years when surface water curtailment activities are in place.

Max Sakato, General Manager

Mr. Sakato is the General Manager for Sutter Mutual Water Company. He has served in this position for more than 12 years. In this capacity, he is responsible for irrigation operations and administration for a 50,000-acre private water purveyor along the Sacramento River in Sutter County. He has extensive knowledge and experience dealing with water-related issues concerning the Sacramento Valley and the State. He is also General Manager for Reclamation District No. 1500, responsible for the flood control and drainage operations and activities of this 70,000-acre Special District located along the Sacramento River. Additionally, Mr. Sakato has extensive corporate managerial and executive experience. He was a lead manager for 12 years in agricultural and natural resource businesses while employed by a Fortune 500 company based in San Francisco. Prior to that, he was an area agricultural manager for a large food product and processing firm.

2. External Cooperators

It is not anticipated that the project will require additional assistance from any other entity or agency. SMWC will coordinate with landowners who may be affected by construction.

D. Benefits and Costs

1. Budget Justification

The estimated total project cost is \$10.9 million, and the allocation of costs by task is shown above in Table 1. However, this proposal only is requesting funding to begin the initial project work, which consists of preparation of the feasibility report, a site biological survey, an environmental assessment, a cost estimate, and the preliminary project design, a total estimated cost of \$250,000.

The budget costs and a break down of the project cost as requested by CALFED are shown in the attached Breakdown Worksheet (Table 2).

2. Cost Sharing

The costs incurred by the District including project administration and management are expected to be a part of the local cost share contribution. SMWC would assume long-term operations and maintenance costs of any improved facilities resulting from the feasibility analysis in perpetuity.

3. Potential Benefits to be Realized and Information to be Gained

The expected project outcome and expected benefits include water supply, environmental, and water quality. The proposed recapture and recycle program envisioned would enhance the efficiency of the Company's agricultural diversions during those critical periods when competition for water delivery is highest.

TABLE 2
Budget Summary

Item	Present Value (\$)	Requested Funds (\$)	Description and Justification
<i>(a)</i> Direct Labor Hours	\$0	\$0	Not applicable—Work for this feasibility shall be contracted out to consultants; SMWC participation is part of the District's cost share
<i>(b)</i> Salaries	\$0	\$0	Not applicable—Work for this feasibility shall be contracted out to consultants; SMWC participation is part of the District's cost share
<i>(c)</i> Benefits	\$0	\$0	Not applicable—Work for this feasibility shall be contracted out to consultants; SMWC participation is part of the District's cost share
<i>(d)</i> Travel	\$0	\$0	Not applicable—Work for this feasibility shall be contracted out to consultants; SMWC participation is part of the District's cost share
<i>(e)</i> Supplies and Expendables	\$0	\$0	Not applicable—Work for this feasibility shall be contracted out to consultants; SMWC participation is part of the District's cost share
<i>(f)</i> Services or Consultants	\$240,000	\$240,000	Engineering services shall be provided by consultants. Initial stages of the study are underway, but require additional funding to proceed.
<i>(g)</i> Equipment	\$0	\$0	
Sub-total (a-g)	\$240,000	\$240,000	
<i>(h)</i> Other Direct Costs			
Review	\$5,000	\$5,000	Engineering services shall be provided by consultants.
Right-of-Way/Legal	\$5,000	\$5,000	Legal and Right-of-Way consultations shall be provided by SMWC's attorney.
Sub-total (h)	\$10,000	\$10,000	
<i>(i)</i> Total Direct Cost	\$250,000	\$250,000	
<i>(j)</i> Indirect Costs	\$0	\$0	Not applicable—Work for this feasibility shall be contracted out to consultants; SMWC participation is part of the District's cost share
<i>(k)</i> Total Costs	\$250,000	\$250,000	

The project benefits RD 1500 in that it reduces the quantity of surface runoff to District drains and pumping plants, thus reducing power consumption of less efficient facilities.

Water Supply Benefits

SMWC would benefit from the project through potential reduction in surface water diversions from its three Sacramento River pumping plants. It would also provide greater reliability in meeting irrigation delivery requirements during periods of drought when diversion restrictions prevent full use of surface water, and when imbalances occur in the conveyance system, requiring greater peak-field delivery than is currently possible.

Environmental Benefits

Environmental benefits would be provided by maintaining a greater water supply and quality in the river for fish, ensuring supply to the refuges within the Sacramento Valley, and allowing additional instream flow downriver and flow through the Delta.

Water Quality Benefits

No change in water quality is expected with construction and implementation of the project, although short-term irrigation service area water quality conditions would deteriorate during extended below-average rainfall periods when salts would not be entirely diluted and flushed from the drainage basin.

These benefits contribute to the CALFED Goals.

4. Benefit Realized and Information Gained versus Costs

Water supply benefits from a project resulting from the feasibility study potentially could be on the order of 25,000 acre-feet per year (ac-ft/yr), as mentioned above. An estimated \$10.9 million system improvement project could yield a project with potentially far-reaching water supply, water management, water quality, and environmental benefits (as discussed above).

E. Outreach, Community Involvement, and Acceptance

The project is an outgrowth of the Sacramento Valley Water Management Agreement among the Sacramento Valley water interests, the California Department of Water Resources, the U.S. Bureau of Reclamation, and export water users. The ongoing process that resulted in the Agreement has a strong public outreach component to inform agencies, environmental and other interests, and the public on the Agreement. Numerous presentations have been made to the CALFED Management Team and associated staff, county supervisors in all affected counties, water districts and their customers, and other organizations and agencies, including the State Water Resources Control Board, Trust for Public Lands, The Bay Institute, U.S. Fish and Wildlife Service, Natural Heritage Institute, The Nature Conservancy, and the public. Additional meetings will occur as the planning and implementation process proceeds. No individual or organization has expressed formal opposition to the Agreement or the projects to be undertaken under the Agreement. The projects, including the one described herein, have been summarized in a published "Short-term Workplan" prepared in conjunction with the Agreement.

Additionally, if they prove to be feasible and are selected for implementation, this and all other capital outlay projects associated with the Agreement will be subject to CEQA and NEPA documentation. The CEQA and NEPA statutes and implementing guidelines ensure that the public and all affected agencies will be fully informed of the project and its effects and receive meaningful opportunities to provide input and review and comment on the project through the CEQA and NEPA public review process.

The project does not directly involve training, employment, or capacity building, but through more efficient and flexible agricultural water supply management, it potentially makes more water available for beneficial uses. A better managed water supply will help sustain the gains being made in the northern California economy by accommodating growth in industry and agriculture, providing growth in employment opportunities in all economic sectors.

The planning effort associated with the Agreement provides a formal framework for disseminating project information. Feedback on benefits achieved through the management and conservation measures recommended in the Agreement will be made available to all Sacramento Valley water contractors, Reclamation, and DWR through the planning partnership. The participants are aware of the need to share this information to ensure successful water supply management throughout the Sacramento Valley.