

**2004 Water Use Efficiency Proposal Solicitation Package**

**APPENDIX A: Project Information Form**

Applying for:

x Urban

x Agricultural

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

- (a) implementation of Urban Best Management Practice, # \_\_\_\_\_
- (b) implementation of Agricultural Efficient Water Management Practice, # \_\_\_\_\_
- x (c) implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # if applicable \_\_\_\_\_
- (d) Specify other: \_\_\_\_\_

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

- (e) research and development, feasibility studies, pilot, or demonstration projects
- (f) training, education or public information programs with statewide application
- (g) technical assistance
- (h) other

3. Principal applicant (Organization or affiliation):

Georgetown Divide Public Utility District

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4. Project Title:

Pipe Placement Structures 2 & 3

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5. Person authorized to sign and submit proposal and contract:

Name, title

Mr. Hank White, General Manager

Mailing address

6425 Main Street, POBOX 4240,  
Georgetown, CA 95634

Telephone

530-333-4356

Fax.

530-333-9442

E-mail

hnwhite@jps.net

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6. Contact person (if different):

Name, title. \_\_\_\_\_

Mailing address. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone \_\_\_\_\_

Fax. \_\_\_\_\_

E-mail \_\_\_\_\_

\_\_\_\_\_

7. Funds requested (dollar amount): \$519,600  
*(from Table C-1, column III, row p)*

8. Applicant funds pledged (dollar amount): \$18,000  
*(from Table C-1, column II, row p)*

9. Total project costs (dollar amount): \$537,600  
*(from Table C-1, column IV, row p)*

10. Is your project locally cost effective? \_\_\_\_\_

*Locally cost effective means that the benefits to an entity (whether in dollar terms or qualitatively) of implementing a program exceed the costs of that program within the boundaries of that entity.*

(a) yes

(b) no

*(If yes, project is not eligible)*

11. Explain why this project is not locally cost effective:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12. Estimated Bay-Delta annual net water savings (reduced irrecoverable losses only, in acre-feet): 180 AFY  
*(from Table C-5a (row E))*

13. Cost/AF of water saved to Bay-Delta: 63,000  
*(from Table C-7 (row L))*

14. Cost/AF of water saved with Applicant Contribution: 28,447  
*(from Table C-7 (row N))*

15. Duration of project (month/year to month/year):	7/05 – 10/06
16. State Assembly District where the project is to be conducted:	04
17. State Senate District where the project is to be conducted:	01
18. Congressional district(s) where the project is to be conducted:	4th
19. County where the project is to be conducted:	El Dorado
20. Location of project (longitude and latitude)	120.835W & 38.909N
21. How many service connections in your service area (urban)?	3400 Dom. 400 Irr. 1100 Waste
22. How many acre-feet of water per year does your agency serve?	12,000

23. Type of applicant (select one):
- (a) City
  - (b) County
  - (c) City and County
  - (d) Joint Powers Authority
  - (e) Public Water District
  - (f) Tribe
  - (g) Non Profit Organization
  - (h) University, College
  - (i) State Agency
  - (j) Federal Agency
  - (k) Other
    - (i) Investor-Owned Utility
    - (ii) Incorporated Mutual Water Co.
    - (iii) Specify \_\_\_\_\_

24. Is applicant a disadvantaged community? If 'yes' include annual median household income.  
(Provide supporting documentation.)

X (a) yes, \$35,058 median household income  
 (b) no

**2004 Water Use Efficiency Proposal Solicitation Package**  
**APPENDIX B: Signature Page**

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

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

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

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

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

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

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name and title

\_\_\_\_\_  
Date

### **A-15c. Statement of Work, Section 1: Relevance and Importance**

*The goals and objectives will be the elimination of canal breaks, water loss through these breaks and evapotranspiration. The savings of water could be 3,000 + AFA of raw water.*

*The district (GDPUD) has approximately 70 miles of open ditch that provides 12,000-acre feet of water each year to 3400 domestic water users and 400 irrigators.*

*This project will set the stage for the eventual closure of the 70-mile open aqueduct.*

*The critical need for enclosure is the detrimental impacts associated with canal breaks. As climatic conditions impact soil stabilization and the need for water, more stability in the system will avoid water losses and insure critical needs of the users.*

*The (GDPUD has addressed the water and public health issues in their document entitled 'Raw Water Conveyance Improvement Projects' dated January 2004*

*Water demand management activities include promotion of water conserving plumbing fixtures, drought tolerant plantings/landscaping and water efficient irrigation techniques. In addition, the GDPUD has teamed with the El Dorado County Resource Conservation District on a joint project to educate water users in prudent water use practices consistent with acknowledged industry Best Management Practices (BMPs).*

*Current water demand is at 12,200-acre feet per year. The forecast is 20,319-acre feet per year in year 2025 with 28,302-acre feet per year at total build out.*

*The proposed project will expand on current water management practices and initiate new efforts designed to save potable water.*

### **A-15d. Statement of Work, Section 2: Technical/Scientific Merit, Feasibility**

*There are seven water diversion structures along the 70-mile canal system. We are planning to install 1200' of 4' dia., 16 gauge aluminized spiral rib pipe between structures 2 & 3 which are located in the upper reaches of the canal system.*

*The district has an on-going contract with Stantec Engineering for services critical to GDPUD needs. Stantec has accomplished preliminary reconnaissance in collaboration with GDPUD staff. A significant break occurred in 2004, which prompted assessment by outside consultants and maintenance personnel.*

*Procedures for the pipe installation include site excavation, bed preparation, equipment transport and placement, channelization work to insure 100% conductivity and ancillary work such as clearing and grubbing for transportation of required hardware.*

## **Environmental Documentation**

*The GDPUD will comply with all applicable permits. Compliance with CEQA has been initiated and should be complete by late spring of 2005. NEPA is not required.*

*There are no other permits required for this project and the public has been apprised of all capital improvement projects.*

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

*CEQA has already been initiated and a completion date of June 1, 2005 has been targeted.*

*The environmental checklist has been completed and is attached. El Dorado County receives copies of CEQA documents and project plans for their records.*

*As a public utility, GDPUD has statutory authority to perform public improvement projects for public service and is not bound by other local public entities.*

### **TASKS AND SCHEDULE**

<i>Task</i>	<i>Deliverable</i>	<i>Dates</i>	<i>Cost</i>
<i>Environmental</i>	<i>Completed &amp; approved CEQA</i>	<i>1/05 – 5/05</i>	<i>\$ 5,000</i>
<i>Purchase Materials</i>	<i>Materials received</i>	<i>7/05 – 8/05</i>	<i>\$ 72,000</i>
<i>Site preparation</i>	<i>Excavation &amp; base complete</i>	<i>7/05 – 10/05</i>	<i>16,000</i>
<i>Site preparation</i>	<i>Final prep work</i>	<i>4/06 – 5/06</i>	<i>8,000</i>
<i>Installation</i>	<i>Pipe install &amp; soil stabilization</i>	<i>6/06 – 9/06</i>	<i>12,000</i>
<i>Technical equipment</i>	<i>Receive and install equipment</i>	<i>10/06 – 11/06</i>	<i>4,000</i>
<i>Admin. &amp; Coord.</i>	<i>Invoicing/overhead/supervision</i>	<i>6/05 – 11/06</i>	<i>37,000</i>
<i>Total</i>			<i>\$154,000</i>

#### **Task 1. Environmental**

The GDPUD has initiated the environmental checklist and preliminary evaluation of the environmental issues associated with the project. It is anticipated that a negative declaration will be completed by late Spring of 2005.

## **Task 2. Materials**

*This task will involve the purchase and delivery of 1200' of 4' dia., 16 gauge aluminized spiral rib pipe, related collars and connectors. The required monitoring equipment will also be purchased which includes two WL15X water level loggers, submersible pressure transducers and data logger, a portable current flow meter and a Weather Hawk 232 meteorological station. All required materials will be ordered upon approval date of grant.*

## **Task 3. Site Preparation**

Under this task, the area along structures 2 and 3 will be cleared and graded for transport and delivery of pipe materials. Diversion structures will be tested for operation and the canal bed will be excavated for 1200 feet to insure proper fit of the new pipe.

Reconnaissance of the canal down stream and upstream from the proposed pipe placement will be made to determine the most satisfactory location for the water level loggers, pressure transducers and flow meters.

## **Task 4. Installation**

The actual installation of the 1200 feet of pipe will take place prior to inclement weather. Collars will be installed along sections of pipe and placed in the canal for fastening. Areas void of material along the lateral lines of the structure will be back-filled and compacted to insure a solid fit and avoid any possibility for movement of the sections.

The monitoring equipment will be installed upon completion of pipe installation as determined by engineers and GDPUD staff.

## **Task 5. Technical equipment**

*The two WL15X water level loggers, submersible pressure transducers and data logger, a portable current flow meter and a Weather Hawk 232 meteorological station will be placed according to determinations made in task 4.*

## **Task 6. Administration and Coordination**

The entire project will require constant coordination by the GDPUD manager in collaboration with Stantec engineers. Administrative services include vendor search, solicitation of bids, bid awards, purchase and delivery of materials, invoicing, progress reports and final project summaries.

## **A-15e. Statement of Work, Section 3: Monitoring and Assessment**

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

*Statements relative to pre-project conditions would not be complete without mention of Public Health and Safety Issues. Many of GDPUD's open ditches and canals are operated very similarly to historic conditions. For much of the canal length, the existing alignment and canal berm conditions essentially exist as they did when those conduits were initially constructed. Over time, these natural ditches (i.e., unlined earthen canals) have experienced badly undercut berms in some places, berm erosion, a decrease in water quality, and downslope structural weakening from years of constant saturation. Current conditions along many stretches of these canals represent serious public safety concerns. The risk of berm collapse resulting in the potential for significant spillage and downslope erosion represents an ever-increasing concern to GDPUD. In fact, several berm blowouts have occurred in the past. Additionally, as open conduits, these canals are exposed to natural litterfall, animal and human traverse, and the potential for inadvertent (or deliberate) contaminant spills. GDPUD maintains the position that the water quality of these important raw water conveyances must be protected.*

*Pre-project conditions have been assessed and consist of existing canal impoundments and laterals of compacted soils. A substantial quantity of water is lost out of the distribution canal system through carriage losses, ditch and distribution reservoir leakage, evaporation, and unregulated spills at the ends of its canals. Total loss has been determined at 27% or approximately 3,000 AF per year (GDPUD, Raw Water Conveyance Improvement Projects Report, and January 2004). This baseline figure of 3,000 AF will be used in determining reduction of water loss by the proposed project.*

*The following work effort will be performed to insure statistical information is available for complete project monitoring:*

- *Compile monthly canal flow from the lower canal reaches and discharge data to evaluate the relative contribution of the proposed project to canal flows on a seasonal and year to year basis*
- *Compile data on existing water extractions along the canal from agricultural and domestic use.*
- *Evaluate the effect of discharges to the canal on the extent of surface flows to the canal based on a hydraulic model of the lower canal using simplified assumptions about channel cross sections, evapotranspiration, groundwater inflows, water extractions, and terminus outflows.*

*The evaluation will also include a discussion of the level of uncertainty involved in the preliminary determinations, data gaps, and future analyses required to provide more definite conclusions.*

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

*Techniques to be considered include the use of two WL15X water level loggers, submersible pressure transducers and data logger, a portable current flow meter and a Weather Hawk 232 meteorological station. These will be used at selected stations prior to,*

*within and below the pipe system. The data acquired will be utilized to accurately assess water loss and savings.*

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

*The data will allow us to determine percentage savings of water by the pipeline installation. Current losses have been determined and post construction water loss will be monitored and determined throughout the year(s) after project completion.*

*The long-term goal of installation of pipe along the 70-mile canal will take on new meaning with enclosure of the current system.*

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

*With continued growth in the Sierra Foothills and related diverse social issues, the GDPUD continues to update forecasted needs within its service area. According to the GDPUD, Raw Water Conveyance Improvement Projects Report, January 2004, the largest use category accounting for future projected increase is irrigation demand. The reports indicates a 170% increase in irrigation water demands by 2025.*

*The selection of aluminized spiral rib pipe has been determined to be best suited for water conveyance along the distribution system. Dramatic temperature changes (8 degrees to 95 degrees) plus snow conditions have been factored in to the selection of materials chosen.*

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

*All data will be retained at GDPUD office in Georgetown. Engineers will gather the data with surveillance by on-site district staff. All documents are public record and will be available for dissemination upon request.*

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

*It is estimated that monthly recordings will be taken. Approximate costs for monitoring and recording will be five hours per month at \$60 per hour. Total costs incurred for five years is \$18,000+.*

## **A-15f. 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.**

*Resumes are attached.*

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

*Outside cooperators include Stantec Consulting for design and construction efforts plus monitoring and water assessments. GDPUD staff will read, calibrate and install the metering equipment required for water assessment.*

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

*No other water use efficiency grants have been received.*

**4. If applicant is a disadvantaged community, provide the source of information documenting annual median household income.**

*The median household income of \$35,058 – 1999 was derived from the U.S. Department of Commerce, Bureau of Census.*

**A-15g. Outreach, Community Involvement, and Acceptance**

*The GDPUD publishes an annual report and holds public meetings monthly. A project proposal was presented at the November 2004, board meeting and the public has been informed of the districts intent to construct a pipeline at structures 2 and 3.*

*Meeting notices are posted at seven post offices throughout the county.*

*There are no third party impacts and no opposition has been received.*

**A-15h. Innovation**

*This project will be a prototype with far reaching impacts for other rural water suppliers. Materials selected have been chosen due to their adaptability to weather extremes and soil conditions. Upon completion of the project we will continually monitor results of long and short-range water conservation. This information will be made available to the AWWA, state and federal agencies of interest.*

*With the use of data loggers, pressure transducers and flow meters, the GDPUD will have the latest instruments for monitoring its water conveyance system.*

**A-15i. Benefits and Costs**

*In addition to the primary project objective, there are other anticipated project benefits besides avoidance of water loss. These include:*

- *Reduced maintenance – Extensive maintenance, including continuous weed and brush control and annual cleaning is currently required for GDPUD's open canals, but would be reduced with the implementation of these two projects.*
- *Reduced liability – Canal encasement/abandonment reduces the potential for accidental spills and contaminated storm water from entering GDPUD's water supply.*

*Encasement also eliminates a potential safety hazard for children, as it would reduce trespassing.*

- *Reduced algae production – Algae growth is a significant problem in small canals. During the summer months, algae flourish and frequently clog customer outlet screens that are required for small orifice deliveries. Piping would eliminate algae production along those portions of the canal that are encased or abandoned.*
- *Overall water quality improvement – Maintenance of a piped system will mandate the construction of a fine-screened inlet designed to reduce sediment and floating debris typically found in canals. The delivery of cleaner raw water will also reduce customer maintenance of their irrigation systems.*
- *Improved Bay-Delta Ecosystem – By decreasing the amount of unaccounted for water within its system, GDPUD would be able to more judiciously divert into their canal system, thus relaxing the rate at which their total entitlements are fully allocated. More water will, ostensibly, be made available to benefit downstream uses, including the Bay-Delta ecosystem.*

#### **Evaluate Bay-Delta Benefits.**

*Bay-Delta water supply savings will be achieved through net water savings by reducing water losses that are currently going to an “unusable” destination (canal breaks causing spillage to slopes and non-demand water consumption/loss).*

*The GDPUD will also be reducing losses to the atmosphere through evaporation or transpiration by enclosing the open canal. Reduction in loss from percolation, canal breaks, vegetative encroachment and surface flows will also benefit the delta.*

#### **List, describe and to the extent possible quantify Bay-Delta water quality and in-stream flow and timing and other environmental benefits.**

*The most significant benefit will be recoverable water loss experienced by canal failures.*

*Improved flows through the 1200-foot section of pipe will prevent current detrimental canal breaks and subsequent water loss.*

*Improved water temperature will be the result of water enclosed in the pipe system; Avoidance of sediments into the system by the piping will greatly enhance water quality.*

#### **Evaluate Local Benefits.**

*The existing ditch transmission is vulnerable to breakage that has resulted in property damage around the vicinity of the break. Given the state of the transmission lines, it has been estimated that the likelihood of a catastrophic break is high and could result in property damage exceeding \$1,000,000 in costs. This is based on the assessed value of homes and the history of damages caused in the past.*

### Costs and Benefits Tables

- Complete the Project Costs and Benefits Tables C-1 through C-6 in Appendix C. Excel files are available at this website:  
<http://www.owue.water.ca.gov/finance/index.cfm>

**For Tables C5a, b – C6a, b, an applicant should only complete the tables applicable to their project.** It is not necessary to complete a table that is not applicable to your project. Applicants will obtain due credit by filling out relevant and applicable tables (see Criteria G, page 9).

If your project does not have a salt load reduction component or quantifiable benefits related to in-stream flow and timing, or water quality and other environmental benefits, do not complete Tables C-5b, C-6a and C-6b, respectively.

- Provide documentation in this section to explain and justify all major analysis assumptions.
- Express all costs in present year (2004) dollars. Convert all costs and benefits to their present value equivalents prior to aggregating them. Use six percent discount rate (see Table C-8).
- Compile a summary of the net water savings and other benefits and costs; benefits to the applicant, each project beneficiary, Bay-Delta, and any other parties affected by the project.
- Describe your strategy in determining total Bay-Delta annual water savings between local and Bay-Delta uses.
- Document the split between the applicant's local benefit and Bay-Delta benefits.

**Applicant:**

THE TABLES ARE FORMATTED WITH FORMULAS: **FILL IN THE SHADED AREAS ONLY**

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

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

	Category (I)	Project Costs \$ (II)	Contingency % (ex. 5 or 10) (III)	Project Cost + Contingency \$ (IV)	Applicant Share \$ (V)	State Share Grant \$ (VI)	Life of investment (years) (VII)	Capital Recovery Factor (VIII)	Annualized Costs \$ (IX)
	Administration <sup>1</sup>								
	Salaries, wages	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Fringe benefits	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Supplies	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Equipment	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Consulting services	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Travel	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Other	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(a)	Total Administration Costs	\$0		\$0	\$0	\$0			\$0
(b)	Planning/Design/Engineering	\$67,000	20	\$80,400	\$0	\$80,400	40	0.0665	\$5,347
	Equipment								
(c)	Purchases/Rentals/Rebates/Vouchers	\$0	0	\$0	\$0	\$0	10	0.0000	\$0
(d)	Materials/Installation/Implementation	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(e)	Implementation Verification	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(f)	Project Legal/License Fees	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(g)	Structures	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(h)	Land Purchase/Easement	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
	Environmental								
(i)	Compliance/Mitigation/Enhancement	\$18,000	20	\$21,600	\$0	\$21,600	40	0.0665	\$1,436
(j)	Construction	\$336,000	0	\$403,200	\$0	\$403,200	40	0.0665	\$26,813
(k)	Other (Specify)	\$0	0	\$0	\$0	\$0	0	0.0000	\$0
(l)	Monitoring and Assessment	\$18,000	0	\$18,000	\$18,000	\$0	0	0.0000	\$0
(m)	Report Preparation	\$12,000	20	\$14,400	\$0	\$14,400	40	0.0665	\$958
(n)	<b>TOTAL</b>	\$451,000		\$537,600	\$18,000	\$537,600			\$34,553
(o)	Cost Share -Percentage				4	96			

1- excludes administration O&M.

Applicant:

THE TABLES ARE FORMATTED WITH FORMULAS: FILL IN THE SHADED AREAS ONLY

**Table C-2: Annual Operations and Maintenance Costs**

Operations (1) (I)	Maintenance (II)	Other (III)	Total (IV) (I + II + III)
-\$15,000	-\$43,000	-\$5,000	-\$63,000

(1) Include annual O & M administration costs here.

**Table C-3: Total Annual Project Costs**

Annual Project Costs (1) (I)	Annual O&M Costs (2) (II)	Total Annual Project Costs (III) (I + II)
\$34,553	-\$63,000	-\$28,447

(1) From Table C-1, row ( n ) column (IX)

(2) From Table C-2, column ( IV )



**Table C- 4: Capital Recovery Table (1)**

Life of Project (in years)	Capital Recovery Factor
1	1.0600
2	0.5454
3	0.3741
4	0.2886
5	0.2374
6	0.2034
7	0.1791
8	0.1610
9	0.1470
10	0.1359
11	0.1268
12	0.1193
13	0.1130
14	0.1076
15	0.1030
16	0.0990
17	0.0954
18	0.0924
19	0.0896
20	0.0872
21	0.0850
22	0.0830
23	0.0813
24	0.0797
25	0.0782
26	0.0769
27	0.0757
28	0.0746
29	0.0736
30	0.0726
31	0.0718
32	0.0710
33	0.0703
34	0.0696
35	0.0690
36	0.0684
37	0.0679
38	0.0674
39	0.0669
40	0.0665
41	0.0661
42	0.0657
43	0.0653
44	0.0650
45	0.0647
46	0.0644
47	0.0641
48	0.0639
49	0.0637
50	0.0634

(1) Based on 6% discount rate.

Applicant:

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

	Qualitative Description - Required of all applicants <sup>1</sup>			Quantitative Benefits - where data are available <sup>2</sup>	
	Description of physical benefits (in-stream flow and timing, water quantity and water quality) for:	Time pattern and Location of Benefit	Project Life: Duration of Benefits	State Why Project Bay Delta benefit is Direct <sup>3</sup> Indirect <sup>4</sup> or Both	Quantified Benefits (in-stream flow and timing, water quantity and water quality)
Bay Delta	The project will reduce the quantity of water lost during raw water transmission due to evaporation and leakage. Ultimately, this will result in an additional 180 AFY of freshwater supply to the Bay Delta that will help contribute to salinity reduction. Greater protection of raw water supply would lead to improved water quality, thereby reducing water treatment costs.	Timing of streamflow changes will vary by season. Pattern of variation would be similar to annual streamflow data from the North Fork of the American River.	40- to 50 years	Project Bay Delta benefit is Direct. Project will: (1) contribute to improvements in water quality (e.g. salinity) reduction through additional freshwater supply and greater raw water protection; (2) increase water supply by reducing raw water transmission loss.	Estimated water savings of 180 AFY. Cost savings of approx. \$63,000 per year due to reduced O&M attention to repair damaged transmission lines. Further savings in administrative, engineering, and legal fees through reduced exposure to property damage resulting from transmission break.
Local	Greater water supply available by reducing raw water losses during conveyance. Project will further reduce risks to supply interruption and possible property damage from ruptured transmission lines.	Timing of streamflow changes will vary by season. Pattern of variation would be similar to annual streamflow data from the North Fork of the American River.	40- to 50 years	<b>Not applicable.</b>	Estimated water savings of 180 AFY. Cost savings of approx. \$63,000 per year due to reduced O&M attention to repair damaged transmission lines. Further savings in administrative, engineering, and legal fees through reduced exposure to property damage resulting from transmission break.

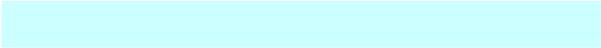
<sup>1</sup> The qualitative benefits should be provided in a narrative description. Use additional sheet.

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

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

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

Applicant:



THE TABLES ARE FORMATTED WITH FORMULAS: FILL IN THE SHADED AREAS ONLY

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

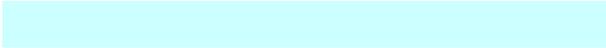
<b>ANNUAL LOCAL BENEFITS</b>	<b>ANNUAL QUANTITY</b>	<b>UNIT OF MEASUREMENT</b>
(a) Avoided Water Supply Costs (Current or Future Source)	180	ac-ft/yr (AFY)
(b) Avoided Energy Costs	0	
(c) Avoided Waste Water Treatment Costs	0	
(d) Avoided Labor Costs	725	hours
(e) Other (describe)	at least one (1)	occurrence
(f) Total [(a) + (b) + (c) + (d) + (e) ]		

**Table C-7 Project Local Monetary Benefits and Project Costs**

(a) Total Annual Monetary Benefits [(Table C-6, row (f))		\$1,058,000
(b) Total Annual Project Costs (Table C-3, column III)		-\$28,447

**Table C-8 Applicant's Cost Share and Description**

Applicant's cost share %: (from Table C-1, row o, column V)
Describe how the cost share (based on relative balance between Bay-Delta and Local Benefits) is derived. (See :)
Provide Description in a narrative form.



<b>ANNUAL MONETARY BENEFITS</b>
\$0
\$0
\$0
\$58,000
\$1,000,000
\$1,058,000

The existing ditch transmission is vulnerable to breakage that has resulted in the loss of service of the break. Given the state of the transmission lines, it has been estimated that the risk of break is high and could result in property damage exceeding \$1,000,000, the value of homes and the history of damages caused in the past.

<b>4</b>
Section A-7 for description.)

sulted in property damage around the vicinity  
estimated that the likelihood of a catastrophic  
,000 in cost. This is based on the assessed