

A-1 Urban Water Conservation Grant Application Cover Sheet

1. Applicant (Organization or affiliation): El Dorado Irrigation District
2. Project Title: Sly Park Recreation Area Water Line Replacement
3. Person authorized to sign and submit proposal:

Name, Title	Ane D. Deister, General Manager
Mailing address	2890 Mosquito Road; Placerville, CA 95667
Telephone	(530) 642-4041
Fax	(530) 626-5990
E-mail	adeister@eid.org
4. Contact person (if different):

Name, Title	Don Pearson, Recreation Director
Mailing address	P.O. Box 577; Pollock Pines, CA 95726
Telephone	(530) 644-2545 X 307
Fax	(530) 644-1003
E-mail	dpearson@eid.org
5. Funds requested (dollar amount): \$1,530,000
6. Applicant funds pledged (local cost share) (dollar amount): None
7. Total project costs (dollar amount): \$1,530,000
8. Estimated net water savings (acre-feet/year): 3 acre-feet
Estimated total amount of water to be saved (acre-feet):
Over 50 years 150 acre-feet
- Benefit/cost ratio of project for applicant: 1.32
Estimated \$/acre-feet of water to be saved: \$42,087
9. Project life (month/year to month/year): 1/1/2004-1/1/2104
10. State Assembly District where the project is to be conducted: 4th
11. State Senate District where the project is to be conducted: 1st
12. Congressional District(s) where the project is to be conducted: 4th
13. County where the project is to be conducted: El Dorado
14. Do the actions in this application involve physical changes in land use, or potential future changes in land use?
(a) Yes - see **Appendix VIII**

A-2 Application Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the application;

The individual signing the form is authorized to submit the application on behalf of the applicant.

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 application on behalf of the applicant; and

The applicant will comply with all terms and conditions identified in this Application Package if selected for funding.

Signature

Ane D. Deister, General Manager

Date

A-3 Application Checklist

Part A: Project Description, Organizational, Financial and Legal Information

- A-1 Urban Water Conservation Grant Application Cover Sheet
- A-2 Application Signature Page
- A-3 Application Checklist
- A-4 Description of Project
- A-5 Maps
- A-6 Statement of work, schedule
- A-7 Agency authority
- A-8 Operation and maintenance (O&M)
- A-9 Innovation

Part B: Engineering and Hydrologic Feasibility (construction projects only)

- B-1 Certification statement
- B-2 Project reports and previous studies
- B-3 Preliminary project plans and specifications
- B-4 Construction inspection plan

Part C: Plan for Environmental Documentation and Permitting

- C-1 CEQA/NEPA
- C-2 Permits, easements, licenses, acquisitions, and certifications
- C-3 Local land use plans
- C-4 State and local statutes and regulations

Part D: Need for Project and Community Involvement

- D-1 Need for project
- D-2 Community involvement, support, opposition

Part E: Water Use Efficiency Improvements and Other Benefits

- E-1 Water use efficiency improvements
- E-2 Other project benefits

Part F: Economic Justification, Benefits to Costs Analysis

- F-1 Net water savings
- F-2 Project budget and budget justification
- F-3 Economic efficiency
- Benefit/Cost Analysis Tables 1; 2; 3; 4a, 4b, 4c, 4d; and 5

A-4 Description of Project

Sly Park Recreation Area, owned by the Bureau of Reclamation under a management agreement with the El Dorado Irrigation District (EID), is located in Pollock Pines, California. Home of Jenkinson Lake, Sly Park offers camping, picnicking, boating, hiking, fishing, bicycle and equestrian trails and facilities, a small museum and wildlife viewing. The park is open all year and has an annual visitor use of 200,000. EID and the Bureau of Reclamation are working under an MOU to transfer ownership of Sly Park to EID. The transfer is anticipated to be completed in the summer of 2003.

The proposed project is replacement of the water distribution system at Sly Park Recreation Area that is outdated, insufficient and has major irrecoverable water losses due to leakage. The project meets the universal goal of the CALFED Program, which is to reduce irrecoverable water losses. Annually, water loss totals 3 acre-feet. Leaks cannot be found for repair; consequently water has to be trucked daily into the park to fill tanks, which supply water to park visitors.

EID will use standard engineering and construction methods to implement this project. To replace the water line, standard-contracting procedures will be used.

The total project cost is estimated at \$1,530,000. Anticipated benefit over the 50-year life of the project is projected at \$6,502,450 with at least 150 acre-feet of water saved.

A-5 Maps

See **Appendix VI** – USGS Project Area Map

A-6 Statement of Work, Schedule

Project Timeline – See **Appendix X**

Quarterly Expenditure Projection

Year	Quarter	Months	Tasks	Expenditure
2003	4	Oct – Dec	Environmental, Surveying	50,000
2004	1	Jan – Mar	Plans & Specifications	122,700
	2	Apr – June	Bid Process	5,000
	3	July - August	Peak Season – no construction	0
	4	Sept – Dec	Construction/Materials	192,815
2005	1	Jan – Mar	Construction/Materials	192,815
	2	Apr – June	Construction/Materials	192,815
	3	July – August	Peak Season – no construction	0
	4	Sept - Dec	Construction/Materials	192,815
2006	1	Jan – Mar	Construction/Materials	192,815
	2	Apr – June	Construction/Materials	192,815
	3	July – September	Peak Season – no construction	0
	4	Oct - Dec	Construction/Materials	192,815

	Total 1,530,000

The stages of the project will be as follows:

- Develop final Plans and Specifications
- Implement Environmental requirements
- Prepare contract documents and implement a Request for Proposal
- Select contractor
- Construct new water system
- Finalize Project reports

A-7 Monitoring and Evaluation

EID will monitor and evaluate the water use before and after the Project. A water meter will be used to analyze and collect data. A report, with the results, will be issued within one year of the completion of the project. This information will be public information, and will be included as information in the EID monthly newsletter, public workshops that are routinely held and other outreach methods utilized by the District.

A-8 Qualifications of the Applicant and Cooperators

El Dorado Irrigation District was formed on October 5, 1925 and has grown from primarily serving agriculture to one that equally serves residential, commercial and industrial sectors. EID has a large staff that can institute and complete a project of this nature in-house, from planning and design to construction and final inspection

The project manager responsible for the system will be Brian Mueller, certified Civil Engineer, employed with El Dorado Irrigation District. See **Appendix V** for the resume. The only role that external cooperators will play will be contractors that are awarded a portion of the job.

A-9 Innovation

While the project uses standard engineering and construction methods to implement the project, EID has utilized some innovative methodologies. EID wants to do more than just minimize the environmental impact of the project, by exploring ways to restore some of our previous impacts to the environment and natural scenic beauty of the lake.

The water pipeline route is being planned along existing paths and roadways, minimizing the environmental impact of the project. The new water line will replace the old shipping buoy water tanks, restoring the natural beauty of the lake environment. Buoy removal eliminates the threat of contaminants entering the water while filling the tanks.

A-10 Agency Authority

El Dorado Irrigation District was formed and operates under the California Water Code Division 11 (Irrigation district Law), 20500 et seq. The District is not required to hold an election or to obtain approval/review from any other agency upon entering into Contracts. The Board of Directors has authorized the General Manager to sign grant applications on behalf of the District (See **Appendix IX**).

The District has no knowledge of any pending litigation that would impact the financial condition of the applicant, the operation of the water facilities, or its ability to complete the proposed project.

A-11 Operations and Maintenance

(Required for construction projects only, including meter installations.)

Costs to operate the existing defective water system at Sly Park are approximately \$130,000, designated as “avoided costs”. The revenue source is currently the Recreation Operating Budget for Sly Park.

O & M costs will be minimal with a new system, as current costs are related to repairing the inadequate, leaking and outdated system. If the new system were to break down, EID and Recreation Department staff are qualified, able and funded to handle such repairs.

Application Part B—Engineering and Hydrologic Feasibility

(Application Part B required for construction projects only, including meter installations.)

B-1 Certification Statement

I, Brian Mueller, a California registered civil engineer, have reviewed the information presented in support of this application. Based on this information, and any other knowledge I have regarding the proposed project, I find that it can be designed, constructed, and operated to accomplish the purpose for which it is planned. There is a sufficient water supply for the project. The information I have reviewed to document this statement is included: feasibility studies, engineering design studies, water rights permits, etc.

(Original signature and stamp with expiration date)

B-2 Project Reports and Previous Studies

Preliminary design for the proposed project has been accomplished, which is limited to proposed alignment, size, pipeline material and feasibility analysis.

B-3 Preliminary Project Plans and Specifications

See **Appendix II**.

B-4 Construction Inspection Plan

EID will use standard engineering and construction methods to implement this project. To replace the water line, standard-contracting procedures will be used. EID maintains a staff of highly qualified Engineers and Construction Inspectors. EID Engineers will review all plans prior to the start of the project. EID Inspectors will monitor and inspect each phase during the construction process.

See **Appendix VII** for typical construction details and refer to **A-6 – Quarterly Expenditure Projection**.

Application Part C—Plan for Completion of Environmental Documentation and Permitting Requirements

C-1 California Environmental Quality Act and National Environmental Policy Act

The District's Environmental staff is an invaluable asset to the project planning and management team. This team has developed a plan, which will ensure the District follows applicable environmental laws including CEQA, NEPA, and Fish and Game law.

The District will prepare a Negative Declaration for the project that includes mitigation measures that will reduce impacts to levels that are less than significant. The Negative Declaration will contain appropriate NEPA informational requirements to enable the U.S. Bureau of Reclamation to complete its NEPA responsibilities.

The District will apply for a Streambed Alteration Agreement (aka 1601 Permit) from the California Department of Fish and Game and include conditions as part of the project.

Schedule for completion of all appropriate environmental documentation:

Complete Draft Negative Declaration/EA: March 2003
Adopt Final Negative Declaration/EA: May 2003

Please see Appendix VIII for a complete Environmental Impact Checklist.

C-2 Permits, Easements, Licenses, Acquisitions, and Certifications

See above.

C-3 Local Land Use Plans

Not applicable.

C-4 Applicable Legal Requirements

See above. Other legal requirements are not applicable.

Application Part D- Need for Project and Community Involvement

A. Scope of Work: Relevance and Importance

D-1 Need for the Project

The proposed project is replacement of the water distribution system that is outdated, insufficient and has major irrecoverable water losses due to leakage. Sly Park Recreation Area has annual visitors numbering 200,000 and needs a dependable water supply in order to continue to meet the needs of the public. Without the new water system, the recreation department will continue to have a fire safety issue and escalated costs to repair the damaged water system.

The project goal is to replace the leaking distribution system components and installation of water hydrants at strategic locations throughout the park. Installed in the late 50's, the existing water line is comprised of 90% 1" rolled black PVC and 10% 2" PVC and galvanized pipe. The system was designed as gravity feed only, but 10 years ago was put under pressure from the main line, resulting in numerous leaks.

The project will include final engineering, purchase of materials and construction of the water line. The project will result in cost effective water conservation,

improved water efficiency, cost savings to the District, watershed improvement and increased fire safety.

Water demand estimates of present and future uses in the EID service area shows that demand will exceed supply in 2007, so water savings measures resulting from the proposed Project are a necessity. EID customer base has risen from 1,750 in 1960 to 30,900 in 2000, with an estimated 64,722 in 2020.

This project is consistent with local and regional water management plans, which emphasize water conservation and elimination of irrecoverable water losses.

Impacts to the visitors at the recreation area have been extraordinary. Water losses have resulted in visitors being without water while the system is repaired. The district has suffered financial losses due to having to pay to truck water in and an abundance of overtime for staff to repair the damage. Public safety is an issue, due to the lack of water hydrants in the recreation area.

The project meets the universal goal of the CALFED Program, which is to reduce irrecoverable water losses. Annually, water loss totals 3 acre-feet. Leaks cannot be found for repair; consequently water has to be trucked daily into the park to fill the tanks and supply water to park visitors.

D-2 Outreach, Community Involvement, Support, Opposition

Outreach Efforts

El Dorado Irrigation District provides water to more than 87,000 customers through 30,900 water accounts in El Dorado County. The scope of this particular project is to repair an approximate 4-mile water line at Sly Park; therefore, outreach efforts will focus primarily on the water customers served at the park. Portions of the project work will be highly visible, enabling park staff and docents to educate visitors as to the funding source and benefits of the project.

EID staff speaks at meetings of various local service groups, providing information on current projects and other water programs. The EID staff approach is to be 'proactive and involved with the community' on all levels of service and information.

Community Involvement

Staff will be able to involve people in disadvantaged communities, through grade school field trips to the Park. Benefits of the repair will be realized throughout the county, hopefully diminishing the 11.5% Sly Park unaccounted for water. The California Division of Forestry (CDF) and local Fire Departments are aware and very supportive of the Project (see Appendix III).

Training & Employment

A contractor will be selected through competitive bidding to replace the water line. Once the Project is completed, there will be no need for any new employment opportunities relating to the Project.

Information Distribution Plan

Newsletters – EID publishes a monthly newsletter that is included with every customer's bill. District activities, programs, accomplishments and water-saving tips are included. The proposed Project will also be identified, with updates as the project progresses.

Media – The local newspaper, *The Mountain Democrat*, will be a vehicle for public education and information as to the proposed Project.

Web Site – EID has a web site that will keep people updated on the project. People are able to email District employees for comments and answers to questions.

Public Workshops – EID holds public workshops on various projects, to receive public input, per EID policy, and this project will be included in this type of forum.

Event Participation – EID staff participate in special events such as the Home Show, County Fair and Harvest Fair. This project could be featured in EID Displays.

Water Issues/Local Management Plan.

What was once thought of as a renewable and abundant resource, shortage of water is of national, statewide and local concern. Going into 2002 many states are in drought mode with water conservation measures mandatory, and a new concern for all are security measures to keep our water safe. California is actually a "Cadillac Desert" and the people of the state are familiar with water conservation efficiency measures. The drought of 1987-1993 was a wake-up call. Current prominent issues are water quality, distribution of water and water conservation. The three main interest groups competing for water are agricultural, urban and environmental.

EID's Policy Statement No. 21 clearly states the District's commitment to the efficient use and conservation of water. The overall philosophy behind the policy is to conserve and preserve our water supply, to educate our citizens and maintain a consciousness of concern; to take reasonable and necessary action regarding conservation; and, at the same time, provide water for a reasonable lifestyle to be enjoyed by the customers of the District. EID has long been a leader in efficient water use and water conservation, from being the first irrigation district in the State to have a water conservation plan, establishing an annual Water Supply and Demand Report, to implementing the first Irrigation Management Service (IMS) program. The proposed project would definitely fit in with this mission.

Application Part E—Water Use Efficiency Improvements and Other Benefits

E-1 Water Use Efficiency Improvements

The objective of the proposed project is to replace the water line with a larger, better, up-to-date system, with the goal of improving water efficiency. EID will utilize standard engineering and construction methods to implement the project. Along with water savings will be cost savings due to better use of staff time, savings of purchasing water from an outside source, and saving transport costs of water into the facility, fire safety and improvement to the watershed.

E-2 Other Project Benefits

An additional benefit as a result of this project will be fire hydrants placed in four locations throughout the park. Currently the closest fire hydrant is outside the park. The El Dorado County Fire Protection District and the California Department of Forestry and Fire Protection both support this effort (see Letters of Support).

The project meets the universal goal of the CALFED Program, which is to reduce irrecoverable water losses. The other benefit will be water supply reliability.

Application Part F – Economic Justification: Benefits to Costs

F-1 Net Water Savings

Sly Park estimates that 11.5% of all water taken into the Park's distribution system is unaccounted for or lost due to pipeline leakage. This equates to a minimum of three acre-feet lost largely to evaporation on an annual basis.

F-2 Project Budget and Budget Justification

Project Budget

	Amount
3,000 lf 10" PVC C900 CL 200 pipe @ \$70/lf	210,000
14,000 lf 8" PVC C900 CL 200 pipe @ \$60/lf	840,000
11,800 lf 2" poly service/includes pressure regulator	177,000
10% construction contingency	122,700
Environmental	20,000
Surveying	30,000
Plans & Specifications – 10% of construction	122,700
Bid process/administration/overhead	5,000
Total	1,530,000

F-3 Economic Efficiency

Avoided Costs		
Water Conservation	1,025	
In-house trucking of water truck rental	62,720	
In-house labor hours	66,304	
Total Avoided Costs		130,049
TOTAL ANTICIPATED ANNUAL BENEFIT		130,049
TOTAL ANTICIPATED BENEFIT 50 YEAR LIFE SPAN OF PROJECT		6,502,450

The major economic benefit will be savings of staff time to find and repair leaks and a savings from having to pay to have water trucked into the facility when the system is down. Annually this amounts to \$130,000. Water is available for the foreseeable future, and by initiating this project, EID will reduce the amount of water purchased, as a result of annual water savings.

Appendix I

Benefit/Cost Analysis Tables

Table 1:	Capital Costs
Table 2:	Annual Operations and Maintenance Costs
Table 3:	Total Annual Costs
Table 4a:	Water Supply Benefits: Avoided Cost of Current Supply Sources
Table 4b:	Water Supply Benefits: Alternative Cost of Future Supply Sources
Table 4c:	Water Supply Benefits: Water Supplier Revenue (Vendibility)
Table 4d:	Total Water Supply Benefits
Table 5:	Benefit/Cost Ratio

Table 1: Capital Costs

	Capital Cost Category (a)	Cost (b)	Contingency Percent (c)	Contingency \$ (d)	Subtotal (e)
				(bxc)	(b+d)
(a)	Land Purchase/Easement	N/A			
(b)	Planning/Design/Engineering	122,700			122,700
(c)	Materials/Installation	1,227,000	10%	122,700	1,349,000
(d)	Structures	N/A			
(e)	Equipment Purchases/Rentals	N/A			
(f)	Environmental Mitigation/Enhancement	20,000			20,000
(g)	Construction/Administration/Ove rhead	5,000			5,000
(h)	Project Legal/License Fees	N/A			
(i)	Other - Surveying	30,000			30,000
(j)	Total (1) (a + ... + i)	1,405,000			1,530,000
(k)	Capital Recovery Factor: use Table 6				.0634
(l)	Annual Capital Costs (j x k)				96,837

(1) Costs must match Project Budget prepared in Section F-2.

Table 2: Annual Operations and Maintenance Costs

Administration (a)	Operations (b)	Maintenance (c)	Other (d)	Total (e)
500	2,000	1,500		4,000

Table 3: Total Annual Costs

Annual Capital Costs (1) (a)	Annual O&M Costs (2) (b)	Total Annual Costs (c) (a+b)
96,837	4,000	100,837

(1) From Table 1 line (l)

(2) From Table 2 Total, column (e)

Table 4: Water Supply Benefits

Net water savings (acre-feet/year) 3 acre-feet

4a. Avoided Costs of Current Supply Sources

Sources of Supply <i>(a)</i>	Cost of Water (\$/AF) <i>(b)</i>	Annual Displaced Supply (AF) <i>(c)</i>	Annual Avoided Costs (\$) <i>(d)</i> <i>(b x c)</i>
Trucked in water	42,087	3.09	130,049
			0
			0
			0
Total			130,049

4b. Alternative Costs of Future Supply Sources

Future Supply Sources <i>(a)</i>	Total Capital Costs (\$) <i>(b)</i>	Capital Recovery Factor (1) <i>(c)</i>	Annual Capital Costs (\$) <i>(d)</i> <i>(b x c)</i>	Annual O&M Costs (\$) <i>(e)</i>	Total Annual Avoided Costs (\$) <i>(f)</i> <i>(d + e)</i>
Total					

(1) 6% discount rate; Use Table 6- Capital Recovery Factor

4c. Water Supplier Revenue (Vendibility)

Parties Purchasing Project Supplies (a)	Amount of Water to be Sold (b)	Selling Price (\$/AF) (c)	Expected Frequency of Sales (%) <small>(1)</small> (d)	Expected Selling Price (\$/AF) (e) (c x d)	"Option" Fee (\$/AF) <small>(2)</small> (f)	Total Selling Price (\$/AF) (g) (e + f)	Annual Expected Water Sale Revenue (\$) <small>(h)</small> (b x g)
EID Urban Customers	3		50.00%	1,027		1,027	3,081
Total							3,081

- (1)** During the analysis period, what percentage of years are water sales expected to occur? For example, if water will only be sold half of the years, enter 50% (0.5).
- (2)** "Option" fees are paid by a contracting agency to a selling agency to maintain the right of the contracting agency to buy water whenever needed. Although the water may not be purchased every year, the fee is usually paid every year.

4d: Total Water Supply Benefits

(a) Annual Avoided Cost of Current Supply Sources (\$) from 4a, column (d)	130,049
(b) Annual Avoided Cost of Alternative Future Supply Sources (\$) from 4b, column (f)	
(c) Annual Expected Water Sale Revenue (\$) from 4c, column (h)	3,081
(d) Total Net Annual Water Supply Benefits (\$) (a + b + c)	133,130

Table 5: Benefit/Cost Ratio

Project Benefits (\$) (1)	133,130
Project Costs (\$) (2)	100,837
Benefit/Cost Ratio	1.32

- (1) From Tables 4d, row (d): Total Annual Water Supply Benefits
- (2) From Table 3, column (c) : Total Annual Costs

Appendix II

Preliminary Plans & Specifications

Appendix III

Letters of Support

Appendix IV

Resume

Appendix V

USGS Project Area Map

Appendix VI

Construction Plan

Appendix VII

Environmental Checklist Earlier Analysis

Appendix VIII

Evidence of Authority

Appendix IX

Project Timeline