

Statement of Work, Section 1: Relevance and Importance

Oakland Releaf in partnership with Department of Land, Air and Water Resources at UC Davis proposes to determine the most efficient method for reducing street tree irrigation water use. We will locate our project in three disadvantaged communities within Richmond, Oakland, and San Francisco. We will educate community members on efficient irrigation methods for their street trees and yard. Our project supports California Bay-Delta Program goals of reducing existing irrecoverable losses and losses that currently return to water system.

The city agencies and non-profit organizations that plant and maintain street trees have not been considering water use efficiency. As these Bay Area agencies and organizations are expanding their street tree planting and maintenance efforts, this study will inform them on making low water use options. Releaf to less water will explore how emerging tree well treatments effect water usage taking into account the varying soil conditions of the Bay Area. Also the project will bring the message ‘use less water’ to three disadvantaged communities.

Statement of Work, Section 2: Technical/ Scientific Merit,

Best management practices (BMPs) on reducing street tree irrigation water use have been studied and applied (Green Streets - innovative solutions for stormwater and stream crossings, Metro, 2002; L.R. Costello and Jones, 2003, Reducing Infrastructure Damage by tree roots: a compendium of strategies). These BMPs will reduce irrigation water demand to each tree. However, they have not been quantified for the amount of water saving, especially in Bay-Delta area.

Our demonstration/education project will be in the cities of North Richmond, Oakland and San Francisco. For each city we will create a slow water release bank in 150 tree wells, so that water will go to the tree roots system. We will use different tree well treatments:

- (1) Cover tree well surface with mulch in residential area.
- (2) Cover the tree well surface with small rocks in industrial and commercial area.
- (3) Use structural soil to fill the tree well.

These tree well treatments will decrease evaporation and increase the water holding capacity of the tree well. There will be a total of 450 sites. 300 sites will contain trees already planted. 150 sites will have new trees planted at the beginning of the study.

The monitoring and measurements in this project includes:

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1. Type of soil // so that right structural soil can be use to maximize water holding capacity of the tree well
2. Amount water given to each tree
3. Soil moisture in the tree well
4. Tree growth

These measurements will be taken over a three-year period, 2006 to 2008.

Oakland Releaf regular watering schedule:

Age of Tree	Wet Season (Nov-May)	Dry Season (Jun-Oct)
First Year	Weekly as needed	Twice a week
Second Year	None	Weekly
Third Year	None	Monthly

Work Schedule:

Tasks & Deliverables	Dates	Projected Costs
Determine soil type – Take 50 soil samples per location for a total of 150 samples	July 2005 – August 2006	\$5,007
Gather baseline tree size on old trees	July 2005 – August 2005	\$5,008
Implement different tree well treatments of 300 old trees	November 2005 – February 2005	\$32,032
Plant 150 trees with different tree well treatments	November 2005 – February 2005	\$20,012
Take measurements – 1. Amount water given 2. Soil moisture in tree well 3. Tree Growth	September 2005 – May 2008	\$61,547
Year Three Community Workshops	North Richmond (2) Oakland (2) San Francisco (2)	\$6,485
Year One Benefits Report	September 2006	\$4,760
Year Two Benefits Report	September 2007	\$4,760
Final Benefits and Education Report	September 2008	\$9,520

Statement of Work, Section 3: Monitoring and Assessment

For research study will make two interim reports and a final report. The reports will include for this information on each of the 450 sites:

1. Soil composition
2. Water used for each site (amount water given)
3. How much water retained (soil moisture in tree well)
4. Tree growth

We will quantify the amount of water saving of the different tree well treatments.

The project will be considered a success in that we have quantified the amount of water savings of the different tree well treatments.

Qualifications of the Applicants and Cooperators

Our Project Manager is Qingfu Xiao, a Research Water Scientist at the Department of Land, Air and Water Resources of University of California, Davis. For the past ten years, he has conducted studies in the field of hydrology. One of his recent studies was on the hydrologic processes at the urban residential scale. (Resume attached at end of the proposal)

Assistant Project Manager: Kemba Shakur, Director of Oakland Releaf

The Project Manager will train Oakland Releaf staff in implementing tree well treatments and data collection. Assistant Project Manager will oversee all tree well treatments implementation and data collection.

Outreach, Community Involvement and Acceptance

Oakland Releaf in partnership with UC Davis will present two “Conserve Our Water” workshops in each disadvantaged community the last year of the project for a total of 6 workshops. The workshops will be divided into two topics – reducing water usage outside your home and reducing water usage inside your home. Informally, Oakland Releaf will educate residents as we are out in the community watering trees.

Oakland Releaf will share the information gained from this project with peer organization through the Bay Area Urban Forestry Council which advises the United States Forest Service. Final Study will be prepared for publication in scientific journals and urban forestry association newsletters online and in print.

Benefits and Costs

Our labor costs include 5 Oakland Releaf staff members – Director, Program Manager and Youths and Qingfu Xiao, the Project Manager as consultant. Their time spent implementing tree well treatments, gathering data, analyzing data, and compiling reports. The supplies cost covers the cost of office materials used in course of the project. The travel cost covers the cost of Quigfu Xiao travel to and from Davis, California.

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2004 Water Use Efficiency Proposal Solicitation Package

APPENDIX A: Project Information Form

Applying for:

Urban

Agricultural

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

(a) implementation of Urban Best Management Practice, # _____

(b) implementation of Agricultural Efficient Water Management Practice, # _____

(c) implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # or Quantifiable Objective #, if applicable

(d) Specify other: _____

(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):

OAKLAND RELEAF

4. Project Title:

RELEAF TO LESS WATER

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

Name, title Kemba Shakur, Director

Mailing address 835 57th Street

Oakland CA 94608

Telephone (510) 601-9062

Fax. (510) 228-0391

E-mail oaklandreleaf@yahoo.com

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6. Contact person (if different):

Name, title. _____

Mailing address. _____

Telephone _____

Fax. _____

E-mail _____

7. Grant funds requested (dollar amount): **151,338**

(from Table C-1, column VI)

8. Applicant funds pledged (dollar amount):

9. Total project costs (dollar amount): **156,588**

(from Table C-1, column IV, row n)

10. Percent of State share requested (%) **97**

(from Table C-1)

11. Percent of local share as match (%) **3**

(from Table C-1)

12. Is your project locally cost effective?

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

(a) yes

(b) no

(If yes, provide information that the project in addition to Bay-Delta benefit meets one of the following conditions: broad transferable benefits, overcome implementation barriers, or accelerate implementation.)

11. Is your project required by regulation, law or contract? (a) yes

If no, your project is eligible. (b) no

If yes, your project may be eligible only if there will be accelerated implementation to fulfill a future requirement and is not currently required.

Provide a description of the regulation, law or contract and an explanation of why the project is not currently required.

Relief to Less Water – An Urban Water Use Efficiency Project by Urban Relief

01/06 to 12/08

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

13, 14, & 16

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

3 & 9

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

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

7, 8, & 9

16. County where the project is to be conducted:

Alameda, San Francisco
&, Contra Costa

17. Location of project (longitude and latitude)

18. How many service connections in your service area (urban)?

N/A

19. How many acre-feet of water per year does your agency serve?

N/A

20. 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 _____

21. Is applicant a disadvantaged community? If 'yes' include annual median household income.

(Provide supporting documentation.)

(a) yes, _____ median household income
Richmond \$30,981 Oakland \$31,451 San Francisco \$27,437 (data from Carnegie ThinkTank)

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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

Kemba Shakur, Director
Name and title

Date

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 ¹								
	Salaries, wages	\$55,000	5	\$57,750	\$0	\$57,750	3	0.3741	\$21,604
	Fringe benefits	\$11,000	5	\$11,550	\$0	\$11,550	3	0.3741	\$4,321
	Supplies	\$3,000	5	\$3,150	\$0	\$3,150	3	0.3741	\$1,178
	Equipment	\$0	0	\$0	\$0	\$0	3	0.3741	\$0
	Consulting services	\$25,565	5	\$26,843	\$0	\$26,843	3	0.3741	\$10,042
	Travel	\$2,025	5	\$2,126	\$0	\$2,126	3	0.3741	\$795
	Other	\$10,500	5	\$11,025	\$0	\$11,025	3	0.3741	\$4,124
(a)	Total Administration Costs	\$107,090		\$112,445	\$0	\$112,445			\$42,065
(b)	Planning/Design/Engineering	\$0	0	\$0	\$0	\$0	3	0.3741	\$0
(c)	Equipment Purchases/Rentals/Rebates/Vouchers	\$1,000	5	\$1,050	\$0	\$1,050	10	0.3741	\$393
(d)	Materials/Installation/Implementation	\$25,541	5	\$26,818	\$5,250	\$21,568	3	0.3741	\$10,033
(e)	Implementation Verification	\$5,000	5	\$5,250	\$0	\$5,250	3	0.3741	\$1,964
(f)	Project Legal/License Fees	\$500	5	\$525	\$0	\$525	3	0.3741	\$196
(g)	Structures	\$0	0	\$0	\$0	\$0	3	0.3741	\$0
(h)	Land Purchase/Easement	\$0	0	\$0	\$0	\$0	3	0.3741	\$0
(i)	Environmental Compliance/Mitigation/Enhancement	\$0	0	\$0	\$0	\$0	3	0.3741	\$0
(j)	Construction	\$0	0	\$0	\$0	\$0	3	0.3741	\$0
(k)	Other (Specify)	\$0	0	\$0	\$0	\$0	3	0.3741	\$0
(l)	Monitoring and Assessment	\$5,000	5	\$5,250	\$0	\$5,250	3	0.3741	\$1,964
(m)	Report Preparation	\$5,000	5	\$5,250	\$0	\$5,250	3	0.3741	\$1,964
(n)	TOTAL	\$149,131		\$156,588	\$5,250	\$151,338			\$58,579
(o)	Cost Share -Percentage				3	97			

1- excludes administration O&M.