



July 2, 1998

Ms. Cindy Darling
 Restoration Coordinator
 CALFED Bay-Delta Program
 1416 Ninth Street, Suite 1155
 Sacramento, California 95814

5770 FREEPORT BLVD.
 SUITE 200
 SACRAMENTO, CA 95822

**Subject: Lower American River Watershed Stewardship Plan
 Proposal**

PHONE 916/433-6276
 FAX 916/433-6295

Dear Ms. Darling:

The City of Sacramento, through agreement with the County of Sacramento and on behalf of the Sacramento Area Water Forum, is pleased to offer this proposal to develop a Lower American River (LAR) Watershed Stewardship Plan. This proposal has been prepared through partnership between the City and County of Sacramento, the Sacramento Area Water Forum, the California Department of Fish and Game, and the Sacramento Area Flood Control Agency. The LAR Watershed Stewardship Plan has been proposed to fulfill CALFED's goal of protecting priority species (e.g., steelhead trout, Sacramento splittail, Sacramento fall-run chinook salmon) and priority habitats (e.g., shaded riverine aquatic habitat, seasonal wetlands), and could serve as a model for other watershed management programs throughout the Bay-Delta ecosystem. The detailed plan will prioritize restoration actions, develop a schedule for implementation, identify the responsibilities of different parties, and coordinate implementation activities by the interest groups involved. The Sacramento Area Water Forum, an established community-based process which has brought together a diverse group of local and regional water interests, because of its membership and history of leadership, is the natural venue in which to prepare such a plan.

On behalf of the City and County of Sacramento, the Sacramento Area Water Forum, the California Department of Fish and Game, and the Sacramento Area Flood Control Agency, I extend our thanks for the opportunity to be involved with the important work being undertaken by the CALFED Program. We look forward to your response to this proposal.

Sincerely,


 Jim Sequeira
 Director of Utilities

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Proposal Title: Lower American River Watershed Stewardship Plan
Applicant Name: City of Sacramento
Mailing Address: 5770 Freeport Boulevard, Suite 100, Sacramento, California 95822
Telephone: (916) 433-6607
Fax: (916) 433 6652

Amount of funding requested: \$ 220,000 for 1 year(s)

Indicate the Topic for which you are applying (check only one box). Note that this is an important decision: see page 8 of the Proposal Solicitation Package for more information.

- | | |
|---|---|
| <input type="checkbox"/> Fish Passage Assessment | <input type="checkbox"/> Fish Passage Improvements |
| <input type="checkbox"/> Floodplain and Habitat Restoration | <input type="checkbox"/> Gravel Restoration |
| <input type="checkbox"/> Fish Harvest | <input type="checkbox"/> Species Life History Studies |
| <input checked="" type="checkbox"/> Watershed Planning/Implementation | <input type="checkbox"/> Education |
| <input type="checkbox"/> Fish Screen Evaluations - Alternatives and Biological Priorities | |

Indicate the geographic area of your proposal (check only one box):

- | | |
|---|---|
| <input type="checkbox"/> Sacramento River Mainstem | <input checked="" type="checkbox"/> Sacramento Tributary: <u>American River</u> |
| <input type="checkbox"/> Delta | <input type="checkbox"/> East Side Delta Tributary: _____ |
| <input type="checkbox"/> Suisan Marsh and Bay | <input type="checkbox"/> San Joaquin Tributary: _____ |
| <input type="checkbox"/> San Joaquin River Mainstem | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Landscape (entire Bay-Delta watershed) | <input type="checkbox"/> North Bay: _____ |

Indicate the primary species which the proposal addresses (check no more than two boxes):

- | | |
|--|---|
| <input type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | |
| <input type="checkbox"/> Winter-run chinook salmon | <input type="checkbox"/> Spring-run chinook salmon |
| <input type="checkbox"/> Late-fall run chinook salmon | <input checked="" type="checkbox"/> Fall-run chinook salmon |
| <input type="checkbox"/> Delta smelt | <input type="checkbox"/> Longfin smelt |
| <input type="checkbox"/> Splittail | <input checked="" type="checkbox"/> Steelhead trout |
| <input type="checkbox"/> Green sturgeon | <input type="checkbox"/> Striped bass |
| <input type="checkbox"/> Migratory birds | |

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Indicate the type of applicant (check only one box):

- | | |
|---|---|
| <input type="checkbox"/> State agency | <input type="checkbox"/> Federal Agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit |
| <input checked="" type="checkbox"/> Local government/district | <input type="checkbox"/> Private party |
| <input type="checkbox"/> University | <input type="checkbox"/> Other: _____ |

Indicate the type of project (check only one box):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Planning | <input type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |
| <input type="checkbox"/> Research | |

By signing below, the applicant declares the following:

- (1) the truthfulness of all representations in their proposal;
- (2) the individual signing the form is entitled to submit the application on behalf of the applicant (if applicant is an entity or organization); and
- (3) the person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section II.K) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.



(Signature of Applicant)

II. EXECUTIVE SUMMARY

a. Project Title and Applicant Name:

Lower American River Watershed Stewardship Plan

City of Sacramento (for the Water Forum) Jonas Minton, Project Coordinator

5770 Freeport Blvd., Suite 100

Jim Sequeira, City of Sacramento Representative

Sacramento, CA 95822

Phone: (916) 433-6607 Fax: (916) 433-6652

b. Project Description and Primary Biological/Ecological Objectives: The City of Sacramento, through agreement with the County of Sacramento and on behalf of the Sacramento Area Water Forum (Water Forum), as well as the California Department of Fish and Game (CDFG) and the Sacramento Area Flood Control Agency (SAFCA), have joined together to offer this proposal to develop a Lower American River (LAR) Watershed Stewardship Plan. CALFED's Ecosystem Restoration Program Plan (ERPP) describes the need for close coordination among the government agencies responsible for the LAR and LAR Basin (ERPP, Vol. II, Pg. 297). The ERPP also describes the previous efforts of the Water Forum. As noted in the ERPP (Vol. II, Pg. 297), the Water Forum has identified important elements that will contribute to improving the ecological health of the LAR, including adoption of AFRP flows on the LAR, habitat mitigation, operational changes of the water release shutters at Folsom Dam, management actions to improve water temperatures in the LAR in summer and fall, and a series of fishery studies and pilot projects to determine additional actions to help restore LAR chinook salmon and steelhead populations. Accordingly, the proposed LAR Watershed Stewardship Plan will include elements of plan development, watershed assessments, riparian and aquatic habitat restoration, monitoring, and technical assistance from a diverse group of participating interests. Development of the LAR Watershed Stewardship Plan will use the community-based process and active local leadership already in place within the Water Forum to meet the goals of the ERPP.

c. Approach/Tasks/Schedule:

The LAR Watershed Stewardship Plan will meet the ERPP goals by building upon previous work by CALFED (ERPP and LAR Technical Team), the USFWS (AFRP), the Water Forum and SAFCA (Floodway Management Plan) by reviewing, analyzing and integrating previous research and monitoring (conducted by CDFG, USFWS, U.C. Davis, C.S.U. Sacramento, Sacramento County and East Bay Municipal Utility District) to identify and define:

- implementation priorities;
- the logistical framework for implementing specific restoration projects;
- testable hypotheses associated with specific restoration projects;
- technical assistance required for implementing and monitoring specific projects;
- an Ecological and Biological Monitoring Plan;
- how the LAR Watershed Stewardship Plan will be coordinated and integrated with other programs;
- logistics and responsibilities associated with administering the LAR Watershed Stewardship Plan;
- lead organizations for implementing specific projects.

Task 1 (Develop Draft LAR Watershed Stewardship Plan) will be initiated following completion of contract approval, and is anticipated to be completed by July 1999. Task 2 (Review of Draft LAR Watershed Stewardship Plan by Project Co-sponsors) will be completed by August 1999. Task 3 (Prepare and Distribute Final LAR Watershed Stewardship Plan) will be completed by October 1999. Task 4 (Prepare Progress Reports) will be completed quarterly.

d. Justification for Project and Funding by CALFED:

Preliminary efforts for the LAR Watershed Stewardship Plan have been initiated by the community-based Water Forum. The LAR Watershed Stewardship Plan will benefit the LAR by implementing coordinated efforts and long-term planning, and will benefit the Bay/Delta ecosystem not only as a tributary to that

system, but through development of an effective model for local watershed stewardship. CALFED recognizes the importance of watershed stewardship as a component of the Bay/Delta solution and recognizes the contributions of the Water Forum on the LAR (ERPP, Vol. II, Pg. 297).

e. Budget Costs and Third Party Impacts:

Task 1 - \$160,000	Task 3 - \$40,000
Task 2 - \$20,000	Task 4- (Included)

Third-Party Impacts: The LAR Watershed Stewardship Plan would not be expected to create any adverse third-party impacts. The LAR Watershed Stewardship Plan would, however, provide valuable information on the ecosystem health of the LAR and the success of restoration actions implemented in the future, and on the parties involved in management and restoration of other watersheds.

f. Applicant Qualifications: The City of Sacramento, through agreement with the County of Sacramento and on behalf of the Water Forum, is the Project Sponsor. The Water Forum, SAFCA, and CDFG have assembled a team of resource consultants to conduct the proposed study. Surface Water Resources, Inc. (SWRI) is proposed as the Water Forum sub-consultant for this project because of its extensive individual and corporate experience in ecological resources issues, particularly aquatic issues, and planning processes in the LAR, the Central Valley and the Bay-Delta, as well as their experience with the Water Forum and community-based planning efforts.

The City of Sacramento, through agreement with the County and on behalf of the Water Forum, is the contracting entity and primary project sponsor. The City and County of Sacramento, through the joint City-County Office of Metropolitan Water Planning (CCOMWP), will lead the Water Forum process. The Water Forum will oversee and direct the preparation of the LAR Watershed Stewardship Plan. The ERPP describes the previous efforts and success of the Water Forum, the participation of a diverse group of business and agricultural leaders, environmentalists, citizen groups, water managers, and local governments. As noted in the ERPP (Vol. II, Pg. 297), the Water Forum has identified important elements that will contribute to improving the ecological health of the LAR.

g. Monitoring and Data Evaluation: The proposed project is designed to be a comprehensive watershed management plan for the LAR, including development of a plan to implement and coordinate restoration actions and assess ecosystem health. Preparation of the LAR Watershed Stewardship Plan will include development of an Ecological and Biological Monitoring Plan to identify objectives of monitoring, questions to be addressed through monitoring, personnel conducting the monitoring and their related experience, duration of the monitoring, constituents to be monitored, sampling methods, and location and frequency of sampling, as well as reporting formats. The Ecological and Biological Monitoring Plan will also incorporate a Quality Assurance Project Plan to identify appropriate quality control measures and analytical procedures.

h. Local Support/Coordination with Other Programs/Compatibility with CALFED Objectives: This proposal is locally supported by the Water Forum, representing 46 stakeholders (including business and agricultural leaders, environmentalists, citizen groups, water managers, and local governments), the CCOMWP, and the LAR Task Force (comprised of 8 Community Groups, 6 Environmental Interests, 2 Recreation Interests, 8 Flood Control Agencies, and 3 Resource Agencies). The program is consistent with the objectives of CALFED and the goals of other ongoing projects. The LAR Watershed Stewardship Plan is based on a process of community-based planning, and will continue to include the active participation and leadership of a diverse group of local interests.

III. TITLE PAGE

- a. Title of Project: LAR Watershed Stewardship Plan
- b. Name of Applicant(s): City of Sacramento (for the Water Forum)

Principle Investigator(s):

Paul Bratovich, Senior Scientist	William Snider, Environmental Specialist IV (Supervisor)
SWRI	CDFG
455 Capitol Mall	1416 Ninth Street
Suite 600	Room 1341
Sacramento, CA 95814	Sacramento, CA 95814
Phone: (916) 325-4050	Phone: (916) 653-2185
Fax: (916) 446-0143	Fax: (916) 653-2588
email: swri@ix.netcom.com	email: bsnider@hq.dfg.ca.gov

- c. Type of Organization and Tax Status: Municipal Government Organization
- d. Tax Identification Number: 94-6000410
- e. Participants/Collaborators in Implementation: The California Department of Fish and Game, Sacramento Area Flood Control Agency, the Water Forum, representing 46 local stakeholders (including business agricultural leaders, environmentalists, citizen groups, water managers, and local governments), and the LAR Task Force (comprised of 8 Community Groups, 6 Environmental Interests, 2 Recreation Interests, 8 Flood Control Agencies, and 3 Resource Agencies).

IV. PROJECT DESCRIPTION

a. Project Description and Approach: The City of Sacramento, through agreement with the County of Sacramento and on behalf of the Water Forum, as well as CDFG and SAFCA, have joined together to offer this proposal to develop the LAR Watershed Stewardship Plan. CALFED's ERPP describes the need for close coordination among with the government agencies responsible for the LAR and LAR Basin (ERPP, Vol. II, Pg. 297). The ERPP also describes the previous efforts of the Water Forum. As noted in the ERPP (Vol. II, Pg. 297), the Water Forum has identified important elements that will contribute to improving the ecological health of the LAR, including approval of AFRP flows on the LAR, habitat mitigation, changes in operations of the water release shutters at the power penstocks of Folsom Dam, management actions to improve water temperatures in the LAR in summer and fall, and a series of fishery studies and pilot projects to determine what additional actions will need to be taken to help restore LAR chinook salmon and steelhead populations. Accordingly, the proposed LAR Watershed Stewardship Plan will include elements of plan development, watershed assessments, riparian and aquatic habitat restoration, monitoring, and technical assistance from a diverse group of participating interests. Development of the LAR Watershed Stewardship Plan will use the community-based process and active local leadership already in place to meet the goals of the ERPP. The development and implementation of the LAR Watershed Stewardship Plan will be undertaken by the co-sponsors of the project; specifically, the Water Forum, Sacramento Area Flood Control Agency, and the California Department of Fish and Game.

The proposed LAR Watershed Stewardship Plan will: 1) prioritize the implementation of identified restoration actions for indicators such as priority species and habitats on the LAR; 2) identify appropriate phasing of restoration and management actions; 3) develop an Ecological and Biological Monitoring Plan to be used to assess future implementation of specific restoration actions; 4) identify appropriate focused research to improve understanding of the LAR ecosystem; 5) conduct comprehensive monitoring of populations of indicator fish species to assess the health of the LAR ecosystem; 6) make recommendations for modification of management actions; and 7) outline a process for effective adaptive management.

The LAR Watershed Stewardship Plan will meet the ERPP goals by building upon previous work by CALFED (ERPP and LAR Technical Team), the USFWS (AFRP), the Water Forum and SAFCA (Floodway Management Plan) by reviewing, analyzing and integrating previous research and monitoring (conducted by CDFG, USFWS, U.C. Davis, C.S.U. Sacramento, Sacramento County and East Bay Municipal Utility District) to identify and define:

- implementation priorities, strategies, and schedules for projects identified by the CALFED Lower American River Technical Team;
- the logistical framework for implementing specific restoration projects;
- testable hypotheses associated with specific restoration projects, to benefit future restoration actions in the Bay/Delta watershed;
- technical assistance required for implementing and monitoring specific projects;
- an Ecological and Biological Monitoring Plan for evaluation of future implementation of specific projects;
- how the LAR Watershed Stewardship Plan will be coordinated with other programs, plans, initiatives, and/or mandates that affect the lower American River ecosystem;
- logistics and responsibilities associated with administering the LAR Watershed Stewardship Plan;
- lead organizations for implementing specific projects; and
- cost-sharing obligations.

The LAR Watershed Stewardship Plan will be community-based and include local leadership and the participation of diverse interests. The plan is sponsored by the Water Forum, which represents 46 stakeholders from the business community, environmental interests, public interests, Sacramento water interests, and foothill water interests. The LAR Watershed Stewardship Plan will include the continued participation of the Lower American River Task Force, representing a broad range of interests in the Sacramento area and on the American River. As co-sponsors of the proposed project, the Water Forum, CDFG, and SAFCA will work together to develop the LAR Watershed Stewardship Plan, including the participation of the diverse community interest groups described above.

b. Proposed Scope of Work

Task 1: *Develop Draft LAR Watershed Stewardship Plan.* Key issues to be addressed, including restoration actions to reduce the effect of stressors on the priority species and habitats, have previously been identified by the project sponsors and by the CALFED LAR Technical Team. The project co-sponsors will work to develop consensus among all participants in the Water Forum process and the LAR Task Force as to which projects will be prioritized, and will develop an appropriate Ecological and Biological Monitoring Plan to be associated with the implementation of any restoration actions. Another important component of developing the Draft LAR Watershed Stewardship Plan will include building upon previous work by CALFED (ERPP and LAR Technical Team), the USFWS (AFRP), the Water Forum and SAFCA (Floodway Management Plan) by reviewing, analyzing and integrating previous research and monitoring (conducted by CDFG, USFWS, U.C. Davis, C.S.U. Sacramento, Sacramento County and East Bay Municipal Utility District). Once analysis of these data is complete, the information will serve as the technical basis for development of the Draft LAR Watershed Stewardship Plan, and will be used in developing experimental designs for future efforts on the LAR.

SCHEDULE: March 1999-July 1999

BUDGET: \$160,000

DELIVERABLE: Draft LAR Watershed Stewardship Plan.

Task 2: *Review of Draft LAR Watershed Stewardship Plan.* Participation of diverse interest groups has been part of the process to date, and will continue to be an important part of developing the Draft LAR Watershed Stewardship Plan. Meetings will be held with the Water Forum stakeholders and the Lower American River Task Force to present the Draft LAR Watershed Stewardship Plan. Feedback from these groups, as well as comments from the project co-sponsors and agencies, will be used to refine the Draft LAR Watershed Stewardship Plan.

SCHEDULE: July 1999- August 1999

BUDGET: \$20,000

DELIVERABLE: Summary of Comments.

Task 3: *Prepare and Distribute Final LAR Watershed Stewardship Plan.* Comments received from the various agencies, stakeholders and local entities that will be implementing the watershed management process for the LAR will be incorporated into the final draft of the LAR Watershed Stewardship Plan.

SCHEDULE: September 1999- October 1999

BUDGET: \$40,000

DELIVERABLE: Final LAR Watershed Stewardship Plan.

Task 4: *Prepare progress reports.* Quarterly progress reports will be prepared, describing key activities performed and deliverables submitted during the invoicing period, the percentage of each task completed, problems and delays encountered, and a description of any amendments or modifications to the contract, as appropriate. Included in these reports will be financial statements describing funds spent and remaining.

SCHEDULE: Quarterly

BUDGET: The budget for this task is included in the other tasks shown.

DELIVERABLE: Progress Reports.

c. Location and/or Geographic Boundaries of Project

The LAR Watershed Stewardship Plan will be applicable to the LAR, within Sacramento County. The geographic boundaries of the project will extend from Folsom Dam, including operation of Folsom Reservoir, to the confluence of the American and Sacramento rivers.

d. Expected Benefit(s)

The LAR Watershed Stewardship Plan will benefit CALFED priority species such as steelhead trout, Sacramento splittail, and Sacramento fall-run chinook salmon. The CALFED priority habitats addressed under the LAR Watershed Stewardship Plan which support the priority species include instream aquatic habitat, shaded riverine aquatic habitat, and seasonal wetland and aquatic habitat. The stressors affecting the priority species and habitats which will be addressed in the LAR Watershed Stewardship Plan include floodplain changes, alteration of flows and water temperatures, channel form changes, water quality, adverse fish and wildlife harvest impacts, artificial propagation of fish, and wildfire. These stressors would be expected to be reduced by the implementation of the previously identified restoration actions.

The LAR Watershed Stewardship Plan will achieve specific objectives of the ERPP, as described in section "e" of this proposal, as well as integrating the objectives of the ERPP with other programs (as described on pp. 297-299 of Vol. II of the ERPP), including the Water Forum, SAFCA's Floodway Management Program, and the Anadromous Fish Restoration Program of the Central Valley Project Improvement Act.

Non-ecosystem benefits include reducing conflicts in the lower American River watershed by resolving issues associated with water availability for beneficial uses, water supply reliability, ecosystem quality, water quality, and levee and channel integrity.

The identification of testable hypotheses in the process of implementing restoration actions in the LAR watershed will have several benefits. This process will benefit the LAR through increasing the success of restoration actions implemented, and allowing more effective evaluation of the projects. Development of testable hypotheses will benefit the Bay/Delta ecosystem as a whole by identifying a process for implementing restoration actions and successful evaluation of those projects. Detailed knowledge of the successful and any less-than-successful efforts will contribute to any future restoration actions implemented throughout the Bay/Delta ecosystem.

The development of an effective watershed management program for the LAR ecosystem could serve as a model for watersheds throughout northern California. A successful model for community involvement, participation of diverse interests, implementation of restoration (not just on a local scale but at the watershed-

planning level), combined with effective evaluation and adaptive management, will benefit restoration and planning efforts in other areas and in larger-scale watershed management projects.

e. Background and Ecological/Biological/Technical Justification

Historically, over 125 miles of riverine habitat were available for anadromous fish in the American River system. In 1955, with the completion of Nimbus Dam, upstream access to the river was blocked, and all anadromous fishes are now restricted to the lower 23 miles of the LAR. Natural steelhead production in the LAR is currently limited by summer rearing temperatures. In this context, the most effective management of the CALFED priority species and habitats in the LAR will be a combination of optimal management of flow and cold water releases from Folsom Dam with actions to restore habitat which will support these species. Through the participation of many diverse interest groups on the LAR, including the Water Forum stakeholders, the California Department of Fish and Game, the LAR Task Force, and the LAR Technical Team, the LAR Watershed Stewardship Plan will coordinate restoration efforts and facilitate implementation of management efforts in an expeditious manner. Additionally, the institutional framework that will be given to the LAR Watershed Stewardship Plan through incorporation into the Water Forum Agreement and SAFCA's Floodway Management Plan will increase the long-term effectiveness of local watershed management efforts and the durability of the biological benefits.

The LAR Watershed Stewardship Plan will address many of the CALFED Ecosystem Restoration Program Plan objectives, as listed below. The LAR Watershed Stewardship Plan will address these objectives through implementation of local watershed management, including prioritizing the implementation of specific restoration actions, coordinating the participation of many stakeholders and diverse interest groups, monitoring of indicator species for the LAR watershed, assignment of responsibilities among the participating groups, identification of schedule and logistics for implementing watershed management efforts, and how the watershed management program will be evaluated after its implementation. As such, the LAR Watershed Stewardship Plan also will address numerous objectives of the AFRP. In addition, a key component of the LAR Watershed Stewardship Plan will be integration with other LAR programs, including SAFCA's Floodway Management Plan.

ERPP objectives met by this proposal include, but are not necessarily limited to:

- Ecological Process Section, American River Basin. Objective: Central Valley Streamflows (Page 300, Volume II).
- Ecological Process Section, American River Basin. Objective: Natural Sediment Supply (Page 303, Volume II).
- Ecological Process Section, American River Basin. Objective: Natural Floodplain and Flood Processes (Page 304, Volume II).
- Ecological Process Section, American River Basin. Objective: Central Valley Stream Temperatures (Page 305, Volume II).
- Habitat Section, American River Basin. Objective: Seasonal Wetland Habitat (Page 307, Volume II).
- Habitat Section, American River Basin. Objective: Riparian and Riverine Aquatic Habitat (Page 308, Volume II).
- Stressors Section, American River Basin. Objective: Levees, Bridges, and Bank Protection (Page 310, Volume II).
- Stressors Section, American River Basin. Objective : Artificial Propagation of Fish (Page 311, Volume II).
- Species Section, American River Basin. Objective : Chinook Salmon (Page 312, Volume II).
- Species Section, American River Basin. Objective : Steelhead (Page 313, Volume II).

- Species Section, American River Basin. Objective : Swainson's Hawk (Page 315 Species Section, American River Basin. Objective : Chinook Salmon (Page 315, Volume II).

Development of the LAR Watershed Stewardship Plan, which will coordinate and facilitate restoration and management actions for the LAR watershed, is a new project. However, significant planning, research, monitoring, and community-based participation activities have previously been conducted by numerous entities, all of which will serve as the basis for, and subsequent implementation of, the LAR Watershed Stewardship Plan.

f. Monitoring and Data Evaluation

The proposed project is designed to be a comprehensive watershed management plan for the LAR, which will coordinate and specify management activities and restoration efforts, and the assessment of ecosystem health. Preparation of the LAR Watershed Stewardship Plan will include development of an Ecological and Biological Monitoring Plan to identify objectives of monitoring, questions to be addressed through monitoring, personnel conducting the monitoring and their related experience, duration of the monitoring, constituents to be monitored, sampling methods, and location and frequency of sampling, as well as reporting formats. The Ecological and Biological Monitoring Plan will also incorporate a Quality Assurance Project Plan to identify appropriate quality control measures and analytical procedures. The development of the LAR Watershed Stewardship Plan, of which the Ecological and Biological Monitoring Plan is a significant element, will include review and analysis of the extensive data that has been collected on the LAR by CDFG, USFWS, U.C. Davis, C.S.U. Sacramento, Sacramento County and East Bay Municipal Utility District. This review and analysis will include power analyses (of analytical procedures) and variance analyses (of existing and ongoing monitoring/research data sets) in order to determine appropriate experimental designs, sampling methodologies and analytical procedures for specific restoration actions and to assess ecosystem health. In addition, the LAR Watershed Stewardship Plan with particular reference to the Ecological and Biological Monitoring Plan, will serve as the basis for implementation of the principles of adaptive management by specifying discussion criteria and significance thresholds for specific restoration actions and overall ecosystem health.

Developed experimental designs and analytical procedures will be distributed to appropriate agency and academic representatives with specific expertise (e.g., sampling large riverine systems, physiologic/behavioral response, biometrics, etc.) for review. Comments received will be incorporated prior to distribution and presentation to the community-based interest groups previously described. The Ecological and Biological Monitoring Plan will serve to guide monitoring efforts on the LAR, including CDFG's ongoing monitoring program.

g. Implementability

Local support for the LAR Watershed Stewardship Plan is very strong, including the Water Forum, representing 46 stakeholders (including business and agricultural leaders, environmentalists, citizen groups, water managers, and local governments), and the LAR Task Force which is comprised of 8 Community Groups, 6 Environmental Interests, 2 Recreation Interests, 8 Flood Control Agencies, and 3 Resource Agencies. Community-based planning will continue to be a key component of the LAR Watershed Stewardship Plan.

An integral component of the LAR Watershed Stewardship Plan is the coordination of projects on the LAR. A stated goal of SAFCA's Floodway Management Program for the LAR is to provide a planning mechanism and institutional framework to be used by SAFCA and the LAR Task Force to coordinate flood control and

environmental management activities with local, state, and federal agencies and other entities. Additionally, the CVPIA Anadromous Fish Restoration Program supports development of a riparian corridor management program. The LAR Watershed Stewardship Plan will be coordinated with SAFCA's Floodway Management Plan and efforts being undertaken for the CVPIA and the Anadromous Fish Restoration Program.

The City of Sacramento, through agreement with the County and on behalf of the Water Forum, is the contracting entity and primary project sponsor. The City and County of Sacramento, through the joint City/County Office of Metropolitan Water Planning (CCOMWP), will lead the Water Forum process. The City and County of Sacramento have a long-standing relationship through the CCOMWP, and have an established legal venue for collaborating on this effort on behalf of the Water Forum.

The Water Forum will coordinate the preparation of the LAR Watershed Stewardship Plan. The ERPP describes the previous efforts and success of the Water Forum, the participation of a diverse group of business and agricultural leaders, environmentalists, citizen groups, water managers, and local governments. As noted in the ERPP (Vol. II, Pg. 297), the Water Forum has identified important elements that will contribute to improving the ecological health of the LAR. Because the LAR Watershed Stewardship Plan will be coordinated through the Water Forum with SAFCA as a co-sponsor, there is a tremendous opportunity to "leverage" other funding sources and institutional mechanisms to provide for ongoing implementation by vesting the numerous stakeholders in the process; specifically, by coordinating and integrating the Habitat Mitigation Element of the Water Forum Agreement, as well as SAFCA's Floodway Management Program, into the LAR Watershed Stewardship Plan.

V. COSTS AND SCHEDULE TO IMPLEMENT PROPOSED PROJECT

a. Budget Costs

The LAR Watershed Stewardship Plan budget would be \$220,000. The Sacramento City/County Office of Metropolitan Water Planning would be the contracting entity, but tasks would be divided among the co-sponsors (i.e., the Water Forum (through the Sacramento City/County Office of Metropolitan Water Planning), the Sacramento Area Flood Control Agency, and the California Department of Fish and Game). Costs associated with preparation of quarterly progress reports would be included in overhead expenses. The cost for each task is shown in the table below; however, the detailed Cost Breakdown Table follows this section.

Task 1 - \$160,000	Task 3 - \$40,000
Task 2 - \$20,000	Task 4- (Included)

Task 1, preparation of the Draft LAR Watershed Stewardship Plan, would be completed by SWRI, with in-kind contribution by CDFG. Any overhead or administrative costs for this task will be provided as in-kind services by the Water Forum (through the City and County of Sacramento). Task 2, review of the Draft LAR Watershed Stewardship Plan, would be undertaken by the participating agencies as in-kind services. The costs shown for this task would be incurred by SWRI in facilitating the review process and producing a summary of comments received and distributed to all interested parties. Task 3, preparation and distribution of the Final LAR Watershed Stewardship Plan, would be completed by SWRI, with in-kind contribution by CDFG. Any overhead or administrative costs for this task will be provided as in-kind services by the Water Forum (through the City and County of Sacramento). The costs of Task 4, preparation of progress reports, would be included in other tasks. Additional in-kind services by each of the project co-sponsors will be documented in the quarterly progress reports.

b. Schedule Milestones

Task 1, preparation of the Draft LAR Watershed Stewardship Plan, would be initiated immediately following execution of a contract, and would be anticipated to be completed in July 1999. Task 2, review of the Draft LAR Watershed Stewardship Plan, would be completed in July and August of 1999. Task 3, preparation and distribution of the Final LAR Watershed Stewardship Plan, would be completed by October of 1999. Task 4, preparation of progress reports, would be completed quarterly.

c. Third Party Impacts

The proposed LAR Watershed Stewardship Plan would be unlikely to have any negative third party impacts. The program would, however, provide valuable information on the ecosystem health of the LAR and the success of restoration actions implemented in the future to interested parties on the American River and to parties involved in management and restoration of other watersheds.

COST BREAKDOWN TABLE

COST BREAKDOWN TABLE							
Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, Admin. And fee)	Service Contracts	Material and Acquisition Contracts	Miscellaneous and other Direct Costs	Total Cost
Task 1	In-kind Services	In-kind Services	In-kind Services	160,000	None needed		160,000
Task 2				20,000		20,000	
Task 3				40,000		40,000	
Task 4				Included		0	
Total							220,000

The Water Forum, CDFG, and SAFCA are providing their participation in the LAR Watershed Stewardship Plan as cost-shared, in-kind services. The costs shown are for the sub-consultant to prepare the document. The estimate includes the following:

- Task 1: 95 hours a month for a Principal Investigator (\$115/hour); 100 hours a month for a Senior Scientist/Project Manager (\$110/hour) for five months; 135 hours a month for a Scientist I (\$65/hour) for five months. For miscellaneous costs associated with printing, mailing, communications and meeting facilitation, \$6,500 has been included. Overhead costs are included in billing rates.
- Task 2: 30 hours a month for a Principal Investigator (\$115/hour) and Senior Scientist/Project Manager (\$110/hour) for two months, as well as 50 hours a month for a Scientist I (\$65/hour) for two months.
- Task 3: 60 hours a month each for a Principal Investigator (\$115/hour) and Senior Scientist/Project Manager (\$110/hour) for two months, as well as 100 hours a month for a Scientist I (\$65/hour) for two months.

VI. APPLICANT QUALIFICATIONS

Introduction

The City of Sacramento, on behalf of the Water Forum, is the contracting entity and primary project sponsor. Co-sponsors of the project also include the California Department of Fish and Game (CDFG) and the Sacramento Area Flood Control Agency (SAFCA). The City and County of Sacramento, through the joint City-County Office of Metropolitan Water Planning (CCOMWP), will continue to lead the Water Forum process. The Water Forum will coordinate the preparation of the LAR Watershed Stewardship Plan. The ERPP describes the previous efforts and success of the Water Forum, the participation of a diverse group of business and agricultural leaders, environmentalists, citizen groups, water managers, and local governments. As noted in the ERPP (Vol. II, Pg. 297), the Water Forum has identified important elements that will contribute to improving the ecological health of the LAR.

Project Roles and Responsibilities

The Water Forum will provide project management and administrative support for the project. Specific activities will include contract administration, review and oversight of subconsultants, and preparation of progress reports and the final report. The Water Forum will also have a key role in the development of the Draft LAR Watershed Stewardship Plan, particularly regarding the community-based support and participation process. The contact person for the City of Sacramento and Water Forum will be Mr. Jonas Minton.

California Department of Fish and Game has conducted monitoring of fisheries and wildlife populations on the LAR for many years, including intensive monitoring efforts over the last nine years. CDFG will provide this existing data on CALFED priority species and habitats in the LAR watershed, and assist with the review and assessment of this data, as well as other data collected by the USFWS, U.C. Davis, C.S.U. Sacramento, Sacramento County and East Bay Municipal Utility District, in the process of developing the LAR Watershed Stewardship Plan. Data collected in the future by CDFG through ongoing efforts will continue to benefit the LAR Watershed Stewardship Plan by providing important feedback information for adaptive management of the LAR. The contact person for the Department of Fish and Game is Mr. James White.

Surface Water Resources, Inc. (SWRI) has been selected by the project sponsors to produce the LAR Watershed Stewardship Plan. Specific activities will include facilitating interagency participation, coordination with CDFG to analyze existing data and incorporate previous monitoring efforts, and preparation of the Draft and Final LAR Watershed Stewardship Plan. SWRI was selected as the sub-consultant for this project because of the company's extensive experience in ecological resources issues, particularly aquatic issues, and planning processes in the lower American River, the Central Valley, and the Bay-Delta. The contact person for SWRI is Mr. Paul Bratovich.

Key Personnel

Jonas Minton (CCOMWP) is the Interim Director of the City-County Office of Metropolitan Water Planning, responsible for managing staff and consultant assistance to the Sacramento Water Forum. The Water Forum is a diverse group of 46 business and agricultural leaders, environmentalists, citizen groups and water managers in the American River watershed. Objectives of the Water Forum include the preservation of the fishery, recreational, and aesthetic values of the Lower American River. Mr. Minton previously managed major projects as the Chief of the California Office of Water Conservation. He was on the team that successfully completed the Environmental Impact Report/Environmental Impact Statement to support the wild and scenic river designation of the Lower American, Trinity, Eel, Klamath, and Smith rivers.

Paul Bratovich (SWRI) has worked as a fisheries consultant and water resources specialist in California for the past 15 years. As a recognized fisheries expert of Central Valley streams, with particular expertise on the Lower American River, he is actively participating in a broad range of forums in a variety of consultative, advisory, and technical expert capacities. For example, as part of the Anadromous Fish Restoration Program (AFRP) of the Central Valley Project Improvement Act (CVPIA), he was the principal author of the Lower American River component of the AFRP, and continues to provide technical expertise regarding instream flow and habitat issues to the USFWS and USBR through the Lower American River Operations Working Group. Mr. Bratovich also served as the technical lead for the CALFED Lower American River Technical Team. Mr. Bratovich is presently serving as a lead consultant to the Water Forum on behalf of the joint Sacramento City-County Office of Metropolitan Water Planning. As a fisheries expert on the Bay/Delta Oversight Council, Mr. Bratovich served on both the Aquatic Resources Technical Advisory Committee and on the Lower Sacramento River and Delta Tributaries Technical Team. Mr. Bratovich has participated in a variety of other interagency consultative teams including the Interagency Ecological Program (IEP) Resident Fish Project Work Team and the Delta Smelt and Sacramento Splittail Co-applicants Technical Subcommittee, and continues to serve as a technical expert of the Lower American River Operations Working Group and the Alameda County Superior Court Lower American River Technical Advisory Committee in support of the Environmental Defense Fund (EDF) et al. vs. East Bay Municipal Utility District (EBMUD).

Mr. Bratovich has served as a technical expert or Principal-in-Charge on a number of projects regarding Lower American River fisheries issues since 1984, and has been responsible for the design, implementation, and report preparation of numerous multi-faceted aquatic ecology investigations of the Lower American River. Investigative elements have included habitat classification and mapping, application of the Instream Flow Incremental Methodology (IFIM), estimation of chinook salmon abundance and distribution by habitat type, chinook salmon micro-habitat suitability data acquisition, water temperature monitoring, development of optimal coldwater pool management strategies of Folsom Reservoir for Steelhead and chinook salmon, availability of potential splittail habitat associated with flood control operations, Temperature Control Device benefits for Folsom Dam, and preliminary identification of restoration actions.

James White (CDFG) is the statewide water management coordinator for the Department, with expertise in fish and wildlife issues. Mr. White has been involved with investigations of habitat requirements for chinook salmon, striped bass, sturgeon, and resident Bay-Delta fisheries for over twenty years. He has also conducted statewide surveys to determine the occurrence of selenium in the environment and its accumulation in fish and wildlife. Mr. White has been CDFG's representative regarding Water Forum issues.

William Snider (CDFG) is an Environmental Specialist IV with expertise in flow and habitat requirements for aquatic bio-systems. Mr. Snider has been involved with numerous statewide programs to design, implement, and analyze flow and non-flow habitat restoration projects for resident and anadromous salmonids. Mr. Snider, with particular technical expertise on the Lower American River, has undertaken studies of flow, channel geomorphology, temperature, and other various biotic and abiotic conditions and the relationship of these factors to fisheries habitat and populations. He has taken the lead for CDFG on these studies since 1989.

Michael D. Bryan (SWRI) holds a doctorate degree in fisheries biology and toxicology, and has over 10 years of combined research and consulting experience. He has extensive expertise in the areas of environmental toxicology, ecological risk assessment, fisheries biology, aquatic ecology, experimental design and statistics. His past work has focused on the toxicological effects of heavy metals,

organophosphorus insecticides, stormwater runoff and wastewater treatment plant effluent on freshwater aquatic organisms. Recently, Dr. Bryan developed the experimental design and field sampling procedures and coordinated field work activities for a North American sediment contamination survey to determine the range of concentrations of polydimethylsiloxanes (PDMS) in marine and fresh water sediments. Dr. Bryan's other recent projects have involved serving as a fisheries expert on the Yuba River on behalf of the Anadromous Fish Restoration Program of the Central Valley Project Improvement Act (CVPIA), monitoring urban stormwater runoff water quality, developing instream flow and water temperature regimes for the Lower American and Yuba rivers, evaluating potential fisheries impacts from Folsom Reservoir operations, and conducting fisheries field surveys in the Central Valley.

Steve James (SWRI) is a conservation biologist who obtained his Master of Science Degree studying the ecology of a proposed endangered plant in the Sierra Nevada Foothills of El Dorado County. His expertise is California and Federal Endangered Species Act consultation and compliance, habitat conservation planning, mitigation monitoring, wetland and vernal pool habitats studies. Professionally, he has conducted consultations under section 7 of the Endangered Species Act (ESA) for projects involving U.S. Bureau of Reclamation Central Valley Project water contracts, and construction of major diversion screening facilities on the Sacramento River. He has provided analysis of Habitat Conservation Plans prepared under section 10 of the ESA. He has performed field monitoring of wetland and vernal pool habitats as well as monitoring of the habitat of the state endangered and federally proposed endangered plant, *Pseudobahia parrisonii*. Mr. James has evaluated the success of riparian and streambank mitigation restoration conducted under a Nationwide Permit in Siskyou County. He has also implemented a mitigation monitoring program for a restored vernal pool complex in Shasta County, and has performed biological evaluations of potential landfill sites in Kern County. In San Diego County, Mr. James has performed biological evaluations and prepared streambank alteration documentation for water conveyance facilities.

Conflict of Interest Statement

Project sponsors have not identified any direct conflicts between the interests of the sponsors themselves, or the interest of the sub-consultant, SWRI, and the objectives and interests of the CALFED program.

VII. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

The standard terms and conditions are agreeable, and the City of Sacramento will be in compliance with the terms and conditions. Requested forms are attached.

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME
City of Sacramento

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME James G. Sequeira	
DATE EXECUTED July 1, 1998	EXECUTED IN THE COUNTY OF Sacramento
PROSPECTIVE CONTRACTOR'S SIGNATURE <i>James G. Sequeira</i>	
PROSPECTIVE CONTRACTOR'S TITLE Director of Utilities	
PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME City of Sacramento	

Agreement No. _____

Exhibit _____

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**

STATE OF CALIFORNIA)
)ss
COUNTY OF Sacramento)

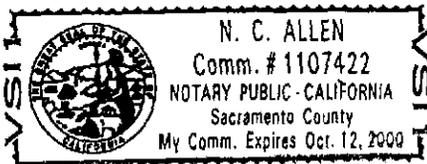
James G. Sequeira , being first duly sworn, deposes and
(name)
says that he or she is Director of Utilities of
(position title)
City of Sacramento
(the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: July 1, 1998

By James G. Sequeira
(person signing for bidder)

Subscribed and sworn to before me on
July 1, 1998
N. C. Allen
(Notary Public)



(Notarial Seal)