SAFCA
Sacramento
Area Flood
Control
Agency

f1-306

JUL 28 1997

July 28, 1997

Ms. Kate Hansel
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Subject: Proposals to Establish Comprehensive Management Program and Four Habitat Demonstration Projects for the Lower American River Ecosystem

Dear Ms. Hansel:

The lower American River (LAR) ecosystem encompasses highly valued and biologically diverse aquatic and terrestrial resources. Many organizations are actively working to protect and enhance the ecosystem. Recent coordination among stakeholders has identified SAFCA's Floodway Management Plan and the Draft Water Forum Agreement as the central programs for helping to ensure the long-term viability of the LAR ecosystem. The Floodway Management Plan and the Habitat Mitigation Element of the Draft Water Forum Agreement have become the focus of the coordinated effort among the stakeholders.

SAFCA, with the support of the Water Forum and other LAR stakeholders, proposes a comprehensive management program for habitat management and monitoring of the LAR, consistent with the above plans. The program would consolidate and coordinate overall LAR habitat and species monitoring, and implement four demonstration habitat enhancement projects identified as high priority targets for the LAR ecosystem. The program would also establish a Technical Assistance Team representing the broad interests of the stakeholders, and serve as a peer review body and as a clearinghouse for information on the success of habitat studies and enhancement projects.

The proposed program for coordinating LAR management efforts would optimize investments in ecosystem enhancements, ensure efficiency in scientific research, and promote communications among the stakeholders towards the common goal of ecosystem protection. A key feature of the program is the coordination of project-level monitoring, such as the four proposed demonstration projects (submitted separately) and other ongoing projects. The information on overall ecosystem health and habitat project successes would be evaluated with data on species population monitoring and other ecosystem function to make cost-effective management decisions on future ecosystem investments.

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The four demonstration projects proposed would provide needed information on the feasibility of habitat enhancements for priority aquatic species. The key objectives of the four demonstration projects are:

- restore and evaluate unique steelhead and splittail habitat;
- restore and protect shaded riverine aquatic habitat and wetland-slough complex habitat;
- promote establishment of vegetation in a highly scoured zone; and
- demonstration of an alternative bank protection method.

The Sacramento Area Water Forum, representing 46 stakeholders, the City/County Office of Metropolitan Water Planning, 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 *(see attached Statement of Support).* This demonstration project is consistent with the objectives of CALFED and the goals of other ongoing projects. The AFRP recommends developing a riparian corridor management plan. The Lower American River Technical Team endorses restoration of wetland-slough complexes and riparian habitats along levees in the lower portion of the LAR, and management and restoration of large woody debris, especially in the upper reaches of the LAR.

Sincerely,

Paul Brotsch for

Timothy Washburn
Agency Counsel

F1-306

I. Executive Summary Format

a. Project Title and Applicant Name:

Demonstration Project to Restore Side Channel Habitat in the Lower American River

Sacramento Area Flood Control Agency 1007 7th Street, 5th Floor
Timothy N. Washburn, Agency Counsel Sacramento, CA 95814
Phone: (916) 440-7607 Fax: (916) 440-8289

b. Project Description and Primary Biological/Ecological Objectives: Sacramento Area Flood Control Agency (SAFCA), the Sacramento Area Water Forum, and other American River stakeholders have joined together to offer this proposal for a side channel habitat restoration project on the lower American River part of a comprehensive program to restore the ecosystem health of the Lower American River (LAR). The primary objectives of this specific project are to restore and evaluate unique steelhead (and fall-run chinook salmon) rearing habitat, Shaded Riverine Aquatic (SRA) habitat, wetland-slough habitat, and riparian habitat.

c. Approach/Tasks/Schedule: Approach - Restoration of an existing side channel of the LAR located in Goethe Park on Goethe Bar on the south side of the river between Bradshaw and Mather Field roads. Restoration would entail excavation of accumulated sand and silt sediments that have filled in the gravel-cobble bed of the once active channel within the present riparian corridor of the side channel. The effects of width, depth, and length of excavation on side-channel characteristics, as well as instream object and overhead cover, will be evaluated to determine the best configuration for this specific site, and broader application elsewhere.

Task 1: Prepare final design and project specifications, including plan drawings, experimental design (e.g., treatment combinations), schematic plan view drawings, logistics and equipment use and protocols. Task 2: Site construction. Vegetation relocated and planted per specifications. Substrate materials will be added or replaced as specified. Task 3: Technical and financial reports. Six-month and annual progress reports will be prepared that will include progress and results to date, plus summaries of costs to date. Task 4: Monitoring and Evaluation (*see Section g. below*).

Schedule - The preliminary design phase (Phase I) of the project was completed in the first half of 1997. Phase II Task 1 and 2 of the project should be completed in late summer and early fall of 1997 or 1998. SAFCA is prepared to immediately initiate Task 1. Tasks 2, 3 and 4 can be completed from late fall through summer 1998. Final reports should be available by late summer 1998 to allow initiation of Phase III of the project - adaptively adjusting site restoration based on results of the project, which will become SAFCA's responsibility.

d. Justification for Project and Funding by CALFED: Side channels offer steelhead and fall-run chinook salmon the type of rearing habitat once provided above the dams. The LAR presently provides only one large primary channel, little SRA habitat and large woody debris in the river channel, limited riparian habitat, little aquatic vegetation, and stressful spring through fall water temperatures for steelhead, especially in low flow years. Restoration and maintenance of side channels are important elements of a program to restore a naturally-produced population of steelhead in the LAR, and to provide Shaded Riverine Aquatic (SRA) habitat, wetland-slough habitat, and riparian habitat, which were identified as high priority actions by CALFED's Technical Team. Habitat improvements derived from this project will help to sustain ecosystem quality on the LAR while retaining and enhancing non-ecosystem values of water supply and flood control.

e. Budget Costs and Third Party Impacts: The total budget costs are $224,795 according to the following tasks:

Task 1 - $25,288	Task 3 - $22,167
Task 2 - $101,948	Task 4- $75,392

Third-Party Impacts: During construction, activities at the site will disturb plant and animal communities and potentially recreationists that may use the bar site for hiking, nature walking, or bird watching. These impacts will be minimal and short-term.

f. Applicant Qualifications: SAFCA is the Project Sponsor. SAFCA and the Water Forum propose Jones & Stokes Associates (JSA) and Jeff Hart & Associates to conduct the technical work. JSA and Jeff Hart and Associates are proposed as the SAFCA consultants because of their extensive individual and corporate experience in the lower American River, the Central Valley, and the Bay-Delta.

Project Management & Design - Thomas Cannon, M.S. Mr. Cannon will be responsible for project management, experimental design, and all fisheries-related technical aspects. His recent activities on the LAR include supporting CALFED staff in preparing the American River Vision of the ERPP, supporting EBMUD in evaluating the Water Forum's program for the LAR, and as a consultant to SAFCA in developing a floodway management plan for the LAR.

Restoration Coordinator - Steve Chainey, M.S. Mr. Chainey is a restoration ecologist, specializing in environmental mediation, riparian ecology, hydrogeomorphology, restoration planning, design, and supervision, riparian and wetland revegetation, natural resources master planning, and environmental impact studies. He will be responsible for managing restoration actions. His experience on the LAR includes the LAR Bank Stabilization Project for the Corps of Engineers and the LAR Task Force.

Vegetation Specialist - Jeff Hart, Ph.D. Dr. Hart has had considerable success in designing and implementing restoration projects (e.g., Stone Lakes National Wildlife Refuge), biotechnical projects (e.g., Dry Creek, Lower American River), and resource studies (e.g., Cosumnes River, Lower American River). His clients include mostly government agencies and non-profit organizations such as the Sacramento Area Flood Control Agency, Sacramento County Water Resources Division, Ducks Unlimited, and the Nature Conservancy.

g. Monitoring and Data Evaluation: Monitoring and data evaluation of the proposed pilot project is essential to determine its effectiveness in meeting specific project objectives, adaptability, and future applicability at other locations in the LAR and other Central Valley rivers and streams. Logistical information obtained will contribute to benefit/cost maximization for future applications, and physical/biological evaluation will determine the effectiveness of specific habitat configurations on several objectives of the pilot project: (1) the physical habitat restoration process; (2) the characteristics (quality and durability) of the restored habitat; and (3) habitat use by target species. Specific details of the monitoring program,. Including data analysis procedures, will be developed in Task 1 with other details of the experimental design of the project.

h. Local Support/Coordination with other Programs/Compatibility with CALFED objectives: The Sacramento Area Water Forum, representing 46 stakeholders, the City/County Office of Metropolitan Water Planning, 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 *(see attached Statement of Support)*. This project is consistent with the objectives of CALFED and the goals of other ongoing projects. The AFRP recommends developing a riparian corridor management plan. CAFED's LAR Technical Team endorses restoration of wetland-slough complexes and riparian habitats along levees in the lower portion of the LAR, and management and restoration of large woody debris, especially in the upper reaches of the LAR.

II. Title Page

a. Title of Project: Demonstration Project to Restore Side Channel Habitat in the Lower American River

b. Name of applicant(s): Sacramento Area Flood Control Agency

Principle investigator(s):

Thomas Cannon, Senior Ecologist
Steven Chainey, Senior Ecologist
Jones & Stokes Associates
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c. Type of Organization and Tax Status: Joint Powers Agency, IRS Exempt

d. Tax Identification Number: 94-6000529

e. Technical and Financial Contact person(s):

Financial Contact Person
Julie Lienert
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Technical Contact Person
Timothy N. Washburn
Agency Counsel, SAFCA
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Sacramento, CA 95814
Phone: (916) 440-7607
Fax: (916) 440-8289

f. Participants/Collaborators in Implementation: The Sacramento Area Water Forum, representing 46 stakeholders, the City/County Office of Metropolitan Water Planning, 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 *(see attached Statement of Support):*

g. RFP Project Group Type- Public Works Construction Projects

III. Project Description

a. Project Description and Approach:

Project Description: This proposed project focuses on restoring steelhead rearing habitat in the Lower American River (LAR). With incising and stability, side channel habitat along the river has been lost over the years, as side channels have become filled with sediment during floods and perched higher above the river, except during high flows. Side channels provide riparian habitat and wetland-slough habitat, which offers newly emerged steelhead fry and fall-run chinook salmon cover and foraging habitat, and protection from predators. During floods, the side channels act as overflow refuges from high velocities in the main channel.

Side-channel habitat at lower summer and fall flows is relatively rare in the LAR. Reconnection of isolation channels to the main river channel, to prevent stranding associated with flow ramping events, has been identified by CALFED as an example of restoration actions in the LAR consistent with 1997 Category III funding.

Approach: We propose to conduct a side channel restoration project on an existing side channel of the LAR located in Goethe Park on Goethe Bar on the south side of the river between Bradshaw and Mather Field roads. This side channel has features that lend to its value as a pilot project including accessibility, relatively large size, public ownership, potential high restoration value, location near important steelhead and fall-run chinook salmon spawning areas, and existing remnant features such as a small wetland-slough complex at its lower end and extensive riparian habitat.

Restoration at the site would entail excavation of accumulated sand and silt sediments that have filled in the gravel-cobble bed of the once active side channel. The excavation would begin at the upper end of the existing wetland-slough and extend "upstream" on the bar within the historic side channel. Because the bar is hydraulically connected to the river via inter-gravel flow, and groundwater (i.e., underflow) is available immediately below the surface along the side channel, the excavated side channel will become watered. The lower portion of the excavated channel will become an extension of the wetland slough, while the upper portion would have a slightly higher gradient and have more of a "creek" appearance. The effects of width, depth, and length of excavation on side-channel characteristics will be evaluated to determine the best configuration for the side channel. The restoration sites will be designed to provide habitat complexity and diversity (i.e., preferential hydraulic characteristics, instream and overhead cover) for juvenile salmonid rearing, and to reduce the risk of stranding to juvenile steelhead and fall-run chinook salmon.

The existing side channel also has sub-channel features that extend like fingers into the bar toward the river, which capture groundwater that has passed through the bar, and contribute to the flow of water in the existing side channel. We also propose to excavate additional subchannels into the bar from the side channel to enhance the flow of water in the side channel. The effects of width, depth, length, and density of subchannels on flow to the channel will be evaluated to provide an optimal configuration of the subchannels.

We initially plan to test the potential of watering the side-channel solely from groundwater, because groundwater flow, if sufficient, could provide water temperatures benefits in the form of slightly cooler water during the critical summer rearing period for steelhead. At a minimum, groundwater should have water temperatures approximating the average daily water temperature of the river and thus avoid the peak daily temperatures that can be extreme in summer. In the event that "natural" groundwater inflow is not adequate for flow or temperature needs, we have included an option to supplement flow by digging a well on the site as part

of the project. An additional option is to provide an upstream connection with the river as a source of water low flows.

For the purpose of this project, we propose to use existing riparian vegetation where possible along the excavated side channel and subchannels. In areas devoid of existing riparian vegetation, planting of native vegetation and control of exotic species would be used to accelerate the restoration process.

Depending on the properties of the substrate in the excavated areas, we may experiment with substrate composition in the side channel and subchannels. Sources of well sorted sand, gravel, and cobble are readily available on the site. Large woody debris and possible boulder clusters will also be evaluated as components of the restored habitat.

b. Location and/or geographic boundaries of project:

The project site is located in Sacramento County on the south side of the lower American River on the property of Goethe Park, which is part of the Sacramento County Parks system. The site is on a gravel bar and includes a ½-mile-long, high-flow side-channel.

c. Expected benefit(s):

The major benefits of this project are: (1) restoration of rearing habitat for steelhead throughout the year, and fall-run chinook salmon from early winter through spring; (2) improvements in high-flow side channel configuration by providing connectivity, at appropriate grade, with the main river channel to prevent isolation and stranding of juvenile fish as flows decline; (3) improvements in wetland-slough habitat; and (4) improvements in riparian and SRA habitat. The expected benefits include 2,000-3,000 linear feet of side channel, including 300-500 feet of wetland-slough habitat, 1,000-2,000 feet of new SRA habitat, and 5-10 acres of improved and new riparian habitat. Flow benefits in the side channel are expected to be 5-10 cfs over the current 1-2 cfs. Water temperature benefits in the side channel are expected to be a potential 1-4° F decrease in peak daily summer water temperature in the existing side channel.

Secondary benefits of the project would include an increase in habitat for native fish species, such as the Sacramento splittail. Wildlife species living in the LAR floodplain that depend on riparian and side channel habitat also could benefit from the project including many species of waterfowl, neotropical migrant birds, beaver, otter, deer, turkey, and other wildlife species.

The project also will provide other benefits in terms of information gained that can be applied to other areas of the LAR, and other rivers of the Central Valley. Habitat improvements to the LAR that will be derived from this pilot project will help to sustain ecosystem quality on the LAR while retaining and enhancing non-ecosystem values of water supply and flood control.

d. Background and Biological/Technical Justification:

Side channel habitat at low summer and fall river flows is lacking in the LAR because of river incising, and because the natural meander of the river no longer occurs. Changes in the geomorphology of the floodplain, stream channel, and stream flow of the LAR have also led to loss of riparian and SRA habitat. With incising, many side channels are now on higher terraces and are no longer available as aquatic habitat. In some places, higher terraces presently act as stranding areas for juvenile fish after high flow events.

Habitats: Because natural streamflow, floodplain, and stream channel processes have been greatly altered in the lower American River, natural aquatic, riparian, floodplain, and upland habitats also have been greatly altered. While some improvements in habitat may be expected from improving streamflow and natural sediment supplies interrupted by the dams, important habitats necessary to sustain fish and wildlife within and along the river will have to be constructed and maintained.

In the lower reaches of the LAR, low gradient habitats such as wetlands and streamside riparian vegetation on lower terraces, and riparian woodlands on higher terraces, have been lost from confinement of the floodplain by major flood control levees. In the middle and upper reaches of the LAR, where lack of a natural stream meander process limits the diversity of habitat, it will be necessary to maintain these habitats to sustain the functions they provide to fish and wildlife populations.

Water Temperature: Water temperature in the lower American River has been altered by dams, flood control operations, changes in streamflow, floodplain, channel processes, and vegetative habitats. Maintaining appropriate temperatures in the LAR is critical to over-summering juvenile steelhead, and spawning of fall-run chinook salmon. Several ongoing and planned structural and operational changes in dam and reservoir management will provide water temperature benefits in the LAR. These structural and operational modifications are directly addressed by AFRP and CALFED programs, as well as other programs (e.g., the "Fazio" water supply contracts, P.L. 101-514). This proposed pilot project will work in concert with these other initiatives to restore priority species and habitats in the LAR.

Floodplain and Stream Channel Processes: There are only limited opportunities to improve natural floodplain and stream channel processes in the lower American River. With natural processes limited by dams, levees, and floodplain development (parks, bridges, and golf courses), there is a need to emulate the natural processes to maintain the ecological functions that such processes support. One important process is side channel formation and function which can be accomplished through restoration actions such as the proposed pilot project.

Durability: Because of the lack of natural processes to sustain side channel habitats in the LAR, restoration of side channels will require ongoing maintenance to sustain the habitat and associated species values. Floods will wash silt, sand, and gravel into restored side channels, which will have to be removed to restore habitat values. Available, measures will be identified through the restoration process that will minimize future damage to restored habitats and reduce future maintenance costs.

Current Status of Habitat Restoration: There has been limited habitat restoration on the lower American River. Efforts to date by the AFRP, Water Forum, and City and County of Sacramento have focused on stream flow and water diversions. SAFCA and the U.S. Army Corps of Engineers are undertaking to mitigate for the loss of riparian habitat with levee improvements in the lower river. The preliminary design phase of this proposed project was completed during the first half of 1997.

e. Proposed Scope of Work:

Phases: The preliminary design phase (Phase I) for the project has been completed. Several surveys have been conducted including preliminary vegetation, fish, and fish habitat surveys. Site contours have also been surveyed, as has the potential availability of subsurface water on the bar between the side channel and the river. The next phase (II) is to implement the project and test the applicability of various restoration configurations, vegetation succession, and fish and wildlife use of restored habitat. Phase III of the project will be to adjust the habitat configuration to that judged best by the study. Phase IV is continued maintenance.

Tasks and Deliverables: The pilot project consists of the following tasks:

Task 1: Prepare final design and project specifications, including plan drawings, experimental design (e.g., treatment combinations), schematic plan view drawings, logistics and equipment use and protocols. DELIVERABLES: Final Design Report. A Draft and Final Design Report will be presented to the LAR Task Force for approval.

Task 2: Site construction. Equipment will be located at the site. Vegetation will be relocated and planted per specifications. Substrate materials will be added or replaced as specified. DELIVERABLES: Final Construction Report with final project configuration and details of problems encountered and solutions.

Task 3: Technical and financial reports. Six-month and annual progress reports will be prepared that will include progress and results to date, plus summaries of costs to date.

Task 4: Monitoring and Evaluation (see below)

f. Monitoring and Data Evaluation:

Monitoring and data evaluation of the proposed pilot project is essential to determine its effectiveness in meeting specific project objectives, adaptability, and future applicability at other locations in the LAR and other Central Valley rivers and streams. Logistical information obtained will contribute to benefit/cost maximization for future applications, and physical/biological evaluation will determine the effectiveness of specific habitat configurations on several objectives of the pilot project: (1) the physical habitat restoration process; (2) the characteristics (quality and durability) of the restored habitat; and (3) habitat use by target species. Specific details of the monitoring program, including data analysis procedures, will be developed in Task 1 with other details of the experimental design and evaluation of the project.

The final experimental design developed in Task 1 will be a statistical design of the various treatments of interest in the project. Treatments will include the physical configuration of the side-channel and subchannels (i.e., depth, width, substrate, etc.) and type of riparian habitat. The intent is to find a configuration that optimizes cost of construction, durability and self-sustainability, and habitat value. Other important factors include configurations that provide the greatest flow of ground water and the lowest temperature water. The role of instream cover will also be evaluated as to its effect on the physical characteristics of the side channel and habitat use by target fish and other organisms. Various riparian and aquatic plant planting regimes also will be evaluated, as will resultant habitat use by aquatic, terrestrial and avian species.

To maximize the effectiveness of the experiment, a detailed literature review will be conducted on each of the factors being evaluated. Information from other similar programs including those conducted under the auspices of CALFED, will be sought out from other investigators. The experimental design, monitoring and evaluation procedures, and subsequent results will be written up in technical reports in scientific journal format, submitted to the LAR Technical Team for peer review, and submitted for publication, if appropriate.

g. Implementability:

Permit Requirements: Because the project involves construction within the active stream channel of the American River, excavation of stream sediments, and activities within the County Parks system, various permits from County, State, and Federal resource management agencies will be required, as well as compliance with CEQA and NEPA. In the event that steelhead are listed by NMFS, habitat modifications and monitoring of steelhead will require Section 10 ESA permits. Streambed alteration agreements will be required from CDFG. Activity permits will also be required from County Parks, as the entire project is on County Park lands.

Construction will necessarily occur in the dry season to ensure the site is not inundated under high flows. As river flows rise during the winter and spring, the back water effect will raise water levels in the side channel. At moderate flows the river will spill over the bar in places and connect to the side channel. The positive and negative aspects to the project goals of changes brought on by changes in river hydrology will be evaluated.

The Sacramento Area Water Forum, representing 46 stakeholders, the City/County Office of Metropolitan Water Planning, 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 *(see attached Statement of Support)*. This project is consistent with the objectives of CALFED and the goals of other ongoing projects. The AFRP recommends developing a riparian corridor management plan. CAFED's LAR Technical Team endorses restoration of wetland-slough complexes and riparian habitats along levees in the lower portion of the LAR, and management and restoration of large woody debris, especially in the upper reaches of the LAR.

Indirect Effects: The project location within an existing floodplain is expected to have little or no impact on riparian or wetland habitat, vegetation, or fish and wildlife. Construction is expected to occur in the summer and fall, which will avoid conflicts with nesting waterfowl. Side channel construction may interrupt the activities of beaver that occur at the site. Construction and monitoring will have no effect on recreational activities at the Goethe Park site, as the side channel is outside of the primary parklands and within the river channel; angler access to the river would not be disturbed. Activities such as hiking or bird watching within the side channel area may be disturbed during project construction and subsequent monitoring. Measures will be taken to avoid peak recreational activity (i.e., weekends).

IV. Costs and Schedule to Implement Proposed Project

a. Budget Costs:

Cost Breakdown Table

Project Phase/ Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor	Service Contracts		Miscellaneous and other Direct Costs	Total Cost	Subtotal/ Task
				Labor	Materials			
I			3,412	25,000				28,412
II 1			3,038	20,251	2,000			25,289
II 2			13,115	87,433	1,400			101,948
II 3			2,604	17,363	2,200			22,167
II 4			9,625	64,167	1,600			75,392
III Adaptive Reconfi-guration			4,095	30,000*				34,095*
IV O&M			8,190	60,000**				68,190**
							Total Cost	$355,493

* SAFCA cost, estimated pending need.
** SAFCA cost for 3 years, estimated pending need.

Cost Sharing

Project Phase/Task	Subtotal/Task Cost	SAFCA/Partner Funding	Proposed Category III Funding
I	28,412	28,412	0
II 1	25,289	0	25,289
II 2	101,948	0	101,948
II 3	22,167	0	22,167
II 4	75,392	0	75,392
III Adaptive Reconfiguration	34,095*	34,095*	0
IV O&M	68,190**	68,190**	0
Total Cost	$355,493	130,697	224,796

* SAFCA cost, estimated pending need.
** SAFCA cost for 3 years, estimated pending need.

The Water Forum and other members of the Lower American River Task Force are seeking funding support in restoring fish and wildlife habitat in the LAR floodplain to go along with their efforts to improve stream flow in the LAR.

The LAR stakeholder group including SAFCA, Water Forum, and City and County organizations such as County Parks have the infrastructure and long-term mandate to protect and enhance natural habitats of the LAR floodplain. Existing O&M designated for floodplain upkeep including levee maintenance and wetland and

riparian vegetation protection are presently funded by these organizations under an ongoing floodway management program. Any habitats and lands restored in the floodplain will be maintained in the future by these organizations.

SAFCA has, and the Water Forum is anticipating, dedicating funds to match CALFED and CVPIA funds for habitat restoration in the LAR including the proposed project. A primary objective of the CVPIA-AFRP is to improve habitat not only through improved flows (where most of their emphasis has been to date) but through physical habitat improvement. Though no CVPIA funds to date have been allocated for physical habitat in the LAR, our stakeholder group intends to solicit their funding of habitat restoration projects in the LAR.

SAFCA (and the Water Forum) would undertake the proposed project directly. Both organizations have a well established team of environmental and engineering consultants to conduct the proposed project.

b. Schedule Milestones:

The preliminary design phase of the project was completed in the first half of 1997. Phase II Task 1 and 2 of the pilot study should be completed in late summer and early fall of 1997 or 1998. SAFCA and the Water Forum are prepared to initiate Task 1 in 1997, in the hope that CALFED awards would be available for Task 2 by late summer (August-September). Tasks 3 and 4 can be completed from late fall through summer 1998. Final reports should be available by late summer 1998 to allow initiation of Phase III of the project - adjusting site restoration based on results of the pilot project.

c. Third Party Impacts:

Restoration of side channel habitat at Goethe Park bar will have some minor third-party impacts during the short-term construction phase and over the long term. During construction, activities at the site will disturb plant and animal communities and potentially recreationists that may use the bar site for hiking, nature walking, or bird watching. These impacts will be minimal and short-term. Over the long-term, changes in habitat, although positive, will change the existing habitat features of the dead-end slough by enhancing flow through the wetland-slough area, potentially cooling the water and partially filling the pond area at the lower end of the slough. The existing high flow side channel contains grasses and shrubs that will be converted to aquatic and wetland habitat. Open-bar habitat will be converted to aquatic, riparian, and wetland habitats. Mitigation, if required, will be identified in Task 1.

V. Applicant Qualifications

SAFCA and the Water Forum have assembled a team of resource consultants to conduct the project. The team conducted Phase I of the study and is prepared to immediately implement Phase II. SAFCA and the Water Forum have worked together along with the Lower American River Task Force to plan ecosystem restoration of the LAR. Jones & Stokes Associates (JSA) and Jeff Hart & Associates are proposed to conduct the technical work. JSA and Jeff Hart and Associates are proposed as the SAFCA consultants to support the project because of their extensive individual and corporate experience in ecological resources issues and planning processes in the lower American River, the Central Valley, and the Bay-Delta. The project principals have participated in the habitat surveys and ecological assessments for the site, as well as adjacent habitat areas. JSA and Jeff Hart & Associates participate in activities of the Lower American River Task Force and have conducted projects for SAFCA and the U.S. Army Corps of Engineers on the LAR. The project team does not have any conflicts of interests.

PROJECT MANAGEMENT & DESIGN - THOMAS CANNON, Jones & Stokes Associates: Mr. Cannon will be responsible for managing the project and preparation of the experimental design of the pilot study. As an aquatic ecologist and biostatistician, he also will be responsible for all fisheries-related technical information and support. His experience in the Bay-Delta and its tributary watersheds dates back 20 years. Most recently he participated in various activities relating to ecological restoration of the LAR, including supporting CALFED staff in preparing the American River Vision of the ERPP, supporting EBMUD in evaluating the Water Forum's program for the LAR, and as a consultant to SAFCA in developing a floodway management plan for the LAR. Mr. Cannon also participated in efforts to develop a Water Management Plan for the American River for the USFWS under the CVPIA program.

RESTORATION COORDINATOR - STEVE CHAINEY, M.S. Mr. Chainey is a restoration ecologist, specializing in environmental mediation, riparian ecology, hydrogeomorphology, restoration planning, design, and supervision, riparian and wetland revegetation, natural resources master planning, and environmental impact studies. He will be responsible for managing the physical habitat restoration actions of the project. His experience on the lower American River includes the Lower American River Bank Stabilization Project for the Corps of Engineers and the Lower American River Task Force. References for Jones & Stokes Associates include: East Bay Municipal Utilities District, U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, SAFCA, and CALTRANS - American River Bridge Project.

JEFFREY A. HART has had considerable success in designing and implementing restoration projects (e.g., Stone Lakes National Wildlife Refuge), biotechnical projects (e.g., Dry Creek, Lower American River), and resource studies (e.g., Cosumnes River, Lower American River). His clients include government agencies and non-profit organizations such as the Sacramento Area Flood Control Agency, Sacramento County Water Resources Division, Ducks Unlimited, and the Nature Conservancy. Hart has successfully completed restoration contracts with Ducks Unlimited, and has made considerable progress with CalTrans Beach Lake Mitigation site.

VI. Compliance with standard terms and conditions (*see attached forms)*

Item 8

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME
Sacramento Area Flood Control Agency

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

CERTIFICATION

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

OFFICIAL'S NAME
F.I. Hodgkins

DATE EXECUTED
July 24, 1997

EXECUTED IN THE COUNTY OF
Sacramento

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE
Executive Director

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME
Sacramento Area Flood Control Agency

Item 11

Agreement No. _____

Exhibit _____

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

STATE OF CALIFORNIA)
)ss
COUNTY OF Sacramento)

F.I. Hodgkins, being first duly sworn, deposes and
(name)

says that he or she is Executive Director of
(position title)

Sacramento Area Flood Control Agency
(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 24, 1997 By _____
(person signing for bidder)

JANE DANKBAR
Comm. # 1127549
NOTARY PUBLIC - CALIFORNIA
Sacramento County
My Comm. Expires Feb. 28, 2001

(Notarial Seal)

Subscribed and sworn to before me on
July 24, 1997
_____
(Notary Public)

Lower American River Task Force

STATEMENT OF SUPPORT

for

CALFED APPLICATION

(Ratified by the Lower American River Task Force on July 15, 1997)

The Lower American River Task Force has reviewed and supports the attached application to CALFED for restoration of key sites on the Lower American River. We strongly urge that these valuable projects be funded. They will provide critical information for the development of restoration opportunities for this important river system.

Community Groups

1. American River Parkway Foundation
2. California State University, Sacramento
3. Campus Commons Park Corporation
4. Citizens-at-Large
5. Dos Rios Neighborhood Association
6. Natomas Community Association
7. River Park Neighborhood Association
8. Sierra Oaks Neighborhood Association

Environmental Interests

1. Environmental Council of Sacramento (ECOS)
2. Environmental Defense Fund
3. Friends of the River
4. Protect American River Canyons (PARC)
5. Save the American River Association (SARA)
6. Sierra Club, Mother Lode Chapter

Flood Control Agencies

1. American River Flood Control District
2. City of Sacramento Utilities
3. City of West Sacramento
4. Reclamation District 900
5. Reclamation District 1000
6. Sacramento Area Flood Control Agency (SAFCA)
7. State Reclamation Board
8. State Department of Water Resources

Recreation Interests

1. California Exposition and State Fair
2. Sacramento County Parks and Recreation

Resource Agencies

1. State Department of Fish and Game
2. State Lands Commission
3. U.S. Fish and Wildlife Service