

DA 11 

JONES & STOKES ASSOCIATES, INC.

FAX TRANSMISSION

To: Wendy Halverson Martin **Pages to follow:** 11
Date: January 15, 1999 **Client:** USACE / EBMUD
Fax #: 916-654-9780 **Project:** Mokelumne River
From: David Ceppos **Project #:** NA
Subject: Mokelumne River Feasibility Study, Directed Action Proposal

Comment:

Ms. Halverson Martin,

On behalf of the East Bay Municipal Utility District (EBMUD) and the U.S. Army Corps of Engineers, Sacramento District, (Corps), please accept the attached proposal for CALFED Designated Action funding for the East Delta Habitat Corridor, Mokelumne River Feasibility Study Cost Share.

This project, in tandem with the Cosumnes River Feasibility Study proposal you have received from The Nature Conservancy (TNC), represents an unprecedented opportunity for extensive local, state, and federal partnership in the pursuit of environmental restoration and flood damage reduction activities along the Mokelumne and Cosumnes Rivers.

Thank you for the opportunity to submit this proposal.

cc: Mr. James Smith / EBMUD
Ms. Jane Rinck / Corps
Mr. Michael Eaton / TNC

JONES & STOKES ASSOCIATES, INC.

2600 V Street, Suite 100 . Sacramento, CA 95818-1914 . 916/737-3000 . Fax 916/737-3030
Internet <http://www.jsa.net> . BBS 916/737-3036

**Cost-Share,
U.S. Army Corps of Engineers
East Delta Habitat Corridor
Mokelumne River Feasibility Study**

**East Bay Municipal Utility District
P.O. Box 24055
375 Eleventh Street
Oakland, CA 94623-1055**

**Phone: 209-333-2095 / Fax: 209-334-3795 / Email: jrsmith@ebmud.com
Primary Contact: Mr. James R. Smith**

Project Participants and Collaborators:

This proposal is for a grant to East Bay Municipal Utility District (EBMUD) (in association with additional agencies to be determined) to provide funds and in-kind services to the Corps of Engineers for a feasibility study of ecosystem restoration opportunities (particularly those with flood hazard reduction benefits) on the Mokelumne River. The Corps of Engineers will have overall responsibility for managing and conducting this feasibility study. EBMUD has agreed, subject to the availability of funding, to be the non-federal sponsor of this study. Other agencies have been contacted about participation in this study and have indicated a willingness to participate and to provide funding or in-kind support to the study, including: The Nature Conservancy (TNC); U.S. Army Corps of Engineers, Sacramento District (Corps); Sacramento Area Flood Control Agency (SAFCA); The University of California, Davis, Center for Integrated Watershed Science (UCD); California Department of Water Resources; San Joaquin County, Woodbridge Irrigation District; City of Lodi; Natural Resource Conservation District; Lodi-Woodbridge Winegrape Commission; and the San Joaquin County Resource Conservation District.

Executive Summary

The Mokelumne River and its associated floodplain have been identified by numerous organizations as providing many environmental restoration opportunities. Currently the river, floodplain ecosystem, and geomorphology have been degraded in several areas from a variety of land and water uses. Significant areas along the river have been developed for agricultural, mining, and residential land uses. These areas are susceptible to periodic flooding and related flood damage. A central focus of this project will be to provide assurances to home, farm, and ranch owners that environmental restoration activities will not negatively impact their residences and businesses.

The proposed project will identify, design, and estimate costs for environmental restoration and flood damage reduction opportunities along the Mokelumne River. Implementation of these opportunities will occur in the future as funding and land management allows. Environmental compliance documents as required by the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) will also be prepared. The general project area is an approximately 40-mile reach of the Mokelumne River from Camanche Reservoir to the confluence with the Cosumnes River, including about 12 miles in the lower part of this reach that is tidally influenced. The project will be carried out with an extensive public involvement program to ensure that all potential stakeholders are

provided a format for project-related discussion, education, and decision-making. The project will be managed as a Feasibility Study under the Corps' General Investigation (GI) process. As required in the GI process, the Corps will be the lead federal sponsor with EBMUD (and its collaborative agency-level partners) participating as the lead non-federal sponsor. Each sponsor will provide 50 percent of the project cost. The project will also be coordinated with the Cosumnes River Feasibility Study that is planned to be conducted simultaneously by the Corps and TNC. The Cosumnes study will share several of the same project participants and Corps technical staff. Because of these simultaneous studies, the specific project areas will be determined through future integration meetings with the Corps, EBMUD and TNC.

The specific purpose of this "Directed Action" proposal to CALFED is to seek \$400,000 in support of cost-share funding to EBMUD (and its collaborative agency-level partners). This amount represents a substantial portion, but not all, of the cost share anticipated to be needed for the study.

¹ (Note: Additional agency-level partners are anticipated to enter into a collaborative management effort with EBMUD. These relationships are not yet formalized)

I. Proposed Scope of Work

The Corps project is expected to begin in July 1999 and continue to September 2001. A detailed workplan and timeline will be identified in a Project Study Plan (PSP) currently being developed as part of the Corps study.

The Corps has identified the following tasks and timeline as typical for a project of this nature. Due to the number of sponsors and stakeholders to be involved in this project, and the integration of this project with the Cosumnes River Feasibility Study, this proposed schedule may change. Changes to the schedule will be communicated to CALFED as they are determined.

Task 1. Design and initiate a public involvement process. Finalize stakeholder list and identify communication tools; meeting locations; and frequency of meetings necessary to support public outreach, education, input, and decision-making. The project will build on the existing Lower Mokelumne River Stewardship Program to maximize participation by affected parties, and build support by integrating feedback into project design.

Proposed Schedule: Begin in July 1999. Ongoing for entire project including long-term site implementation.

Proposed Deliverables: Mailing list database, meeting summaries, newsletters, fact sheets, project web page, administrative record of collected data.

Task 2. Refine challenges and opportunities, and goals and objectives. Using input from stakeholders, refine flood plain management and aquatic and terrestrial habitat improvement actions as well as actions to reduce further channel degradation, sedimentation, and flood damage.

Proposed Schedule: July 1999 to September 1999.

Proposed Deliverable: Challenges and Opportunities Summary Report.

Task 3. Conduct preliminary baseline studies. Study existing data and conduct limited field surveys on topics including biology, ecology, hydrology and hydraulics, fluvial geomorphology, levee construction and stability, and soils of the project area. Prepare a baseline report of associated topics to establish existing conditions in the project area.

Proposed Schedule: August 1999 to December 1999.

Proposed Deliverables: Existing Conditions Report of baseline information.

Task 4. Conduct site prioritization. Identify likely locations to do environmental restoration and flood damage reduction projects. Conduct land or easement acquisition appraisals and feasibility studies. Analyze preliminary environmental and flood damage benefits provided at project sites. Prepare preliminary cost estimates for implementation.

Proposed Schedule: December 1999 to March 2000.

Proposed Deliverables: Site Prioritization Report, including preliminary cost estimates.

Task 5. Develop Preliminary Site Designs. Develop preliminary site designs for environmental restoration and flood damage reduction elements for the priority sites.

Proposed Schedule: March 2000 to June 2000.

Proposed Deliverables: Preliminary Site Design Report.

Task 6. Develop Final Project Design. Develop final site designs for environmental restoration and flood damage reduction elements for the priority sites.

Proposed Schedule: June 2000 to October 2000.

Proposed Deliverables: Final Site Design Report.

Task 7. Define Final Project Benefits. Conduct and complete an analysis of the ecological and flood damage reduction benefits that will occur as an outcome of project implementation. Benefits will focus on the goals and objectives identified by stakeholders at the beginning of the project.

Proposed Schedule: August 2000 to October 2000.

Proposed Deliverables: None. Results will be included with Final Project Design Report (see above).

Task 8. Refine Cost Estimates. Prepare final site specific and total project cost estimates. Estimates may include (but will not be limited to) costs of land acquisitions and/or easements, and/or land swaps, materials, labor, operations and maintenance, security, and site monitoring. The estimates will also include a benefit/cost analysis using Corps estimating and valuation tools to assess ecological and flood damage reduction benefits compared to time and costs.

Proposed Schedule: October 2000 to January 2001.

Proposed Deliverables: Final Site-Specific and Total Project Cost Estimates and Benefit/Cost Assessments.

Task 9. Conduct Environmental Compliance. Prepare draft and final NEPA/CEQA documents (See Section VI below for information regarding NEPA/CEQA requirements).

Proposed Schedule: January 2001 to September 2001.

Proposed Deliverables: NEPA/CEQA Environmental Compliance Documents.

Task 10. Project Management. Conduct ongoing management and project coordination, stakeholder and sponsor communication, budget tracking, project staffing, deliverables scheduling, invoicing, CALFED reporting, progress meeting attendance, integration meeting (with Cosumnes Feasibility Study and Corps staff) attendance.

Proposed Schedule: July 1999 to September 2001.

Proposed Deliverables: Monthly Project Summary Reports including project status, key milestones achieved, key deliverables distributed (as appropriate), budget, schedule, and CALFED cost reports.

III. Location of the Project

The study area (Plate 1) is in Sacramento and San Joaquin Counties, California. The project area is an approximately 40-mile reach of the Mokelumne River from Camanche Reservoir to the confluence with the Cosumnes River (about 12 miles of the reach are tidally influenced). The Cosumnes and Mokelumne River Basins are both eastside tributaries to the Delta. Due to the size of the project area, presentation of U.S. Geological Survey maps of the entire river reach in 8-1/2 x 11-inch paper is not feasible. At this time, presentation of GIS mapped data that is geo-located and legible at the requested paper size is not available. This data will be made available during the project and will be updated on a regular basis and transmitted to CALFED when appropriate.

IV. Ecological Objectives and Related Benefits

A. The project sponsors believe that flood plain management, and aquatic and terrestrial habitat improvement actions should be implemented, as well as actions to reduce further channel degradation, sedimentation, and flood damage. The objective of the project is to implement environmental

restoration and flood damage reduction efforts on selected sites that are geographically appropriate and have willing landowners. In order to achieve this, the project will identify and evaluate management alternatives for improving flood plain management practices (especially regarding land use and flood plain compatibility) and reducing flood related damage to farmland, infrastructures, property, and public health. The project will also evaluate alternatives for restoring tidal habitats unique to the Delta; restoring riparian and associated upland habitats which have suffered precipitous declines in this century; developing and enhancing tidally-influenced rearing habitats for native Delta fishes and anadromous fisheries; and developing and enhancing habitat for other wildlife, particularly Federally and State-recognized special-status species. In addition, the project will develop options for reducing negative navigational effects in the Delta resulting from sediment and debris transport and deposition. The project will include recommendations of the most feasible sites on which to implement the options developed; these sites will be selected based on willing landowner participation, stakeholder ideas, acquisition potential, probable costs, and potential for environmental restoration and flood control benefits to occur.

B. Experiments conducted in lower floodplain lands within the nearby Cosumnes River Preserve indicate that natural processes will regenerate riparian forest and seasonally-flooded fish rearing habitats if rivers of Sierra Nevada watershed origins are reconnected with their historical floodplains. Within the geographic scope of the Mokelumne River study area, however, many stretches of the river are so deeply incised that even with the implementation of set-back levees or intentional breaches, the river may remain isolated from the floodplain, except in the case of large storm events. In order to address the goals of this project, a number of questions must be addressed:

- Where will levee setbacks be effective in restoring riparian habitat and fish spawning and rearing habitats?
- How might effective levee setbacks (and other non-traditional flood damage reduction methods) be coordinated with the needs of agricultural and non-agricultural land owners to remain economically viable and protected from flood damages?
- What are the best methods for halting the incision of the streambed, and building the bed up toward historical and stable levels which would allow for the movement of river water into the floodplain?
- How might expansion of the floodplain for environmental restoration and/or flood damage reduction affect existing and proposed upstream and downstream conditions?
- How might revisions to the Camanche flood control curves and the pattern of flood flow releases be modified to support ecological restoration efforts?
- How do the different strategies for improving connectivity to the floodplain and increasing riparian and floodplain habitat affect fish, bird, and mammal use, vegetation establishment, and

water quality and flood water action?

- What types of restoration and flood damage reduction information can be learned and exported to other watersheds throughout the state from the simultaneous study of the Cosumnes River (an undammed river with a relatively natural hydrologic regime) and the Mokelumne River (a dammed river with a controlled hydrologic regime)?

Because the proposal is for a study process with broad stakeholder involvement, including engineering, modeling, and research components, the preceding statement of hypotheses should be read as draft and incomplete. These will be refined throughout the course of the study.

C. This project is an integral part of CALFED's vision for ecological restoration of the Mokelumne River. It focuses on several of the stressors to ecological functions, processes, habitats, and resources within the zone, including separation of rivers from their floodplains, reduced sediment transport, high levels of predation on juvenile salmonids, and riparian vegetation removal. Other ongoing CALFED funded projects, including the *Lower Mokelumne River Restoration Program* and the *Lower Mokelumne River Watershed Stewardship Plan* are addressing other stressors, including poor land use and livestock grazing practices, entrainment of aquatic organisms in water diversions, restriction of fish passage at dams and diversion structures and input of contaminants. Both of these projects are in the planning stages and project completion is anticipated in 2003. These projects, in combination with EBMUD, U.S. Fish and Wildlife Service and California Department of Fish and Game's implementation of the FERC Joint Settlement Agreement for the lower Mokelumne River, will address all of the ecological stressors identified by CALFED for the Mokelumne River and should result in substantial progress in achieving CALFED's vision for the East Side Tributaries.

V. Monitoring and Data Collection Methodology

Not applicable at this point. Monitoring issues will be addressed programmatically within the study documents and specifically as site-specific activities are designed and implemented.

VI. Technical Feasibility and Timing

A. Feasibility assessment, screening and site-specific project selection will be an integral part of the study. Generally, preliminary analyses indicate that there are feasible opportunities, with stakeholder support, for additional activities on the lower Cosumnes that improve habitats for salmon, avian species, and mammal populations, while reducing flood hazards. Some of these opportunities are described in the preliminary *Lower Cosumnes and Mokelumne Rivers 905(b) Analysis, prepared by the Corps in September 1998*.

B. Although it is not feasible at this time to specifically state what NEPA/CEQA documents will be required, it is likely that for NEPA, an Environmental Assessment (EA) resulting in a Finding of No Significant Impact will be required for each implemented project. It is possible that development of a Programmatic EA will be helpful in assessing the cumulative effects of project implementation. A Programmatic EA would also likely provide a format to conduct a tiered-NEPA process for

supplemental EAs to be performed at only the sites requiring additional efforts (e.g. not covered by the programmatic document). CEQA compliance will likely require an Initial Study (IS). The IS may result in a negative declaration or may be continued on to the development of an Environmental Impact Report.

C. At this time, EBMUD has not identified any permits required to proceed with the proposed project. As previously discussed in Section II of this document, an extensive public involvement program will be established to ensure stakeholder participation. Working agreements such as Memorandums of Agreement (MOA) or Understanding (MOU) may be established as the project proceeds.

D. Due to the size of the project area and the issues to be addressed, outstanding implementation issues may arise. The project co-sponsors are committed to using the public involvement process (discussed in Section II of this document) to alleviate any disputes or outstanding issues that could impede the success of this project. The key to success on this project and future restoration and flood reduction measures will be active participation of affected stakeholders, and site implementation only with willing landowners.

VII. Cost and Cost-Sharing

As previously stated, EBMUD is working with the Corps on the preliminary steps of this project (identified as an Expedited Reconnaissance Study). As part of the Corps' study, a document titled a Project Study Plan (PSP) will be developed. Along with providing an in-depth project description, the purpose of the PSP is to function as a scope of work, cost estimate, and project schedule. The PSP also identifies the roles and responsibilities of each sponsor and co-sponsor for each project task. The Corps has recently initiated the development of the PSP. EBMUD, the Corps, and several of the other project co-sponsors have agreed that the PSP will be completed by approximately April 1999. At that time, the information requested for this section will be available and will be distributed to CALFED staff. Presently, the cost breakdown would be difficult to accurately prepare. Therefore, Tables 2 and 3 requested in the Designated Actions instructions have not been included at this time. If additional information is required regarding this issue, please feel free to contact the Corps' Cosumnes and Mokelumne Rivers Study Manager, Ms. Jane Rinck at (916) 557-6715.

As also previously stated, the Corps' GI process requires that the Federal and non-federal sponsor each be responsible for a 50 percent cost share for a project. The amount requested in this proposal (\$400,000) represents a substantial portion, but not all, of the cost share anticipated to be needed for the study. The total cost of the study is likely to be between \$1 million and \$1.5 million. This estimate is based on several preliminary scoping meetings that have taken place between EBMUD and the Corps as part of the Expedited Reconnaissance Study. The cost share of the non-federal sponsor can consist of funding and in-kind services (however, no more than 50 percent of the non-federal portion can be in-kind services). Several other co-sponsors have indicated a desire to be actively involved in the project and to make funding and/or in-kind services available to support the efforts of EBMUD and the Corps. Specifically, UCD will make staff and funding available to support some of the baseline studies, specific technical evaluations (such as fluvial geomorphological issues), and long term

monitoring. SAFCA has recently pledged as much as \$100,000 of financial support to the project and may also provide staff support. San Joaquin County has recently pledged their support to assist in the development of the project. TNC will also be contributing funding and potential staff time to assist in the integration of the Cosumnes and Mokelumne projects. Additional organizations such as local Resource Conservation Districts and Reclamation Districts have also expressed an interest to be involved. As the development of the PSP continues, additional stakeholders will be contacted to discuss the scope of the project. EBMUD and the Corps anticipate that from these stakeholders, additional co-sponsors with funding and/or in-kind support will be identified.

Although the Corps is willing to phase a project so that the non-federal sponsor and co-sponsors can review (and potentially refuse certain work by the Corps), the Corps prefers to confirm the total costs and all funding sources for a project prior to project initiation. Therefore, incremental funding and implementation of a Feasibility Study is not practical.

VIII. Local Impacts, Support, and Involvement

Approximately 95 percent of riverine and flood plain forests in the Central Valley have been lost to agriculture and urban development. This is true on the lower Mokelumne River, where existing vegetation communities adjacent to the Mokelumne River from Camanche Dam downstream to the confluence with the Cosumnes River consist of remnants of riparian forest and seasonal wetlands. Most of the extant vegetation is narrowly confined to levee banks. In addition, non-native, invasive species including *Arundo donax* and *Rubus discolor* comprise many of the riparian vegetation communities along the lower Mokelumne River. Many public and private agencies, including the Corps, California Department of Fish and Game, U.S. Fish and Wildlife Service, East Bay Municipal Utility District, Sacramento and San Joaquin counties, the Natural Resources Conservation Service, The Nature Conservancy, Ducks Unlimited, and the Audubon Society have expressed interest and support in restoring and rehabilitating the native riparian forests, emergent marsh, oak woodlands and seasonal wetlands in the lower Mokelumne River area.

Within the area, particularly downstream of Lodi, levees were constructed to reclaim agricultural lands and protect crops and livestock from flooding. Many of these levees were constructed by private landowners and are currently in poor condition, the result of age and lack of maintenance. Flood control releases combined with high tides can result in significant flooding in the area, the result of a constricted flood plain, isolation of the flood plain from the river channel, loss of riparian vegetation and poorly constructed or maintained levees. Numerous agencies, entities and private landowners, including the San Joaquin County Resource Conservation District, the Lodi-Woodbridge Winegrape Commission, the City of Lodi, Community Alliance with Family Farmers and the Woodbridge Irrigation District have expressed interest and support in rehabilitating natural riparian systems and flood plain function as a means to environmental restoration and flood protection in the lower Mokelumne River. Several private landowners in the area have expressed support for the project and have indicated they will actively participate in the process.

Public outreach will be an integral part of the project and will build on the current efforts being conducted by the San Joaquin County Resource Conservation District's *Lower Mokelumne River*.

Watershed Stewardship Program. That program, funded by CALFED, is developing a community-based, shared vision and plan for the lower Mokelumne River watershed.

There are no known potential third party impacts or individuals, groups or agencies opposed to the project.

IX. Applicant's Ability's Ability

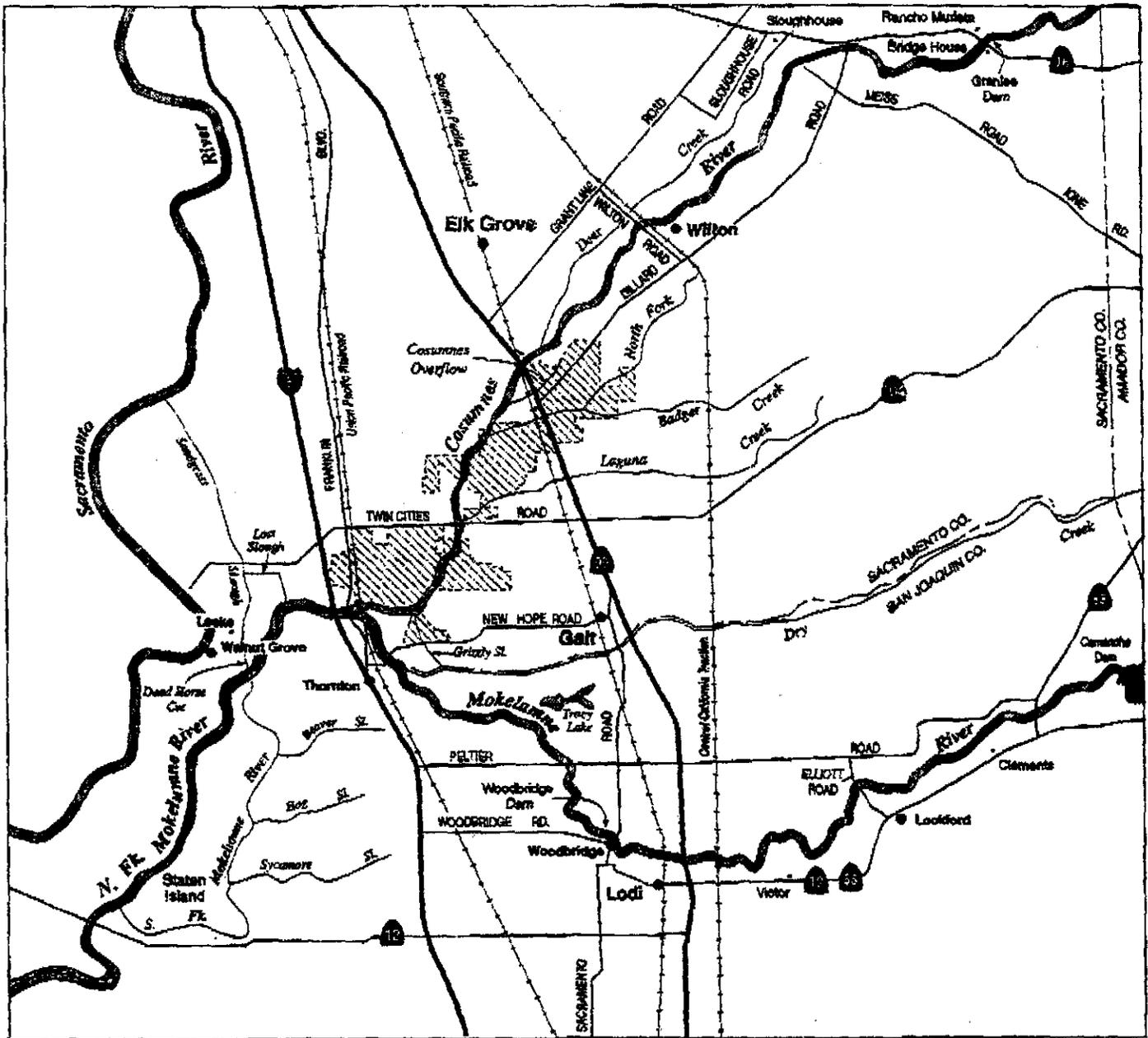
EBMUD supplies water and provides wastewater treatment for parts of Alameda and Contra Costa counties. Approximately 1.2 million people are served by EBMUD's water system. EBMUD, a publicly owned utility, is a customer-oriented and environmentally sensitive public agency, firmly committed to serving people and the environment. EBMUD owns and operates Pardee and Camanche dams on the Mokelumne River, diverting up to 997 acre-feet of water daily from the river. In addition, EBMUD owns and manages lands below Camanche Dam primarily for fisheries and wildlife protection as well as recreation.

EBMUD has successfully administered numerous grants for ecological restoration in the lower Mokelumne River, including two current efforts funded by the U.S. Fish and Wildlife Service and the California Department of Fish and Game to rehabilitate salmonid spawning gravels below Camanche Dam. EBMUD is a participant and collaborator with the San Joaquin County Resource Conservation District in the *Lower Mokelumne River Watershed Stewardship Program* and with the Woodbridge Irrigation District/City of Lodi in the *Lower Mokelumne River Restoration Program*. Both of these programs are currently funded by CALFED.

Since 1990, EBMUD's professional staff and consultants have been monitoring the fisheries and wildlife resources and the effects of ecological restoration programs in the lower Mokelumne River. The data collected by these efforts and the analyses performed by EBMUD have been used to assist in the identification and development of the CALFED objectives for anadromous fisheries production, and aquatic and riparian ecosystem integrity and diversity. These efforts will continue throughout the duration of this project.

X. Compatibility with Non-Ecosystem Objectives

Non-ecosystem objectives include avoiding or minimizing local negative economic impacts and reducing flood hazards for local communities and agricultural operations. The proposed study, and the potential actions that will result, is fully compatible with these non-ecosystem objectives.



Project Location

Legend
 Cosumnes River Preserve

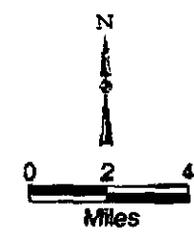


Plate 1
Study Area