

Partners in Flood Control Planning

U.S. Army Corps
of Engineers
Sacramento District

San Joaquin River Basin
South Sacramento County Streams
Investigation, California

**Feasibility Phase
Initial Project
Management Plan**

December 1994

TABLE OF CONTENTS

SECTION 1 - INTRODUCTION.....	1
PURPOSE AND SCOPE.....	1
SECTION 2 - STUDY AREA.....	2
SECTION 3 - FOCUS OF FEASIBILITY STUDY.....	4
RESULTS OF RECONNAISSANCE STUDY	4
PROJECT PURPOSES	5
Flood Control	5
Recreation	5
Wildlife Enhancement	5
FEASIBILITY STUDY PURPOSE	6
FEASIBILITY STUDY SCOPE	6
Study Area	6
Preliminary Alternatives.....	7
Local Crediting of Flood Control Development.....	7
Level of Detail	7
WITHOUT-PROJECT ASSUMPTIONS.....	8
Land Use	8
Future Water Resources Projects.....	8
SECTION 4 - MANAGEMENT OF STUDY.....	10
General	10
Project Review Boards.....	10
Study Management Team	11
Executive Committee.....	13
SECTION 5 - TECHNICAL REQUIREMENTS	14
SECTION 6 - CODE OF ACCOUNTS	16
SECTION 7 - WORK TASKS AND RESPONSIBILITIES	17
JA - ENGINEERING APPENDIX	17
JAA - Surveys and Mapping Except for Real Estate	17
JAB - Hydrology and Hydraulic Studies/Report	17
JAC - Geotechnical Studies/Report	18
JAE - Engineering and Design Analysis Report with Preliminary Drawings	18
JB- SOCIOECONOMIC STUDIES/REPORT	19
JBA - Economic Analysis/Report	19
JBB - Social Studies/Report	19
JBC - Institutional Studies/Report	20

JBE- Financial Analysis Report	20
JC - REAL ESTATE ANALYSES/DOCUMENTS	20
JCA- Real Estate Supplement/Plan	20
JCB- Gross Appraisal/Report	20
JCC- Preliminary Real Estate Acquisition Maps	20
JCD - Physical Takings Analysis.	21
JCE- Preliminary Attorney's Opinion of Compensability	21
JCF- Rights of Entry	21
JCG - All Other Real Estate Analyses/Documents	21
JD - ENVIRONMENTAL STUDIES/REPORT	21
JDA- Environmental Studies/Report	21
JE - FISH AND WILDLIFE STUDIES	22
JEA- Fish and Wildlife Coordination Act Report	22
JF -HAZARDOUS, TOXIC, AND RADIOLOGICAL WASTE STUDIES/REPORT	
JFA- HTRW Studies/Report.	23
JG - CULTURAL RESOURCES REPORT.	23
JGA- Cultural Resources Report	23
JH - COST ESTIMATES	23
JHA- Cost Estimate	23
JI - PUBLIC INVOLVEMENT DOCUMENTS	24
JIA- Public Involvement Documents	24
JJ - PLAN FORMULATION AND EVALUATION REPORT	24
JJA- Plan Formulation and Evaluation Report	24
JK - DRAFT REPORT DOCUMENTATION.	25
JKA- Draft Report Documentation	25
JL - FINAL REPORT DOCUMENTATION.	25
JLA- Final Report Documentation	25
JP - MANAGEMENT DOCUMENTS.	25
JPA - Management Documents.	25
JPI - Updates of IPMP.	26
JPL - Project Management Plan (PMP).	26
JPZ- Programs and Project Management Documents.	26
 SECTION 8 - STUDY COST ESTIMATE	 27
FEASIBILITY STUDY COST	27
 SECTION 9 - MILESTONES AND STUDY SCHEDULE	 58
DESCRIPTION OF MILESTONES	58
Initiate Feasibility Study (F1).	58
Public Workshop (F2).	58
Conference #1 (F3).	58
Conference #2 (F4).	58
Submit Draft Report to SPD (F5).	59
Feasibility Review Conference (FRC) (F5A)	59

Field Level Coordination {F6}	59
Final Public Meeting (F7)	59
Submit Final Report to SPD (F8)	59
Division Engineer Public Notice (F9)	59
FEASIBILITY STUDY SCHEDULE	60

SECTION 10 - STUDY MANAGEMENT TOOLS

JUSTIFICATION SHEET	64
PROJECT EXECUTIVE SUMMARY REPORT	64
MONTHLY STATUS REPORT	64
FUNDS MANAGEMENT REPORT	64
SCHEDULE AND COST CHANGE REQUEST	65
WORK ORDERS/DETAILED SCOPES OF WORK	65
SAFETY AND SECURITY REPORT	65

SECTION 11 - DESCRIPTION OF WORK ELEMENTS67

TABLES

1	Current Study Management Team Members
2	Current Executive Committee Members
3	Feasibility Study Cost Estimate, Activities Summary
4	Task/Resource Cost by Fiscal Year
5	Task/Resource by Charge Type for FY 1995
6	Task/Resource by Charge Type for FY 1996
7	Task/Resource by Charge Type for FY 1997
8	Task/Resource by Charge Type for FY 1998
9	Total Costs, Task/Resource by Charge Type
10	Resource/Task Cost by Fiscal Year

FIGURES

1	Study Area
2	Feasibility Study Schedule

SECTION 1 - INTRODUCTION

PURPOSE AND SCOPE

The purpose of the Initial Project Management Plan (IPMP) is to ensure that the work required for the feasibility phase of the South Sacramento County Streams Investigation has been thoroughly formulated and considered. The IPMP is the principal tool for conducting the feasibility study. The IPMP forms the basis for estimating the total study cost and respective shares of the Sacramento District, Corps of Engineers (Corps), and the primary local sponsor. Sacramento Area Flood Control Agency (SAFCA) is the primary local sponsor, but the City of Sacramento (City) and the County of Sacramento (County) are participants and will contribute funds and perform in-kind work. The IPMP is the basis for defining scope and assigning tasks among the Corps and the non-Federal sponsors. The IPMP provides a common understanding between non-Federal sponsors, the South Pacific Division (SPD), the Sacramento District, and Headquarters offices of the Corps and provides a basis for managing and monitoring the study. The content and level of detail of the IPMP will change over the duration of the study. The IPMP will serve as the historical record of the execution of the feasibility study.

The IPMP was developed and the study will be managed using as many existing reports, computer programs and data bases, and project management procedures as possible, while still meeting the requirements of ER 1105-2-100 and ER 5-7-1. This minimizes the need for developing new reports and procedures for the South Sacramento County Streams Investigation. The IPMP is organized to serve ongoing day-to-day study management by the team members and to minimize the amount of work required to update it. Each study team member receives a copy of this IPMP and any updates.

SECTION 2 - STUDY AREA

The study area primarily includes the drainage basin for the South Sacramento County Streams (see figure 1). Most of the basin lies south and east of the City of Sacramento. A portion of the basin lies within the Sacramento city limits, south of the city center. The principal streams, Morrison, Elder, Unionhouse, and Laguna Creeks, originate in the foothills of the Sierra Nevada mountains. In addition, numerous small tributaries originate on the valley floor. All these streams flow generally westward, and most join Morrison Creek in or near the City of Sacramento on the west side of the basin. Downstream (southwest) of the confluence of Morrison Creek with Laguna Creek, Morrison Creek low flows are pumped through a levee into the Sacramento River. High flows drain south to the Sacramento-San Joaquin Rivers Delta by way of Beach and Stone Lakes, Snodgrass Slough, and the Mokelumne River.

The basin has two distinct areas. The upper basin is above the point where Morrison Creek enters Beach Lake near Interstate 5 (I-5). The upper basin is sloped and is drained by Morrison Creek and its tributaries. Flooding in the upper basin is generally due to inadequate channel capacity. The lower basin, downstream from I-5, is called Beach-Stone Lakes. The lower basin is low and flat, and during flood events experiences severe ponding and backwater effects from flows from the Cosumnes and Mokelumne Rivers as well as from Morrison Creek. Pacific Ocean tides slightly influence the hydrologic conditions in the lower basin.

The feasibility study will concentrate on flood problems in the upper basin. However, because the two sub-basins affect each other hydraulically, the upper basin cannot be discussed without considering hydrologic impacts to and from the lower basin.

This Page reserved for
Vicinity Map of Study Area.

SECTION 3 - FOCUS OF FEASIBILITY STUDY

RESULTS OF RECONNAISSANCE STUDY

This reconnaissance report was prepared in response to the House of Representatives Report 102-555, which accompanied the 1993 Energy and Water Development Appropriations Bill. The primary objectives of this study were to (1) identify flood and related water resource problems within the South Sacramento County Streams study area, (2) identify at least one feasible plan to solve these problems, (3) develop a management plan for feasibility-level studies, and (4) identify a potential non-Federal sponsor for the feasibility study.

The major findings in the reconnaissance study are:

- Flooding is a serious and widespread problem on Morrison, Elder, Unionhouse, and Laguna Creeks. Flooding is especially severe in the populated, middle portion of the basin where backwater from Beach-Stone Lakes and flat gradients impede channel flow.
- There is a serious flood threat to the densely populated area north of Beach-Stone Lakes in the City of Sacramento due to failure of Sweeney Ranch, Beach Lake, or Morrison Creek levees from high water levels at Beach-Stone Lakes.
- Along Morrison and Unionhouse Creeks, 100-year level of protection can be economically achieved through either channel and levee improvements or a combination of channel and levee improvements and flood detention basins.
- It appears that the potential for developing an economically feasible flood control plan along Elder and Laguna Creeks is low. However, a flood control plan limited to certain reaches may be feasible.
- SAFCA, with the participation of the City and County of Sacramento, has stated its intent to act as the sponsor for feasibility studies of South Sacramento County Streams.

The reconnaissance report recommended that the Federal Government proceed to the feasibility phase and initiate cost-shared feasibility studies.

A Reconnaissance Review Conference (RRC) was held on 30 June 1994 at SPD. The RRC produced two technical comments: one regarding the establishment of potential failure and non-failure points (PFP's and PNP's) on some of the levees in the study area, the other regarding calculation of economic damages resulting from flood stages at the PFP and the PNP. The Corps

Sacramento District responded to the two comments and found they resulted in no change to the basic conclusions outlined in the reconnaissance report.

Subsequent to the RRC, the without project future condition assumed in the reconnaissance study changed. The County announced that it would, on its own, mitigate for increased runoff due to urbanization of the upper watershed. Mitigation would be accomplished through construction of detention basins. The Corps Sacramento District conducted a supplemental reconnaissance reevaluation to estimate flood problems and damages that would ensue given the new future without-project condition and assuming future hydrology would be equal to existing hydrology. This new evaluation concluded that flood control development is still economically feasible on Morrison and Unionhouse Creeks (Elder and Laguna Creeks were not part of this reevaluation). In fact, the combination of the post-study economic evaluation and the supplemental reevaluation resulted in a net increase to the benefit to cost ratio. Supplemental reconnaissance report has been prepared and will be forwarded along with this IPMP for approval by SPD and Headquarters U.S. Army Corps of Engineers (HQUSACE).

PROJECT PURPOSES

Flood Control

The primary study purpose is flood control. The feasibility study will identify a National Economic Development (NED) plan which attains the highest net benefits of all acceptable and feasible flood control alternatives. However, a locally preferred plan may also be identified (if different from the NED plan). The cost sharing will be based upon the NED plan. Both plans would be technically complete, providing for all required mitigation. The plans will include all necessary documentation to comply with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), and other applicable state and local statutes.

Recreation

Recreation is a secondary project purpose. If flood control improvements result in special opportunities for recreation, a recreation plan will be developed during the feasibility study. A recreation plan may be recommended if the separable benefit of recreation is greater than its separable cost and if a non-Federal sponsor is available to share design and construction costs and operate and maintain the completed project.

Wildlife Enhancement

Similar to recreation, wildlife enhancement is a secondary project purpose. A wildlife enhancement plan will be developed if there is an opportunity to incorporate it with the selected flood control plan. Wildlife enhancement may be recommended if a feasible plan is found and if there is a non-Federal sponsor willing to cost-share design and construction costs and operate and maintain the completed project.

FEASIBILITY STUDY PURPOSE

Purposes of the South Sacramento County Streams feasibility study are:

- Define the flood risks posed by the subject streams.
- Identify potential flood control measures and describe the most feasible ones in detail.
- Identify recreation and wildlife enhancement opportunities, and identify non-Federal sponsors for these project purposes.
- Formulate the NED plan.
- Formulate other alternatives, as appropriate, and identify the locally preferred plan.
- Identify a plan to be tentatively recommended for construction.
- Develop a project management plan (PMP) to guide the design and construction efforts.

FEASIBILITY STUDY SCOPE

Study Area

The primary study area for hydrology and environmental impact reporting purposes will be the entire upper drainage area plus the Beach-Stone Lakes area. However, as in the reconnaissance study, the study area will also extend to the Sacramento-San Joaquin Rivers Delta downstream from Lambert Road as the delta affects Beach-Stone Lakes hydrology and environmental impacts may extend to the delta. The study will at a minimum, refine the estimated flood problem and consider flood control alternatives at the following areas:

- Morrison Creek/Beach Lake Levee - From Jackson Road to Beach Lake and the Sacramento River.

- Elder Creek- From Elk Grove/Florin Road to Morrison Creek.

- Unionhouse Creek - From Strawberry Creek to Morrison Creek.

- Laguna Creek - From Highway 99 to Morrison Creek.

- Sacramento Regional Wastewater Treatment Plant Ring Levees - Includes the existing levees and any necessary levee extensions.

Flood control improvements may extend upstream and/or downstream from the listed reaches to capture flows that may otherwise flank the proposed project, or to mitigate for with-project induced flooding (hydraulic mitigation).

Preliminary Alternatives

The feasibility study will develop costs and benefits of, and analyze impacts from, at a minimum, channel and levee improvements. Levee improvement measures can include strengthening, raising, or replacing existing levees, or building new levees or flood ways. Channel improvements can include enlarging or straightening existing channels; lining channels with concrete, riprap, grouted stone, grass or other material; and replacing bridges. Each alternative will be analyzed at 25-, 50-, 100-, 200- and 500-year levels of protection. Alternatives under consideration may change during the course of the study, but must be agreed to by both the Corps and the local sponsor.

Local Crediting of Flood Control Development

The local sponsors plan to raise and lengthen the Beach Lake levee and the Sacramento Regional Wastewater Treatment Plant levee during the feasibility phase. The local sponsors may request that their design and construction expenses be credited towards the local share of the flood control plan developed in the feasibility study. Crediting is authorized under Section 104 of Public Law 99-662. At the RRC, it was noted that elements for Section 104 credits will be included in the feasibility report and must be economically justified. Credits must be approved prior to construction, and construction must be initiated before authorization of the project.

If local design and construction takes place within 3 years after project authorization, local costs may be credited as "Section 215" credit. Subject flood control elements must be part of the authorized project and must be incrementally justified. Credit is limited to a maximum of \$3 million or 10 percent of the total project cost.

Level of Detail

The level of detail will be that necessary to identify the NED plan and locally preferred plan.

The amount of engineering detail in the engineering appendix shall be sufficient to establish the baseline cost estimate, identify the NED plan, and a recommended plan for implementation. Cost estimates of alternatives will be based on quantity takeoffs derived from channel geometry and real estate required for each alternative. Alternative analysis will be at a detail great enough to effectively compare alternatives in terms of costs; benefits; and environmental, hydrologic, social, and cultural impacts.

Study costs and schedule in this IPMP do not allow for a level of detail greater than that appropriate for the feasibility phase. However, during the course of the study, the design level of detail for the selected plan may be increased to facilitate the post-study design effort. Changing the design level would require prior approval by the local sponsors and (HQUSACE).

WITHOUT-PROJECT ASSUMPTIONS

Feasibility study without-project assumptions affect future condition hydrology and the risk of flooding. Without-project assumptions are as follows.

Land Use

The South Sacramento County Streams watershed within the City of Sacramento and the Sacramento County urban services area is projected to be fully urbanized within the life of any Federal project. The urban services boundary is delineated in the Sacramento County general plan. The boundary encompasses virtually all the drainage basin outside the Sacramento city limits except Beach-Stone Lakes, the aggregate mining area in the vicinity of Jackson Road and Morrison Creek, and the extreme northeast corner of the basin. Urbanization will consist of low to medium density residential development with supporting commercial, institutional, and industrial uses.

Future Water Resources Projects

For the purposes of this IPMP, the upper watershed is defined as areas of the basin above the reaches defined under study area. The feasibility study assumes that there will be no increased peak flows due to future urbanization in the upper watershed. Increased peak flows due to urbanization will be mitigated by the County. The method identified by the County to mitigate potential impacts of the flows is by local detention basins. The County is currently formulating local

drainage master plans that include provisions for funding, dedicating land for, and constructing these detention basins. It is expected that some detention basins will be constructed and come on line within the next 3 years, others will be constructed as urbanization occurs. The basins will be considered part of the without-project condition. For detention not in place by the end of the feasibility study, the without-project condition will be dependent upon the County providing, before the end of the feasibility study, assurances of Its intent to build all necessary detention facilities. The assurance must be approved drainage master plans, statutes, or other legally binding arrangement. The assurance must be acceptable to both the local sponsors and the Corps. As part of the feasibility study, the Corps will work with the County to revise the existing hydrologic model to reflect the County's detention plans. The feasibility study will confirm that the County's plans will work hydraulically and will develop future condition hydrology in accordance to Corps criteria. The study will also determine any increases in volume of runoff due to changes in land use. The detention basins together with the levee and channel improvements to be considered in the feasibility study are the major parts of the overall basin flood control plan. Channels and levees will be sized to work in concert with existing and future basins. The feasibility study will also assume that no project will be built that significantly affects water-surface elevations or hydrology of the Beach-Stone Lakes area. It is also assumed for the study that there will be no changes to hydrology of the Mokelumne or Cosumnes Rivers.

The study will assume that the County will perform minimal channelization in the invert of the upper reaches of Florin, Elder, and Laguna Creeks, primarily to allow future storm drain out falls from new urban development to drain by gravity. These limited channel improvements will increase 10-year peak flows, but should not increase design flood flows.

During the course of the feasibility study, without-project assumptions may be changed providing there is a consensus between the Corps, SAFCA, and the City.

SECTION 4 - MANAGEMENT OF STUDY

General

The study will be managed at three basic levels: Corps Project Review Boards (PRBs), Study Management Team (SMT), and Executive Committee. The following is a description of each. SAFCA and the City will participate in study management. In order to manage this cost-shared study, an Executive Committee and an SMT will be formed. This management structure will be formalized in the Feasibility Cost-Sharing Agreement (FCSA).

Project Review Boards

PRBs have been established at three levels within the Corps to evaluate the status and progress on all studies, projects, and programs. One PRB includes HQUSACE. The HQUSACE PRB is chaired by the Director of Civil Works or designee and includes the chiefs of the elements whose functions are integral to the USACE role in civil works project. The HQUSACE PRB will review the study only if it determines that it needs intensive management at that level or if recommended by SPD PRB. The HQUSACE PRB will facilitate resolution of major study issues, concerns, or problems through Corps functional channels and make recommendations to the Director of Civil Works, SPD, and SAFCA as part of intensive management. Upon receipt of a Schedule and Cost Charge Request (SACCR), the HQUSACE PRB will approve changes in major milestones and significant cost increases in accordance with Engineering Regulation (ER) 5-7-1. The HQUSACE PRB will meet bimonthly.

The second PRB will be chaired by the SPD Commander or designee and include the chiefs of the elements whose functions are integral to the role of the Division in civil works projects. The SPD PRB will review monthly the project executive summary (PEES for compliance with the IPMP and provide comments to the District. The SPD PRB will facilitate resolution or elevate to the Division Commander or higher authority major issues raised during the study, monitor study contingencies and cost changes against the approved study cost estimate, and take appropriate action on schedule and cost change requests (SACCR), in accordance with ER 5-7-1.

A third PRB will be held by the Sacramento District and chaired by the District Commander or designee. It will include the chiefs of the elements whose functions are integral to the role of the District in civil works projects. The District PRB will review monthly the PES report (along with all others for the District) for compliance with the IPMP and provide comments to the Division and the project manager. The District PRB will facilitate resolution or elevate to SPD major issues raised during the study, monitor study contingencies and costs of changes against

the approved study cost estimate, and take appropriate action on SACCR, in accordance with ER 5-7-1. The District PRB also will approve the IPMP and any significant changes identified by the SMT and recommended by the project manager in accordance with ER 5-7-1. The sponsor will attend the District PRB meetings at his discretion.

Study Management Team

The SMT will include representatives from the Corps, SAFCA, the City, and the County. This team will ensure appropriate scope of the studies, guide in their accomplishment, and participate in selection of potential solutions. The team will be directly involved in establishing mutual roles and in focusing on the critical issues. Corps representatives will include the study manager and the Chief of American River/Great Basin Branch. The team will recommend to an Executive Committee the tasks to be conducted and extent of planning and evaluation to be carried out in the feasibility phase. The team will also report to the committee on the results of studies and recommend alternative courses of action for project implementation. Members of the study team are listed below.

SMT meetings will be held regularly throughout the feasibility phase. Meetings will be held at approximately 1-month intervals, but may be more frequent. Current SMT members are listed on Table 1.

Table 1
Current Study Management Team Members

Organization	Name/Title	Address	Phone
Corps of Engineers CESPK-PD-A	Merritt Rice Chief, Am River/GR Bsn Br	1325 J Street Sacramento, CA 95814	(916) 557-6761 (916) 557-7856 FAX
Corps of Engineers CESPK-PD-A	Tom Adams Study Manager	1325 J Street Sacramento, CA 95814	(916) 557-6716 (916) 557-7856 FAX
Corps of Engineers CESPK-PM-C	Paul Bowers Project Manager	1325 J Street Sacramento, CA 95814	(916) 557-6639 (916) 557-7848 FAX
Corps of Engineers CESPK-ED-D	Larry Dacus Engineering Manager	1325 J Street Sacramento, CA 95814	(916) 557-6711 (916) 557-7846 FAX
Corps of Engineers CESPK-RE-C	Pat Dwyer Real Estate Mgr	1325 J Street Sacramento, CA 95814	(916) 557-7802
Corps of Engineers CESPK-PD-R	Jean Rinck Environmental Coord	1325 J Street Sacramento, CA 95814	(916) 557-6715 (916) 557-7856 FAX
SAFCA	Paul T. Devereux Federal Coordinator/ Grant Kreinberg Consultant	1325 J Street Sacramento, CA 95814	(916) 440-7606 (916) 440-8289 FAX
City of Sacramento Utilities Dept	A.E. McCollam Federal Coordinator/ George Weddel Consultant	5770 Freeport Blvd, Ste 100 Sacramento, CA 95822	(916) 433-6619 (916) 433-6652 FAX
County of Sacramento Dept. of Public Works Water Resources Division	Craig Crouch Project Engineer	827 Seventh Street Room 301 Sacramento, CA 95814	(916) 440-6851 (916) 552-8693 FAX

Executive Committee

The Executive Committee will include the District Engineer (or his designee) and his two chief planners (Planning Division Chief and Planning and Programs Management Division Chief). The sponsors, SAFCA and the City, will each provide one representative along with one primary technical advisor. Those representing SAFCA and the City will be equal partners with the Corps representatives on the committee. The District Engineer and his counterpart from SAFCA will co-chair the committee. The Executive Committee will manage the overall study by (1) maintaining a working knowledge of the feasibility study, (2) assisting in resolving emerging policy issues, (3) ensuring that evolving study results and policies are consistent and coordinated, (4) directing the SMT, and (5) ratifying decisions made by the SMT. Members of the Executive Committee are listed below.

The Executive Committee will participate in Issue Resolution Conferences (IRCs). The committee is also responsible for resolving any disputes that may arise during the study. The committee will agree on the solutions and study direction, which may include termination. At least one IRC will be held prior to the public distribution of the draft feasibility report to ensure that all issues are resolved before the final report is submitted to higher authority. Additional IRCs will be held, as required, throughout the study to resolve any problems that may arise. Current Executive Committee members are identified on Table 2.

Table 2
Current Executive Committee Members

Organization	Name/Title	Address	Phone
Corps of Engineers CESPK-DE	John N. Reese, Colonel District Engineer	1325 J. Street Sacramento, CA 95814	(916) 557-7832
Corps of Engineers CESPK-DDP	Edward G. Jones Deputy District Engr for Project Management (Acting)	1325 J. Street Sacramento, CA 95814	(916) 557-7832
Corps of Engineers CESPK-PD	Walter Yep Chief, Planning Division	1325 J. Street Sacramento, CA 95814	(916) 557-6699
Sacramento Area Flood Control Agency	F.I. (Butch) Hodgkins Director	926 J. Street, Suite 424 Sacramento, CA 95814	(916) 440-7606
City of Sacramento Utilities Department	Jim Sequeira Director	5770 Freeport Blvd. Suite 100 Sacramento, CA 95822	(916) 443-6318
Co of Sacramento Dept. of Public Works	Douglas M. Fraleigh Director	827 Seventh Street Sacramento, CA 95814	(916) 440-6581

SECTION 5 - TECHNICAL REQUIREMENTS

The work to be performed consists of a feasibility level effort per the attached schedules and budgets to determine the best solution to the flooding problems in the Morrison Creek/Laguna Creek basin. The National Economic Development (NED) plan will be identified, as well as any-plan preferred by the local sponsor, if different. This work includes preparation of an environmental impact statement/environmental impact report (EIS/EIR), cost/benefit evaluations, the necessary survey and geotechnical investigations, a hydraulic analysis, design calculations and drawings, preparation of an MCACES cost estimate, real estate investigations, a recreational and wildlife enhancement analysis, study management, and coordination with local, State, and Federal agencies as well as environmental/other interest groups and the public. The scope of studies in terms of content and level of detail for the feasibility stage effort are as defined and required by the following documents:

ER 5-7-1 dtd 1 March 1991	“Project Managements” Department of the Army regulation for the overall management of civil works projects
ER 220-2-2 dtd 4 March 1988 33 CFR 230	“Procedures for Implementing NEPA” Department of Army regulation on environmental quality.
ER 405-1-12 (Ch. 12) dtd 28 May 1991	“Real Estate Handbook- Local Cooperation” Department of the Army regulation establishing guidelines for real estate activities for local cooperation agreements.
ER 1 105-2-100 dtd 28 December 1990	“Planning Guidance” Department of the Army regulation on policy and guidance for the conduct of civil works planning studies.
ER 1110-2-1150	“Engineering and Design for Civil Works Projects”
ER 1165-2-131	“Local Cooperation Agreement for New Starts” Department of the Army regulation for developing and processing local cooperation agreements.
EC 1 105-2-205	“Risk Based Analysis for Evaluation of Hydrology/Hydraulics and Economics in Flood Damage Reduction Studies”

EC 1110-2-263	“Civil Works Construction Cost Engineering” Department of the Army circular establishing accounting standards for preparing cost estimates for civil projects.
EC 1110-2-538	“Civil Works Project Cost Estimating - Code of Accounts” Department of the Army circular establishing accounting standards for preparing cost estimates for civil projects.
EM 1110-2-1301	“Cost Estimates - Planning and Design Stages”
U.S. Water Resources Council Publication	“Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies”
dtd 10 March 1983	

SECTION 6 - CODE OF ACCOUNTS

For accounting and administrative purposes all tasks, including in-kind services will be organized in a “Code of Accounts” format as required by ER 1 105-2-100. This cost code has been broken down into a series of subaccount covering project activities during the feasibility phase. In general, the subaccount relate to activities performed by a specific technical or administrative work element within the Corps. In-kind services performed by SAFCA and the City are incorporated into the WBS as a cost figure. Responsible functional elements for each account code are described in detail later in this IPMP.

The Code of Accounts organization of tasks is called a Work Breakdown Structure (WBS). The WBS is organized along the following levels:

Level Number	Level Description	Example	
		Accounting Code	Name
1	Project/Subproject	(none)	South Sacramento County Streams, California
2	Product	J	Feasibility Report
3	Subproduct	(none)	(not applicable to this feasibility study)
4	Activity	JA	Engineering Appendix
5	Subactivity	JAA	Surveys and Mapping
6	Work Element	JAA-1	Detailed Channel/Levee Maps

SECTION 7 - WORK TASKS AND RESPONSIBILITIES

The following is a brief description of the major feasibility phase tasks and the responsibilities to accomplish these tasks. At the beginning of each task, either the Corps or the local sponsors may review any planned in-kind work or contract of the other for adequacy. At the conclusion of each task, either the Corps or the local sponsor may review and approve the results of the work before it is considered complete. Review and assessment of the adequacy of the task will be accomplished by the SMT and its technical staff.

JA - ENGINEERING APPENDIX

JAA - Surveys and Mapping Except for Real Estate

Mapping is required for flood routing to delineate overbank flows and for civil and hydraulic design work. The City's surveys and plans covering Morrison and Unionhouse Creeks will be used as much as possible.

JAB - Hydrology and Hydraulic Studies/Report

Overall basin hydrology used in the reconnaissance study is generally adequate for the feasibility study. The concurrence between high water at Beach-Stone Lakes and peak flow on Morrison Creek is currently inadequately understood and will need to be evaluated in the feasibility studies. New without-project assumptions may require adjusting future hydrology and readjusting of hydrographs. With-project impacts such as raising Beach-Stone Lakes water-surface elevation will be addressed. This impact analysis will include a review of levee failure, flow assumptions, and established policy that results in baseline flood plain elevations. New hydrology studies will also include determining the uncertainty of the flow-frequency relationship for use in a risk and uncertainty analysis. A feasibility-level hydrology report will be generated.

Hydraulic studies will be used to determine with and without project flood plains, and design channel and levee improvements. Previous flood plain routing studies used in the reconnaissance study are inadequate for the feasibility study, but these studies will use data from previous studies whenever possible. Flood routing in the upper basin will be at a level of detail adequate to determine flows between creeks, natural detention, and timing of peaks where flows meet. More detailed analysis will be required along the study reaches where benefits will accrue. A standard deviation of error in stage/flow relationship will be determined for use as input to the risk and uncertainty analysis.

Channels and levee sizes, configurations, design water-surface profiles, and top-of-levée elevations will be developed by the Corps using hydraulic modeling procedures standard for the Corps. Hydraulics will be based on feasibility-level hydrology. Interior drainage and sediment transport issues will be addressed, and impacts of events exceeding the design event will be evaluated. The studies will also evaluate streambank stabilization and channel stability and quantify the uncertainty of the flow-depth relationship. sedimentation issues will be explored and incorporated into hydraulic designs as needed.

JAC - Geotechnical Studies/Report

This work will include reviewing potential ground water and seismic conditions along the study reaches of Morrison, Elder, Unionhouse and Laguna Creeks. It will also include boring and/or trenching explorations of sensitive levee locations to determine structural soundness. Analysis of explorations will be made by the Corps SPD laboratory. This task includes administration of a drilling contract. Elevations representing probable failure and probable non-failure points will be determined along all levees under study. Potential material requirements and geotechnical design parameters, as well as identifying potential borrow areas, determining sources and costs of other material, and identifying potential disposal sites, will also be estimated.

JAE - Engineering and Design Analysis Report with Preliminary Drawings

This work will include designs of all flood control and any potential recreation and fish and wildlife enhancement features. The basis of design will include drawings displaying the plan, profile, and typical cross sections. Quantities will be developed based on design. The work will include field investigations and coordination with local interests regarding design considerations. This task will include determination of alternative operation and maintenance requirements. Details of the work will be discussed in a basis of design, which will be included as an appendix to the feasibility report.

The level of detail of the design work will be sufficient to estimate the baseline cost, identify the NED plan, and determine the selected plan (may be the same as the NED plan). More detailed design work may be included during the feasibility phase if the Corps and non-Federal sponsors determine, and agree in advance that the additional detail is needed.

Overall management and coordination of Engineering Division technical elements performing hydrology; hydraulic and civil design; geotechnical work; hazardous, toxic and radiological waste (HTRW) studies; and cost estimating rests with the engineering manager. In most cases, the engineering manager will represent Engineering Division technical elements at SMT meetings.

JB - SOCIOECONOMIC STUDIES/REPORT

JBA - Economic Analysis/Report

This task will be performed by the Corps. Corps tasks will include obtaining flood plain maps and gathering and compiling property and structure characteristics such as foundation heights, square footage, number of stories, usage, and type of construction for those structures located within the flood plains.

Flood damages will be evaluated, and flood control benefits of the various alternatives and the selected plan will be determined. Essential hydrologic and hydraulic input to the flood damage analysis includes without- and with-project stage data. Existing conditions and future land use development projections will also be evaluated.

Once flood damages are estimated, the following benefit categories will be determined: inundation reduction benefits, location benefits, savings in flood proofing costs, advanced bridge replacement, transportation cost savings, emergency cost savings, and employment benefits. Other potential benefits associated with incidental purposes will also be examined. To assure that the project remains economically viable through the design phase, benefits will be updated once every 2 to 3 years.

A risk and uncertainty analysis will be done to help quantify uncertainties in the flood damage estimates, and a probability distribution will be developed for expected annual flood damages and flood reduction benefits associated with the various alternatives and the selected plan. The critical key variables that will be evaluated include structure first-floor elevation, structure values, and content values.

These studies will assist in measuring potential flood damages and flood control benefits when evaluating potential projects. An economic appendix will be provided for inclusion in the technical documentation for the feasibility study and will include development of benefits for each alternative. Tasks will include preparing materials, including text and plates, for inclusion in the appendix, assisting in plan formulation, reviewing in-house reports, responding to comments, and supporting the study manager and others during the study phase.

JBB - Social Studies/Report

Social impact studies will be accomplished and reported in the EIS/EIR.

JBC - Institutional Studies/Report

This task primarily consists of determining the financial and legal arrangements required to implement the recommended plan, including methods of financing. A financial capability analysis will examine whether the potential sponsor for construction has the organizational, legal, and financial capability to undertake the required financial obligations for implementation of the project. Studies include determining the political and institutional arrangements of the study area and identifying attitudes and customs regarding the management and use of the resources.

JBE - Financial Analysis Report

The non-Federal sponsor will prepare and submit to the Corps a financing plan to display its ability to meet the construction cost-sharing requirements.

JC - REAL ESTATE ANALYSES/DOCUMENTS

JCA - Real Estate Supplement/Plan

Real estate studies will be conducted by the Corps to determine lands, easements, rights-of-way, relocations, and disposal areas (LERRDs) necessary for the project. The work includes completion of required investigations; preparation of documentation materials, including text and plates; coordination of real estate activities with the study manager; in-house reviews; response to comments; support to other technical elements during the study; and review of the financial plan. Costs, including acquisition and administrative, will be identified in the required format for the code of accounts. Study results will be documented in the real estate plan as an appendix to the feasibility report.

JCB - Gross Appraisal/Report

Investigative tasks will be conducted by the Corps and the non-Federal sponsor to include a gross appraisal of land costs, resale values, and damages required for economic evaluations of the alternative plans.

JCC - Preliminary Real Estate Acquisition Maps

Detailed identification of ownership and tentative real estate maps based on project design and mitigation requirements will be developed in accordance with ER 405-1-12 and ER 405-2-4.

JCD - Physical Takings Analysis

This is an analysis to evaluate if the project will hydraulically impact private property or rights for the public's use.

JCE - Preliminary Attorney's Opinion of Compensability

Investigation and attorney's determination, if owners of project affected facilities or utilities have a vested interest and compensable interest in the property.

JCF- Rights of Entry

Required rights-of-entry will be obtained by the Corps for cultural, environmental, HTRW, and engineering studies by the Corps.

JCG - All Other Real Estate Analyses/Documents

Real Estate input to the IPMP and an institutional real estate financial capability analysis are included under this subactivity.

JD - ENVIRONMENTAL STUDIES/REPORT

JDA- Environmental Studies/Report

The environmental evaluation prepared in the reconnaissance phase will be expanded into a comprehensive environmental impact statement (EIS) and environmental impact report (EIR). These documents will evaluate the environmental effects of the alternative plans and satisfy the requirements of the NEPA, CEQA, and other Federal and State environmental laws. The EIS and EIR will be either a joint document or separate documents. Generally, the Corps will be responsible for satisfying Federal requirements, and SAFCA, the City will be responsible for tastes needed to satisfy State regulations. It is expected that any additional, unscheduled major tasks that are beyond the scope of this IPMP and are required solely by the CEQA process will be accomplished by the local sponsor and not cost shared. The draft environmental documents will be circulated to appropriate State and Federal agencies and interested organizations and individuals. Comments received on the drafts will be addressed, and revisions will be made in accordance with Federal and State law.

Mitigation features for fish and wildlife and other affected resources will be formulated and a monitoring plan developed to record the success of the mitigation. Any land required for mitigation will be identified.

Requirements of the Endangered Species Act and the California Endangered Species Act will be completed during the feasibility phase. A biological assessment and formal consultation with the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service, and California Department of Fish and Game (CDFG) will be initiated if it is determined that State- and Federally-listed species will be affected by the alternatives.

A Section 404(b)(1) evaluation of water quality impacts will be accomplished by the Corps and coordinated with State and Federal water quality agencies to ensure that adequate consideration has been given to water quality and to acquire water quality certification or exemption.

The Corps will prepare a scope of work and contract with FWS to prepare a coordination act report. The Corps will supervise the contract. All steps in the coordination act process will be available for review by the non-Federal sponsor. The Corps, non-Federal Sponsor, FWS, and optionally the CDFG will jointly conduct a Habitat Evaluation Procedure (HEP) analysis. The HEP analysis will quantify habitat losses due to the selected alternative and establish habitat values of alternative mitigation areas. An incremental analysis of the cost versus benefits of the mitigation measures will also be performed.

The Corps and the non-Federal sponsor will identify potential fish and wildlife enhancement opportunities allied with the proposed flood control project and a potential non-Federal sponsor. This task will be accomplished by both the Corps and the non-Federal sponsor.

A recreation plan will be formulated and analyzed in terms of benefits and costs. If a feasible recreation plan is found and a potential non-Federal sponsor is identified, the recommended flood control plan will include a recreation plan.

JE - FISH AND WILDLIFE STUDIES

JEA - Fish and Wildlife Coordination Act Report

This task includes studies by the FWS in support of the environmental studies required by the Fish and Wildlife Coordination Act. The principal FWS product is a coordination act report. The report will refine impacts of alternatives on fish and wildlife habitat and recommend types and amounts of mitigation for habitat losses. The Corps will coordinate with FWS and supervise the interagency contract as part of its environmental impact studies task.

JF - HAZARDOUS, TOXIC, AND RADIOLOGICAL WASTE STUDIES/REPORT

JFA - HTRW Studies/Report

No problems with HTRW have been identified in the reconnaissance assessment. However, lands that make up the selected plan site will be field inspected for HTRW. If HTRW sites are encountered, a response analysis will be initiated to identify and evaluate alternatives to respond to the problem. The first alternative will be avoidance of the problem area. Activities to address HTRW could include sampling and analysis to identify contaminants and concentrations, delineation of site contamination, assessment of threat to human health and the environment, and estimate of cleanup cost. HTRW response measures are the responsibility of the non-Federal sponsor and will be completed by the sponsor.

JG - CULTURAL RESOURCES REPORT

JGA - Cultural Resources Report

The cultural resources studies by the Corps will determine the impacts of the alternative plans on any historical, architectural, and archeological resources in the construction area. Many of the areas expected to be affected have already been surveyed in accordance with the National Historic Preservation Act of 1966. Further field surveys may need to be performed. A report to document the survey results, outline significant cultural resources, and describe impacts of each alternative on cultural resources will be prepared and coordinated with the State Historic Preservation Officer, the National Park Service, and the Advisory Council on Historic Preservation. Any sites discovered during the survey will be evaluated for the National Register of Historic Places. The cultural resources report will be included in the EIS/EIR.

JH - COST ESTIMATES

JHA- Cost Estimate

The work will include preliminary cost estimates for alternatives and an MCACES cost estimate for the NED and tentatively selected plans. It will be accomplished by the Corps. The cost estimate will also include contingencies, operation and maintenance costs, and interest during construction. Costs and a narrative explaining the basis of the cost estimate and assumptions will be included in the basis of design.

JI - PUBLIC INVOLVEMENT DOCUMENTS

JIA - Public Involvement Documents

Responsibility for this task will be shared between the Corps and the sponsor. This task will include one public workshop, a series of public outreach sessions, and a public meetings

The purpose of the public workshop is to solicit input concerning study scope and local interests and desires. The outreach sessions will keep the public informed of study progress and facilitate local feedback. The public meeting will give the public and organizations an opportunity to comment on the draft report. Oral testimony at the public meeting will be considered official comments on the draft report, and will satisfy NEPA and CEQA public review requirements.

Work includes arranging and hosting the public workshop and outreach sessions and preparing follow-up documentation.

JJ - PLAN FORMULATION AND EVALUATION REPORT

JJA - Plan Formulation and Evaluation Report

Plan formulation includes reassessing the resources and related problems and needs and developing, reviewing, and refining alternative plans selected for study during the feasibility phase and other plans formulated to date. Formulated plans will include required alternatives such as a no-action plan and a nonstructural plan. Alternatives will be formulated from a variety of flood control measures to display a full array of flood control opportunities, assess their performance under various flood events, identify a reliable NED plan, and satisfy the NEPA. As part of the formulation process, the study will consider technical feasibility, economic feasibility, environmental impact, real estate acquisition, induced flooding, and views of the public. The alternatives that pass an initial screening will be analyzed in terms of costs and benefits to determine an NED plan. Alternatives will be evaluated for with-project risk and uncertainty in the overall analysis. A Monte Carlo simulation will be used to combine the inherent hydrologic, hydraulic, and economic uncertainties and express the reliability of alternatives in terms of percent chance of failure for given flood events. The selected plan will be a locally preferred plan with Federal participation based on the NED plan.

The annual and periodic activities and responsibilities for operating and maintaining the completed project, including environmental mitigation sites, will be described. The magnitude of these activities will be described for the alternative recommended for implementation. All requirements of 33 CFR 208 and other Federal regulations specifying operation and maintenance requirements will be

clearly described so that the City and County of Sacramento will be aware of their respective future duties.

Plan formulation and studies to date will be reported in two interim documents: the F3 Report and the F4 Report. The F3 Report will provide preliminary alternatives and cost and benefit data to indicate economic feasibility. The F4 Report will document full alternative formulation and identification of the NED plan and the tentatively selected plan. Costs and benefits and environmental and hydraulic impacts will be discussed in the F4 Report.

JK- DRAFT REPORT DOCUMENTATION

JKA- Draft Report Documentation

The work will include assembling pertinent data, and writing, editing, typing, drafting, reviewing, revising, reproducing, and distributing the draft feasibility report, EIS or EIS/EIR, and related technical documents.

JL - FINAL REPORT DOCUMENTATION

JLA - Final Report Documentation

This work will include all tasks necessary to produce and distribute the final feasibility report and supporting documents. Tasks are similar to JKA, Draft Report Documentation. Tasks also include all work items necessary to support the review process from the signing of the feasibility report to the request by the Assistant Secretary of the Army for Civil Works (ASAICW)} to the Office of Management and the Budget (OMB) for the views of the administration. In addition tasks include answering comments, attending review meetings, and revising the report.

JP- MANAGEMENT DOCUMENTS

JPA - Management Documents

Responsibility for day-to-day technical management of the study lies with the Corps Planning Division in cooperation with the non-Federal sponsor and the other local interests. Study management will ensure that all required tasks and coordination are performed. This task includes such duties as assigning and negotiating study tasks to technical elements, scheduling the study, coordinating between technical elements, monitoring and modifying assigned work items as required, and reviewing results and reports provided by the technical support staff

and technical correspondence. Budget preparation, correspondence, inter organizational coordination, and point-of-contact responsibilities are also part of study management. The study manager will organize, set the agenda for, and moderate SMT meetings. The study manager will coordinate with Real Estate Division.

The Corps project manager is responsible for managing the overall Study cost, schedule, present and future budget year submissions, and coordination with the Non-Federal sponsor. The non-Federal sponsor will assist in project management. The Corps project manager with assistance by the non-Federal project manager will monitor expenditures, keep the IPMP current, prepare project management reports and SACCR as needed, and report study status and issues to the District Engineer. The project management structure will continue into the pre-engineering and design and construction phase.

JPI - Updates of IPMP

Updates of IPMP will include monthly finance and accounting reports regarding expenditures and obligations, executive summary reports for the PRB, schedule and cost changes, and changes to work elements. Updates are described in Section 10, Study Management Tools.

JPL - Project Management Plan (PMP)

A product associated with the feasibility study is the PMP. The PMP describes the project activities during Preconstruction Engineering & Design and construction phases and is a basis for the project cost sharing agreement. A draft PMP will be attached to the draft feasibility report.

JPZ - Programs and Project Management Documents

This subactivity includes preparation of budget documents and financial reports. At the end of the study a final audit will be performed. Work required to prepare a sponsor letter of intent to participate in the Preconstruction Engineering & Design and construction phases will be prepared under this subactivity.

SECTION 8 - STUDY COST ESTIMATE

FEASIBILITY STUDY COST

All feasibility study costs are required to be cost-shared between the Corps and the non-Federal sponsor on a 50-50 basis. Further, the non-Federal sponsor may provide a maximum of half of its total share as in-kind services toward the study. The feasibility study cost estimate for the South Sacramento County Streams Investigation is \$2.8 million. The cost estimate and work breakdown structure of the feasibility study is presented in table numbers 3 through 10. The tables divide costs into different categories as follows:

- **Work Breakdown Structure (WBS)** - activities, subactivities, and work elements or tasks are shown on Table 9.

- **Tasks** - tasks, or work elements are organized through the WBS. Each task has a WBS code (e.g. JAA-01). One or more resources are assigned to each task.

- **Fiscal years** - study costs occurring in fiscal years 1995, 1996, 1997, and 1998. Referred to as "Distribution" in the table titles.

- **Resources** - Resources are as follows:

Resource:	Listed in Table As:
Corps technical elements hired labor	HL
local sponsor in-kind work	Local Sponsor
work performed through contract	AE
other Federal agency work	OA
miscellaneous expenses (e.g. printing costs)	OE

- **Charge Type** - Corps hired labor is divided into direct, indirect, and overhead charges. Direct charges are derived from the rate of pay, leave, and benefits for staff assigned to a task. Indirect and overhead charges are Corps support costs, e.g. building rent and services not specific to the study.

The feasibility study cost estimate is based on October 1994 price levels and is subject to revision for inflation for future years. Inflation adjustments will be made to the appropriate tasks at the current year approved rate. Changes in costs due to inflationary adjustments will not require a revision to the FCSA. The Corps -will provide the local sponsor with periodic accounting information.

and technical correspondence. Budget preparation, correspondence, inter organizational coordination, and point-of-contact responsibilities are also part of study management. The study manager will organize, set the agenda for, and moderate SMT meetings. The study manager will coordinate with Real Estate Division.

The Corps project manager is responsible for managing the overall Study cost, schedule, present and future budget year submissions, and coordination with the Non-Federal sponsor. The non-Federal sponsor will assist in project management. The Corps project manager with assistance by the non-Federal project manager will monitor expenditures keep the IPMP current, prepare project management reports and SACCR as needed, and report study status and issues to the District Engineer. The project management structure will continue into the pre-engineering and design and construction phase.

JPI - Updates of IPMP

Updates of IPMP will include monthly finance and accounting reports regarding expenditures and obligations, executive summary reports for the PRB, schedule and cost changes, and changes to work elements. Updates are described in Section 10, Study Management Tools.

JPL - Project Management Plan (PMP)

A product associated with the feasibility study is the PMP. The PMP describes the project activities during Preconstruction Engineering & Design and construction phases and is a basis for the project cost sharing agreement. A draft PMP will be attached to the draft feasibility report.

JPZ - Programs and Project Management Documents

This subactivity includes preparation of budget documents and financial reports. At the end of the study a final audit will be performed. Work required to prepare a sponsor letter of intent to participate in the Preconstruction Engineering & Design and construction phases will be prepared under this subactivity.

Cost estimate table are as follows:

- 3 Feasibility Study Cost Estimate, Activities Summary
- 4 Task/Resource Cost by Fiscal Year
- 5 Task/Resource by Charge Type for FY 1995
- 6 Task/Resource by Charge Type for FY 1996
- 7 Task/Resource by Charge Type for FY 1997
- 8 Task/Resource by Charge Type for FY 1998
- 9 Total Costs, Task/Resource by Charge Type
- 10 Resource/Task Cost by Fiscal Year

Tables 3 through 10 are not included. The table showed the Task/Resource cost by fiscal year.

SECTION 9 - MILESTONES AND STUDY SCHEDULE

DESCRIPTION OF MILESTONES

A system of milestones has been established to help monitor and manage study completion. Following is a highlight of each milestone.

Initiate Feasibility Study (F1)

The feasibility work allowance is received, and first Corps charges are made.

Public Workshop (F2)

The purpose of the public workshop is to present results of the reconnaissance study, to describe the feasibility study, and to solicit public views and issues. The public workshop will be organized and conducted by the sponsors, with Corps participation and technical support.

Conference #1 (F3)

The purpose of the F3 conference is to review study findings to date concerning flood control problems and needs (described in quantitative terms), the array of alternatives consistent with the Federal Interest; and analysis of impact of alternatives including first cut economic benefits and social, environmental, and regional impacts. This meeting will be a key decision point as the issue of Federal and non-Federal interest will be revisited. Interim conclusions from the F3 Conference will indicate the feasibility and likelihood of project implementation. At this milestone, study sponsors may wish to review their respective commitments to completion of the study, if they perceive there is a low probability of a positive study recommendation.

Any proposed non-Federal interests' preferred alternative will be identified. "Without-project" hydrology must be approved prior to the conference. Background material in the form of the "F3 Conference Report" will be sent to SPD at least 2 weeks prior to the conference.

The designs and costs presented at the F3 conference will be at a preliminary level of detail. Designs need only be to the minimum detail needed to roughly estimate quantities and costs.

Conference #2 (F4)

The purpose of the F4 conference is to review the selection of the recommended plan and the NED plan. Evaluation criteria and process will be

presented. Problem identification, impact analysis, benefit analysis and selection criteria will be reviewed as well as the issue of continuing Federal and sponsor interest. The sponsor's ability to pay will be reviewed. The status of the ENS, including cultural resources evaluation, fish and wildlife mitigation, and hydraulic mitigation will be discussed. With-project hydrology must be approved before the conference. The background material will be submitted to SPD 2 weeks before the conference.

Submit Draft Report to SPD (F5)

Upon clearance by SPD, the draft report (or other pre-conference documentation) including the draft PMP will be forwarded to HQUSACE in preparation for the feasibility review conference (Milestone F5A).

Feasibility Review Conference (FRC) (F5A)

The conference is normally held in the District office or the immediate project area and will include a field trip to the project site. The Washington-level review team will evaluate the feasibility study using Corps general evaluation guidelines, any specific guidelines following the RRC, and contents of the PMP. Representatives from OASA(CW), HQUSACE, Division, District, and the local sponsor will participate in the FRC. The FRC will be held and the project guidance memorandum (PGM) prepared by HQUSACE prior to release of the draft feasibility report for public review.

Field Level Coordination (F6)

Upon compliance with PGM requirements, the draft feasibility report and NEPA document will be distributed for formal field-level coordination.

Final Public Meeting (F7)

The District will present results of the study, conclusions, and recommendations to the public. Division representatives will usually attend.

Submit Final Report to SPD (F8)

The District will submit the final feasibility report in accordance with guidance in ER 1105-2-100 and include technical documentation report and mailing list for Division Engineer public notice.

Division Engineer Public Notice (F9)

The Division Engineer will issue the public notice and transmit the final feasibility report to HQUSACE for Washington-level processing.

FEASIBILITY STUDY SCHEDULE

The final feasibility report and EIS is scheduled to be submitted to SPD (F8) in approximately 32 months after initiation of the feasibility study. (See figure 2.) The signing of the FCSA is scheduled to take place 1 month prior to initiation of the study (F1). The Division Engineer's issuance of the public notice (F9), which completes the feasibility phase, is scheduled 2 months after the final feasibility report and EIS is submitted for Washington-level review. It is expected that processing the feasibility report through Washington-level review to Congress will add up to 7 months to the feasibility phase period.

SECTION 10 - STUDY MANAGEMENT TOOLS

Over the course of the feasibility study, the Corps will prepare a series of reports and other information documents useful in overall study management. They are available to the study sponsor and are as follows:

JUSTIFICATION SHEET

The budget analyst and the project manager prepare the justification sheet twice a year. It summarizes the study status, expenditures to date, and Federal budget requirements for the following year. This document is sent by the Corps to Congress to support the President's annual budget request. After the President's budget is released for the pertinent fiscal year, the justification sheet will be released to the sponsor. The series of justification sheets, along with other documents in this IPMP, will serve as the record of study progress.

PROJECT EXECUTIVE SUMMARY REPORT

The project manager prepares the PES report monthly with input from the study sponsors and the study manager, who prepares the status report, and the program analyst, who prepares the funds management report. This report will be sent to the Executive Committee, study team members, and the District and Division PRBs. Once the report is submitted to SPD, it may not be changed, but may be annotated. This report will be the principal document for reporting study status, milestone forecasts and approvals, and study cost change approvals, and forecasts at the executive level.

MONTHLY STATUS REPORT

The study manager will prepare the status report monthly with assistance from SMT members. In the status report, the study manager will report on each study task currently under way or about to be initiated. This report also will document all important dates and milestones, meetings, task completions, etc., and expenditures for Federal and non-Federal funds compared to budgets. The monthly status report will support the PES report. The series of status reports, along with other documents in this IPMP, will serve as the record of study progress.

FUNDS MANAGEMENT REPORT

The budget analyst will update the funds management report monthly and distribute copies to the study manager and the project manager. This report

documents budgets and expenditures for each task, resource, and budget type (hired labor, contracts, miscellaneous expenses, etc.) for the current Federal fiscal year. This report will be made available to the study sponsors. At the end of each government fiscal year, a final funds management report is issued showing the total budgets, expenditures, and obligations for the fiscal year. The series of these end-of-the-year reports, along with other reports in this IPMP, will serve as documentation of the study progress. The year-end report will be sent to SAFCA, the City, and the County.

SCHEDULE AND COST CHANGE REQUEST

The SACCR is the principal form that will be used to change the IPMP. A SACCR usually is initiated by any person working on the study who first recognizes a need for a change. Requests can be made to change the study scope, cost, or milestones. Changes to work orders will be negotiated with the initiator of the work order. The initiator of the SACCR provides the request to the project manager for approval of impact assessment, evaluation of study impacts, and coordination with other SMT members. Local sponsor representatives on the SMT will review and agree to changes proposed by the SACCR before subsequent action by the appropriate level of approval in accordance with ER 5-7-1.

The PM is authorized to revise project schedules that do not impact the major milestones. Changes which extend major milestones require approval of the SPD PRB.

WORK ORDERS/DETAILED SCOPES OF WORK

The work orders include scopes of work for each work element. Work orders may be in draft form and will be replaced by final versions when they become available.

The work and funds will be distributed by the project manager and the study manager through the Corps work order system. Work orders will be based on the scopes of work negotiated with Corps technical elements, SAFCA, City, or County and, once signed off, will replace the scopes of work filed herein at the signing of the FCSA. All work orders not written by the project manager will stem from general work orders written by the project manager to the appropriate Corps division at the beginning of each fiscal year. Work orders expire at the end of each fiscal year and must be renegotiated for a new fiscal year. The series of work orders, along with other documents in this IPMP, will serve as the record of study progress.

SAFETY AND SECURITY REPORT

The safety and security report contains documentation (if needed) to identify and describe any unique safety and security measures that must be implemented before or during field investigations.

SECTION 11 - DESCRIPTION OF WORK ELEMENTS

All work elements that make up the feasibility study through the Division Engineers public notice are described in this section. The work elements are listed in the code of accounts order described earlier in this IPMP.

Information includes days of work required by Sacramento District staff, Sacramento District cost, contract cost, other agency cost (e.g. FWS), miscellaneous cost, (e.g. printing and mailing), cost for in-kind work done by the City or SAFCA, and total cost for each work element.

JAA SURVEYS AND MAPPING

JAA-1 Detailed Channel/ Levee Mapping

• Description:

Develop contract scope of work, issue and administer contract for aerial survey of Morrison and Unionhouse Creeks (approximately 15 miles, 1" to 200 feet scale, 1000 feet wide) to develop intergraph terrain model and detention basin area(s) along Morrison and Unionhouse Creeks (approximately 65 acres). The City and County have surveys and plans covering some of Morrison and Unionhouse Creeks. For this study, detailed surveys will be prepared for sections of Morrison and Unionhouse Creeks where acceptable existing maps are not available and on the reaches of Elder and Laguna Creeks where improvements will be proposed. Collect from local sponsor bridge cross section data. Develop scope of work, issue and administer contract to obtain Morrison, Unionhouse, Laguna and Elder Creeks drainage basin/floodplain spot elevations.

- *Responsible Sacramento district Element:* Survey Section

- *Costs:*
 - Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Survey Section	24

Subtotal, Sacramento District:	\$ 8,000
● Contract Cost:	150,000
● Other Agency/Other COE Cost:	
● Miscellaneous Costs:	
● Sponsor unkind Contribution	
Total Cost:	\$ 158,000

JAB HYDROLOGY AND HYDRAULIC STUDIES/REPORT

JAB-1 Without-Project Condition Hydrology

- **Description:**

This task will be accomplished by the Corps. Hydrology Section will have primary responsibility, but Hydraulic Design Section will have a major role in the determination of the influence of County drainage improvements and flood plain development on both existing and future without-project hydrology.

Hydrology Section will analyze both rainfall, runoff, and Mokelumne and Cosumnes Rivers and Morrison Creek stream flow data to determine concurrence between Beach-Stone Lakes high water and Morrison Creek peak flow. The existing State of California DWOPR model will be used and improved as appropriate to model Beach-Stone Lakes flows. Hydrology Section will use analysis to determine starting water-surface elevations for Morrison Creek backwater analysis. It is anticipated that the DWOPR model outputs will also be appropriate for Beach Lake Levee and Sacramento Regional Wastewater Treatment Plant Levee design during the design phase, subsequent to the feasibility phase. The analysis will include a documentation of levee failure assumptions.

Hydrology Section will review and update the County HEC-1 hydrologic model of the Morrison/Laguna Creek drainage area and revise the model as appropriate to meet study needs and Corps criteria. Work includes developing stage-frequency and/or flow-frequency curves at least 50 locations. The without-project future condition will be redefined due to continuing County work on drainage master plans. This work will be done in coordination with Hydraulic Design Section and Reservoir Control Section of the Corps, and the County Division of Water Resources. Hydraulic Design Section will work with Hydrology Section and the County to help develop detention basin location, configuration, design and volume assumptions and to route future IS, 25-, 50, 100, 200, and 500 year flows. Similarly, Hydraulic Design Section will analyze County planned water quality basins to assess their impact on different frequency flows. Hydrology Section will add the effect of urbanization and County drainage master plan features to the drainage model to simulate existing and future conditions. Work also includes incorporating any new channel modifications that affects routing. Resultant downstream flows will be compared with County findings. Flow data will be forwarded to Regional Planning Branch for development of floodplain depths and frequencies.

Hydrology Section will determine flow/frequency uncertainty bounds. This data will be used for risk and uncertainty analysis. Run LIMIT program to interface stage-frequency curves into the risk and uncertainty analysis. Prepare narrative office report suitable for incorporation into the draft engineering appendix for the draft feasibility report, including plates, charts and tables.

JAB-1 Without-Project Condition Hydrology, continued

• ***Responsible Sacramento District Element:***

Engineering Division, Civil Des Branch, Hydrology Section

• ***Costs:***

Sacramento Distinct Labor

Sacramento District Elements

Effort (in person-days)

Hydrology Section

144

Hydraulic Design Section

137

Subtotal, Sacramento District:

\$ 124,000

Contract Cost

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:

Total Cost:

\$ 124,000

JAB HYDROLOGY AND HYDRAULIC STUDIES/REPORT

JAB-2 Without-Project Flood Plains and Depths

• Description:

Review and revise most recent HEC-2 database to accurately reflect without-project channel and flood plain conditions. Perform a general basin-wide flood routing study to determine general pattern of flooding and any trans-subbasin flows. Flood routing in the upper basin will be at a level of detail adequate to determine flows between creeks, natural detention, and timing of peaks where flows meet. More detailed analysis will be required along the study reaches where benefits will accrue. Routings will be done for the 10, 25, 50, 100, 200, and 500-year events. It is assumed that no more than one hydrologic condition need be modeled; it is assumed that future conditions will approximate existing conditions. Use input from Hydrology Section for starting water surface elevations at Beach-Stone Lakes. Perform detailed flood routings for the stream reaches and areas described under study area in Section 3. Geotechnical Branch will supply PNP and PFP elevations. Set levees to fail at the PNP, provide PFP failure frequency.

Attend Study Team Management meetings and milestone conferences as needed.

• Responsible Sacramento District Element:

Planning Division, Regional Planning Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Regional Planning Branch	168

Subtotal, Sacramento District:	\$ 95,000
--------------------------------	----------------

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:	0
-------------------------------	---

Total Cost:	\$ 95,000
-------------	----------------

JAB HYDROLOGY AND HYDRAULIC STUDIES/REPORT

JAB-3 Induced Flooding Analysis

• Description:

Perform with-project hydrology, including an analysis of impact of the NED plan and the tentatively selected plan on flooding of Beach Stone Lakes area. New hydrology studies will also include determining the uncertainty of the flow-frequency relationship for use in a risk and uncertainty analysis. Attend study team meetings and coordinate with local sponsor hydrologic engineering staff. Prepare narrative office report suitable for incorporation into the draft engineering appendix for the draft feasibility report, including plates, charts and tables.

• Responsible Sacramento District Element:

Hydrology Section

• Costs:

Sacramento District Labor

Sacramento District Elements	Effort (in person-days)
Hydrology Section	90

Subtotal, Sacramento District: \$ 40,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 40,000

JAC GEOTECHNICAL STUDIES REPORT

JAC-1 Baseline Geology and Soils Data

• *Description:*

Conduct field investigations of existing and proposed project levee locations along Morrison, Elder, Laguna, and Unionhouse Creeks, Sweeny Ranch and the Sacramento Regional Wastewater Treatment Plant levees. Investigations include explorations using trenchings and borings. Analysis of explorations will be made by the Corps SPD laboratory. This task includes administration of a drilling contract. Elevations representing probable failure (PFP) and probable non-failure points (PNP) will be determined along all levees under study. Prepare one or more plates showing PM and PFP profiles for all leveed stream reaches. PNP's and PFP's will be used to determine without-project flood plains (Geology and Soils).

• *Responsible Sacramento District Element:*

Engineering Division, Geotechnical Branch, Soils Design Section

• *Costs:*

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Soils Design Section	40
Geology Section	37
Subtotal, Sacramento District:	\$ 32,000
Contract Cost:	29,500
Other Agency/Other COE Cost:	27,000
Miscellaneous Costs:	1,800
Sponsor In-Kind Contribution:	0
Total Cost:	\$ 90,300

JAC GEOTECHNICAL STUDIES REPORT

JAC-2 Geology and Soils Design

• *Description:*

Prepare design analysis for modification of existing levees and design of new levees and/or flood ways (Soils), and assess side slope stability along channel enlargement reaches of Morrison and Unionhouse Creeks (Soils). Identify borrow and disposal areas (Geology), conduct explorations for foundation conditions (Geology), investigate bridge replacements (Geology). Prepare narrative office report suitable for incorporation into the engineering appendix of the feasibility report (Geology and Soils) including discussion of areal geology (Geology), seismic assessment (Geology), and groundwater studies.

• *Responsible Sacramento District Element:*

Engineering Division, Geotechnical Branch, Soils Design Section

• *Costs:*

Sacramento District Labor

<i>Sacramento District Elements</i>	Effort (in person-days)
Soils Design Section	35
Geology Section	14
Subtotal, Sacramento District:	\$ 20,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	0
Total Cost:	\$ 20,000

JAE ENGINEERING AND DESIGN ANALYSIS REPORT WITH PRELIMINARY DRAWINGS

JAE-1 Technical Management

• Description:

Manage and coordinate Engineering Division technical elements (Geotechnical, Civil Designs and Cost Engineering Branches). Assure work is adequate and appropriate for the feasibility study. As a member of the SMT, attend and participate in meetings and respond to SMT requests. Coordinate and help plan Engineering Division activities during design and construction phases; provide input to the PMP. This overall management task is on-going throughout the duration of the study.

• Responsible Sacramento District Element:

Engineering Division, Civil Design Branch, Design and Studies Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Design & Studies Section	161

Subtotal, Sacramento District: \$ 66,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 66,000

JAE ENGINEERING AND DESIGN ANALYSIS REPORT WITH PRELIMINARY DRAWINGS

JAE-2 Preliminary Design and Costs

• Description:

Coordinate with study management and attend plan formulation meetings. Prepare preliminary designs and first and annual cost estimates of two alternatives. The purpose of this estimate is to establish general economic feasibility given study findings to date. Costs may be based on designs and backup data connected with the reconnaissance report basis of design. Cost will be reported to the study manager for inclusion in the F3 Conference Report. Price levels and interest rates to be provided by the study manager upon request.

• Responsible Sacramento District Element:

Engineering Division, Civil Design Branch, Design and Studies Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Design & Studies Section	14

Subtotal, Sacramento District: \$ 6,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 6,000

JAE ENGINEERING AND DESIGN ANALYSIS REPORT WITH PRELIMINARY DRAWINGS

JAE-3 Structural Design

• **Description:**

Develop structural designs for hydraulic structures and other project features.

• **Responsible Sacramento District Element:**

Engineering Division, Civil Design Branch, Structural Design Section

• **Costs:**

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Structural Design Section	52

Subtotal, Sacramento District: \$ 22,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 22,000

JAE ENGINEERING AND DESIGN ANALYSIS REPORT WITH PRELIMINARY DRAWINGS

JAE-4 Design and Quantities

• Description:

Attend study team meetings and conduct field investigations of Morrison and Unionhouse Creeks (entire team). Coordinate all technical engineering division design effort with Planning Division and local sponsor, issue work order requests and monitor study team progress (Design and Studies Section). Prepare design and quantities for channel enlargement and levee modification/flood walls, design bridge relocations, utility relocations, develop taking plan(s) for real estate including project acquisitions, disposal areas, and temporary construction easements, develop operation and maintenance considerations including assessing baseline performance, develop planning and engineering and construction schedule (all above is Design and Studies Section), and develop quantities for detention basin(s) (Design and Studies Section). Prepare preliminary narrative and plates in support of the F4 Conference Report (Design and Studies Section).

• Responsible Sacramento District Element:

Engineering Division, Civil Design Branch, Design and Studies Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Design & Studies Section	118

Subtotal, Sacramento District: \$ 48,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 48,000

JAE ENGINEERING AND DESIGN ANALYSIS REPORT WITH PRELIMINARY DRAWINGS

JAE-5 Draft Basis of Design

• Description:

Prepare narrative and plates for fee draft basis of design to the draft feasibility report (Design and Studies Section).

• Responsible Sacramento District Element:

Engineering Division, Civil Design Branch, Design and Studies Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Design & Studies Section	83

Subtotal, Sacramento District: \$ 34,000

Contract Costs

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 34,000

JAE ENGINEERING AND DESIGN ANALYSIS REPORT WITH PRELIMINARY DRAWINGS

JAE-6 Final Basis of Design

• *Description:*

Revise draft basis of design based on public, agency and COILS of Engineers SPD & HQ comments. Final basis of design will be attached to the final feasibility report. Prepare engineering and design input to the PMP.

• *Responsible Sacramento District Element:*

Engineering Division, Civil Design Branch, Design and Studies Section

• *Costs:*

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Design & Studies Section	113

Subtotal, Sacramento District: \$ 46,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 46,000

JBA ECONOMIC ANALYSIS/REPORT

JBA-1 Economic Damages

• *Description:*

This task will be performed by the Sacramento District. Previous economic data cannot be used because the risk and uncertainty analysis requires new kinds of data. The work will require flood plain maps and without- and with-project stage data, which will be prepared under Hydrology and hydraulic Studies/Report Subactivity and provided to Economics Branch through the Technical Study Manager. This work includes obtaining flood plain maps and gathering and compiling property and structure characteristics such as foundation heights, square footage, number of stories, usage, and type of construction for those structures located within the flood plains. The number of flood-damageable structures and their contents will be estimated through interviews and statistical sampling. Historical flood damage information will also be collected. All information will be generated with statistical flood depth/damage uncertainties for use in the risk and uncertainty process.

Flood damages will be evaluated, and flood control benefits of the various alternatives and the selected plan will be determined. Existing conditions and future Land use development projections will also be evaluated.

Damages evaluation will be used to help formulate alternatives and will be documented in the F3 Conference Report.

• *Responsible Sacramento District Element:*

Planning Division, Economics Branch

• *Costs:*

Sacramento District Labor	
<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Economics Branch	195
Subtotal, Sacramento District:	\$ 77,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	0
Total Cost:	\$ 77,000

JBA ECONOMIC ANALYSIS/REPORT

JBA-2 Benefit Analysis

• *Description:*

Once flood damages are estimated, the following benefit categories will be determined: inundation reduction benefits, location benefits, savings in flood proofing costs, advanced bridge replacement, transportation cost savings, emergency cost savings, and employment benefits. Other potential benefits associated with incidental purposes will also be examined. Benefits will be calculated for each alternative. Future land use projections will be verified for accuracy in the analysis of the inundation reduction benefits.

A risk and uncertainty analysis will be done to help quantify uncertainties in the flood damage estimates, and a probability distribution will be developed for expected annual flood damages and flood reduction benefits associated with the various alternatives and the selected plan. The critical key variables that will be evaluated include structure first-floor elevation, structure values, and content values.

In addition, Economics Branch will assist American River/Great Basin Branch running Monte Carlo simulations using hydrology, hydraulics, and economics probability distributions (see work element JJA-2). Monte Carlo simulations will be run in coordination with technical study management and the local sponsor to assess alternatives and select a plan.

Benefits will be documented in the F4 Conference Report.

• *Responsible Sacramento District Element:*

Planning Division, Economics Branch

• *Costs:*

- Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Economic Branch	45
Subtotal, Sacramento District:	\$ 18,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	0
Total Cost:	\$ 18,000

JBA ECONOMIC ANALYSIS/REPORT

JBA-3 Draft Economic Appendix

• Description:

A draft economic appendix will be prepared for inclusion in the technical documentation for the draft feasibility study and will include development of benefits for each alternative. Tasks will include responding to in-house and F4 conference comments, preparing materials, including tenet, tables, and plates, for inclusion in the appendix, assisting in plan formulation, responding to comments, and attending team meetings to report on findings.

• Responsible Sacramento District Element:

Planning Division, Economics Branch

• Costs:

Sacramento District Labor

Sacramento District Elements

Economics Branch

Effort (in person-days)

26

Subtotal, Sacramento District: \$ 10,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 10,000

JBA ECONOMIC ANALYSIS/REPORT

JBA-4 Final Economics Appendix

• Description:

Based on comments from the draft feasibility report review, the public review, and the Feasibility Review Conference, documentation of economic studies will be finalized in a final economic appendix to be attached to the final feasibility report. Provide economics input to the PNP.

• Responsible Sacramento District Element:

Planning Division, Economics Branch

• Costs:

Sacramento District Labor

Sacramento District Elements

Economics Branch

Effort (in person-days)

20

Subtotal, Sacramento District:

\$ 8,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:

0

Total Cost:

\$ 8,000

JBB SOCIAL STUDIES/REPORT

JBB-1 Social Resources Assessment

• Description:

Determine social resources baseline conditions, including land use, population, public facilities, and other relevant demographic and community data; determine alternative impacts to resource and appropriate mitigation, if any. Sacramento District will assess social impacts as they pertain to the EIS. The local sponsor will assess and report on social impacts as required by CEQA and other state and local regulations. Sacramento District and the local sponsor will coordinate to avoid duplication of effort. Social resources documentation will be part of the EIS/EIR.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	38
Subtotal, Sacramento District:	\$ 14,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	7,000
Total Cost:	\$ 21,000

JBC INSTITUTIONAL STUDIES/REPORT

JBC-1 Institutional Studies

• Description:

This work element includes the effort required to establish SAFCA's capability to finance their portion of the project costs, to determine the cost allocations between the Corps of Engineers and the local sponsor, and to determine the best method of financing the project costs. To the extent that the City and County of Sacramento contribute funds to the project, the respective financing capabilities of these two entities will be explored.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	84

Subtotal, Sacramento District: \$ 38,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 11,000

Total Cost: \$ 49,000

JBD FINANCIAL ANALYSIS AND ABILITY TO PAY REPORT

JBD-1 Local Financing Plan

• Description:

The local sponsor will document its financial capability and prepare a Local Financing Plan. The plan will include the funding sources for project construction and credit analysis (i.e. bond rating). The plan will include funding sources to be used by other major contributors (such as the city and the county of Sacramento) to the project. Sacramento District will advise the local sponsor on plan requirements and review the plan before it is finalized. Real Estate and Economics Branch will review the local financing plan.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	35
Economics Branch	5

Subtotal, Sacramento District: \$ 18,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 16,000

Total Cost: \$ 34,000

JCA REAL ESTATE SUPPLEMENT/ PLAN

JCA-1 Coordination

• Description:

Includes, but is not limited to, CESP-K-RE participation in team meetings, negotiation of work requirements, coordination with other offices on Project data needed for Real Estate's major study products, and monitoring of progress and findings associated with Real Estate study products.

• Responsible Sacramento District Element:

Real Estate Division, Acquisition Branch

• Costs:

Sacramento District Labor

Sacramento District Elements

Acquisition Branch

Effort (in person-days)

14

Subtotal, Sacramento District: \$ 6,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 6,000

JCA REAL ESTATE SUPPLEMENT/PLAN

JCA-2 Preparation of Real Estate Supplement

• Description:

This work includes preparation of the Real Estate Supplement (RES) which is an overall plan describing the minimum real estate requirements for the project requirements (see ER 405-1-12, Draft Chapter 12).

• Responsible Sacramento District Element:

Real Estate Division, Acquisition Branch

• Costs:

Sacramento District Labor

Sacramento District Elements
Acquisition Branch

Effort (in person days)
10

Subtotal, Sacramento District: \$ 4,000

• Contract Cost:

• Other Agency/Other COE Cost:

• Miscellaneous Costs:

• Sponsor In-Kind Contribution: 0

• Total Cost: \$ 4,000

JCA REAL ESTATE SUPPLEMENT/PLAN

JCA-3 Review and Revise Report Documents

• **Description:**

Includes all CESPk-RE activity involved in reviewing the Feasibility Report and responding to Division comment.

• **Responsible Sacramento District Element:**

Real Estate Division, Acquisition Branch

• **Costs:**

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Acquisition Branch	4

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor k-Kind Contribution: 0

Total Cost: \$ 2,000

JCB GROSS APPRAISAL/REPORT

JCB-1 Preparation of Gross Appraisal

• Description:

This work includes preparation of a detailed estimate of all real estate costs associated with acquisition of the Project's real property requirements. (See ER 405-1-12, Draft Chapter 12, Section m, appraisals, paragraph 12-12b and Real Estate Policy Guidance Letter Number 3, Guidance for Preparation of Gross Appraisals.)

• Responsible Sacramento District Element:

Real Estate Division, Appraisal Branch

• Costs:

Sacramento District Labor

Sacramento District Elements
Appraisal Branch

Effort (in person-days)
44

Subtotal, Sacramento District: \$ 20,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 17,000

Total Cost: \$ 37,000

JCC PRELIMINARY REAL ESTATE ACQUISITION MAPS

JCC-1 Real Estate Map Preparation

• Description:

Determine tract ownership and acreage. Prepare real estate preliminary and final take line drawings.

• Responsible Sacramento District Element:

Real Estate Division, Planning and Control Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Planning and Control Branch	15

Subtotal, Sacramento District: \$ 6,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 6,000

JCE PRELIMINARY ATTORNEY'S OPINION OF COMPENSABILITY

JCE-1 Preliminary Attorney's Opinion of Compensability

• Description:

Investigation and attorney's determination, if owners of facility's or utility's affected by the project have a vested interest and compensable interest in the property, with regard to the real estate taking. If so, the obligation or liability of the Government is the cost of providing substitute facilities or utilities, if necessary, for existing publicly owned roads and utilities as well as existing privately owned railroads and utilities.

• Responsible Sacramento District Element:

Real Estate Division, Acquisition Branch

• Costs:

Sacramento District Labor

Sacramento District Elements

Acquisition Branch

Effort (in person-days)

10

Subtotal, Sacramento District:

\$ 4,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:

Total Cost:

\$ 4,000

JCF RIGHTS OF ENTRY

JCF-1 Rights of Entry

• Description:

Real Estate will coordinate requests and work with the sponsor to obtain rights of entry for fee survey, HTRW, cultural resource, and geotechnical exploration work required. ROE's must be obtained before any testing can be done on privately owned property.

• Responsible Sacramento District Element:

Real Estate Division, Acquisition Branch, Planning & Control Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Acquisition Branch	4
Subtotal, Sacramento District:	\$ 2,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	
Total Cost:	\$ 2,000

JCG ALL OTHER REAL ESTATE ANALYSES/DOCUMENTS

JCG-1 Baseline Real Estate Cost Estimate

• Description:

Accounting for the Project's total estimated real estate cost in Code of Accounts format as required by EC 1110-1--528 under Feature Codes 01, Lands and Damages. This estimate of total real estate cost should include estimated costs for all Federal and local sponsor activities necessary for completion of the project.

• Responsible Sacramento District Element:

Real Estate Division, Planning & Control Branch

• Costs:

Sacramento District Labor

<i>Sacramento District elements</i>	<i>Effort (in person-days)</i>
Planning & Control Branch	5

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 2,000

JCG ALL OTHER REAL ESTATE ANALYSES/DOCUMENTS

JCG-2 Real Estate Input to IPMP

• Description:

Ensures that the Real Estate Supplement is provided to the PM and its components are properly incorporated into PMP. Also includes Chief of Real Estate Division endorsement of the PMP which certifies that the real estate requirements, including schedule of acquisition, are adequately and accurately included in the PMP.

• Responsible Sacramento District Element:

Real Estate Division, Acquisition Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Acquisition Branch	10
Subtotal, Sacramento District:	\$ 4,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	0
Total Cost:	\$ 4,000

JCG ALL OTHER REAL ESTATE ANALYSES/DOCUMENTS

JCG-3 Institutional Financial Capability Analysis

• Description:

Review the sponsor's financial arrangements required to implement the recommended plan and determine their financial capability.

• Responsible Sacramento District Element:

Real Estate Division, Acquisition Branch

• Costs:

Sacramento District Labor

Sacramento District Elements

Acquisition Branch

Effort (in person-days)

5

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 2,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-1 Public Scoping Activities

• Description:

Prepare and disseminate a notice of intent; assist with mailing list for notice and invitation to public workshop; assist with public workshop and other public involvement activities. Local responsibilities include assuring that CEQA and other state and local regulations concerning public involvement are met.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	11

Subtotal, Sacramento District: \$ 4,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 4,000

Total Cost: \$ 8,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-2 Alternative Formulation Participation

• Description:

Participate in developing alternatives, general coordination with other elements, attend study team meetings, advise on environmental aspects of alternatives.

Sacramento District will assure that an project features for which the local sponsor seeks Section 104 and Section 215 credit comply in effect with NEPA and other environmental regulations governing Federal projects. This will avoid complications, as these levees will be designed and/or built before the NEPA process is completed.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	32

Subtotal, Sacramento District: \$ 12,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 5,000

Total Cost: \$ 17,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-3 FWS Coordination Act Administration

• Description:

The Sacramento District will write a scope of work and transfer funds to FWS for biological surveys, REP analysis, and draft and final Coordination Act Reports. Work also includes supervising FWS work and providing FWS with required information such as description of alternatives, map of areas affected, etc.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	38

Subtotal, Sacramento District: \$ 14,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 14,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-4 HEP Analysis

• Description:

Participate in a HEP team. The team will consist of one representative each from the Sacramento District, the local sponsor, and FWS. A representative from the California Department of Fish and Game may also be on the HEP team, but that person's salary would not be funded by this Federal study. All team members must be HOP certified. The work includes attending meetings, mapping, field work to assess habitats, choosing indicator species, and identifying mitigation alternatives. The team will produce a HEP report which will document baseline conditions and impacts from the selected plan. The Corps will provide project description, maps, etc.

• Responsible Sacramento District Element:

Planning Division., Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento Distinct Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	48

Subtotal, Sacramento Distinct: \$ 18,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 12,000

Total Cost: \$ 30,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-5 Threatened and Endangered Species

• Description:

Complete the Section 7 process to satisfy the Endangered Species Act and satisfy requirements of the California Endangered Species Act. Sacramento District will perform Section 7 consultation with the FWS, prepare Biological Data Reports and a Biological Assessment, and write scope of work and manage contract for species field surveys. The contract would be issued to conduct field surveys to determine presence of endangered species and critical habitat. The contract cost assumes surveys would be required for Swainsons Hawk, valley elder berry long horn beetle, and California garter snake. Surveys of plants and invertebrates associated with vernal pools and terrestrial plants is not anticipated and is not assumed in the cost estimate.

The local sponsor will perform all work necessary to satisfy the California Endangered Species Act without duplicating Sacramento District and contract work listed above. Local sponsor cost is based on the same assumption given above.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	56

Subtotal, Sacramento District:	\$ 21,000
Contract Cost:	60,000
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	12,000
Total Cost:	\$ 93,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-6 Mitigation Plan/Incremental Analysis

• Description:

Sacramento District will have the major responsibility for this work. Based on reported impacts, develop rough estimates of required mitigation and mitigation costs for alternative plans; develop a more detailed mitigation plan and costs for the selected plan. The local sponsor will select mitigation sites, subject to approval by the Corps.

• Responsible Sacramento Detract Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	45

Subtotal, Sacramento district: \$ 17,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 6,000

Total Cost: \$ 23,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-7 Water Quality Assessment

Description:

Complete a water quality assessment, 404(b)(1) analysis, and mitigation plan.

- **Responsible Sacramento District Element:**
Planning Division, Environ. Res. Branch, Environ. Analysis Section

- **Costs:**
 - Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	33

Subtotal, Sacramento District: \$ 12,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 12,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-8 Wetlands Assessment

• Description:

Delineate wetlands in study area for Section 404 requirements and state and local Laws; determine impacts of alternative plans to wetlands and mitigation requirements. The contract will include field surveys, mapping, and report preparation.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

Sacramento District Elements

Environmental Analysis Section

Effort (in person-days)

11

Subtotal, Sacramento District: \$ 4,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 25,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-9 Air Quality Assessment

• Description:

Perform an air quality baseline assessment, determine impacts of alternatives, and develop appropriate mitigation. All major work will be done by the local sponsor.

• Responsible Sacramento District Element:

Planning Division

• Costs:

Sacramento District Labor

Sacramento District Elements

Environmental Analysis Section

Effort (in person-days)

10

Subtotal, Sacramento District:	4,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	10,000
Total Cost:	\$ 14,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-10 Other Resources Assessment

• Description:

Determine baseline conditions, assess alternative impacts, and formulate appropriate mitigation for resources not described elsewhere. The Sacramento District will be responsible for an HTRW write up based on the HTRW Studies and report accomplished under a separate activity in this WBS. The Sacramento District will also be responsible for baseline studies and impacts to land use. Sacramento District will write a scope of work and supervise a contract to assess and map impacts to land use.

The local sponsor will be responsible for traffic, noise, visual resources, and cumulative and growth inducing impacts.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	32
Subtotal, Sacramento District:	\$ 12,000
Contract Cost:	15,000
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	50,000
Total Cost:	\$ 77,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-11 Fish and Wildlife Enhancement

• Description:

Using public comment and other agency input, fee local sponsor will explore opportunities for wildlife enhancement and identify one or more possible sponsors. If wildlife enhancement appears to be a viable opportunity, the local sponsor will prepare a brief preliminary plan and a SACCR to develop the enhancement plan to feasibility level of detail.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	15
Subtotal, Sacramento District:	\$ 6,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	7,000
Total Cost:	\$ 13,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-12 Recreation

• Description:

Using public comment and other agency input, fee local sponsor will explore opportunities for recreation allied with the flood control plan, and win identify one or more possible sponsors. If recreation is locally desired and appears to be economically feasible, the local sponsor will prepare a brief preliminary plan and a SACCR to develop the recreation plan to feasibility level of detail.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	15

Subtotal, Sacramento District: \$ 6,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 10,000

Total Cost: \$ 16,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-13 Draft EIS/EIR Preparation

• Description:

Examine NINA, CEQA, and other environmental related regulations, organize and format data, describe alternatives, including construction durations, borrow and disposal areas, etc., Sacramento District will assemble and reproduce Draft EIS/EIR. The local sponsor will write and provide material specific to the EIR that Sacramento District will incorporate into the draft EIS/EIR. Reproduction and distribution of reports is covered under Draft Feasibility Report Documentation. Sacramento District and the local sponsor will coordinate to avoid duplicate effort.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	102

Subtotal, Sacramento District: \$ 38,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 9,000

Total Cost: \$ 47,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-14 Public Review and Comment

• Description:

Help Prepare for and attend public meeting, administer statutory comment period, address and incorporate public comments. The local sponsor will prepare a report documenting and summarizing comments both written and oral on the draft feasibility report and draft EIS/EIR. Both the Sacramento District and the local sponsor will be responsible for addressing comments.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	32

Subtotal, Sacramento District: \$ 12,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 5,000

Total Cost: \$ 17,000

JDA

ENVIRONMENTAL STUDIES/REPORT

JDA-15 Final EIS/EIR Preparation

• Description:

Incorporate changes and comments from Draft EIS, assemble into Final EIS. The local sponsor will be responsible for assembling the EIR. Reproduction and distribution of reports is covered under Final Feasibility Report Preparation.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis

Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	32

Subtotal, Sacramento District: \$ 12,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 7,000

Total Cost: \$ 19,000

JDA ENVIRONMENTAL STUDIES/REPORT

JDA-16 Record of Decision

• Description:

Prepare a Record Decision, submit to the Federal Register.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Environmental Analysis Section	5

Subtotal, Sacramento District:	\$ 2,000
--------------------------------	----------

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:	0
-------------------------------	---

Total Cost:	\$ 2,000
-------------	----------

JEA FISH AND WILDLIFE COORDINATION ACT REPORT

JEA-1 Draft Coordination Act Report

• Description:

This subaccount includes work to be conducted by the PUS. Work will include environmental data collection and evaluation of the envier resources of the study area. The FWS will review alternative plans and assess alternative impacts of the environmental values of the study area. The FWS will offer recommendations concerning Fish and Wildlife enhancement. As part of this work effort the FWS will be participate as a team member in HEP evaluation. The Draft Fish and Wildlife Coordination Act Report will be incorporated as an attachment to the draft ENS. There is no requirement to prepare a Planning Aid Letter as this was accomplished during the Reconnaissance Study.

• Responsible Sacramento District Element:

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• Costs:

Sacramento District Labor

Sacramento District Elements Effort (in person-days)
Environmental Analysis Section

Subtotal, Sacramento District:	\$	0
Contract Cost:		
Other Agency/Other COE Cost:		55,000
Miscellaneous Costs:		
Sponsor In-Kind Contribution:		0
Total Cost:	\$	55,000

JFA HTRW STUDIES/REPORT

JFA-1 HTRW Studies, Report Preparation

• Description:

Attend study team meetings and conduct field investigations of Morrison and Unionhouse Creeks. Conduct site tour along Morrison and Union House Creeks to identify any undocumented HTRW sites, develop contingency plan to identify any undocumented HTRW sites, develop contingency plan to identify responsible agency and outline a course of action in the event HTRW sites are discovered during construction. Prepare narrative report suitable for incorporation into the engineering appendings to the feasibility study.

• Responsible Sacramento District Element:

Environmental Engineering Branch, Support for Others

• Costs:

Sacramento District Labor

Sacramento District Elements

Support for Others

Effort (in person-days)

40

Subtotal, Sacramento District:

\$ 18,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:

Total Cost

\$ 18,000

JGA CULTURAL RESOURCES REPORT

JGA-1 Cultural Resources Report Preparation

• *Description:*

The cultural resources studies to be performed by the Corps will determine the impacts of the alternative plans on any historical, architectural, and archeological resources in the project area. A field survey to locate cultural sites, in accordance with the National Historic Preservation Act of 1966, may need to be performed. A report to document the survey results, outline significant past and present cultural resources, and describe impacts of each alternative on cultural resources will be prepared and coordinated with the State Historic Preservation Officer. Any sites discovered during the survey will be evaluated for the National Register of Historic Places.

Corps labor is for writing scope of work, supervising contract, reviewing contract products, and coordinating with the State Historic Preservation Officer.

• *Responsible Sacramento District Element:*

Planning Division, Environ. Res. Branch, Environ. Analysis Section

• *Costs:*

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person days)</i>
Environmental Analysis Section	32
Subtotal, Sacramento District:	\$ 12,000
Contract Cost:	15,000
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	0
Total Cost:	\$ 27,000

JHA COST ESTIMATES

JHA-1 Alternative Costs

• Description:

Attend study team meetings. Develop plan formulation alternative cost estimates (code of accounts format) for channel and levee improvements. Alternatives still be at least 100- and 200 year levels of protection. Cost figures will be included in the F4 Conference Report.

• Responsible Sacramento District Element:

Engineering Division, Cost Engineering Branch

• Costs:

Sacramento District Labor

Sacramento District Elements

Cost Engineering Branch

Effort (in person-days)

29

Subtotal, Sacramento District:

\$ 14,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:

0

Total Cost:

\$ 14,000

JHA COST ESTIMATES

JHA-2 Draft MCACES Cost Estimate

• Description:

Attend study team meetings. Develop plan formulation alternative cost estimates (assume 3) in code of accounts format and feasibility level baseline cost estimate, MCACES format, for the selected plan. These estimates will be the total cost (Federal and non-Federal) of implementing the project, including construction costs, lands, easements, rights-of-way, relocations, disposal areas, mitigation, engineering and design and construction management. Detailed first and annual cost estimates, including Operation and maintenance, inspection plan, interest during construction, and replacement costs will be developed in the MCACES format for the selected plan, in accordance with Engineering Circular (EC) 1110-2-538, Civil Works Projects Cost Estimates Code of Accounts and EC 110-2-263, Civil Works Project Construction Cost Estimating. A narrative basis of estimate will be prepared and included in the draft engineering appendix to the draft feasibility report.

• Responsible Sacramento District Element:

Engineering Division, Cost Engineering Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Cost Engineering Branch	21
Subtotal, Sacramento District:	\$ 10,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	0
Total Cost:	\$ 10,000

JHA COST ESTIMATES

JHA-3 Final MCACES Cost Estimate

• Description:

Attend study team meetings. Develop plan formulation alternative cost estimates (assume 3) in code of accounts format and feasibility level baseline cost estimate, MCACES format, for the selected plan. These estimates will be the total cost (Federal and non-Federal) of implementing the project, including construction costs, lands, easements, rights-of-way, relocations, disposal areas, mitigation, engineering and design and construction management. Detailed first and annual cost estimates, including operation and maintenance, inspection plan, interest doting construction, and replacement costs will be developed in the MCACES format for the selected plan, in accordance with Engineering Circular (EC) 1110-2-538, Civil Works Projects Cost Estimates Code of Accounts and EC 110-2-263, Civil Works Project Construction Cost Estimating. A narrative basis of estimate will be prepared and included in the engineering appendix to the feasibility report.

• Responsible Sacramento District Element:

Engineering Division, Cost Engineering Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Cost Engineering Branch	17

Subtotal, Sacramento District: \$ 8,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:

Total Cost: \$ 8,000

JIA PUBLIC INVOLVEMENT DOCUMENTS

JIA-1 Public Workshop Mail List/Invitation

• Description:

The Sacramento District will update the mail list that was used for the Reconnaissance Study, and provide mailing labels to the local sponsor. The local sponsor will contribute to and review the list. The local sponsor will prepare the invitation to the public workshop, with input and review by the Sacramento District. The local sponsor will print and distribute the invitation using the mail list. Postage will be paid by the local sponsor.

• Responsible Sacramento District Element:

Planning Division, Public Involvement & Reports

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Public Involvement and Reports Unit	4

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 6,000

Total Cost: \$ 8,000

JIA PUBLIC INVOLVEMENT DOCUMENTS

JIA-2 Public Workshop Preparation

• Description:

The local sponsor will have the major responsibility for the Public Workshop. The purpose of the public workshop is to disseminate information regarding the feasibility study and give the public an opportunity to comment on the scope of the study and the issues to be addressed. Work includes planning and setting the agenda for the workshop, logistics such as finding a suitable meeting place, setting up and manning a sign-in table, providing audio visual equipment and other materials, development and delivery of presentations, and actual conduct of the public workshop. The Sacramento District will review presentations, aid in production of presentation materials, and be available at the workshop to aid in making presentations, act as technical resources, perform recording duties, etc.

• Responsible Sacramento District Element:

Planning Division, Public Involvement & Reports

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Public Involvement and Reports Unit	4

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor h-Kind Contribution: 6,000

Total Cost: \$ 8,000

JIA PUBLIC INVOLVEMENT DOCUMENTS

JIA-3 Public Workshop Memorandum

• Description:

The local sponsor will have fee major responsibility for writing a memorandum documenting and summoning the results of the Public Workshop. A draft memorandum will be circulated to and reviewed by Sacramento District and the local sponsor. The local sponsor will incorporate comments.

• Responsible Sacramento District Eminent:

Planning Division, Public Involvement & Reports

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Public Involvement and Reports Unit	4

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor k-Kind Contribution: 2,000

Total Cost: \$ 4,000

JIA PUBLIC INVOLVEMENT DOCUMENTS

JIA-4 Public Outreach Sessions Preparation

• Description:

The local sponsor will have the major responsibility for the Outreach Sessions. The purpose of the outreach sessions is to increase awareness of flood problems posed by the Morrison creek watershed and Beach/Stone Lakes area, and solicit comments regarding feasibility study scope. Work includes planning and setting the agenda for the sessions, development and delivery of presentations, actual conduct of the session, and logistics such as finding a suitable meeting place, setting up and manning a sign-in table, and providing audio visual equipment. The Sacramento District will review presentations, aid in production of presentation materials, and be available at the sessions workshop to aid in making presentations, act as technical resources, perform recording duties, etc. The local sponsor will write a memorandum documenting each outreach session. The sponsor will provide the draft memorandum on each session to the Sacramento District for review and incorporate comments into the final memorandum. Costs are based on three sessions.

• Responsible Sacramento District Element:

Planning Division, Public Involvement & Reports

• Costs:

Sacramento District Labor

Sacramento District Elements	Effort (in person-days)
Public Involvement and Reports Unit	8

Subtotal, Sacramento District: \$ 4,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 10,000

Total Cost: \$ 14,000

JIA PUBLIC INVOLVEMENT DOCUMENTS

JIA-5 Public Meeting Mailing List/Invitation

• Description:

The Sacramento District will update the mailing list. The local sponsor will prepare public meeting invitation. The invitation will include a summary of fee draft feasibility report, draft EIS/EIR, a description of alternatives, and meeting information. The invitation will be reviewed by the Sacramento District. The local sponsor will print and distribute the invitation.

• Responsible Sacramento District Element:

Planning Division, Public Involvement & Reports

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Public Involvement and Reports Unit	4

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 3,000

Total Cost: \$ 5,000

JIA PUBLIC INVOLVEMENT DOCUMENTS

JIA-6 Public Meeting Preparation

• Description:

The local sponsor will have the major responsibility for the public meeting. The purpose of the public meeting is to provide an opportunity for public comments on the draft feasibility report and draft EIS/EIR. Work includes planning and setting the agenda for the meeting, development and delivery of presentations, actual conduct of the meeting, and logistics such as finding a suitable meeting place, setting up and manning a sign-in table, and providing audio visual equipment. Testimony will be documented by a court reporter. The Sacramento District will review presentations, aid in production of presentation materials, and be available at the meeting to aid in making presentations, act as technical resources, perform recording duties, etc.

• Responsible Sacramento District Element:

Planning Division. Public Involvement & Reports

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Public Involvement and Reports Unit	4

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 8,000

Total Cost: \$ 10,000

JJA PLAN FORMULATION AND EVALUATION REPORT

JJA-1 F3 Conference Report

• *Description:*

This work element covers the actual initial plan formulation process as well as preparation of the F3 Conference Report. The Sacramento District and the local sponsor will review flood control problems and opportunities that have been identified under hydrology, hydraulics, geotechnical, and economic studies. They will identify critical issues, and develop methods and preliminary alternatives for screening. Alternative formulation will use guidance issued at the RRC. Included will be nonstructural alternatives and phased construction to address future hydrology. Alternatives will be formulated with the participation of the Study Management Team and technical elements. The Sacramento District will be responsible for writing, editing, and preparing graphics for the F3 Conference Report. This report will document the feasibility study through preliminary alternative formulation.. The task includes printing and distributing of the F3 Conference Report and technical attachments. The Local Sponsor will review rough drafts.

• *Responsible Sacramento District Element:*

Planning Division, American River/Great Basin Branch

• *Costs:*

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	52
Public Involvement and Reports Unit	10

Subtotal, Sacramento District: \$ 28,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 5,000

Total Cost: \$ 33,000

JJA PLAN FORMULATION AND EVALUATION REPORT

JJA-2 F4 Conference Report

• Description:

This work element covers the actual plan formulation process as well as preparation of the F4 Conference Report. The Sacramento District and the local sponsor will perform detailed formulation of alternative plans based on guidance from the F3 Conference. Alternatives (including nonstructural and phased-construction alternatives) will be developed so that technical Elements may assess and quantify hydraulic design, hydrology, geotechnical design, benefits, hydraulic impact, and environmental impact. American River/Great Basin Branch will run Monte Carlo simulations employing different levee heights and configurations. Economics branch and the local sponsors will assist and advise American River/Great Basin Branch regarding flood control measures to include in the Monte Carlo analysis. Alternatives will be compared in accordance to Corps guidance to identify the NED plan. In addition, the Tentatively Selected Plan will be identified, based on local preferences. Costs and benefits of each alternative will be established. Alternatives will be formulated with the participation of the Study Management Team and technical elements.

The Sacramento District will be responsible for writing, editing, and preparing graphics for the F4 Conference Report. This report will document the feasibility study through alternatives evaluation. The task includes printing and distributing of the F4 Conference Report and technical attachments. This report will be similar to a rough draft feasibility report. The Local Sponsor will review F4 Conference Report drafts.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>	
American River/Great Basin Branch	71	
Public Involvement and Reports Unit	8	
Subtotal, Sacramento District:		\$ 36,000
Contract Cost:		
Other Agency/Other COE Cost:		
Miscellaneous Costs:		
Sponsor In-Kind Contribution:		8,000
Total Cost:		\$ 44,000

JKA DRAFT REPORT DOCUMENTATION

JKA-1 Draft Feasibility Report Preparation

• Description:

The Sacramento District will be responsible for writing, editing, and preparing graphics for the Draft Feasibility Report. The task includes printing and distributing of the report and technical appendices. Reproduction cost is included under this work element as "Other Expense". The Local Sponsor will review the report (tasked under Study Management, Draft Feasibility Report)

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	35
Public Involvement and Reports unit	9

Subtotal, Sacramento District: \$ 20,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs: 4,000

Sponsor In-Kind Contribution: 6,000

Total Cost: \$ 30,000

JLA FINAL REPORT DOCUMENTATION

JLA-1 Final Feasibility Report Preparation

• Description:

The Sacramento District will be responsible for writing, editing, and preparing graphics for the Final Feasibility Report. The Me includes printing and distributing of the report and technical appendixes. Reproduction cost is included under this work element as "Other Expense". The Local Sponsor will review the report (tasked under Study Management, Final Feasibility Report)

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	48
Public Involvement and Reports Unit	13

Subtotal, Sacramento District: \$ 28,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs: 4,000

Sponsor In-Kind Contribution: 8,000

Total Cost: \$ 40,000

JPA MANAGEMENT DOCUMENTS

JPA-1 Study Management, Public Workshop

• Description:

Both the Sacramento District and the local sponsor will refine the Public Involvement plan and assure that it meets environmental and other needs, conceptually formulate and review materials developed for the public workshop, and review workshop findings and propose modifications to the plan of study, if necessary, based on public comment. Study management will attend and may make technical presentations at the public workshop.

Sacramento District study management tasks include day to day management of the execution of the feasibility study. This includes monitoring schedule and budget, setting the agenda for and participating in Study Management Team meetings, coordinating with and writing work orders to Sacramento District technical elements, writing Miscellaneous correspondence, providing coordination and input to Project Management, and coordinating with the local sponsor. The local sponsor will monitor schedule and budget of, and coordinate in-kind work elements. These tasks will also be done in other phases of the study, and apply to the study management work elements (JPA) listed below.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	48

Subtotal, Sacramento District:	\$ 22,000
--------------------------------	-----------

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:	10,000
-------------------------------	--------

Total Cost:	\$ 32,000
-------------	-----------

JPA MANAGEMENT DOCUMENTS

JPA-2 Study Management, F3 Conference

• Description:

The Sacramento District will monitor and coordinate technical studies required in support of the F3 milestone conference. Similarly, the local sponsor will monitor and coordinate in-kind technical studies and other activities required in support of the F3 Conference. Under this work element, both the Sacramento District and the local sponsor will attend the F4 Conference.

Sacramento District and local sponsor general study management responsibilities also applicable to this work element are described above in JPA-1, Study Management, Public Meeting.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

Sacramento District Elements

American River/Great Basin Branch

Effort (in person-days)

280

Subtotal, Sacramento District:

\$ 127,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:

100,000

Total Cost:

\$ 227,000

JPA MANAGEMENT DOCUMENTS

JPA-3 Study Management, F4 Conference

• Description:

The Sacramento District will monitor and coordinate technical studies required in support of the F4 milestone conference. Similarly, the local sponsor will monitor and coordinate in-kind technical studies and other activities required in support of the F4 Conference. Under this work element, both the Sacramento District and the local sponsor will attend the F4 Conference.

Sacramento District and local sponsor general study management responsibilities also applicable to this work element are described above in JPA-1, Study Management, Public Meeting.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	190

Subtotal, Sacramento district:	\$ 86,000
--------------------------------	-----------

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:	50,000
-------------------------------	--------

Total Cost:	\$ 136,000
-------------	------------

JPA MANAGEMENT DOCUMENTS

JPA-4 Study Management, Draft Feasibility Report

• Description:

The Sacramento District will monitor and coordinate technical studies and other activities required in support of the draft report. Similarly, the local sponsor will monitor and coordinate in-kind technical studies and other activities required in support of the draft report.

Sacramento District and local sponsor general study management responsibilities also applicable to this work element are described above in JPA-1, Study Management, Public Meeting.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	Effort (in person-days)
American River/Great Basin Branch	97

Subtotal, Sacramento District:	\$ 44,000
--------------------------------	-----------

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution:	30,000
-------------------------------	--------

Total Cost:	\$ 74,000
-------------	-----------

JPA MANAGEMENT DOCUMENTS

JPA-5 Study Management, Feasibility Review Conference (FRC)

• Description:

The Sacramento District will monitor and coordinate technical studies and other activities required in support of the FRC. Sacramento District will be responsible for providing technical and backup material to SPD, and providing an agenda for the FRC. Similarly, the local sponsor will monitor and coordinate in-kind technical studies and other activities required in support of the FRC. Under this work element, both the Sacramento District and the local sponsor will attend the FRC (expected to be held in the Sacramento area and last for 2 days).

Sacramento District and local sponsor general study management responsibilities also applicable to this work element are described above in JPA-1, Study Management, Public Meeting.

• Responsible Sacramento District Element:

Planning Division, American River Great Basin Branch

• Costs:

- Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	80

Subtotal, Sacramento District: \$ 36,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 26,000

Total Cost: \$ 62,000

JPA MANAGEMENT DOCUMENTS

JPA-6 Study Management Public Meeting

• Description:

Both the Sacramento District and the local sponsor will conceptually formulate and review materials developed for the public meeting, help write and review a memorandum documenting and summarizing results of the public review period, review the results of the public comment period and propose responses to comments. Sacramento District and local sponsor study management will attend and may make technical presentations at the public workshop.

Sacramento District and local sponsor general study management responsibilities also applicable to this work element are described above in JPA-1, Study Management, Public Meeting.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	49

Subtotal, Sacramento District:	\$ 22,000
Contract Cost:	
Other Agency/Other COE Cost:	
Miscellaneous Costs:	
Sponsor In-Kind Contribution:	20,000
Total Cost:	\$ 42,000

JPA MANAGEMENT DOCUMENTS

JPA-7 Study Management, Final Report

• Description:

The Sacramento District will monitor and coordinate technical studies and other activities required in support of the final report. Similarly, the local sponsor will monitor and coordinate in-kind technical studies and other activities required in support of the final report.

Sacramento District and local sponsor general study management responsibilities also applicable to this work element are described above in JPA-1, Study Management, Public Meeting

• Responsible Sacramento District Element:

Planning Division, American River/Great Rosin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	66

Subtotal, Sacramento District: \$ 30,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 20,000

Total Cost: \$ 50,000

JPA MANAGEMENT DOCUMENTS

JPA-8 Study Management Public Notice Materials

• Description:

The Sacramento District will be responsible for preparing and forwarding materials required by the South Pacific Division Engineer to produce a public notice . Materials include slides, a study map, a fact sheet and a list of affected members of congress.

• Responsible Sacramento District Element:

Planning Division, American River/Great Basin Branch

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
American River/Great Basin Branch	66

Subtotal, Sacramento District: \$ 30,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 7,000

Total Cost: \$ 37,000

JPI UPDATES OF IPMP

JPI-1 Monthly Reports Preparation

• Description:

Sacramento District will update the periodic reports listed under the IPMP section on Study Management Tools. The monthly reports include Project Executive Summary Report Other reports are justification sheet, PB-6 update and schedule and cost change request.

• Responsible Sacramento District Element:

Programs & Project Mgmt. Division, Civil Works Branch, San Joaquin Basin/West Area Unit

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Civil Works Br., San Joaquin Basin/W. Area Unit	65
Programs Management Branch	63

Subtotal, Sacramento Distnct: \$ 60,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 0

Total Cost: \$ 60,000

JPL PROJECT MANAGEMENT PLAN (PMP)

JPL-1 Draft PMP

• Description:

A draft PMP will be prepared specifying work roles and responsibilities regarding design, construction, and operation and maintenance of the project. This task will require close coordination with the study manager, technical elements, and the local sponsor. The draft PMP will be based on study results available at time of preparation. The draft PMP will be submitted with the draft feasibility report.

• Responsible Sacramento District Element:

Programs & Project Mgmt. Division, Civil Works Branch, San Joaquin Basin/West Area Unit

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Civil Works Br., San Joaquin Basin/W. Area Unit	36
Programs Management Branch	16

Subtotal, Sacramento District: \$ 26,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 18,000

Total Cost: \$ 44,000

JPL PROJECT MANAGEMENT PLAN (PMP}

JPL-2 PRB Approval of PMP

• Description:

The draft PMP will be revised based on comments received at the FRC and on current study findings. The revised PMP will be submitted to the District PRB for approval. Further coordination and input will be required of ale study manager, Sacramento Distinct technical elements, and the local sponsor.

• Responsible Sacramento District Element:

Programs & Project Mgmt. Division, Civil Works Branch, San Joaquin Basin/West Area Unit

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Civil Works Br., San Joaquin Basin/W. Area Unit	29
Programs Management Branch	11

Subtotal, Sacramento district: \$ 20,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 6,000

Total Cost: \$ 26,000

JPZ PROGRAMS AND PROJECT MANAGEMENT DOCUMENTS

JPZ-1 Budget Documents, Financial Reports

• Description:

Sacramento District will prepare monthly Funds Management Reports and other budget documents for use by managers and by the local sponsor. This work requires working with the study manager to explain expenditures and develop spending schedules.

• Responsible Sacramento District Element:

Programs & Project Mgmt. Division, Civil Works Branch, San Joaquin Basin/West Area Unit

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Civil Works Br., San Joaquin Basin/W. Area Unit	76
Programs Management Branch	52

Subtotal, Sacramento District: \$ 62,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 6,000

Total Cost: \$ 68,000

JPZ PROGRAMS AND PROJECT MANAGEMENT DOCUMENTS

JPZ-3 Sponsor Letter of Intent

• Description:

The local sponsor (or another non-Federal entity) will write a letter expressing intent to cost share the cost of design and construction of the project and operate and maintain the completed project. The local sponsor will express its understanding of cost-share responsibilities regarding design, construction and operations and maintenance.

• Responsible Sacramento District Element:

Programs tic Project Mgmt. Division, Civil Works Branch, San Joaquin Basin/West Area Unit

• Costs:

Sacramento District Labor

<i>Sacramento District Elements</i>	<i>Effort (in person-days)</i>
Civil Works Br., San Joaquin Basin/W. Area Unit	4

Subtotal, Sacramento District: \$ 2,000

Contract Cost:

Other Agency/Other COE Cost:

Miscellaneous Costs:

Sponsor In-Kind Contribution: 9,000

Total Cost: \$11,000