

**Meeting of the Central Valley Flood Protection Board
March 28, 2014**

Staff Report

**Feasibility Cost Share Agreements for the American River Common Features
General Reevaluation Report**

1.0 ITEM

Consider approval of Resolution No. 2014-03 to:

1. Approve the Feasibility Cost Share Agreement (FCSA) and Local Feasibility Cost Share Agreement (LFCSA) for the American River Common Features General Reevaluation Report between the Central Valley Flood Protection Board and the U.S. Army Corps of Engineers; and
2. Delegate to the Central Valley Flood Protection Board President the authority to execute the FCSA & LFCSA in substantially the form attached hereto.

2.0 SPONSORS

Federal: U.S. Army Corps of Engineers (USACE)
State: The Central Valley Flood Protection Board (Board)
Local: Sacramento Area Flood Control Agency (SAFCA)

3.0 LOCATION

The American River Common Features General Re-evaluation Report (ARCF - GRR) will include the City of Sacramento, the Natomas Basin along the left bank of the Natomas East main Drainage Canal, Arcade Creek, Magpie Creek, left bank of the Sacramento River Between RM 45.5 and RM 60 and areas along the North and South Banks of the American River (see Attachment A, Location Map).

4.0 PROJECT DESCRIPTION:

The primary goal of the ARCF – GRR is to identify flood risk management problems within the city of Sacramento and surrounding areas, Natomas Basin, along the left bank of the Natomas East main Drainage Canal, Arcade Cree, Magpie Creek, left bank of the Sacramento River between RM 45.5 and RM 60, analyze potential solutions to those problems, and recommend a plan that satisfies USACE's National Economic Development (NED) planning process and meets the intentions of the Central Valley Flood Protection Plan. The ARCF - GRR will focus on reducing flood risk to urban areas, private and public property, and the State infrastructure within. The resulting

federally recommended project will be in accordance with State and Federal levee design criteria and environmental law. A joint Environmental Impact Report/Environmental Impact Statement under California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) will be prepared with the ARCF - GRR.

5.0 PROJECT BACKGROUND

The American River Common Features Project was initiated in 1996 by Congress, whereby common flood risk reduction elements considered within the 1996 Supplemental Feasibility Study were authorized through the Water Resources Development Act of 1996. After the 1997 flood event, the Sacramento District of the Army Corps of Engineers realized that under-seepage (as opposed to through-seepage) was a significant concern throughout the entire system of levees protecting the Sacramento area. A General Reevaluation Report (GRR) was underway for the Natomas area, but due to deep under-seepage issues throughout the entire Sacramento area, the Natomas GRR was expanded to include the entire Sacramento area thereby becoming the ARCF – GRR.

5.1 ESTIMATED COSTS:

The GRR was a project element of the ARCF Project Cost Share Agreement executed by the Board on July 10, 1998. The cost has been updated several times since the original cost share agreement was executed. USACE's Planning Modernization Effort (3x3x3 Rule) required rescoping of the GRR; by USACE Sacramento District (SPK), for a completion date of December 2014. The rescoping required SPK to estimate the cost to complete the GRR. SPK requests an estimated \$1.2 million from the Non-federal Sponsors to complete the GRR. The LFCSA will establish a 50% cost share of the \$1.2 million to complete. SAFCA and the Board will each be responsible for an estimated \$625 thousand to complete the GRR.

5.2 COST ALLOCATION:

USACE estimates the total cost of the GRR to be \$14.9 million. The total estimated GRR cost includes costs for creditable work that will be performed by the Non-federal Sponsors. A new Feasibility Cost Share Agreement (FCSA) will separate the ARCF – GRR from the current Project Cooperation Agreement (PCA) and revise the current GRR cost share from a 75/25 federal and non-federal cost share to a 50/50 cost share. In addition to the FCSA, the Non-federal Sponsors will need to execute a Local Feasibility Cost Share Agreement (LFCSA). The LFCSA will establish a 50/50 cost share between SAFCA and the Board for the non-federal share of the FCSA. The non-federal share of the FCSA is \$7.4 million. The Board and SAFCA will each be responsible for the estimated \$3.7 million in non-federal contribution. The non-federal sponsors have contributed \$3.1 million to the GRR under the 75/25 cost share of the PCA. The Non-federal Sponsors will be required to make up the cost share difference

between the PCA and the FCSA; which will establish a balanced cost share in accordance with the new FCSA & LFCSA cost share formulas. The total non-federal amount necessary to balance the cost shares is \$3.1 million leaving an estimated \$1.2 million in non-federal contribution to complete the GRR. Upon execution of the FCSA the non-federal sponsors will contribute an approximate total of \$4.3 million; consisting of \$3.1 in non-federal back pay and an estimated \$1.2 million to complete the GRR.

5.3 PROJECT BENEFITS

The primary benefits of completing the GRR which includes an LPP are:

- Risk reduction delivered in a timely manner which considers potential funding and agency coordination constraints
- System Wide improvements which are in accordance with State policy and engineering guidance outlined in the Central Valley Flood Protection Plan.
- Establishes a partnership with USACE which allows necessary coordination of State flood risk management goals outlined in the Central Valley Flood Protection Plan.

6.0 STAFF ANALYSIS

The Feasibility Scoping Meeting was conducted in March 2009; SPK was then tasked to complete a Post Authorization change (PAC)/ Interim GRR for the Natomas portion of the Common Features project. The Chief's Report for the Natomas Basin PAC report was completed in December 2010. The remaining reevaluation for the American River Common Features has been re-scoped in accordance with the 3x3x3 Rule initiated in 2012. USACE and the non-federal study sponsors have worked through the alternative analysis and screening processes and are currently completing the Tentatively Selected Plan (TSP) process. The Non-federal Sponsors and SPK have selected Locally Preferred Plan (Alternative 2) as the TSP the TSP has a greater cost than the NED. SPK has recommended that the TSP be fully funded and have tentative agreement with USACE Headquarters. Alternative 2 is described below:

Alternative 2 includes the construction of fix-in-place levee remediation measures to address seepage, slope stability, erosion, and overtopping concerns identified for the American and Sacramento River Levee, NEMDC, Arcade, Dry/Robla, and Magpie Creeks. In addition, Alternative 2 would reduce the need for levee raises in along the Sacramento River and recommend Sacramento Bypass and Weir widening. USACE and the Non-federal Sponsors continue to negotiate the details of the TSP to achieve a more comprehensive alternative which addresses federal policy while fulfilling State flood risk management guidance outlined in the Central Valley Flood Protection Plan (CVFPP) and State System Wide Investment approach. USACE and the Non-federal Sponsors have incorporated several of the elements in Alternative 2; in order to limit direct impacts to the surrounding property owners:

1. System-wide Improvement Framework (SWIF) for addressing landside access and encroachment issues over time; allowing prioritization of critical flood risk improvements.
2. Vegetation Variance will be pursued in the PED phase to limit vegetation removal on the waterside to the upper 2/3 of the levee slope.
3. Further limiting impacts to the property owners by considering retaining walls for levee raises (if necessary to reduce potential takes where real estate rights are inadequate).

USACE and the Non-federal Sponsors continue to work together to achieve a comprehensive plan. USACE has made good progress in addressing non-federal concerns regarding project implementation and methodology. Board Staff recommends the Board approve the FCSA and LFCSA so that the project sponsors can move forward with their coordination and continue toward completion of the GRR.

7.0 AUTHORIZATIONS

Federal: WRDA 1999 (section 336); WRDA 1996 (Section 101); WRDA 1986 (section 902)

State: California Water Code Section 12670.10, 12670.11, 12670.12, 12670.14, and 12670.16

8.0 STAFF RECOMMENDATION

Consider approval of Resolution No. 2014-03 to:

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2. Delegate to the Central Valley Flood Protection Board President the authority to execute the FCSA & LFCSA in substantially the form attached hereto.

9.0 LIST OF ATTACHMENTS

- A. Tentatively Selected Plan Report Synopsis
- B. Resolution 2014-03
- C. Project Cooperation Agreement & Amendments
- D. Draft Feasibility Cost Share Agreement
- E. Draft Local Feasibility Cost Share Agreement
- F. Project Management Plan
- G. PowerPoint Presentation*

*attachment in development, to be completed by the March 28, 2014 Board Meeting.

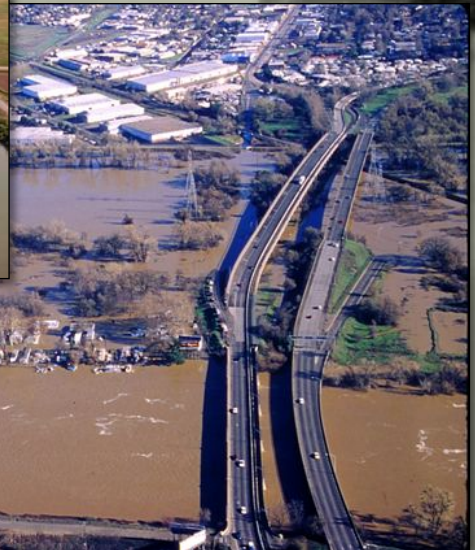
American River Watershed

Common Features

General Reevaluation Report

Draft Report Synopsis

February 2014



**US Army Corps
of Engineers®**
Sacramento District

**Draft Report Synopsis
for
American River Common Features, California
General Revaluation Report**

1.0 Stage of Planning Process

This is a report synopsis of the draft general reevaluation report for the American River Common Features, California Project. The Feasibility Scoping Meeting conference was conducted in March 2009. The Sacramento District was then tasked to complete a Post Authorization Change (PAC)/Interim GRR for the Natomas portion of the Common Features project. The Chief's Report for the Natomas Basin PAC report was completed in December 2010. The remaining reevaluation for the American River Common Features has been re-scoped in accordance with Planning Modernization Guidance. Currently the District is working through Step 6 of the planning process for the GRR, and has a tentatively selected plan to recommend to higher authority.

2.0 Study Authority

The Common Features Project was authorized in Section 101 of the Water Resources Development Act (WRDA) 1996 (Public Law 104-303). Additional authority was provided in Section 366 of WRDA 1999. Significant changes to the project were approved via the Second Addendum to the Supplemental Information Report of March 2002. And, Section 129 of the Energy and Water Development Appropriations Act of 2004 increased the Section 902 authorized project cost limit. The Common Features Natomas 2010 recommendation is with Congress and authorization is anticipated.

This study would only partially address the American River Watershed authorization and is therefore called an "interim General Reevaluation Report" which indicates that the study is addressing the water resource issues of a specific area within the authority, rather than the entire area authorized for study. Additional studies to address other water resource issues within the American River Watershed could be initiated based on Congressional direction.

2.1 Additional Study Guidelines

There are no additional guidelines issued by HQ, ASA (CW), or SPD for this study.

2.2 Study Area

The investigation is focused on reducing the flood risk to the City of Sacramento which is located at the confluence of the Sacramento and American Rivers. Therefore, the study area includes the Sacramento and American River Watersheds (Figure 1). The Sacramento River watershed covers approximately 27,000 square miles in central and northern California. Major tributaries of the Sacramento River

include the Feather, Yuba and American Rivers. Shasta and Oroville Dams impound significant flood volumes from the upper Sacramento and Feather River watersheds, respectively. The American River Watershed covers about 2,100 square miles northeast of the City of Sacramento and includes portions of Placer, El Dorado, Alpine, and Sacramento counties. The American River watershed includes Folsom Dam and Reservoir; inflowing rivers and streams, including the North, South, and Middle forks of the American River; and the American River downstream to its confluence with the Sacramento River in the City of Sacramento (Figure 1). The Sacramento and American Rivers, in the Sacramento area, form a flood plain covering roughly 110,000 acres at their confluence. The flood plain includes most of the developed portions of the City of Sacramento and the entire Natomas basin. The study area also includes other flood facilities, including the Fremont and Sacramento Weirs and the Yolo and Sacramento Bypasses.

2.3 Project Area

The American River Common Features project area primarily includes the City of Sacramento. The City of Sacramento sits within three basins each of which is protected by a distinct system of levees as well as by Folsom Dam (Figure 2). The three basins are referred to as the American River South (ARS) basin, the American River North (ARN) basin, and the Natomas (NAT) basin (Figure 3). The ARS basin has 25 miles of levees along the American and Sacramento Rivers. There are over 400,000 people at risk of flooding in this basin. The ARN basin has 25 miles of levees along the American River, the Natomas East Main Drainage Canal (NEMDC), Arcade Creek, and Dry/Robla Creeks. There are approximately 75,000 people at risk of flooding in this basin. The NAT basin has 42 miles of levees along the American and Sacramento Rivers from the Natomas Cross Canal to the American River confluence, NEMDC, the Pleasant Grove Creek Canal, and the Natomas Cross Canal. There are approximately 100,000 people at risk of flooding in this basin.

The City of Sacramento is the capital of California, and thus is the government center for the state, which by itself has the 9th largest economy in world. Critical infrastructure, including the State Capital Building and many state offices, are located in downtown Sacramento in areas that could be affected by flood events. Disruption of government services, and effects to emergency services and transportation corridors could have far ranging effects to the safety and economy of the State, including life safety.

2.4 West Sacramento GRR

The City of West Sacramento lies across the river from the ARCF study area. The West Sacramento area experiences many of the same flood risk issues that the ARCF study area does and has many similar potential alternatives under consideration. The West Sacramento GRR is on a similar timeline with the ARCF GRR. However, for the purposes of the without project condition assumptions, neither the West Sacramento GRR nor the ARCF GRR assumes the other study is in place. This was done to ensure that all potential effects of each of the studies are properly accounted.

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Figure 1: Sacramento River Watershed

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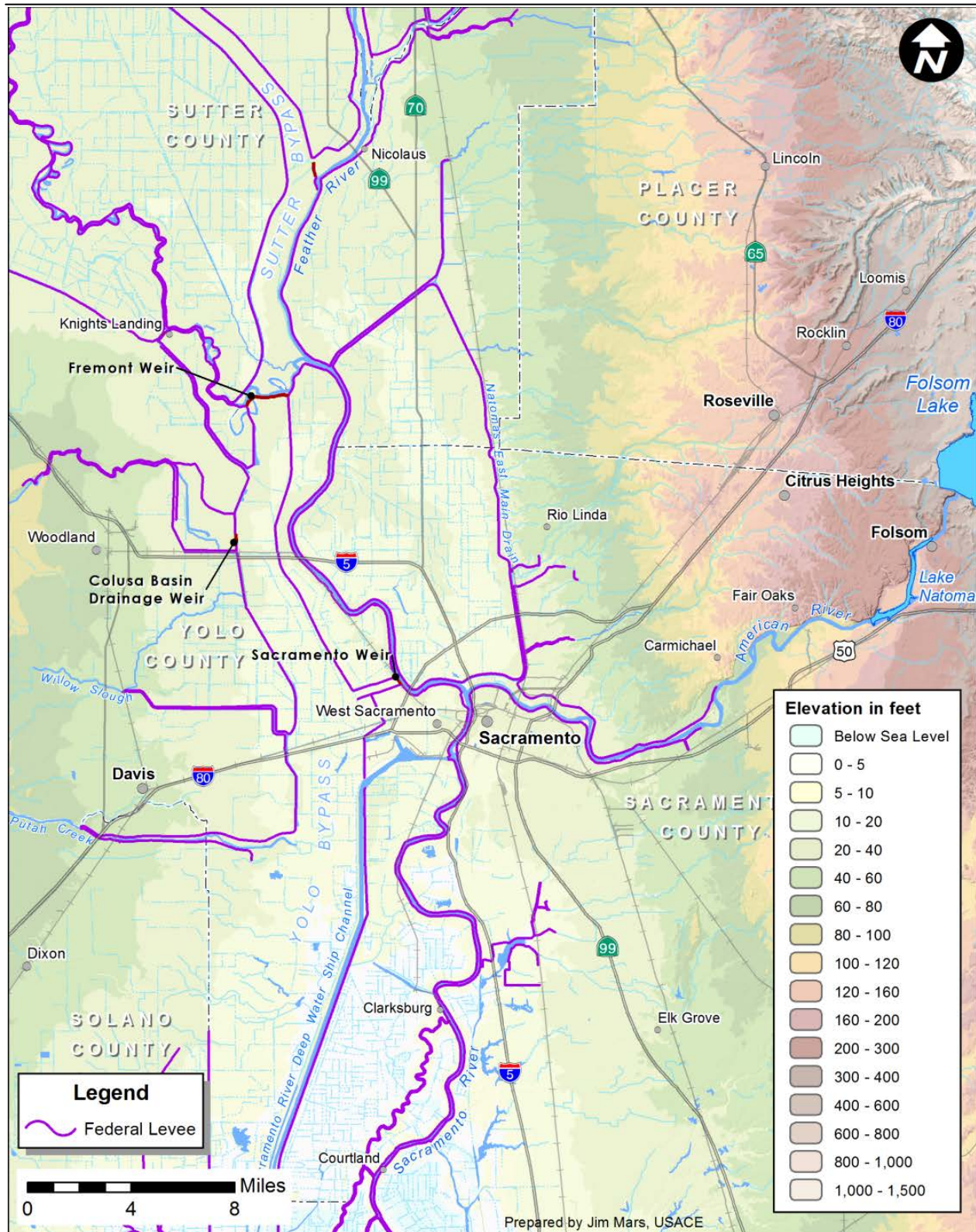


Figure 2: Sacramento Area Levees

3.0 Non-Federal Sponsors

The non-Federal sponsor for the project and general reevaluation study is the State of California's Central Valley Flood Protection Board (CVFPB). The State's local partner is the Sacramento Area Flood Control Agency (SAFCA); SAFCA has a Local Cooperation Agreement with the CVFPB.

4.0 Problems, Opportunities and Without Project Condition

The Sacramento Metropolitan area is one of the most at risk areas for flooding in the United States. There is a high probability that flows in either the American or Sacramento Rivers will stress the network of levees protecting the study area to the point that levees could fail. The consequences of such a levee failure would be catastrophic since the inundated area is highly urbanized and the flooding would be up to 20 feet deep. This section describes the flood risk problems in the Sacramento Metropolitan area. The following sections include a description of the flood risk in terms of the probability of flooding and the resulting consequences.

4.1. Problem: There is a great risk to life and safety from flooding due to the high probability of levee failure in the Sacramento Metropolitan Area.

The Sacramento metropolitan area has a high probability of flooding due to its location at the confluence and within the floodplain of two major rivers. Both of these rivers have large watersheds with the potential for very high volume of runoff which has overwhelmed the existing flood management system in the past. The existing levee system was designed and built many years ago, before modern construction methods were employed. These levees were constructed close to the river to increase velocities which would flush out hydraulic mining debris. This debris is essentially gone now but the high velocities associated with flood flows are eroding the levees and levee foundations which comprise the flood risk management system for the study area. Levees in the study area could fail due to a number of reasons. (Figure 4) These reasons include:

- Seepage of floodwater through and under the levee
- Erosion of the levees and river banks
- Stability of the levees
- Overtopping of levees during events that exceed design

In addition to these flood risk management problems, many of the levees within the study area are not in compliance with ETL 1110-2-571, Guidelines for Landscaping, Planting, and Vegetation Management, at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures (the Vegetation ETL). Subsequent development occurred immediately behind the levees resulting in limited to no landside access to the levee toe. Additionally, woody vegetation exists within the USACE established vegetation free zone for much of the levee protecting the study area.

The greatest flood risk driver to the Sacramento Area is the risk of a geotechnical levee failure along the Sacramento River from a relatively high frequency event. The next risk driver is a levee failure from erosion from a relatively high frequency flow along the American and Sacramento Rivers. The third order risk driver is from lower frequency, high volume flows exceeding the flood carrying capacity of the Sacramento,

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American and Natomas levee systems. Lastly, there is some risk from encroachments and minor risk from vegetation, though there are isolated instances of significant risk due to encroachments and vegetation.

Table 1: Risk Drivers

BASIN	INDEX POINT	HYDRAULIC STAGE (NAVD 88)		PR (FAILURE)		CONSEQUENCE	IMPACT	CONSTRUCTION PRIORITY
		100-YR	200-YR	100-YR	200-YR			
ARS	F	29.29	30.99	0.32	0.399	13600	5426	1
ARS	E	32.46	34.26	0.327	0.398	13600	5413	2
ARS	A	48.03	53.08	0.066	0.458	9800	4488	3
ARS	G	28.21	29.85	0.254	0.33	13600	4488	4
ARS	D	33.28	35.11	0.148	0.229	13600	3114	5
ARS	B	38.15	41.35	0.221	0.315	9800	3087	6
ARN	A	46.26	51.1	0.1179	0.463	4500	2084	7
ARS	C	35.86	38.23	0.092	0.14	9800	1372	8
ARN	B	37.01	39.89	0.102	0.145	4500	653	9
ARN	D	39.03	41.3	0.514	0.72	733	528	10
ARN	F	40.1	42.18	0.578	0.686	733	503	11
ARN	E	39.09	41.35	0.451	0.663	733	486	12
ARN	C	38.79	41.21	0.124	0.448	733	329	13
ARN	G	41.49	43.24	0.088	0.152	733	111	14
ARN	H	41.46	43.22	0.089	0.11	733	81	15

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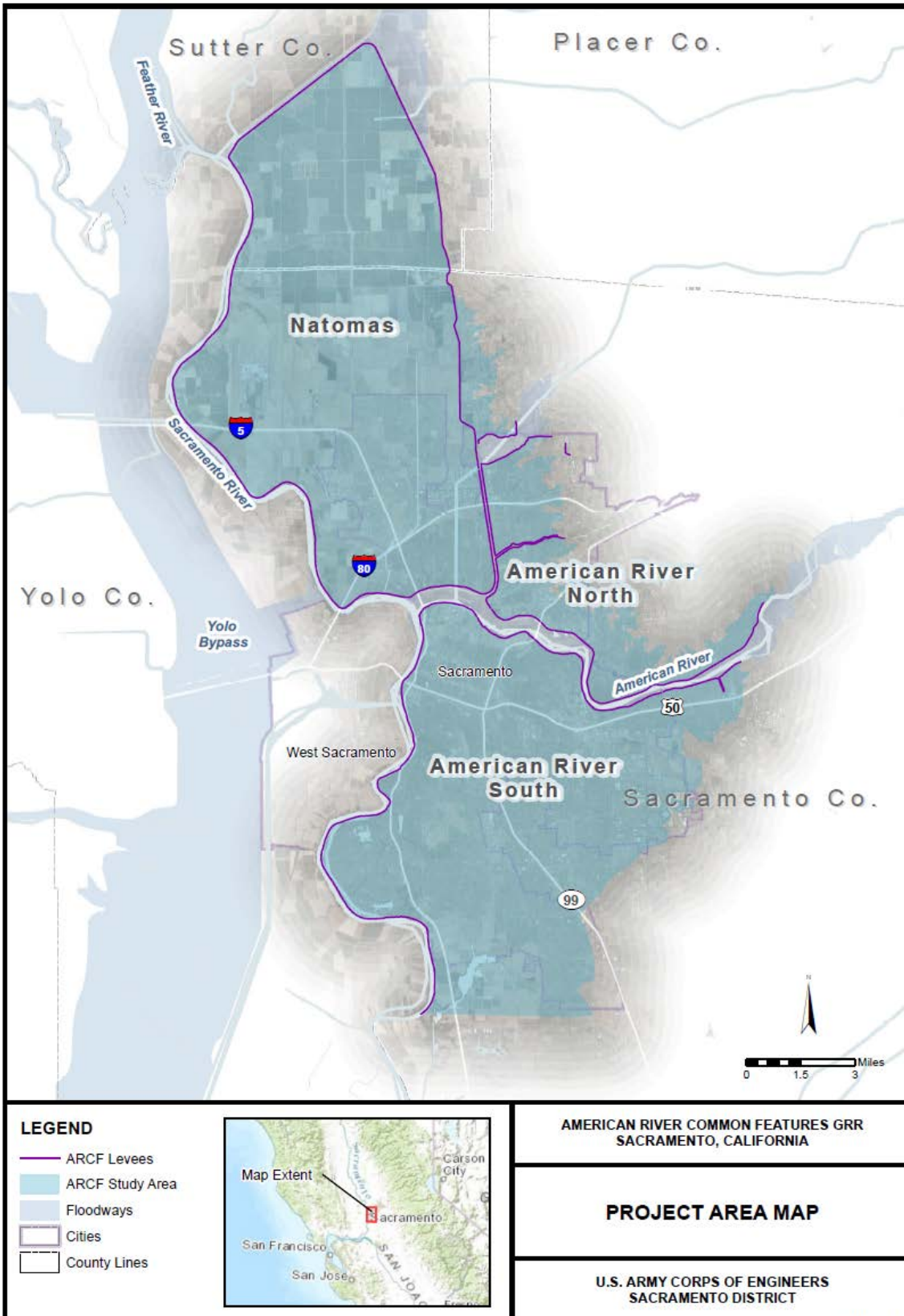


Figure 3: Study Area

4.2 Problem: The consequences of flooding in the study area are catastrophic.

If flooding were to occur within the study area, the consequences would be catastrophic. The cold water flooding would rapidly inundate a highly urbanized area with minimal warning or evacuation time. As the Capital of California, the Sacramento Metropolitan area is the center of State Government and many essential statewide services are located here. The study area is also at the crossroads of 4 major highway systems which would be impassable should a major flood occur. The effects of flooding within the study area would be felt not only at the local level, but at the regional, state and national level as well.

A significant portion of the City of Sacramento and other portions of the study area are located within the 200-year flood plain. An analysis was completed to determine the population at risk in the 200-year flood plain. The distribution of population within the study area was based on 2010 census blocks. Inundation maps were developed for hypothetical breach locations in each of the basins. Composite floodplains reflecting the greatest depths per breach scenario were developed. The following table shows the population at risk in each basin for the 1/200 annual chance exceedence (200 year) event at flood depths of 0, 2, and 15 feet.

Table 2: Population within, 0.5% (1/200) ACE Floodplain

Basins	Population with depths greater than 0 feet	Population with depths greater than 2 feet	Population with depths greater than 15 feet
ARS	191,563	172,635	28,344
ARN	69,973	62,785	8,444
NAT	98,558	98,234	51,841

Life safety information was taken from the USACE Levee Screening Tool (LST) for use in this study. The Levee Screening Tool supports a levee screening process in support of the USACE Levee Safety Program by facilitating a preliminary assessment of the general condition and associated risks of levees. Life safety can be evaluated using the consequence portion of the LST. Readily available data and information are used along with limited analysis to assess the potential consequences related to several flooding scenarios. Consequence estimates focus on loss of life, but also include population at risk, number of structures, and direct monetary damage estimates to structures. The overall data for life safety and life loss estimates can be found in Table 3.

Flooding in urban areas can cause serious health and safety problems for the affected population. In the three basins making up the study area, there are 500,000 residents at risk. Additionally, census data indicates that another 100,000 people work in the Sacramento area but do not live there. Significant numbers of people traverse the area via Interstate 5 every day. Data obtained from the California Department of Transportation shows that 185,000 vehicles pass through the Sacramento area in the

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north-south direction in an average 24-hour period. The number of vehicle occupants is estimated to be 270,000. This is only a partial accounting of vehicular traffic passing through the region.

Table 3: Life Safety and Life Loss Information (USACE's Levee Screening Tool)

	American River South	American River North	ARN, Small Streams	Natomas	Total
Population at Risk (Day)	350,000	58,558	15,457	76,973	500,988
Population at Risk (Night)	439,491	51,380	23,816	65,696	580,383
Loss of Life (Day)	503	170	77	669	1419
Loss of Life (Night)	978	156	131	553	1818

4.3 Opportunities: There are opportunities to address these issues and reduce the flood risk for the City of Sacramento. There is also the opportunity to educate the public about ongoing residual risk.

4.4 Without Project Condition - The future without-project conditions and associated assumptions for a 50 year planning period of analysis for this study are:

1. The elements of the Common Features project authorized by WRDA 1996 and WRDA 1999 are assumed to be in place. These features addressed the seepage and stability concerns along the American River but do not address the erosion risk.
2. The levee modifications recommended in the 2010 Natomas PAC Report are assumed to be in place, which improve the levees but do not include levee raises to address higher volume, low frequency flows.
3. The Levee Vegetation Management Strategy presented in the Central Valley Flood Protection Plan will be in place. This strategy focuses on a long term vegetation life cycle management plan which would allow existing trees and other vegetation to live out their normal life cycles but would result in the gradual elimination of trees from the levee and adjacent areas, with the exception of the lower waterside slope of the levee.
4. In 2017, the Folsom Joint Federal Project (JFP) auxiliary spillway at Folsom Dam will be completed and a new water control manual will be adopted (Folsom Dam Modifications). The JFP will allow dam operators to release larger quantities of water and more efficiently utilize flood space in the reservoir. Operation of the JFP is to some degree dependent on the American River levees downstream of the dam being able to safely pass the objective release of 160,000cfs. At the time of the Folsom PAC report in 2007, assumptions were made based on the available information at the time, that the downstream improvements authorized by WRDA 1996 and 1999 would be in place and allow for the safe passage of the objective releases identified in the Folsom PAC report. However, as was noted in the Folsom PAC, an erosion study of the downstream channel was needed to provide more information on this subject. This study is nearing completion and identifies the need for erosion protection. Therefore, erosion protection to these levees would enable more optimal operation of the JFP. In the absence of a

Federal project to enable the levees to safely pass these objective releases, downstream levees could fail leading to flooding in the Sacramento Metropolitan area.

5. In 2018, the 3.5-foot mini-raise of the Folsom Dam will be completed (Folsom Dam Raise).
6. Features under consideration as part of the West Sacramento GRR are not in place. The West Sacramento levee performance is assumed to have a 1 in 11 Annual Exceedence Probability (AEP)

5.0 Planning Goal/Objectives

The planning goal for the study is to reduce the risk of flooding in the Sacramento area.

The planning objectives are specified as follows:

- Reduce the probability of flooding in the study area measured by the reduction in damages.
- Reduce the consequences of flooding in the study area measured by the reduction of the population at risk, life safety concerns and availability of evacuation routes.
- Reduce the impacts to critical infrastructure in the study area measured by the reduction in damages and availability of emergency facilities during flood events
- Encourage wise use of the flood plain measured by the strength of the Floodplain Management plan, and for minimizing the both the monetary and non-monetary aspects related to the probability and consequences of flooding.
- Educate the public about ongoing residual risk measured by increased public awareness as result of annual notifications of residual flood risk and an increase in the percent insured.

The State of California as the project sponsor has an objective that the plan should achieve the minimal 200-year urban level of protection standard as defined by the State of California which is the mean 200 year water surface elevation plus 3 feet of freeboard. Note that the Folsom Dam improvements under design and construction as part of the Joint Federal Project (JFP) will have a Conditional Non-exceedence Probability (CNP) or assurance of 86% for the 1% event (or the 1/100 Annual Chance Exceedence (ACE)) and a 50% CNP for the 0.5% event (1/200 year ACE).

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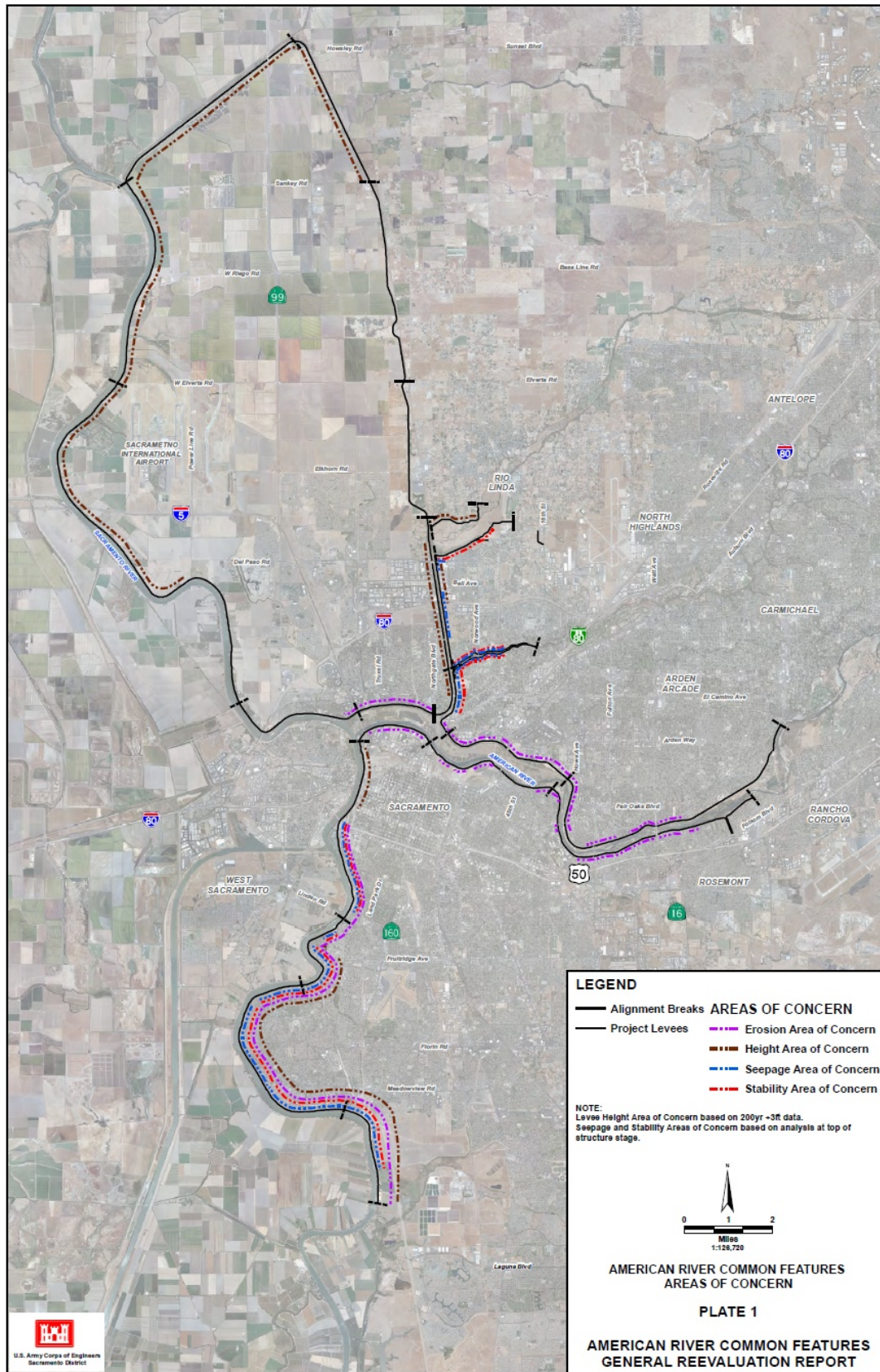


Figure 4 – Levee Problems in the Study Area

6.0 Planning Constraints

The planning constraint identified in this study is that:

Plans must not violate the Federal Aviation Administration (FAA) restrictions regarding providing additional bird habitat in the vicinity of the Sacramento International Airport.

7.0 Formulating Alternative Plans

7.1 Management Measures

The measures considered to reduce flood risk and to educate the public on residual risk and the objectives they address are included in the following table:

Table 4: Measures and Objectives

	Objective Addressed				
	Reduce the probability of flooding within the study area	Reduce consequences of flooding within the study area	Reduce Risk to Critical Infrastructure within the study area	Encourage Wise Use of the Floodplain	Educate the public about ongoing risk
Measures to Reduce Flood Stages					
Upstream storage on the American River	X		X		
Transitory storage on the Sacramento River	X		X		
Reoperation of Upstream Reservoirs	X		X		
Sacramento Weir and Bypass Improvements	X		X		
I Street Diversion Structure on Sacramento River	X		X		
Yolo Bypass Improvements	X				
Offstream storage on Deer Creek	X		X		
Measures to Reduce Levee Seepage and Underseepage					
Seepage Berms	X		X		
Relief Wells	X		X		
Slurry Walls	X		X		
Sheet Pile Walls	X		X		
Removal of Ditches Adjacent to levees	X		X		
Measures to Address Levee Stability					
Widen/Flatten Levee Slopes	X		X		
Stability Berms	X		X		

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	Objective Addressed				
	Reduce the probability of flooding within the study area	Reduce consequences of flooding within the study area	Reduce Risk to Critical Infrastructure within the study area	Encourage Wise Use of the Floodplain	Educate the public about ongoing risk
Full Levee Reconstruction	X		X		
Measures to Achieve State Urban Levee Level of Protection					
Raise Levees in Place	X		X		
New Adjacent Levees	X		X		
Add Floodwalls to Existing Levees	X		X		
Construct Cross-Natomas Levee	X		X	X	
Remove Levees and Construct Floodwalls	X				
Construct Partial Floodwalls	X				
Construct New Levees	X				
Measures to Address Erosion					
Waterside Armoring of Levee Slopes (Sac Bank-type repair)	X		X		
Launchable Rock Trench	X		X		
BioEngineering Armoring of Slopes	X		X		
Grade Control Structures in River	X		X		
Measures to Address Maintenance Access¹					
Tall Wall at Landside Toe of Levee	X				
Short Wall with Cut into Levee	X				
Short Wall with Real Estate Acquisition	X				
Tall Wall in the Levee Embankment	X				
Acquisition of Real Estate For Maintenance Access	X				
Non-Structural Measures					
Permanent Relocation		X	X	X	
Raising Structures in Place		X	X	X	
Flood Proofing of Existing Structures		X	X	X	
Floodplain Management		X		X	X
Providing Floodplain Information to Regulatory Agencies				X	

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	Objective Addressed				
	Reduce the probability of flooding within the study area	Reduce consequences of flooding within the study area	Reduce Risk to Critical Infrastructure within the study area	Encourage Wise Use of the Floodplain	Educate the public about ongoing risk
Annual Publication of Residual Risks				X	X
Telemeter Stream Flow Gages		X			
Modifications to Flood Warning System		X			
Federal Flood Insurance Program		X		X	

Note: ¹: access is required for maintenance, inspection and flood fighting.

An initial evaluation of the measures was performed to assess their response to the planning objectives, with emphasis on cost effectiveness and environmental concerns. In the formulation of preliminary plans, measures are selected from this list that best meet the planning objectives, cost effectiveness and constructability.

7.2 Screening of Measures

A preliminary screening of the measures identified was done in an attempt to reduce the number of candidate measures before combining them into alternatives. Screening level cost estimates were developed for the measures described. These estimates included construction costs and real estate costs. The estimates were developed by applying each measure over the entire length of the area under consideration. The goal was to screen out measures that would not be cost-effective or implementable or are non-responsive to the planning objectives.

The following criteria were used to evaluate and screen the measures:

Table 5: Measures Screening Criteria and Metrics

	Measure Screening Criteria	Metric
1	Effectiveness	Does the measure respond to one or more objectives?
2	Efficiency	Ability of measure to address the problem for the least cost
3	Life Safety Metric	How well measure would reduce flood risk (qualitative assessment at this stage) measured in residual risk

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Table 6: Summary of Management Measures Retained or Dropped.

Measures	Retained	Dropped	Rationale
Measures to Reduce Flood Stages			
Upstream storage on the American River	x		Does not reduce stages enough to preclude levee improvements on the Sacramento River in the study area. Effective method of reducing the flood risk to the downstream communities.
Transitory storage on the Sacramento River		x	Does not reduce stages enough to preclude levee improvements on the Sacramento River in the study area.
Reoperation of Sacramento River Watershed reservoirs upstream of the study area		x	Does not reduce stages enough to preclude levee improvements on the Sacramento River downstream of the American. Distance to reservoirs is too great and there are too many unregulated tributaries in between.
Reoperation of American River Watershed reservoirs upstream of the study area		x	Folsom Dam Modification Water Control Manual update is considering modifications to the flood control space.
Sacramento Weir and Bypass Improvements	x		Provides regional benefits in the form of reduced water surface elevations in the Sacramento River in the study area and to communities downstream of the study area. High reliability of moving flood flows away from urban area to rural bypass area
Improvements to the Yolo Bypass		x	Does not reduce stages enough to preclude levee improvements on the Sacramento River in the study area.
Offstream storage on Deer Creek		x	Substantial development has taken place in the area where this alternative would be located. High costs would be incurred in relocating these communities.
Construct Diversion Structure on Sac River near I Street Bridge	x		Reduces water surface elevation in the Sacramento River downstream to the extent that seepage, stability and erosion issues are addressed and levee improvements not needed.
Measures to Address Seepage and Underseepage			
Seepage Berms	x		Existing residential and commercial development immediately adjacent to the levee toe make this measure more costly than other seepage reduction measures in most areas. Retained for use in areas with land available on the landside of the levee.
Relief Wells	x		Effective method of addressing residual seepage without jeopardizing levee integrity.
Slurry Walls	x		Effective method of reducing levee seepage and underseepage.
Sheet Pile Walls		x	Not an effective construction technique for deep cutoff of seepage. Screened based on cost and constructability

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Removal of Ditches Adjacent to levees	x		Effective at lengthening seepage path to meet seepage criteria.
Measures to Address Levee Stability			
Widen/Flatten Levee Slopes	x		Effective method of improving levee stability
Stability Berms		x	Existing residential and commercial development immediately adjacent to the levee toe make this measure much more costly than other stability improvement measures.
Full Levee Reconstruction		x	Not a cost effective construction technique to address stability.
Measures to Achieve State Urban Levee Performance			
Raise Levees in Place	x		Effective method of increasing levee performance.
Raise levees with Adjacent Levees		x	Residential and Commercial development immediately adjacent to existing levee toe. Real Estate requirements make this measure much more costly than other measures which achieve similar results.
Add Floodwalls to Existing Levees	x		Effective method of increasing levee performance.
Construct Cross-Natomas Levee		x	Much more costly than other measures. Very high Real estate costs.
Remove Levees and Construct Floodwalls		x	Other measures that achieved the same result were more cost effective. High environmental effects.
Construct Partial Floodwalls		x	Other measures that achieved the same result were more cost effective.
Construct New Levees		x	Improving existing levees is more cost effective due to construction and real estate.
Measures to Address Erosion			
Waterside Armoring of Levee Slopes (Sac Bank-type repair)	x		Effective method of reducing erosion potential on the levee.
Launchable Rock Trench	x		Effective method of reducing erosion potential on the levee.
Biotechnical Armoring of Slopes	x		Used in areas with a wide natural bank. Would not be used on levee slopes. Effective method to reduce erosion
Grade Control Structures in River		x	Analysis confirmed that erosion of the river bed not a concern during the period of analysis.
Maintenance Access			

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Tall Wall at Landside Toe of Levee	x		Provides access in areas constrained by existing structures
Short Wall with Cut into Levee	x		Provides access in areas constrained by existing structures
Short Wall with Real Estate Acquisition	x		Provides access in areas constrained by existing structures
Tall Wall in the Levee Embankment	x		Provides access in areas constrained by existing structures
Acquisition of Real Estate For Maintenance Access	x		Provides access in areas constrained by existing structures
Non-Structural Measures			
Permanent Relocation		x	Too costly to relocate the City of Sacramento out of the floodplain.
Raising in Place		x	More costly than improving levees and would alter the character of the community.
Flood Proofing of Existing Structures		x	More costly than improving levees and would alter the character of the community.
Floodplain Management	x		Item of local cooperation provided by non-Federal sponsor.
Providing Floodplain Information to Regulatory Agencies	x		Supports effective land use policies
Annual Publication of Residual Risks	x		Item of local cooperation provided by the non-Federal sponsor.
Telemeter Stream Flow Gages	x		Provides advance notice of flood risk and potentially increases warning time
Modifications to Flood Warning System	x		Provides advance notice of flood risk and potentially increases warning time
Federal Flood Insurance Program	x		Promotes community resilience

7.3 Key Uncertainties –

In order to more quickly address flood risk, the Non-Federal sponsor may pursue a Section 408 permit to address critical seepage and stability work along the east levee of the Sacramento River south of the American River confluence. It is anticipated that the request will come after a plan is identified by USACE but likely before authorization of a project by Congress. The sponsor will likely seek a request to the ASA(CW) to be considered eligible for credit toward an authorized project. This presents low risk to the analysis because Federal interest would be determined before a Section 408 request is scoped.

7.4 Plan Formulation Strategies

The plan formulation strategy applied for this study consisted of a few steps. Overall, alternatives were developed to comprehensively to reduce flood risk. However, this was done by starting with an understanding of addressing the greatest risk drivers. As described in the problems section, the greatest flood risk driver to the Sacramento Area is the risk of a geotechnical levee failure along the Sacramento River from a relatively high frequency event. The next risk driver is a levee failure from erosion from a relatively high frequency flow along the American and Sacramento Rivers. The third order risk driver is from lower frequency, high volume flows exceeding the flood carrying capacity of the Sacramento, American and

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Natomas levee systems. Lastly, there is some risk from encroachments and minor risk from vegetation, although there are isolated instances of significant risk from encroachments and vegetation.

There are some reaches of levees where the seepage and stability issues are worse than other reaches. However, improving those reaches just moves the point(s) of greatest concern to the next location. It would not be efficient to improve only a few reaches at a time when the extent of the problem applies to the Sacramento River levee from the confluence to the south. Traditionally, erosion has been addressed from a reactionary standpoint once erosion is actively or eminently occurring. This has been done via the Sacramento River Bank Protection Project. (The Sacramento River Bank Protection Project is an authority to preserve the integrity of the Sacramento River Flood Control Project, which includes the Sacramento and American River levees. However, evaluating the history and nature of erosion as part of this GRR indicates strong evidence that active and eminent erosion is present and constitutes a relatively high risk. There is also a high degree of likelihood that extensive erosion will occur without preventative measures put in place to prevent erosion of the flood risk reduction features, both past and potential future investments.

7.5 Focused Array of Alternative Plans: The following is a description of the Focused Array of Alternative Plans.

No Action Alternative – Under this plan, no work would be completed to reduce the risk of flooding in the Study Area.

0.5 Plan – Improve levees up to the existing height. This alternative would incorporate levee improvements for seepage, stability and erosion but not include any levee raises. Specifically, levee raises would not be implemented in the Pocket area, Natomas, or along the NEMDC, Arcade, Dry/Robla and Magpie Creek tributaries. This plan addresses the worst risk factors of seepage, stability and erosion. This alternative was dropped from further consideration since it does not maximize net benefits and is on the rise portion of the net benefits curve.

Alternative 1 – Improve Levees. Alternative 1 involves the construction of fix-in-place levee improvement measures to address seepage, slope stability, erosion, and overtopping concerns identified for the American and Sacramento River levees, NEMDC, Arcade, Dry/Robla, and Magpie Creeks. In addition, Alternative 1 would include levee raises for the Natomas Basin. Due to environmental, real estate, and hydraulic constraints within the American River North and South basins, the majority of the levees would be improved within the existing levee footprint to the extent practical.

Alternative 2 – Improve Levees and Widen Sacramento Weir and Bypass. Alternative 2 would include all of the levee improvements discussed in Alternative 1, except for the majority of levee raises along the Sacramento River. Instead of the levee raises, the Sacramento Weir and Bypass would be widened by approximately 1,500 feet to divert more flows into the Yolo Bypass. A new weir would be constructed adjacent to the existing Sacramento Weir, the existing north Sacramento Bypass levee would be removed, and a new levee would be constructed approximately 1,500 feet to the north. The levees along the American River, Sacramento River, NEMDC, Arcade, Dry/Robla, and Magpie Creeks, would be improved to address identified seepage, stability, erosion, and height concerns through the methods described under Alternative 1.

Alternative 3 - Improve Levees, Construct I Street Diversion Structure, and Sacramento Bypass

widening. This alternative involves construction of a control structure on the Sacramento River in the vicinity of I Street that would force more flow to travel upstream to a widened Sacramento Weir and Bypass. The control structure on the Sacramento River would regulate flows such that all necessary levee improvements on the Sacramento River downstream of the structure would become unnecessary. The Sacramento Bypass widening described in the previous alternative would be necessary for this alternative as well. All levee improvements on the American River, NEMDC, and tributaries, and levee raising in the Natomas Basin would be necessary with this alternative as well. Improvements to the Yolo Bypass to account for increased water surface elevations include a variety of features.

Alternative 4 - Upstream Storage on the American River and levee improvements downstream. This alternative involves construction of a flood control dam near the town of Auburn on the north fork American River for the purpose of attenuating flows continuing downstream into Folsom Reservoir and the lower American River. Additionally, levee improvements to address seepage, stability, erosion, and height concerns are included where they exist in various stretches of levee protecting the City of Sacramento.

Alternative 5 – Maximum Plan - The maximum Plan to reduce flood risk for the City of Sacramento and the surrounding area would include most of the measures previously discussed. Due to the fact that the City of Sacramento is the Capital of the State of California, has several hundred thousand residents residing and working in the floodplain, critical infrastructure of State and National value, and is one of the most at risk urban areas in the country for flooding, the focus of this Maximum Alternative would be to identify all means possible to reduce the risk of flooding and not constrain the plan by net benefits or performance. Therefore, the Maximum plan would include levee improvements along the Sacramento and American Rivers as well as the tributaries and the Natomas levee raises. This alternative would also include construction of a dam upstream on the American River near the town of Auburn which would further reduce the risk of flooding from a 200 year to about a 400 year. Additional levee raises along the Sacramento River would also be included to increase the performance of these levees to a comparable level to that of the American River flood management system with an upstream dam in place.

Alternative 6 - Non-Structural Alternative. A stand alone non-structural alternative is impractical for this project because of the large population density and very large cost to implement these measures. However, non-structural measures are incorporated into all of the previous alternatives. These measures include flood warning system improvements and better public education regarding flood risk awareness.

Table 7 compares the preliminary first costs, annual costs, annual benefits, and net benefits for the focused array of alternatives.

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Table 7: Comparison of Costs (in \$1,000s) and Benefits of the Focused Array of Alternatives^{1,2}

	Alt 0.5 (minimum)	Alt 1 (Improve Levees)	Alt 2 (Widen Sac Weir and Bypass)	Alt 3 (I Street Diversion Structure)	Alt 4 (Upstream Storage)	Alt 5 (Maximum Plan)	Alt 6 (Non- Structural)
First Costs	1,262,915	1,426,055	1,567,746	2,122,000	3,226,055	4,567,746	N/A
Annual Costs	72,430	80,412	92,562	119,738	161,500	260,362	N/A
Annual Benefits	384,047	433,581	430,798	428,000	451,600	451,600	N/A
Net benefits	311,617	353,169	338,236	308,262	290,100	191,238	N/A
B/C	5.30	5.39	4.65	3.57	2.56	1.84	N/A

Notes:

¹ Based on October 2013 price levels, 3.75% interest rate, and a 50-year period of analysis.

² Preliminary costs were based on a combination of estimates developed for the GRR, previous USACE studies and costs developed by private consultants.

Figure 5 displays the net benefit curve for the focused array of alternatives.

Figure 5: Net Benefits of the Focused Array of Alternatives (\$1,000s)

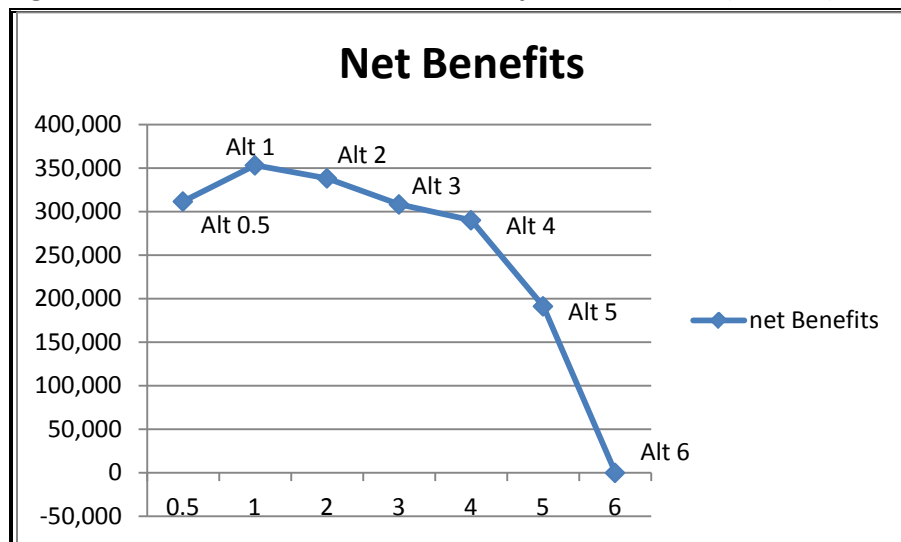


Table 7 displays the extent to which the focused alternatives meet the planning criteria and the results from this screening.

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Table 8: Screening of Focused Array of Alternatives

Preliminary Alternative	Completeness (Stand alone)	Efficiency (Cost Effective)	Effectiveness (meets objectives)	Acceptability (Implementability)	Carried Forward?
0.5. Improve levees within Existing Geometry	Yes	Yes – but does not maximize net benefits	Yes	Does not meet State’s criteria for 200 year protection for urban areas. ETL issues to be addressed.	No
1. Improve Levees	Yes	Yes - first increment and most cost effective	Yes	Yes, but ETL issues need to be addressed.	Yes
2. Improve Levees & Widen Sacramento Weir and Bypass	Yes	No, Alt 1 provides higher net benefits for less cost.	Yes	Yes, but ETL issues to be addressed. Provides regional flood risk management benefits	Yes
3. Improve Levees and Construct I-Street Diversion Structure	Yes	No	Yes	No, potential hydraulic impacts to Yolo Bypass. Long construction time would leave urban areas vulnerable to flooding	No
4. Upstream Storage on American River	Yes	No however was NED plan in two prior studies.	Yes	No, Congressional support and public support lacking.	No
5. Maximum Plan	Yes	No	Yes	Partially	No
6. Non-Structural	No	Yes	No	No	No

The evaluation of the focused array of alternatives demonstrated that Alternatives 1 and 2 have the highest net benefits. Based on these results, Alternatives 1 and 2 were carried forward to the final array of alternatives for further evaluation and comparison.

7.6 Final Array of Alternative Plans

- **Alternative 1 – Improve Levees** - Alternative 1 would include the construction of levee improvement measures to address seepage, stability, erosion, and height concerns identified for the Sacramento River, Natomas East Main Drainage Canal (NEMDC), Arcade, Dry/Robla, and Magpie Creeks, and the height measures identified for the Natomas Basin. Alternative 1 would also include erosion measures for specific locations along the American River.
- **Alternative 2 – Sacramento Bypass and Improve Levees (Locally Preferred Plan)** - Alternative 2 would include widening the Sacramento Weir and Bypass to divert more flows into the Yolo Bypass and alleviate the need for most of the levee raises along the Sacramento River downstream of the bypass. This alternative would also include the levee improvements

identified in Alternative 1, namely the construction of levee improvement measures to address seepage, stability, erosion, and height concerns identified for the Sacramento River, Natomas East Main Drainage Canal (NEMDC), Arcade, Dry/Robla, and Magpie Creeks, and the height measures identified for the Natomas Basin. Alternative 2 would also include erosion measures for specific locations along the American River.

8.0 Evaluation of Final Array of Alternative Plans

The final alternatives have been evaluated based on their costs, benefits, contributions to the Federal objectives and planning objectives, environmental considerations and planning criteria. The results of these analyses are displayed in the comparison section below. The evaluation of the final array of alternatives also included consideration of the hydraulic effects of each alternative and the Life Safety Metric, specifically application of EO 11988.

Hydraulic Effects

Alternative 1 essentially does not alter the flow within the river channels and therefore does not have hydraulic effects associated with the levee improvements. Alternative 2 proposes to widen the Sacramento Weir and Bypass to redirect flow away from the urban area. This would have the effect of reducing the flow in the Sacramento River but increasing the flow in the Sacramento Bypass and the Yolo Bypass.

Widening of the Sacramento Weir and Bypass, and enhancing the flood system capacity, are key features of the system-wide improvements identified in the 2012 Central Valley Flood Protection Plan. The system wide improvements can reduce the degree of urban area levee improvements and/or provide additional system flexibility and capacity in accommodating hydrologic uncertainty, including that associated with the effects of climatic change. The system-wide improvements also increase the ability to accommodate and attenuate large peak floods.

Widening of the Sacramento Weir and Bypass provides downstream stage reduction in the Sacramento and West Sacramento urban areas by pushing more water into the rural Yolo Bypass. This decreases the risk to life safety and reduces flood damage for the urban core of Sacramento. The downstream stage reduction also decreases the risk to life safety and reduces flood damages to the rural communities located downstream of Sacramento. These communities include Clarksburg, Hood, Courtland, Walnut Grove, Ryde, and Isleton. Preliminary information from the Delta Islands Feasibility Study indicates expected annual damages for Walnut Grove and Isleton at \$1.1 million and \$6.9 million, respectively. The reduced stage reduction in the Sacramento River resulting from widening the Sacramento Weir and Bypass would decrease the expected annual damages in these communities.

The increase of flow through the widened Sacramento Weir and Bypass and the associated increase of flow in the Yolo Bypass would slightly increase the flood stage in the Yolo Bypass which has levees which protect the City of West Sacramento. However, the existing performance of the West Sacramento

levees are so poor, it is assumed these levees would fail well below the stage increase attributed to the TSP would be realized.

Natomas Basin

As noted in the description of the problems, the vast majority of the study area is located in the natural floodplain of the Sacramento and American Rivers. There are approximately 400,000 people living and working within this floodplain, which is divided into the three separate and distinct basins that make up the study area. Two of these basins, the American River North and American River South (Figure 3), have essentially been built out. The remaining area, the Natomas Basin, had largely been an agricultural area until recent times. After having been given assurances that the levees provided adequate flood protection, residential and commercial development increased in this area in the late 1990s and early 2000s. Subsequent investigations and signs of levee distress during high flows have shown that the area is still at significant risk of flooding. Further flood risk reduction is needed, not only to meet the FEMA regulatory requirements, but also to meet the State of California requirement for 200-year level of protection for urban areas. Some additional levee improvements are underway as part of the State and local Section 408 efforts to reduce flood risk. Federal involvement is awaiting authorization of the Natomas PAC report which would improve levees by construction of an adjacent levee which would provide a 1:67 annual exceedence probability (a 1 in 67 chance of being exceeded in any given year). The draft GRR considered further flood risk reduction features for the Natomas Basin.

If implemented as described in the Final Array of Alternatives section, either of the final alternatives would provide significantly greater flood risk reduction to the Natomas Basin. Specifically, they would facilitate FEMA accreditation as well as meet the State of California's requirement for 200 year level of protection for urban areas. The Administration has expressed concerns with USACE projects enabling growth in floodplains. This additional growth would increase the consequences of flooding within the Basin and therefore increase the future flood risk. Subsequent discussions with the project partners ensued. The partners decided that, in light of ongoing locally-driven regional planning efforts that are investigating regional-scale flood risk reduction measures to deal with large flood events, that this ARCF GRR would not make further recommendations for the Natomas Basin. This is because it is conceivable that the other local regional planning efforts could recommend implementation of other measures that would render levee raises around the Natomas Basin unnecessary or redundant.

Raising levees around the Natomas Basin is a separate element common to the final array of alternatives. As such, removal of those features from both of the final array action alternatives does not change the designation of NED. Therefore, as a final step in plan comparison, the final array of alternatives was reformulated to remove the Natomas levee raise features. NED remains Alt.1.

The Natomas 2010 Post Authorization Change report (authorization pending), determined that improvements to the existing levee system around the Natomas Basin were in the Federal interest, and that the non-Federal sponsor, subject to review and audit, is eligible to receive credit for work undertaken in advance of authorization of the project by Congress. The work undertaken by the non-Federal sponsors was approved under Section 408 and approval included levee raises for levees

protecting almost half of the Basin. By not recommending levee raises around Natomas as part of this Common Features GRR, strictly speaking only the work associated with the project recommended in the Natomas 2010 PAC would be considered creditable, once the project is authorized. Levee raises around the Natomas Basin would not require any lands, easements, replacements or disposal beyond what was required for the Natomas 2010 PAC. Some limited relocations would have been necessary to accommodate the increased levee height. The difference is in materials and associated costs related to the levee raises. Based on actual experience for the Natomas Reimbursement Phase I and Phase II, work that would be needed in order to account for the separate engineering and real estate requirements associated with the 2010 recommendation versus the levee raise increment is cumbersome and pricey. The non-Federal sponsors are therefore requesting that USACE waive the requirement to isolate the increment of levee raise from the portions of the project that they have constructed as the basis for actual credit. The non-Federal sponsors will be submitting a request for this in the near future. This request has no bearing on decisions associated with designation of a TSP or on the overall GRR.

Vegetation and Encroachment Management

Vegetation and encroachment management, including the establishment of continuous obstruction free landside levee toe access, is an extremely sensitive issue in California's Central Valley. Finding an acceptable balance between flood risk reduction actions, private property interests, and impacts to ecosystems important to threatened and endangered species is critical to identifying a project that can be successfully implemented.

This issue is particularly acute for the American River Common Features GRR study area where the levees do not meet modern engineering or operations and maintenance standards. However, the engineering analysis conducted to date indicates that levee performance is highly sensitive to the correction of geotechnical deficiencies and erosion and significantly less sensitive to the correction of most vegetation and maintenance issues.

In order to characterize the worst case scenario for real estate and environmental impacts associated with vegetation and encroachment modernization, the current version of the Draft GRR and supporting technical documents assume compliance with the ETL though Federal implementation of the TSP with the appropriate allocation of costs. This approach assumes the removal of all vegetation with the exception of the lower 1/3 of the waterside levee slope which would be covered by a variance in PED. It also assumes as part of the future without project condition that a right-of-way would be secured continuously along the landside levee toe.

The results of this analysis indicated that the likely time and cost necessary to bring the levees into complete compliance with the ETL though implementation of the TSP would likely negatively impact the overall project implementation schedule therefore delaying the ability to implement levee improvements for the higher risk geotechnical and erosion deficiencies. Additionally, public opposition to complete compliance with the ETL though implementation of the TSP could also potentially negatively impact the overall project implementation schedule.

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As a result, USACE has been in discussions with the NF partners concerning the use of a SWIF to address all vegetation, encroachment, and access issues outside of the anticipated construction footprint necessary to correct the identified geotechnical and erosion deficiencies. This approach eliminates the direct schedule and cost connection between these low and high risk deficiencies; however, it still provides a means to ensure steady modernization of the maintenance conditions over time.

The strategy to use a SWIF to address all vegetation, encroachment, and access issues outside of the anticipated construction footprint is NOT reflected in the current technical documents supporting the Draft GRR. Because these costs and impacts are common to all alternatives, the changes are not relevant to the TSP selection. The current plan is to reflect these changes in the study and supporting documents after selection of the TSP, except for the description in the GRR and EIS.

9.0 Comparison of Final Array of Alternative Plans / Decision Criteria

The final alternatives have been compared based on their costs, benefits, contributions to the Federal objectives and planning objectives, environmental considerations, and planning criteria. Table 9 shows the cost comparison and Table 10 shows a benefits and costs comparison for the final alternatives.

Table 9: Estimated Costs (in \$1,000) for Final Alternatives 1 and 2 ¹

	Final Alternative 1			Final Alternative 2		
	American River North	American River South ²	Total	American River North	American River South ³	Total
First Costs	348,361	1,039,567	1,387,928	350,113	1,197,720	1,547,833
IDC	44,233	317,142	361,375	53,849	435,598	489,447
Total	392,594	1,356,709	1,749,303	403,962	1,633,318	2,037,280
Average Annual Costs	16,736	57,837	74,573	17,221	69,628	86,849
O&M	100	200	300	100	400	500
Total Average Annual Costs	16,836	58,037	74,873	17,321	70,028	87,349

Notes:

¹ Based on October 2012 price levels, 3.75 percent rate of interest, and a 50-year period of analysis.

² Includes costs of levee raises along the Sacramento River

³ Includes the cost of the Sacramento Weir and Bypass widening.

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Table 10: Comparison of Total Annual Benefits and Costs (in \$1000's) for Final Alternatives 1 and 2^{1,2}

Item	Final Alternative 1	Final Alternative 2
Investment Costs:		
Flood Risk Management First Costs	1,387,928	1,547,833
Interest During Construction	361,375	489,447
Total	1,749,303	2,037,280
Annual Cost		
Interest and Amortization	74,573	86,849
OMRR&R ³	300	500
Total	74,873	87,349
Annual Benefits	414,553	410,928
Net Annual Flood Risk Management Benefits	339,680	323,579
Benefit to Cost Ratio	5.5	4.7

¹ Based on October 2013 price levels, 3.75 percent rate of interest, and a 50-year period of analysis.

² some numbers have been rounded and may be slightly different than those displayed in the appendices.

³ Operation, Maintenance, Repair, Replacement and Rehabilitation TBD: The OMRR&R can be assumed to be somewhat greater for the LPP as well as IDC.

Table 11 shows the contributions of the final alternatives toward addressing the planning criteria.

Table 11: Comparison of Final Array of Alternatives in meeting the Planning Criteria

Preliminary Alternative	Completeness (Stand alone)	Efficiency (Cost Effective)	Effectiveness (meets objectives)	Acceptability (Implementability)
1. Improve Levees	Yes	Yes	Yes	Yes
2. Improve Levees & Widen Sacramento Weir and Bypass	Yes	No	Yes	Yes

Identification of the NED Plan

Based on the above comparison, Alternative 1 is the plan which maximizes net benefits and is therefore identified as the NED plan. However, Alternative 2 has been tentatively identified as the Federally Supportable Plan (FSP). The partners support the FSP based on its ability to reduce the water surface elevation in the river adjacent to two urban areas, increase the regional flexibility of the flood management system, provide benefits to downstream communities in the form of reduced water surface elevations in the Sacramento River, and improve natural floodplain values by increasing the areas exposed to overbank flooding in the widened Sacramento Bypass.

The NED Plan (Alternative 1).

The NED plan has been identified and establishes the basis for Federal interest in a tentative recommendation. NED consists of the following features:

- American River
 - Placement of erosion protection in the form of rock bank protection or launchable rock trench. The treatment would be determined by conditions at specific sites – for example, if a wide berm exists with minimal vegetation near the levee toe, the launchable trench method might be employed. If there is only a narrow berm, the bank protection method would most likely be used. This erosion protection has been determined to be necessary to optimize the benefits from the JFP, as well as to preserve the environmental and recreational aspects of the Lower American River Parkway by reducing the erosion of the banks of the American River. Erosion protection would be placed along 11 miles of the Lower American River within the reach that is most confined by levees and contains the highest velocity of flows. Methods of placement would be similar to those recently applied at river mile 10 on the left bank of the American River. Protection would be designed to minimize impacts to waterside habitat and would be intended to be self-mitigating. Examples of sites are along the left bank of the American near Sacramento State University.
- Tributaries (Natomas East Main Drain Canal, Arcade, Dry, Robla and Magpie Creeks)
 - Construction of slurry cutoff walls to address seepage and stability concerns
 - Construction of floodwalls or levee raises to address concerns of overtopping
 - Sponsor would bring the remainder of the levee into compliance with the Levee Safety Policy for Vegetation and Access during construction timeframe
- Sacramento River south of the American River confluence
 - Construct slurry cutoff wall and flatten levee slopes to address seepage and stability concerns
 - Placement of erosion protection, primarily in the form of rock bank protection with some limited application of launchable rock trench
 - Construct about 1 mile of floodwalls or levee raises to address concerns of overtopping at low points along the system
 - Construct 8 miles of floodwalls or levee raises to increase capacity
 - Variance to allow vegetation to remain on the lower 1/3 of the waterside levee slope
 - Vegetation within construction footprint would be removed

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Table 12 displays the features of the NED plan by waterway.

Table 12: NED Proposed Improvement Measures by Waterway.

	American River	Tribs ¹	Sacramento River	Natomas
Seepage Measures	<i>WRDA 96/99</i>	Cutoff Wall	Cutoff Wall	<i>Natomas PACR</i>
Stability Measures	<i>WRDA 96/99</i>	Cutoff Wall	Cutoff Wall	<i>Natomas PACR</i>
Erosion Protection Measures	<i>Bank Protection, Launchable Rock Trench</i>	---	<i>Bank Protection, Launchable Rock Trench</i>	<i>Natomas PACR</i>
Overtopping Measures	<i>WRDA 96/99</i>	Floodwall/Levee Raise	<i>Floodwall Levee Raise</i>	<i>No recommendation</i>

Notes: 1 Tribs = Tributaries include NEMDC, Arcade Creek, Dry/Robla Creeks, and Magpie Creek

The Federally Supportable Plan (FSP) (Alternative 2)

The features included in the FSP (non-NED features are denoted in **bold**) are:

- American River
 - Placement of erosion protection in the form of rock bank protection or launchable rock (see NED discussion)
- Tributaries (Natomas East Main Drain Canal, Arcade, Dry, Robla and Magpie Creeks)
 - Construction of slurry cutoff walls to address seepage and stability concerns
 - Construction of floodwalls or levee raises to address concerns of overtopping
- Sacramento River south of the American River confluence
 - Construct slurry cutoff wall to address seepage and stability concerns (part of NED)
 - Placement of erosion protection in the form of rock bank protection or launchable rock trench (part of NED) (refine scope in PED if possible; apply worst first approach.)
 - Construct about 1 mile of floodwalls or levee raises to address concerns of overtopping at low points along the system (part of NED)
 - Variance to allow vegetation to remain on the lower 1/3 of the waterside levee slope (part of NED).
 - Vegetation within construction footprint would be removed as cost shared project cost.
- **Sacramento Weir and Bypass Widening**

Table 13 displays the features of the LPP plan by waterway.

Table 13: LPP Proposed Improvement Measures by Waterway.

	American River	Tribs ¹	Sacramento River	Natomas
Seepage Measures	<i>WRDA 96/99</i>	Cutoff Wall	Cutoff Wall	<i>Natomas PACR</i>
Stability Measures	<i>WRDA 96/99</i>	Cutoff Wall	Cutoff Wall	<i>Natomas PACR</i>
Erosion Protection Measures	<i>Bank Protection, Launchable Rock Trench</i>	---	<i>Bank Protection, Launchable Rock Trench</i>	<i>Natomas PACR</i>
Overtopping Measures	<i>WRDA 96/99</i>	Floodwall/Levee Raise	<i>Minimal Floodwall Levee Raise</i>	<i>No Recommendation</i>

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			<i>Sacramento Weir and Bypass Widening</i>	
--	--	--	--	--

- Notes: 1 Tribs = Tributaries include NEMDC, Arcade Creek, Dry/Robla Creeks, and Magpie Creek

Table 14 displays a comparison of the NED and LPP plans based on the system of accounts.

Table 14: Summary System of Accounts Comparison of NED and LPP

	NO ACTION	NED PLAN	LOCALLY PREFERRED PLAN
1. PLAN DESCRIPTION			
	The No Action provides no physical project constructed by the Federal Government or local interests.	The NED plan reduces the risk of flooding within the study area by improving levees.	The LPP plan reduces the risk of flooding to the study area by improving levees and widening the Sacramento Weir and Bypass. Also provides benefits to communities downstream of the study area.
2. IMPACT ASSESSEMENT			
A. National Economic Development (NED)			
1. Project Cost	\$0	\$1,749,303,000	\$2,037,280,000
2. Annual Cost	\$0	\$74,873,000	\$87,349,000
3. Total Annual Benefit	\$0	\$414,553,000	\$410,928,000
4. Annual Net Benefits	\$0	\$339,680,000	\$323,579,000
5. Benefit - Cost Ratio	N/A	5.5	4.7
B. Environmental Quality (EQ)			
1. Air/Noise	No construction activities present; Normal noise levels created by traffic, business, and industrial activities.	Temporary increased noise levels and air quality effects during estimated 10 year construction period.	Temporary increased noise levels during estimated 13 year construction period. Slightly higher air quality effects than NED due to additional material transport for Sac Bypass levee.
2. Water Quality	Significant impacts if a flood event were to occur as urban runoff would contaminate rivers, streams, and eventually damage Delta estuary.	Temporary decreased water quality due to increased turbidity during construction.	Same as NED.
3. Biological Resources	Long term erosion would cause the loss of habitat along the waterways.	Loss of riparian habitat due to construction – replacement habitat will take many years to provide similar value of those removed.	Similar to NED with a small amount of additional loss of habitat. There is potential to create habitat within the expanded Sacramento Bypass.
4. Threatened & Endangered Species	Potential loss of habitat as erosion of berms and levees will result in	Temporary impact to endangered fish species, Valley Elderberry Longhorn	Similar to NED with a small amount of additional loss of habitat along the Sacramento

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	NO ACTION	NED PLAN	LOCALLY PREFERRED PLAN
	vegetation loss in flooded areas	Beetle, and Giant Garter Snake (GGS). Also impacts to avian species nesting and foraging habitat.	River with expansion of the Weir There is potential to create habitat within the expanded bypass for fish species and GGS.
5. Cumulative Effects	No increased effects	The NED will generate increased air quality effects associated with temporary construction activity.	Same as described for NED.
6. Cultural Resources & Historic Properties	Long term erosion, inundation, and/or scouring could cause adverse effects to existing cultural resources.	Potential adverse effects to existing cultural resources. Execution of a Programmatic Agreement and Historic Property Treatment Plan(s) reduces effects to less than significant.	Same as described for the NED, with one additional known historic property potentially adversely affected, the Sacramento Weir.
7. Recreation	Loss of recreation facility in American River Parkway with continue erosion of berm	Short term impacts during construction	Same as described for NED
8. Land Use	Loss of Parkway land with continued erosion of Parkway berm	Conversion of private property to flood control structure (this will be a taking of homes)	Similar to NED plus the conversion of 300+ acres of farm land to floodway
9. Socio-economics	Continue high risk of levee failure and flooding of the Sacramento Metropolitan area and the State Capitol	Short term impacts during construction	Same as described for NED
C. Regional Economic Development (RED)			
1. Construction Activities	Future flooding would destroy part of infrastructure resulting in a loss in the region's ability to produce goods and services. Little to no RED benefits	Value added: temporary jobs added within the region and jobs added within the State. Adds to the gross regional product for the State and Nation.	Slightly higher value added due to additional construction work: temporary jobs added within the region and jobs added within the State. Adds to the gross regional product for the State and Nation.
2. Future Residential Development	New development must be built above the 1% flood elevation, which is not economical to accomplish. Effectively creates a building moratorium in Natomas. ARN and ARS basins already built out.	Future development associated with the construction of new homes would generate substantial economic activity in the study area. Levee construction would decrease the risk of flooding to the established urban areas.	Levee construction would decrease the risk of flooding to the established urban areas.
3. General Economic Gains	Emergency response and recovery activities and reconstructions and	The with-project regional economic impacts would emerge from more gradual	The with-project regional economic impacts would emerge from more gradual spending over

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	NO ACTION	NED PLAN	LOCALLY PREFERRED PLAN
	repairs. The economic stimulus generated would only be temporary and minor compared to overall losses.	spending over an extended timeframe. Levee construction is expected to take place over a 10-year period.	an extended timeframe Levee construction is expected to take place over a 13-year period. Benefits to small communities downstream of the project area along the Sacramento River in terms of reducing the water surface elevation.
D. Other Social Effects (OSE)			
1. Life, Health, and Safety	Continued flood risk in the City of Sacramento and surrounding areas.	The plan significantly reduces risk to life, health and safety.	The plan significantly reduces risk to life, health and safety.
2. Community Cohesion (displacement of people & businesses)	Future flooding would displace selected businesses and subject the community to potential catastrophic flood risk.	Increased level of protection to homes and businesses within the City of Sacramento.	Increased level of protection to homes and businesses within the City of Sacramento and surrounding areas.
3. Residual Risk	Residual Risk remains high throughout the study area	Residual Risk reduced in the City of Sacramento. However increased water surface elevation against urban levees.	Residual Risk reduced. Directs floodflows away from urban centers of Sacramento and West Sacramento to rural bypass areas.

10.0 The Tentatively Selected Plan

The preliminary recommendation of the District Engineer of the Sacramento District, U.S. Army Corps of Engineers is that the FSP plan be considered the Tentatively Selected Plan (TSP) and authorized for implementation as a Federal project. The estimated first cost of the TSP is **\$1,547,833,000** (October 2013 price levels). The Federal portion of the estimated first cost is **\$1,006,092,000**. (Table 15)

The non-Federal sponsor portion of the estimated first cost is **\$541,741,000**. The non-Federal sponsor shall agree to provide all lands, easements, rights-of-way, relocations, and suitable borrow and disposal areas. The non-Federal sponsor shall also assume responsibility for operating, maintaining, replacing, repairing, and rehabilitating (OMRR&R) the project. The non-Federal sponsor shall publicize floodplain information in the areas concerned and provide this information to zoning and other regulatory agencies for their guidance and leadership in preventing unwise future development in the floodplain and in adopting such regulations as may be necessary to ensure compatibility between future development and protection levels provided by the project.

The TSP is not the NED. The Sacramento District has submitted a request for a deviation from the policy that requires recommendation of the NED plan.

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Table 15: Summary of Cost Sharing Responsibilities for the TSP¹ (in \$1,000s).

Item	Federal ²	Non-Federal	Total
Fish and Wildlife Facilities	\$54,700		\$54,700
Construction	\$907,199		\$907,199
Cultural Resource Compliance Contingency	\$9,819		\$9,819
LERRDs ³	\$34,675	\$329,598	\$364,273
PED ⁴	\$124,146	\$11,713	\$135,859
Construction Management	\$70,353	\$5,120	\$75,473
Non-Federal Cash Contribution	-\$194,800	\$194,800	
Subtotal Total (NED Plan Cost Sharing)	\$1,006,092	\$541,741	\$1,547,833
Percentage	(65%)	(35%)	

Notes:

¹ Based on October 2013 price levels, 3.75% interest rate, and a 50-year period of analysis.

² Federal Project First Costs are based on 65% of the FSP Plan of \$1,547,833,000.

³ Non-Federal interests must provide all LERRDs and a minimum cash contribution of 5% of the total project cost. LERRDs include Lands, Easements, Rights-of-way, Relocations, and Disposal sites.

⁴ Planning, Engineering, and Design. Includes supplemental environmental compliance work and efforts to identify and evaluate cultural resources, as well as alternative mitigations aside from data-recovery activities.

11.0 Timeline and Implementation

The schedule for completing the study is as follows:

Tentatively Selected Plan (TSP) Milestone	February 2014
Public Review of Draft Report	March 2014
Chief's Report	December 2014

Implementation

The GRR has identified significant and extensive seepage, stability, overtopping and erosion problems with the levees that reduce the risk of flooding for the Sacramento area, and recommendations to address these problems are the focus of this report. Due to the potential for catastrophic consequences associated with a levee failure in this urban area, all identified deficiencies, including vegetation and encroachment issues require correction in order to reduce the flood risk to an acceptable level. However, risk reduction measures must be implemented in a “worst first” manner in order to immediately maximize the amount of risk reduction realized for each increment of investment.

The order in which a deficiency is corrected should be based on the severity of the risk it poses. This approach does not necessarily apply to each category of problem (i.e. seepage, vegetation, erosion) but rather each instance of a particular problem compared to each instance of other problems. For example, a large evergreen tree growing at the waterside hinge point of the levee may be considered a significantly higher risk than an erosion site in the waterside berm of a levee. The engineering analysis conducted to date generally indicates that seepage and erosion concerns pose a significantly higher risk of levee failure than those associated with vegetation and encroachments. However, specific instances of vegetation and encroachment problems have been identified as high risk and require resolution concurrent with other high risk issues.

In an effort to modernize the levee system to meet current engineering standards, vegetation and encroachment issues (including landside levee access) in the study area will be resolved through a combination of construction actions associated with implementation of the recommended plan and formal agreements (such as a SWIF) which allow specific vegetation and/or encroachments to remain in place permanently or defer their resolution to some future date. In the case of construction associated with the recommended plan, vegetation and encroachment removal is anticipated as ancillary to the primary flood risk management measure (i.e. seepage cutoff barrier, levee raise, slope flattening) being constructed. In the case of a formal agreement, the integrated use of a SWIF and a variance from vegetation standards would both be required to ultimately assure compliance with Engineering Technical Letter (ETL) 1110-2-571 “*Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures*”.

The SWIF would address vegetation and encroachment issues (including landside levee access) not removed as part of construction associated with the recommended plan but deemed unacceptable in terms of compliance with the ETL. A variance to vegetation management will be developed during PED to allow for vegetation to remain on the lower portion of the waterside levee slope. (Figure 6)

Complete implementation of the recommended plan will be assumed to occur at the same time as complete implementation of the SWIF. Based on current experience in the watershed, the complete implementation of these two plans can reasonably be expected to occur 20 to 40 years from the approval of the Chief’s Report for the GRR.

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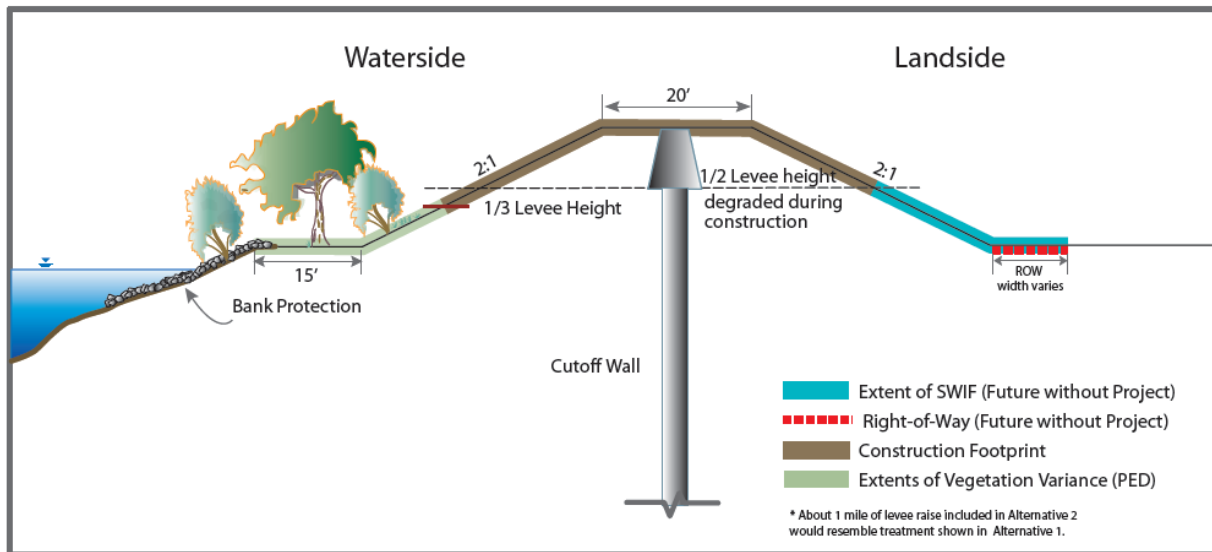


Figure 6: TSP Levee Safety Compliance

STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
CENTRAL VALLEY FLOOD PROTECTION BOARD

RESOLUTION NO. 2014-03

APPROVE THE FEASIBILITY COST SHARE AGREEMENT AND LOCAL FEASIBILITY COST
SHARE AGREEMENT FOR
THE AMERICAN RIVER COMMON FEATURES GENERAL RE-EVALUATION REPORT

WHEREAS, the American River Common Features Project was authorized by the
Water Resources Development Act of 1996; and

WHEREAS, the U.S. Army Corps of Engineers' (USACE) Planning Modernization Effort
required the rescoping of the American River Common Features General Re-evaluation Report
(GRR); and

WHEREAS, the Government has determined it is necessary to execute a feasibility cost
sharing agreement with the Non-Federal Sponsor to share the costs of the Study in accordance
with Section 105(a) of the Water Resources Development Act of 1986, Public Law 99-662, as
amended (33 U.S.C. 2215(a));

WHEREAS, the Study has been performed by the Government through the effective date
of this Agreement with the Non-Federal Sponsor contributing 25 percent of the costs of the
Study;

WHEREAS, the Board and Sacramento Area Flood Control Agency (SAFCA) wish to
execute a feasibility cost share agreement and local feasibility cost share agreement for the
GRR; and

WHEREAS, the Board's participation in the project is subject to the successful

completion of the California Environmental Quality Act (CEQA) process.

NOW, THEREFORE, LET IT BE RESOLVED that the Central Valley Flood Protection

Board:

- 1) Approves the Feasibility Cost Share Agreement and Local Feasibility Cost Share Agreement for the American River Common Features General Reevaluation Report between the Central Valley Flood Protection Board and The U.S. Army Corps of Engineers; and
- 2) Delegates to the Central Valley Flood Protection Board President the authority to execute the FCSA & LFCSA in substantially the form attached hereto.

By: _____ Date: _____
William H. Edgar
President

By: _____ Date: _____
Jane Dolan
Secretary

Approved as to Legal Form and Sufficiency

Jeremy D. Goldberg
Legal Counsel

STANDARD AGREEMENTAPPROVED BY THE
ATTORNEY GENERAL

STL 2 (REV. 5-81)

CONTRACT NUMBER B81560	AM. NO.
TAXPAYER'S FEDERAL EMPLOYER IDENTIFICATION NUMBER 94-6027112	

THIS AGREEMENT, made and entered into this 9th day of July, 1998,
State of California, by and between State of California, through its duly elected or appointed, qualified and acting

TITLE OF OFFICER ACTING FOR STATE Director	AGENCY Water Resources The Reclamation Board	Non-Federal Sponsor hereafter called the State, and
CONTRACTOR'S NAME Department of the Army		Government hereafter called the Contractor.

WITNESSETH: That the Contractor for and in consideration of the covenants, conditions, agreements, and stipulations of the State hereinafter expressed, does hereby agree to furnish to the State services and materials as follows: (Set forth service to be rendered by Contractor, amount to be paid Contractor, time for performance or completion, and attach plans and specifications, if any.)

See attached copy of the Project Cooperation Agreement Between The Department of the Army and the State of California for Construction of the American River Watershed (Common Features), California Project.

Signatures appear on page 22 of the Agreement.

CONTINUED ON 24 SHEETS, EACH BEARING NAME OF CONTRACTOR AND CONTRACT NUMBER.

The provisions on the reverse side hereof constitute a part of this agreement.

IN WITNESS WHEREOF, this agreement has been executed by the parties hereto, upon the date first above written.

STATE OF CALIFORNIA**CONTRACTOR**

AGENCY	CONTRACTOR (If other than an individual, state whether a corporation, partnership, etc.)
BY (AUTHORIZED SIGNATURE)	BY (AUTHORIZED SIGNATURE)
PRINTED NAME OF PERSON SIGNING	PRINTED NAME AND TITLE OF PERSON SIGNING
TITLE	ADDRESS

Department of General Services
Use Only

Disbursement from WRRF SOC WC 135 Fund Item 902 Ch.
Reimbursement from Fund Item Ch. Code 1726

Y.	ACCOUNT NO.	ORGAN. NO.	EXP. CODE	BUDGET ITEM NO.	ENCUMBRANCE AMOUNT	UNENC. BAL.
8	1895 0002	1480	338		\$1,600,000	\$1,695,000
9	1895 1002	1480	338		Pending budget approval	
					B81560	

I Hereby Certify upon my own personal knowledge that the unencumbered balance of the departmental budget provision for the period stated above is correct.

(After T.B.A. No. or B.R. No.)

SIGNATURE OF ACCOUNTING OFFICER
STATE OF CALIFORNIA
THE RESOURCES AGENCY


DATE

070998

STATE OF CALIFORNIA

STANDARD AGREEMENT

STD. 2 (REV. 5-91) (REVERSE)

- 
1. The Contractor agrees to indemnify, defend and save harmless the State, its officers, agents and employees from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, materialmen, laborers and any other person, firm or corporation furnishing or supplying work services, materials or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm or corporation who may be injured or damaged by the Contractor in the performance of this contract.
 2. The Contractor, and the agents and employees of Contractor, in the performance of the agreement, shall act in an independent capacity and not as officers or employees or agents of State of California.
 3. The State may terminate this agreement and be relieved of the payment of any consideration to Contractor should Contractor fail to perform the covenants herein contained at the time and in the manner herein provided. In the event of such termination the State may proceed with the work in any manner deemed proper by the State. The cost to the State shall be deducted from any sum due the Contractor under this agreement, and the balance, if any, shall be paid the Contractor upon demand.
 4. Without the written consent of the State, this agreement is not assignable by Contractor either in whole or in part.
 5. Time is of the essence in this agreement.
 6. No alteration or variation of the terms of this contract shall be valid unless made in writing and signed by the parties hereto, and no oral understanding or agreement not incorporated herein, shall be binding on any of the parties hereto.
 7. The consideration to be paid Contractor, as provided herein, shall be in compensation for all of Contractor's expenses incurred in the performance hereof, including travel and per diem, unless otherwise expressly so provided.
- 7

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PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

THIS AGREEMENT is entered into this 13th day of July, 1998, by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"), represented by the District Engineer, U.S. Army Engineer District, Sacramento, and the State of California acting by and through The Reclamation Board (hereinafter the "Non-Federal Sponsor"), as represented by the General Manager of The Reclamation Board.

WITNESSETH, THAT:

WHEREAS, construction of the American River Watershed (Common Features), California Project at Sacramento, California was authorized by the Water Resources Development Act of 1996;

WHEREAS, the Government and the Non-Federal Sponsor desire to enter into a Project Cooperation Agreement for construction of the American River Watershed (Common Features), California Project (hereinafter the "Project", as defined in Article I.A. of this Agreement);

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, specifies the cost-sharing requirements applicable to the Project;

WHEREAS, Section 221 of the Flood Control Act of 1970, Public Law 91-611, as amended, and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, provide that the Secretary of the Army shall not commence construction of any water resources project, or separable element thereof, until each non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

WHEREAS, Section 101(a)(1)(B) of the Water Resources Development Act of 1996, Public Law 104-303 provides that the Non-Federal Sponsor shall receive credit toward its share of project costs for expenses that it incurs for design or construction of the Project which is performed before the date on which Federal funds are made available for construction of the Project, and provides further that the amount of the credit shall be determined by the Government:

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WHEREAS, the Non-Federal Sponsor does not qualify for a reduction of the maximum non-Federal cost share pursuant to the guidelines that implement Section 103(m) of the Water Resources Development Act of 1986, Public Law 99-662, as amended;

WHEREAS, Section 902 of Public Law 99-662 establishes the maximum amount of costs for the American River Watershed (Common Features), California Project and sets forth procedures for adjusting such maximum amount; and

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate in cost-sharing and financing of the construction of the Project in accordance with the terms of this Agreement.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree as follows:

ARTICLE I -DEFINITIONS AND GENERAL PROVISIONS

For purposes of this Agreement:

A. The term "Project" shall mean the construction of approximately 24 miles of slurry wall in the existing levees along the American River, modifying and raising approximately 12 miles of levee on the east side of the Sacramento River from Powerline Road to the Natomas Cross Canal, installation of three telemetered stream flow gages upstream of Folsom Dam, and modification of the existing flood warning system that exists at the Bureau of Reclamation's Nimbus Dam as generally described in the Supplemental Information Report, American River Watershed Project, California dated March 1996, and approved by the Chief of Engineers on June 27, 1996, and modified by the August 1997 SIR Addendum, approved on July 10, 1998. The Project includes the Section 101(a)(1)(B) work described in Article I.K of this Agreement.

B. The term "total project costs" shall mean all costs incurred by the Non-Federal Sponsor and the Government in accordance with the terms of this Agreement directly related to construction of the Project. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to: continuing planning and engineering costs incurred after October 1, 1985; advanced engineering and design costs; preconstruction engineering and design costs; engineering and design costs during construction; the costs of investigations to identify the existence and extent of hazardous substances in accordance with Article XV.A. of this Agreement; costs of historic preservation activities in accordance with Article XVIII.A. of this Agreement; actual construction costs, including the costs of alteration, lowering, raising, or replacement and attendant removal of existing railroad bridges and approaches thereto; the credit amount for the Section 101 (a)(1)(B) work performed by the Non-Federal Sponsor afforded in accordance with Article II.D.5. of this Agreement; supervision and administration costs; costs of participation in the Project Coordination Team in accordance with Article V of this Agreement; costs of contract dispute settlements or awards; the value of lands, easements, rights-of-way, relocations, and suitable borrow and dredged

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or excavated material disposal areas for which the Government affords credit in accordance with Article IV of this Agreement; and costs of audit in accordance with Article X of this Agreement. The term does not include any costs for operation, maintenance, repair, replacement, or rehabilitation; any costs due to betterments; or any costs of dispute resolution under Article VII of this Agreement.

C. The term "financial obligation for construction" shall mean a financial obligation of the Government or a financial obligation of the Non-Federal Sponsor for Section 101(a)(1)(B) work, other than an obligation pertaining to the provision of lands, easements, rights-of-way, relocations, and borrow and dredged or excavated material disposal areas, that results or would result in a cost that is or would be included in total project costs.

D. The term "non-Federal proportionate share" shall mean the ratio of the Non-Federal Sponsor's total cash contribution required in accordance with Articles II.D.1. and II.D.3. of this Agreement to total financial obligations for construction, as projected by the Government.

E. The term "period of construction" shall mean the time from the date the Government first notifies the Non-Federal Sponsor in writing, in accordance with Article VI.B. of this Agreement, of the scheduled date for issuance of the solicitation for the first construction contract to the date that the U.S. Army Engineer for the Sacramento District (hereinafter the "District Engineer") notifies the Non-Federal Sponsor in writing of the Government's determination that construction of the Project is complete.

F. The term "highway" shall mean any public highway, roadway, street, or way, including any bridge thereof.

G. The term "relocation" shall mean providing a functionally equivalent facility to the owner of an existing utility, cemetery, highway or other public facility, or railroad (excluding existing railroad bridges and approaches thereto) when such action is authorized in accordance with applicable legal principles of just compensation; providing a functionally equivalent facility to the owner of an existing utility, or other public facility that is located in, on, under, or along the existing levee when the owner of such utility or facility is the State of California, or a political subdivision thereof, or as otherwise provided in the authorizing legislation for the Project or any report referenced therein. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, or replacement and attendant removal of the affected facility or part thereof.

H. The term "fiscal year" shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

I. The term "functional portion of the Project" shall mean a portion of the Project that is suitable for tender to the Non-Federal Sponsor to operate and maintain in advance of completion of the entire Project. For a portion of the Project to be suitable for tender, the District Engineer must notify the Non-Federal Sponsor in writing of the Government's determination that the portion of the

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Project is complete and can function independently and for a useful purpose, although the balance of the Project is not complete.

J. The term "betterment" shall mean a change in the design and construction of an element of the Project resulting from the application of standards that the Government determines exceed those that the Government would otherwise apply for accomplishing the design and construction of that element.

K. The term "Section 101(a)(1)(B) work" shall mean construction of the three telemetered stream flow gages as described in Supplemental Information Report, American River Watershed Project, California dated March 1996. The Section 101(a)(1)(B) work includes construction of the authorized improvements as well as planning, engineering, design, supervision and administration, and other activities associated with construction, but does not include the construction of betterments or the provision of lands, easements, rights-of-way, relocations, or suitable borrow and dredged or excavated material disposal areas associated with the Section 101(a)(1)(B) work.

ARTICLE II - OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

A. The Government, subject to receiving funds appropriated by the Congress of the United States (hereinafter, the "Congress") and using those funds and funds provided by the Non-Federal Sponsor, shall expeditiously construct the Project (including alteration, lowering, raising, or replacement and attendant removal of existing railroad bridges and approaches thereto), applying those procedures usually applied to Federal projects, pursuant to Federal laws, regulations, and policies.

1. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on the solicitations for all contracts, including relevant plans and specifications, prior to the Government's issuance of such solicitations. The Government shall not issue the solicitation for the first construction contract until the Non-Federal Sponsor has confirmed in writing its willingness to proceed with the Project. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract modifications, including change orders, prior to the issuance to the contractor of a Notice to Proceed. In any instance where providing the Non-Federal Sponsor with notification of a contract modification or change order is not possible prior to issuance of the Notice to Proceed, the Government shall provide such notification in writing at the earliest date possible. To the extent possible, the Government also shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract claims prior to resolution thereof. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the contents of solicitations, award of contracts, execution of contract modifications, issuance of change orders, resolution of contract claims, and performance of all work on the Project (whether the work is performed under contract or by Government personnel), shall be exclusively within the control of the Government.

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2. Throughout the period of construction, the District Engineer shall furnish the Non-Federal Sponsor with a copy of the Government's Written Notice of Acceptance of Completed Work for each contract for the Project.

3. Notwithstanding paragraph A.1. of this Article, if, upon the award of any contract for construction of the Project, cumulative financial obligations for construction would exceed \$66,500,000, the Government and the Non-Federal Sponsor agree to defer award of that contract and all subsequent contracts for construction of the Project until such time as the Government and the Non-Federal Sponsor agree to proceed with further contract awards for the Project, but in no event shall the award of contracts be deferred for more than three years. Notwithstanding this general provision for deferral of contract awards, the Government, after consultation with the Non-Federal Sponsor, may award a contract or contracts after the Assistant Secretary of the Army (Civil Works) makes a written determination that the award of such contract or contracts must proceed in order to comply with law or to protect life or property from imminent and substantial harm.

B. The Non-Federal Sponsor may request the Government to accomplish betterments. Such requests shall be in writing and shall describe the betterments requested to be accomplished. If the Government in its sole discretion elects to accomplish the requested betterments or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs due to the requested betterments and shall pay all such costs in accordance with Article VI.C. of this Agreement.

C. When the District Engineer determines that the entire Project is complete or that a portion of the Project has become a functional portion of the Project, the District Engineer shall so notify the Non-Federal Sponsor in writing and furnish the Non-Federal Sponsor with an Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual (hereinafter the "OMRR&R Manual") and with copies of all of the Government's Written Notices of Acceptance of Completed Work for all contracts for the Project or the functional portion of the Project that have not been provided previously. Upon such notification, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project or the functional portion of the Project in accordance with Article VIII of this Agreement.

D. The Non-Federal Sponsor shall contribute a minimum of 25 percent, but not to exceed 50 percent, of total project costs in accordance with the provisions of this paragraph.

1. The Non-Federal Sponsor shall provide a cash contribution equal to 5 percent of total project costs in accordance with Article VI.B. of this Agreement.

2. In accordance with Article III of this Agreement, the Non-Federal Sponsor shall provide all lands, easements, rights-of-way, and suitable borrow and dredged or excavated material

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disposal areas that the Government determines the Non-Federal Sponsor must provide for the construction, operation, and maintenance of the Project, and shall perform or ensure performance of all relocations that the Government determines to be necessary for the construction, operation, and maintenance of the Project.

3. If the Government projects that the value of the Non-Federal Sponsor's contributions under paragraphs D.1. and D.2. of this Article and Articles V, X, and XV.A. of this Agreement will be less than 25 percent of total project costs, the Non-Federal Sponsor shall provide an additional cash contribution, in accordance with Article VI.B. of this Agreement, in the amount necessary to make the Non-Federal Sponsor's total contribution equal to 25 percent of total project costs.

4. If the Government determines that the value of the Non-Federal Sponsor's contributions provided under paragraphs D.2. and D.3. of this Article and Articles V, X, and XV.A. of this Agreement has exceeded 45 percent of total project costs, the Government, subject to the availability of funds, shall reimburse the Non-Federal Sponsor for any such value in excess of 45 percent of total project costs. After such a determination, the Government, in its sole discretion, may provide any remaining Project lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas and perform any remaining Project relocations on behalf of the Non-Federal Sponsor.

5. The Section 101(a)(1)(B) work has been determined to be compatible with the Project and has an estimated cost in the amount of \$30,000 for construction of such work by the Non-Federal Sponsor. The Congress, in authorizing the Project, included authority for the Government to afford credit for Section 101(a)(1)(B) work. The Non-Federal Sponsor shall receive credit toward the non-Federal share of project costs for expenses that the Non-Federal Sponsor incurs for design or construction of these features before the date on which Federal funds are made available for construction of the Project. The affording of such credit shall be subject to an on-site inspection by the Government to verify that the work was accomplished in a satisfactory manner and is suitable for inclusion in the Project. The actual amount of credit shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. To afford such credit, the Government shall apply the credit amount toward any additional cash contribution required under paragraph D.3. of this Article. If the credit amount exceeds the amount of such additional cash contribution, the Government, subject to the availability of funds, shall, on behalf of the Non-Federal Sponsor, provide Project lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas, or perform Project relocations, equal in value to such excess credit amount. As an alternative, and in its sole discretion, the Government may make a payment to the Non-Federal Sponsor in an amount equal to such excess credit amount, up to the value of contributions under paragraph D.2. of this Article and Articles V, X, and XV.A. of this Agreement. In no event shall the credit amount afforded exceed the lesser of 45 percent of total project costs or the value of the Non-Federal Sponsor's contributions required under paragraphs D.2. and D.3. of this Article and Articles V, X, and XV.A. of this Agreement.

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E. The Non-Federal Sponsor may request the Government to provide lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or perform relocations on behalf of the Non-Federal Sponsor. Such requests shall be in writing and shall describe the services requested to be performed. If in its sole discretion the Government elects to perform the requested services or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs of the requested services and shall pay all such costs in accordance with Article VI.C. of this Agreement. Notwithstanding the provision of lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or performance of relocations by the Government, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response in accordance with Article XV.C. of this Agreement.

F. The Government shall perform a final accounting in accordance with Article VI.D. of this Agreement to determine the contributions provided by the Non-Federal Sponsor in accordance with paragraphs B., D., and E. of this Article and Articles V, X, and XV.A. of this Agreement and to determine whether the Non-Federal Sponsor has met its obligations under paragraphs B., D., and E. of this Article.

G. The Non-Federal Sponsor shall not use Federal funds to meet the Non-Federal Sponsor's share of total project costs under this Agreement unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

H. The Non-Federal Sponsor agrees to participate in and comply with applicable Federal floodplain management and flood insurance programs.

I. The Non-Federal Sponsor shall prevent future encroachments on project lands, easements, and rights-of-way which might interfere with the proper functioning of the project.

J. The Non-Federal Sponsor shall not less than once each year inform affected interests of the limitations of the protection afforded by the Project.

K. The Non-Federal Sponsor shall publicize flood plain information in the area concerned and shall provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the flood plain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the Project.

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ARTICLE III -LANDS, RELOCATIONS, DISPOSAL AREAS, AND PUBLIC LAW 91-646 COMPLIANCE

A. The Government, after consultation with the Non-Federal Sponsor, shall determine the lands, easements, and rights-of-way required for the construction, operation, and maintenance of the Project, including those required for relocations, borrow materials, and dredged or excavated material disposal. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of the lands, easements, and rights-of-way that the Government determines the Non-Federal Sponsor must provide, in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with acquisition of such lands, easements, and rights-of-way. Prior to the end of the period of construction, the Non-Federal Sponsor shall acquire all lands, easements, and rights-of-way set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each construction contract, the Non-Federal Sponsor shall provide the Government with authorization for entry to all lands, easements, and rights-of-way the Government determines the Non-Federal Sponsor must provide for that contract. For so long as the Project remains authorized, the Non-Federal Sponsor shall ensure that lands, easements, and rights-of-way that the Government determines to be required for the operation and maintenance of the Project and that were provided by the Non-Federal Sponsor are retained in public ownership for uses compatible with the authorized purposes of the Project.

B. The Government, after consultation with the Non-Federal Sponsor, shall determine the improvements required on lands, easements, and rights-of-way to enable the proper disposal of dredged or excavated material associated with the construction, operation, and maintenance of the Project. Such improvements may include, but are not necessarily limited to, retaining dikes, wasteweirs, bulkheads, embankments, monitoring features, stilling basins, and de-watering pumps and pipes. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions of such improvements in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with construction of such improvements. Prior to the end of the period of construction, the Non-Federal Sponsor shall provide all improvements set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare plans and specifications for all improvements the Government determines to be required for the proper disposal of dredged or excavated material under that contract, submit such plans and specifications to the Government for approval, and provide such improvements in accordance with the approved plans and specifications.

C. The Government, after consultation with the Non-Federal Sponsor, shall determine the relocations necessary for the construction, operation, and maintenance of the Project, including those necessary to enable the removal of borrow materials and the proper disposal of dredged or excavated material. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such relocations in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-

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Federal Sponsor with a written notice to proceed with such relocations. Prior to the end of the period of construction, the Non-Federal Sponsor shall perform or ensure the performance of all relocations as set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare or ensure the preparation of plans and specifications for, and perform or ensure the performance of, all relocations the Government determines to be necessary for that contract.

D. The Non-Federal Sponsor in a timely manner shall provide the Government with such documents as are sufficient to enable the Government to determine the value of any contribution provided pursuant to paragraphs A., B., or C. of this Article. Upon receipt of such documents the Government, in accordance with Article IV of this Agreement and in a timely manner, shall determine the value of such contribution, include such value in total project costs, and afford credit for such value toward the Non-Federal Sponsor's share of total project costs.

E. The Non-Federal Sponsor shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring lands, easements, and rights-of-way required for the construction, operation, and maintenance of the Project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and shall inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV -CREDIT FOR VALUE OF LANDS, RELOCATIONS, AND DISPOSAL AREAS

A. The Non-Federal Sponsor shall receive credit toward its share of total project costs for the value of the lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas that the Non-Federal Sponsor must provide pursuant to Article III of this Agreement, and for the value of the relocations that the Non-Federal Sponsor must perform or for which they it must ensure performance pursuant to Article III of this Agreement. However, the Non-Federal Sponsor shall not receive credit for the value of any lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas that have been provided previously as an item of cooperation for another Federal project. The Non-Federal Sponsor also shall not receive credit for the value of lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas to the extent that such items are provided using Federal funds unless the Federal granting agency verifies in writing that such credit is expressly authorized by statute.

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B. For the sole purpose of affording credit in accordance with this Agreement, the value of lands, easements, and rights-of-way, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined in accordance with the provisions of this paragraph.

1. Date of Valuation. The fair market value of lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement shall be the fair market value of such real property interests as of the date the Non-Federal Sponsor provide the Government with authorization for entry thereto. However, for lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement that are required for the construction of the Section 101(a)(1)(B) work, fair market value shall be the value of such real property interests as of the date the Non-Federal Sponsor awards the first construction contract for the Section 101(a)(1)(B) work, or, if the Non-Federal Sponsor perform the construction with its own labor, the date that the Non-Federal Sponsor begins construction of the Section 101(a)(1)(B) work. The fair market value of lands, easements, or rights-of-way acquired by the Non-Federal Sponsor after the effective date of this Agreement shall be the fair market value of such real property interests at the time the interests are acquired.

2. General Valuation Procedure. Except as provided in paragraph B.3. of this Article, the fair market value of lands, easements, or rights-of-way shall be determined in accordance with paragraph B.2.a. of this Article, unless thereafter a different amount is determined to represent fair market value in accordance with paragraph B.2.b. of this Article.

a. The Non-Federal Sponsor shall obtain, for each real property interest, an appraisal that is prepared by a qualified appraiser who is acceptable to the Non-Federal Sponsor and the Government. The appraisal must be prepared in accordance with the applicable rules of just compensation, as specified by the Government. The fair market value shall be the amount set forth in the Non-Federal Sponsor's appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's appraisal, the Non-Federal Sponsor may obtain a second appraisal, and the fair market value shall be the amount set forth in the Non-Federal Sponsor's second appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's second appraisal, or the Non-Federal Sponsor chooses not to obtain a second appraisal, the Government shall obtain an appraisal, and the fair market value shall be the amount set forth in the Government's appraisal, if such appraisal is approved by the Non-Federal Sponsor. In the event the Non-Federal Sponsor does not approve the Government's appraisal, the Government, after consultation with the Non-Federal Sponsor, shall consider the Government's and the Non-Federal Sponsor's appraisals and determine an amount based thereon, which shall be deemed to be the fair market value.

b. Where the amount paid or proposed to be paid by the Non-Federal Sponsor for the real property interest exceeds the amount determined pursuant to paragraph B.2.a. of this Article, the Government, at the request of the Non-Federal Sponsor, shall consider all factors

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relevant to determining fair market value and, in its sole discretion, after consultation with the Non-Federal Sponsor, may approve in writing an amount greater than the amount determined pursuant to paragraph B.2.a. of this Article, but not to exceed the amount actually paid or proposed to be paid.

If the Government approves such an amount, the fair market value shall be the lesser of the approved amount or the amount paid by the Non-Federal Sponsor, but no less than the amount determined pursuant to paragraph B.2.a. of this Article.

3. Eminent Domain Valuation Procedure. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor shall, prior to instituting such proceedings, submit to the Government notification in writing of its intent to institute such proceedings and an appraisal of the specific real property interests to be acquired in such proceedings. The Government shall have 60 days after receipt of such a notice and appraisal within which to review the appraisal, if not previously approved by the Government in writing.

a. If the Government previously has approved the appraisal in writing, or if the Government provides written approval of, or takes no action on, the appraisal within such 60-day period, the Non-Federal Sponsor shall use the amount set forth in such appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

b. If the Government provides written disapproval of the appraisal, including the reasons for disapproval, within such 60-day period, the Government and the Non-Federal Sponsor shall consult in good faith to promptly resolve the issues or areas of disagreement that are identified in the Government's written disapproval. If, after such good faith consultation, the Government and the Non-Federal Sponsor agree as to an appropriate amount, then the Non-Federal Sponsor shall use that amount as the estimate of just compensation for the purpose of instituting the eminent domain proceeding. If, after such good faith consultation, the Government and the Non-Federal Sponsor cannot agree as to an appropriate amount, then the Non-Federal Sponsor may use the amount set forth in its appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

c. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted in accordance with sub-paragraph B.3. of this Article, fair market value shall be either the amount of the court award for the real property interests taken, to the extent the Government determined such interests are required for the construction, operation, and maintenance of the Project, or the amount of any stipulated settlement or portion thereof that the Government approves in writing.

4. Incidental Costs. For lands, easements, or rights-of-way acquired by the Non-Federal Sponsor within a five-year period preceding the effective date of this Agreement, or at any time after the effective date of this Agreement, the value of the interest shall include the documented incidental costs of acquiring the interest, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and

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allowability of costs. Such incidental costs shall include, but not necessarily be limited to, closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, and mapping costs, as well as the actual amounts expended for payment of any Public Law 91-646 relocation assistance benefits provided in accordance with Article III.E. of this Agreement.

C. After consultation with the Non-Federal Sponsor, the Government shall determine the value of relocations in accordance with the provisions of this paragraph.

1. For a relocation other than a highway, the value shall be only that portion of relocation costs incurred by the Non-Federal Sponsor that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items.

2. For a relocation of a highway, the value shall be only that portion of relocation costs that would be necessary to accomplish the relocation in accordance with the design standard that the State of California would apply under similar conditions of geography and traffic load, reduced by the salvage value of any removed items.

3. Relocation costs shall include, but not necessarily be limited to, actual costs of performing the relocation; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with performance of the relocation, but shall not include any costs due to betterments, as determined by the Government, nor any additional cost of using new material when suitable used material is available. Relocation costs shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

D. The value of the improvements made to lands, easements, and rights-of-way for the proper disposal of dredged or excavated material shall be the costs of the improvements, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. Such costs shall include, but not necessarily be limited to, actual costs of providing the improvements; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with providing the improvements, but shall not include any costs due to betterments, as determined by the Government.

ARTICLE V-PROJECT COORDINATION TEAM

A. To provide for consistent and effective communication, the Non-Federal Sponsor and the Government, not later than 30 days after the effective date of this Agreement, shall appoint named senior representatives to a Project Coordination Team. Thereafter, the Project Coordination Team shall meet regularly until the end of the period of construction. The Government's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Project Coordination Team.

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B. The Government's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Project Coordination Team informed of the progress of construction and of significant pending issues and actions, and shall seek the views of the Project Coordination Team on matters that the Project Coordination Team generally oversees.

C. Until the end of the period of construction, the Project Coordination Team shall generally oversee the Project, including issues related to design; plans and specifications; scheduling; real property and relocation requirements; real property acquisition; contract awards and modifications; contract costs; the Government's cost projections; final inspection of the entire Project or functional portions of the Project; preparation of the proposed OMRR&R Manual; anticipated requirements and needed capabilities for performance of operation, maintenance, repair, replacement, and rehabilitation of the Project; and other related matters. This oversight shall be consistent with a project management plan developed by the Government after consultation with the Non-Federal Sponsor.

D. The Project Coordination Team may make recommendations that it deems warranted to the District Engineer on matters that the Project Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider the recommendations of the Project Coordination Team. The Government, having the legal authority and responsibility for construction of the Project, has the discretion to accept, reject, or modify the Project Coordination Team's recommendations.

E. The costs of participation in the Project Coordination Team shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE VI -METHOD OF PAYMENT

A. The Government shall maintain current records of contributions provided by the parties and current projections of total project costs and costs due to betterments. By April 1 of each year and at least quarterly thereafter, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of total project costs, of total costs due to betterments, of the maximum amount of total project costs determined in accordance with Article XIX of this Agreement, of the components of total project costs, of each party's share of total project costs, of the Non-Federal Sponsor's total cash contributions required in accordance with Articles II.B., II.D., and II.E. of this Agreement, of the non-Federal proportionate share, and of the funds the Government projects to be required from the Non-Federal Sponsor for the upcoming fiscal year. On the effective date of this Agreement, total project costs are projected to be \$66,500,000, and the Non-Federal Sponsor's cash contribution required under Article II.D. of this Agreement is projected to be \$7,390,000. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall provide the cash contribution required under Articles

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II.D.1. and II.D.3. of this Agreement in accordance with the provisions of this paragraph.

1. Not less than 30 calendar days prior to the scheduled date for issuance of the solicitation for the first construction contract, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and the funds the Government, after consideration of any credit afforded pursuant to Article II.D.5. of this Agreement, determines to be required from the Non-Federal Sponsor to meet the non-Federal proportionate share of projected financial obligations for construction through the first fiscal year of construction on a quarterly basis, including the non-Federal proportionate share of financial obligations for construction incurred prior to the commencement of the period of construction. Not later than such scheduled date, the Non-Federal Sponsor shall provide the Government with the full amount of the required funds by delivering a check payable to "FAO, USAED, Sacramento District" to the District Engineer.

2. For the second and subsequent quarters of construction, the Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the beginning of that quarter year, of the funds the Government, after consideration of any credit afforded pursuant to Article II.D.5. of this Agreement, determines to be required from the Non-Federal Sponsor to meet the non-Federal proportionate share of projected financial obligations for construction for that quarter. No later than 30 calendar days prior to the beginning of the quarter, the Non-Federal Sponsor shall make the full amount of the required funds for that quarter available to the Government through the funding mechanism specified in Article VI.B.1. of this Agreement.

3. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government, after consideration of any credit afforded pursuant to Article II.D.5. of this Agreement, deems necessary to cover: (a) the non-Federal proportionate share of financial obligations for construction incurred prior to the commencement of the period of construction; and (b) the non-Federal proportionate share of financial obligations for construction as they are incurred during the period of construction.

4. If at any time during the period of construction the Government determines that additional funds will be needed from the Non-Federal Sponsor to cover the non-Federal proportionate share of projected financial obligations for construction for the current quarter, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required, and the Non-Federal Sponsor, no later than 60 calendar days from receipt of such notice, shall make the additional required funds available through the payment mechanism specified in Article VI.B.1. of this Agreement.

C. In advance of the Government incurring any financial obligation associated with additional work under Article II.B. or II.E. of this Agreement, the Non-Federal Sponsor shall provide the Government with the full amount of the funds required to pay for such additional work on a quarterly basis by delivering a check payable to "FAO, USAED, Sacramento District" to the District Engineer.

The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover the Government's financial obligations for such additional work as they are incurred. In the event the Government determines that the Non-Federal Sponsor

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must provide additional funds to meet its cash contribution, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required. Within 30 calendar days thereafter, the Non-Federal Sponsor shall provide the Government with a check for the full amount of the additional required funds for that quarter.

D. Upon completion of the Project or termination of this Agreement, and upon resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with the results of the final accounting. The final accounting shall determine total project costs, each party's contribution provided thereto, and each party's required share thereof. The final accounting also shall determine costs due to betterments and the Non-Federal Sponsor's cash contribution provided pursuant to Article II.B. of this Agreement.

1. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor is less than its required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Non-Federal Sponsor shall, no later than 90 calendar days after receipt of written notice, make a cash payment to the Government of whatever sum is required to meet the Non-Federal Sponsor's required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement.

2. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor exceeds its required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Government shall, subject to the availability of funds, refund the excess to the Non-Federal Sponsor no later than 90 calendar days after the final accounting is complete; however, the Non-Federal Sponsor shall not be entitled to any refund of the 5 percent cash contribution required pursuant to Article II.D.1. of this Agreement. In the event existing funds are not available to refund the excess to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund.

ARTICLE VII -DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VIII - OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION (OMRR&R)

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A. Upon notification in accordance with Article II.C. of this Agreement and for so long as the Project remains authorized, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project or the functional portion of the Project, at no cost to the Government, in a manner compatible with the Project's authorized purposes and in accordance with applicable Federal and State laws as provided in Article XI of this Agreement and specific directions prescribed by the Government in the OMRR&R Manual and any subsequent amendments thereto. In the event OMRR&R of the Project pursuant to the manual would adversely affect any Federal endangered or threatened species or result in the destruction or adverse modification of critical habitat, at the request of the Non-Federal Sponsor, the District Engineer shall initiate Section 7 consultation and modify the Manual as necessary.

B. The Non-Federal Sponsor hereby gives the Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor owns or controls for access to the Project for the purpose of inspection and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project. If an inspection shows that the Non-Federal Sponsor for any reason is failing to perform its obligations under this Agreement, the Government shall send a written notice describing the non-performance to the Non-Federal Sponsor. If, after 30 calendar days from receipt of notice, the Non-Federal Sponsor continues to fail to perform, then the Government shall have the right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor own or control for access to the Project for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Government shall operate to relieve the Non-Federal Sponsor of responsibility to meet the Non-Federal Sponsor's obligations as set forth in this Agreement, or to preclude the Government from pursuing any other remedy at law or equity to ensure faithful performance pursuant to this Agreement.

ARTICLE IX -INDEMNIFICATION

The Non-Federal Sponsor shall hold and save the Government free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the Project and any Project-related betterments, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE X -MAINTENANCE OF RECORDS AND AUDIT

A. Not later than 60 calendar days after the effective date of this Agreement, the Government and the Non-Federal Sponsor shall develop procedures for keeping books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative

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Agreements to State and Local Governments at 32 C.F.R. Section 33.20. The Government and the Non-Federal Sponsor shall maintain such books, records, documents, and other evidence in accordance with these procedures and for a minimum of three years after the period of construction and resolution of all relevant claims arising therefrom. To the extent permitted under applicable Federal laws and regulations, the Government and the Non-Federal Sponsor shall each allow the other to inspect such books, documents, records, and other evidence.

B. Pursuant to 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act of 1984, 31 U.S.C. Sections 7501-7507, as implemented by Office of Management and Budget (OMB) Circular No. A-133 and Department of Defense Directive 7600.10. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable Federal laws and regulations, the Government shall provide to the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-Federal audits performed in accordance with this paragraph shall be allocated in accordance with the provisions of OMB Circulars A-87 and A-133, and such costs as are allocated to the Project shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. Section 7503, the Government may conduct audits in addition to any audit that the Non-Federal Sponsor is required to conduct under the Single Audit Act. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits performed in accordance with this paragraph shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE XI - FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government agree to comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulations 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army and Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), requiring non-Federal preparation and implementation of flood plain management plans".

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ARTICLE XII -RELATIONSHIP OF PARTIES

A. In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other.

B. In the exercise of its rights and obligations under this Agreement, neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights such other party may have to seek relief or redress against such contractor either pursuant to any cause of action that such other party may have or for violation of any law.

ARTICLE XIII -OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE XIV -TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under Article II.B., II.D., II.E., VI, or XVIII.C. of this Agreement, the Assistant Secretary of the Army (Civil Works) shall terminate this Agreement or suspend future performance under this Agreement unless he determines that continuation of work on the Project is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the Project.

B. If the Government fails to receive annual appropriations in amounts sufficient to meet Project expenditures for the then-current or upcoming fiscal year, the Government shall so notify the Non-Federal Sponsor in writing, and 60 calendar days thereafter either party may elect without penalty to terminate this Agreement or to suspend future performance under this Agreement. In the event that either party elects to suspend future performance under this Agreement pursuant to this paragraph, such suspension shall remain in effect until such time as the Government receives sufficient appropriations or until either the Government or the Non-Federal Sponsor elects to terminate this Agreement.

C. In the event that either party elects to terminate this Agreement pursuant to this Article or Article XV of this Agreement, both parties shall conclude their activities relating to the Project and proceed to a final accounting in accordance with Article VI.D. of this Agreement.

D. Any termination of this Agreement or suspension of future performance under this Agreement in accordance with this Article or Article XV of this Agreement shall not relieve the parties of liability for any obligation previously incurred. Any delinquent payment shall be charged

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interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13-week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3-month period if the period of delinquency exceeds 3 months.

ARTICLE XV - HAZARDOUS SUBSTANCES

A. After execution of this Agreement and upon direction by the District Engineer, the Non-Federal Sponsor shall perform, or cause to be performed, any investigations for hazardous substances that the Government or the Non-Federal Sponsor determines to be necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"), 42 U.S.C. Sections 9601-9675, that may exist in, on, or under lands, easements, and rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the construction, operation, and maintenance of the Project. However, for lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the District Engineer provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction. All actual costs incurred by the Non-Federal Sponsor for such investigations for hazardous substances shall be included in total project costs and cost shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

B. In the event it is discovered through any investigation for hazardous substances or other means that hazardous substances regulated under CERCLA exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the construction, operation, and maintenance of the Project, the Non-Federal Sponsor and the Government shall provide prompt written notice to each other, and the Non-Federal Sponsor shall not proceed with the acquisition of the real property interests until both parties agree that the Non-Federal Sponsor should proceed.

C. The Government and the Non-Federal Sponsor shall determine whether to initiate construction of the Project, or, if already in construction, whether to continue with work on the Project, suspend future performance under this Agreement, or terminate this Agreement for the convenience of the Government, in any case where hazardous substances regulated under CERCLA are found to exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the construction, operation, and maintenance of the Project. Should the Government and the Non-Federal Sponsor determine to initiate or continue with construction after considering any liability that may arise under CERCLA, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination; Such costs shall not be

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considered a part of total project costs. In the event the Non-Federal Sponsor fails to provide any funds necessary to pay for clean up and response costs or to otherwise discharge the Non-Federal Sponsor's responsibilities under this paragraph upon direction by the Government, the Government may, in its sole discretion, either terminate this Agreement for the convenience of the Government, suspend future performance under this Agreement, or continue work on the Project.

D. The Non-Federal Sponsor and the Government shall consult with each other in accordance with Article V of this Agreement in an effort to ensure that responsible parties bear any necessary clean up and response costs as defined in CERCLA. Any decision made pursuant to paragraph C. of this Article shall not relieve any third party from any liability that may arise under CERCLA.

E. Once the Government provides a written notification in accordance with Article II.C. and Article VIII of this Agreement, as between the Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the Project for purposes of CERCLA liability. To the maximum extent practicable, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the Project in a manner that will not cause liability to arise under CERCLA.

ARTICLE XVI -NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and either delivered personally or by telegram or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor:

The Reclamation Board
1416 Ninth Street, Room 1601
Sacramento, California 95814-5594

If to the Government:

US Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California

B. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

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C. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

ARTICLE XVII - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XVIII - HISTORIC PRESERVATION

A. The costs of identification, survey and evaluation of historic properties shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

B. As specified in Section 7(a) of Public Law 93-291 (16 U.S.C. Section 469c(a)), the costs of mitigation and data recovery activities associated with historic preservation shall be borne entirely by the Government and shall not be included in total project costs, up to the statutory limit of one percent of the total amount authorized to be appropriated for the Project.

C. The Government shall not incur costs for mitigation and data recovery that exceed the statutory one percent limit specified in paragraph B. of this Article unless and until the Assistant Secretary of the Army (Civil Works) has waived that limit in accordance with Section 208(3) of Public Law 96-515 (16 U.S.C. Section 469c-2(3)). Any costs of mitigation and data recovery that exceed the one percent limit shall not be included in total project costs but shall be cost shared between the Non-Federal Sponsor and the Government consistent with the minimum non-Federal cost sharing requirements for the underlying flood control purpose, as follows: 25 percent borne by the Non-Federal Sponsor, and 75 percent borne by the Government.

ARTICLE XIX - SECTION 902 PROJECT COST LIMITS

The Non-Federal Sponsor has reviewed the provisions set forth in Section 902 of Public Law 99-662, as amended, and understands that Section 902 establishes the maximum amount of total project costs for the American River Watershed (Common Features), California Project. Notwithstanding any other provision of this Agreement, the Government shall not make a new Project financial obligation, make a Project expenditure, or afford credit toward total project costs for the value of any contribution provided by the Non-Federal Sponsor, if such obligation, expenditure, or credit would result in total project costs exceeding this maximum amount, unless

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otherwise authorized by law. On the effective date of this Agreement, this maximum amount is estimated to be \$66,500,000, as calculated in accordance with ER 1105-2-100 using October 1, 1997 price levels and allowances for projected future inflation. The Government shall adjust this maximum amount in accordance with Section 902.

ARTICLE XX -OBLIGATIONS OF FUTURE APPROPRIATIONS

Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the legislature of the State of California.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the ~~Assistant Secretary of the Army (Civil Works)~~ District Engineer, U.S. Army Engineer District, Sacramento. *ma 7/7/98*

THE DEPARTMENT OF THE ARMY

THE RECLAMATION BOARD *ma 7/7/98*
13 Jul 98

BY: *Douglas R. Gault*

Douglas R. Gault
Lieutenant Colonel,
Corps of Engineers
Acting District Engineer

BY: *Peter D. Rabbon*

Peter D. Rabbon
General Manager
The Reclamation Board

DATE: *13 July 1998*

DATE: *July 9, 1998*

FORM	POLICY	BUDGET
Department of General Services		
APPROVED		
JUL 10 1998		
<i>[Signature]</i>		
BY		
Ass't. Chief Counsel		

Approved as to Legal Form and
sufficiency for The Reclamation
Board

Claire P. LeFlore
Counsel

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CERTIFICATE OF AUTHORITY

I, Claire P. LeFlore, do hereby certify that I am the principal legal officer of The Reclamation Board, that The Reclamation Board is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and The Reclamation Board in connection with the American River Watershed (Common Features), California, Project and to pay damages in accordance with the terms of this Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Agreement on behalf of The Reclamation Board have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this
9th day of July 1998.

Claire P. LeFlore
Claire P. LeFlore
Counsel to The Reclamation Board

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CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



Peter D. Rabbon
General Manager
The Reclamation Board
of the State of California

DATE: July 9, 1998

STATE OF CALIFORNIA

STANDARD AGREEMENT AMENDMENT

STD-243-A (Rev. 9/01)

☒ CHECK HERE IF ADDITIONAL PAGES ARE ATTACHED 7 Pages

AGREEMENT NUMBER

4600000651

AMENDMENT NUMBER

1

1. This Agreement is entered into between the State Agency and Contractor named below:

STATE AGENCY'S NAME

Department of Water Resources/The Reclamation Board

CONTRACTOR'S NAME

Department of the Army

2. The term of this

Agreement is

July 10, 1998

through

October 30, 2007

This Agreement shall not become effective until approved by the Department of General Services.

3. The maximum amount of this \$120,600,000 thousand Agreement after this amendment is: One hundred and twenty million six hundred dollars and no cents.

4. The parties mutually agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:

- I. The amendment to Agreement No. 4600000651 for the American River Watershed (Common Features) California Project updating the current project cost to \$120.6 million is based on a Schedule and Cost Change Request, SACCR No. 077522-02-01, dated October 24, 2001, from the Department of the Army to The Reclamation Board. Cost increases are attributed to the Water Resources Development Act of 1999 authorization, and design and construction changes associated with deep foundation slurry cutoff walls that added additional features to roads, utilities, and bridge crossings using the jet grouting method.

This amendment to the Project Cooperation Agreement adjusts the projected total project costs by \$54,100,000 from \$66,500,000 to \$120,600,000, as reflected in the aforementioned SACCR. This amount is slightly below the federal cap under Section 902 project cost limit. (Nonfederal costs of the project are capped at 50 percent of the Section 902 limit). This adjustment increases the nonfederal project share by \$13,525,000 from \$16,625,000 to \$30,150,000 and increases the Local project share by \$4,057,500 from \$4,987,500 to \$9,045,000. The maximum nonfederal share under the current estimate may not exceed \$60,300,000.

- II. This Agreement is amended as follows:

1. Add Exhibit A to reflect changes in scope and costs due to redesign. The U.S. Army Corps of Engineers' Schedule and Cost Change Request, SACCR No. 077522-02-01, dated October 24, 2001, with the Table is attached as Exhibit A and made a part of this Agreement by this reference.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR

CONTRACTOR'S NAME (If other than an individual, state whether a corporation, partnership, etc.)

Department of the Army

BY (Authorized Signature)

Michael W. Connelly LTC, EN

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

Colonel Michael J. Conrad, Jr.

ADDRESS

1325 J Street

Sacramento, California 95814

STATE OF CALIFORNIA

AGENCY NAME

Department of Water Resources

BY (Authorized Signature)

Peter D. Rabbon

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

Peter D. Rabbon

ADDRESS

1416 9th Street

Sacramento, California 95814

Approved as to legal form and sufficiency:

Asst. Chief Counsel, DWR

CALIFORNIA
Department of General Services
Use Only**APPROVED**

JUN 13 2003

DEPT OF GENERAL SERVICES

Contract 4600000651, AM-1
Page 2 of 2

AMERICAN RIVER (COMMON FEATURES) CALIFORNIA PROJECT

II. This Agreement is amended as follows: (continued)

2. Extend the contract termination date from June 30, 2003 of the original contract to October 30, 2007 to coincide with current projected project completion date referenced in the aforementioned SACCR.
3. Increase the cumulative financial obligation for construction from \$66,500,000 to \$120,600,000. Article II – Obligations of the Government and the Non-Federal Sponsor, Paragraph A. 3, the first sentence on page 5 of 24, of the original agreement is being replaced by the following language and amended to read: Notwithstanding paragraph A.1. of this Article, if, upon the award of any contract for construction of the Project, cumulative financial obligations for construction would exceed \$120,600,000 the Government and the Non-Federal Sponsor agree to defer award of that contract and all subsequent contracts for construction of the Project until such time as the Government and the Non-Federal Sponsor agree to proceed with further contract awards for the Project, but in no event shall the award of contracts be deferred for more than three years.
4. As original stated in Article VI – Method of Payment, Page 14 of 24, Paragraph A is hereby amended to increase the estimated total project cost by \$54,100,000 from \$66,500,000 to \$120,600,000 and the Non-Federal Sponsor's cash contribution required under Article II.D of this Agreement is projected to be \$23,090,000. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.
5. Increase the maximum projected total Project cost limit by \$54,100,000 as reflected in the aforementioned SACCR. Article XIX – Section 902 Project Cost Limits, Page 22 of 24, is hereby amended to increase the maximum Project cost limit from \$66,500,000 to \$120,600,000. This increases the projected non-Federal Project share by \$13,525,000 from \$16,625,000 to \$30,150,000 and increases the projected Local Project share by \$4,057,500 from \$4,987,500 to \$9,045,000. The maximum nonfederal share under the current estimate may not exceed \$60,300,000.
6. Add Exhibit B – Special Terms and Conditions for Department of Water Resources (Department of the Army Corps of Engineers).
7. All other terms and conditions of Contract No. 4600000651 shall remain the same.

Schedule and Cost Change Request (SACCR)

Alternate Eng. Form 5040-1-R

From CESPK-PM-C	To CESPK-DD-P	Project Manager Name <u>Richard Nishio</u> Phone <u>(916)-557 6645</u>
		Signature <u><i>James O. Nishio</i></u> Date <u>Oct 24, 2001</u>
Section I – Request		
<p>Description of Change Request: Request approval to the increase the current project cost to \$120.6 million (fully funded, Oct 01 price level). The sponsor requests that this cost change be compared to the original authorized project cost estimate of \$65.5 million (fully funded, Oct 95 price level) as authorized by WRDA 1996 to justify the sponsor increasing the sponsor's cost ceiling clause in the PCA (Article II A.3.) to the current project cost estimate of \$120.6 million. Subsequent to WRDA 1996 authorization, the sponsor though SAFCA got the authorized project cost increased to \$91.9 million in WRDA 1999 authorization. The project cost estimate change comparison is shown on the attached continuation sheet.</p>		
<p>Justification for Change: Cost increases are mainly attributed to construction and engineering & design and are described below. Cost increases for other items are shown on the attached sheet and detailed in the footnotes.</p> <ol style="list-style-type: none"> (1) Adopting a complete cutoff wall closure design requirement and additional geotechnical explorations resulted in construction of deeper slurry walls down to impermeable material and required the more expensive jet grout method of slurry wall construction around bridges and deep utility crossings. (2) Adding cement to soil-bentonite slurry wall mixture increased both material cost and construction operation costs. (3) Issuance of a number of high cost contract modifications. The more significant modifications resulted from unexpected slurry leaks during construction of the slurry wall that required emergency repair and restoration of the levee and at times extended work hours. Contract modifications to comply with EPA notice of violation and to accelerate Garden Highway slurry wall construction before the flood season were also very costly contract modifications. 		

Project: Sacramento River East Levee and Natomas Cross Canal Levee Modifications	Project No: 07522-01-01
Date: 10/24/01	

Justification for Change (continues):

- (4) Construction of a short 1.5 mile slurry reach from Howe Avenue to Watt Avenue to meet project goal of initiation of slurry wall construction in 1998 resulted in a very costly slurry wall. Also the original project cost estimate assumed all the slurry walls would be constructed under one contract which is generally less costly to construct than multiple contracts. Due to design schedule constraints and the jet grouting requirement, 6 contracts are needed to complete slurry wall construction (4 construction contracts have been completed and 2 more are scheduled for award in 2001 and 2002).
- (5) Engineering and design cost increases are due to increased effort to prepare an additional 5 slurry wall and jet grout construction contracts and added effort required to conduct additional exploration and design work required to refine the plans for the Sacramento River East Levee and Natomas Cross Canal Levee modifications.
- (6) Price escalation from Oct 95 to Oct 2001 price levels has increased construction and engineering & design costs.
- The current project cost estimate of \$120.6 million is under the Federal cost ceiling as calculated in accordance to Section 902 of WRDA 1986 as based on the current authorized project cost of \$91.9 million as authorized by WRDA 1999.

Section II - Impact Assessment

Organization	Description
N/A	No impacts to District team since workload was budgeted for the current project cost estimate of \$120.6 million.

Section III - Project Manager's Evaluation

Category	Impact	Resources Required
Costs (\$000)	None	Current project cost of \$120.6 million is under Sec 902 limit
Schedule	None	Project completion date of Oct 2007 remains unchanged from SACCR #07522-01-01
Manpower	None	Workload was budgeted for the project current cost estimate of \$120.6 million.

Project: <u>Arden Park Watershed T&A (Common Features)</u>		APCR: <u>3377</u> / <u>1002</u> / <u>01</u>	
		Date: <u>01-11-2001</u>	
Section IV - Coordination with Partner			
Partner's Position and Acknowledgement			
<p><i>concur</i></p> <p style="text-align: right;">Signature <u><i>Pat D. R. [Signature]</i></u> Date <u>12/12/01</u></p>			
Section V - PRB Action & Resolution			
CESPK-DE-P Recommendation and Signature			
<p><i>concur</i></p> <p style="text-align: right;"><i>[Signature]</i> 15 Jan 02</p>			
District PRB Recommendation		Reason	
<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Approval with Modifications <input type="checkbox"/> Disapproval <input type="checkbox"/> Returned to PM w/o Action <input type="checkbox"/> Referred to Division			

**AMERICAN RIVER WATERSHED, CA
(COMMON FEATURES)
10/24/01**

**Project Cost Estimate Comparison
(\$1000)**

	Past Project Cost Estimate Based WRDA 1996 Authorization (Fully Funded, Oct 95 Price Level) (1)	Estimated Increase	Current Project Cost Estimate Based on WRDA 1999 Authorization (Fully Funded, Oct 01 Price Level) (5)
Federal RE In-house Labor	40	900	940
F&W Mitigation (2)	0	1660	1660
Cultural Resources	430	170	600
Construction (3)	45150	37450	82600
Engineering & Design (4)	6830	14670	21500
Supervision & Admin	6850	-460	6390
LERRDs	6200	710	6910
TOTAL	\$65,500	\$55,100	\$120,600

- (1) - Cost estimates as reported in the (First) Addendum to the 1996 Supplemental Information Report (SIR), dated September 2, 1997.
- (2) - At the time the authorized cost estimate was prepared F&W mitigation costs were not considered since construction would be within the existing project right of way.
- (3) - \$82.6 million reflects actual slurry wall construction contract costs and funds required to complete two jet grout construction contracts along the lower American River as authorized by WRDA 1996. Construction contract expenditures to date amount to approximately \$45 million. Cost increases are due to deeper slurry wall requirement, need for jet grout method of slurry wall construction, adding cement to the slurry wall, significant contract modifications, high cost to construct the Howe to Watt Ave slurry wall contract and price escalation.
- (4) - Engineering and design cost increases are due to increased effort to prepare an additional 5 slurry wall and jet grout construction contracts and added effort required to conduct additional exploration and design work required to refine the plans for the Sacramento River East Levee and Natomas Cross Canal Levee modifications.
- (5) - The current project cost estimate of \$120.6 million is under the Federal cost ceiling as calculated in accordance to Section 902 of WRDA 1986 and based on the current authorized cost of \$91.9 million as authorized by WRDA 1999.

**EXHIBIT B—Special Terms and Conditions for
Department Of Water Resources
(Department of the Army Corps of Engineers)**

1. AVAILABILITY OF FUNDS: Work to be performed under this contract is subject to availability of funds through the State's normal budget process.
2. AUDIT CLAUSE: For contracts in excess of \$10,000, the contracting parties shall be subject to the examination and audit of the State Auditor for a period of three years after final payment under the contract (Government Code Section 8546.7).
3. CONFLICT OF INTEREST:
 - a. Current and Former State Employees: Contractor should be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.
 - (1) Current State Employees: (PCC §10410)
 - (a) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.
 - (b) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.
 - (2) Former State Employees: (PCC §10411)
 - (a) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.
 - (b) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

b. Penalty for Violation:

- (a) If the Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (PCC §10420)

c. Members of Boards and Commissions:

- (a) Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC §10430 (e))

d. Representational Conflicts of Interest:

The Contractor must disclose to the DWR Program Manager any activities by contractor or subcontractor personnel involving representation of parties, or provision of consultation services to parties, who are adversarial to DWR. DWR may immediately terminate this contract if the contractor fails to disclose the information required by this section. DWR may immediately terminate this contract if any conflicts of interest cannot be reconciled with the performance of services under this contract.

e. Financial Interest in Contracts:

Contractor should also be aware of the following provisions of Government Code §1090:

"Members of the Legislature, state, county district, judicial district, and city officers or employees shall not be financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Nor shall state, county, district, judicial district, and city officers or employees be purchasers at any sale or vendors at any purchase made by them in their official capacity."

f. Prohibition on Contracts for End Product of Contract:

Pursuant to the provisions of Public Contract Code §10365.5, the Contractor and subcontractors (except for subcontractors who provide services amounting to 10 percent or less of the contract price) may not submit a bid/SOQ, or be awarded a contract, for the provision of services, procurement of goods or supplies or any other related action which is required, suggested, or otherwise deemed appropriate in the end product of this contract. This prohibition does not apply to contracts pursuant to Government Code Section 4525 et seq., to local assistance or subvention contracts with non-profit entities, or Federal, state and local public entities.

☒ CHECK HERE IF ADDITIONAL PAGES ARE ATTACHED 7 Pages

AGREEMENT NUMBER

AMENDMENT NUMBER

4600000651

2

1. This Agreement is entered into between the State Agency and Contractor named below: 38600806136192-2
 STATE AGENCY'S NAME
Department of Water Resources/The Reclamation Board
 CONTRACTOR'S NAME
Department of the Army
2. The term of this Agreement is July 10, 1998 through Notice of completion This Agreement shall not become effective until approved by the Department of General Services.
3. The maximum amount of this Agreement after this amendment is: \$246, 000,000.00 Two hundred and forty six million dollars and no cents.
4. The parties mutually agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:

See the attached Amendment Number 2 to the Project Cooperation Agreement between the Department of the Army and the State of California for construction of the American River Watershed (Common Features), California Project.

All other terms and conditions of Contract No. B81560/4600000651, including Amendment 1 shall remain the same.

Signatures appear on page 3 of 7 of the Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR

CONTRACTOR'S NAME (If other than an individual, state whether a corporation, partnership, etc.)

BY (Authorized Signature)

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

ADDRESS

STATE OF CALIFORNIA

AGENCY NAME

BY (Authorized Signature)

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

ADDRESS

CALIFORNIA
Department of General Services
Use Only

APPROVED

JUL 19 2006

DEPT OF GENERAL SERVICES

Contract 4600000651

Amendment 2

Page 1 of 3

AMENDMENT NUMBER 2
TO
PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

This amendment is entered into on this 5th day of September, 2006, by and between the Department of the Army (hereinafter the "Government") and The State of California, acting by and through The Reclamation Board (hereinafter the "Non-Federal Sponsor") to amend the Contract B81560/4600000651, a Project Cooperation Agreement (PCA), between the Non-Federal Sponsor and the Government dated July 13, 1998.

RECITALS:

1. The Energy and Water Development Appropriations Act, 2004 increased the authorized project cost to a total of \$205,000,000 for the Project.
2. On May 26, 2004, the Government issued a Schedule and Cost Change Request (SACCR) for the Project and requested the Non-Federal Sponsor's approval to (a) increase the total Project cost to \$205,000,000, (b) delay the Project completion date by one year.
3. The Non-Federal Sponsor desires to approve the Government's request in accordance with the SACCR.

IT IS HEREBY AGREED to amend the PCA as follows:

1. Delete the contract termination date from October 30, 2007 shown in Amendment No. 1 Article II.2 and recognize the Project completion date of October 30, 2008 referenced in the SACCR, included as Exhibit A, Attachment 1.
2. Article II, A.3. shall read as follows:
 - "3. Notwithstanding paragraph A.1. of this Article, if, upon award of any contract for construction of the Project, cumulative financial obligations

Contract 4600000651

Amendment 2

Page 2 of 3

for construction would exceed \$205,000,000, the Government and the Non-Federal Sponsor agree to defer award of that contract and all subsequent contracts for construction of the Project until such time as the Government and the Non-Federal Sponsor agree to proceed with further contract awards for the Project, but in no event shall the award of contracts be deferred for more than three years. Notwithstanding this general provision for deferral of contract awards, the Government, after consultation with the Non-Federal Sponsor, may award a contract or contracts after the Assistant Secretary of the Army (Civil Works) makes a written determination that the award of such contract or contracts must proceed in order to comply with law or to protect life or property from imminent and substantial harm."

3. Article IV.A. shall read as follows:

- "A. The Government shall maintain current records of contributions provided by the parties and current projections of total project costs and costs due to betterments. By April 1 of each year and at least quarterly thereafter, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of total project costs, of total costs due to betterments, of the maximum amount of total project costs determined in accordance with Article XIX of this agreement, of the components of total project costs, of each party's share of total project costs, of the Non-Federal Sponsor's total cash contributions required in accordance with Articles II.B, II.D., and II.E. of this Agreement, of the Non-Federal proportionate share, and of the funds the Government projects to be required from the Non-Federal Sponsor for the upcoming fiscal year. On the effective date of this Agreement, total project costs are projected to be \$205,000,000, and the Non-Federal Sponsor's cash contribution required under Article II.D. of this Agreement is projected to be \$47,800,000. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor."

4. Article XIX should read as follows:

"The Non-Federal Sponsor has reviewed the provisions set forth in Section 902 of Public Law 99-662, as amended, and understands that Section 902 establishes the maximum amount of total project costs for the American River Watershed (Common Features), California Project. Notwithstanding any other provision of this Agreement, the Government shall not make a new Project

Contract 4600000651
Amendment 2
Page 3 of 3

financial obligation, make a Project expenditure, or afford credit toward total project costs for the value of any contribution provided by the Non-Federal Sponsor, if such obligation, expenditure, or credit would result in total project costs exceeding this maximum amount, unless otherwise authorized by law. On May 26, 2004, this maximum amount is estimated to be \$246,000,000, as calculated in accordance with ER 1105-2-100 using October 2001 price levels and allowances for projected future inflation. The Government shall adjust this maximum amount in accordance with Section 902."

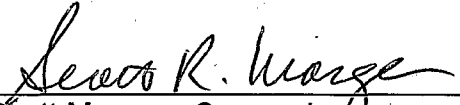
IN WITNESS THEREOF, the Parties hereto have executed this amendment as of the day and year first above written.

THE RECLAMATION BOARD OF THE
STATE OF CALIFORNIA

By 
Benjamin Carter, President


Date: 6/22/06

APPROVED AS TO LEGAL FORM
AND SUFFICIENCY:

By 
Scott Morgan, Counsel

Date: 6/23/06

DEPARTMENT OF THE ARMY

By 
Colonel Ronald N. Light, District Engineer

Date: 9/5/06

Schedule and Cost Change Request (SACCR)

Alternate Eng. Form 5040-1-R

ATTACHMENT C

Project: American River Watershed, CA (Common Features)

SACCR #077522-04-01

Date May 26, 2004

From
CESPK-PM-C

To
CESPK-DD

Project Manager Mark Ellis

Phone (916) 557-6892

Signature

Mark A. Ellis

Date May 26, 2004

Section I – Request

Description of Change Request:

Change project cost estimate to reflect the current total project cost of \$205 million. The sponsor requests that this cost change be compared to the original authorized project cost estimate of \$56.9 million as authorized by WRDA 1996 (PL 104-303) for partner's use in increasing the sponsor's cost ceiling clause in the PCA (Article II A.3.) to the current project cost estimate of \$205 million. The authorized project cost was increased to \$91.9 million in WRDA 1999 authorization (PL 106-53). The Energy and Water Development Appropriations Act, 2004 (PL108-37) increased the total project cost to \$205 million. The current estimated maximum amount of total project cost under Section 902 of PL99-662 is \$246,000,000 as calculated using October 2001 price levels. The Non-Federal Sponsor's estimated cash contribution under Article II.D. of the PCA is \$47,800,000.

Justification for Change:

The following table summarizes the incremental cost changes to the project cost estimate. Cost increases are primarily attributed to unanticipated use of jet grout technology to meet the design criteria, increases in slurry wall depths, support from Architect Engineer firms, and increased in-house labor.

Common Features	WRDA 99 Cost	Incremental Change	Revised Project Cost
Slurry Wall	40,380	24,280	64,660
Jet Grout	0	55,040	55,040
Flood Warning System	400	60	460
Levee Modifications	7,940	910	8,850
Sac River East Levee	10,050	3,700	13,750
Cross Canal	9,860	1,140	11,000
Planning, Engineering, Design	9,450	25,920	35,370
Supervision and Admin.	7,750	-580	7,170
Fed Lands and Damages	40	810	850
Non Fed LERRDs	5,590	-220	5,370
Fish and Wildlife	0	1,730	1,730
Cultural Resources	440	310	750
Total	91,900	113,100	205,000

Project American River Watershed, CA (Common Features)

SACCR #077522-04-01

Date May 26, 2004

Section II - Impact Assessment

Organization	Description
N/A	No overall impact to any specific organizational structure. Engineering division will continue to provide the core technical resources for soils, hydraulics, and civil design. Additional district resources will continue to be provided on an as-needed basis at the request of the project manager.

Section III - Project Manager's Evaluation

Category	Impact	Resources Required
Costs (\$000)	\$113,100	The increased funds will allow full completion of all project tasks previously identified in WRDA 96 and WRDA 99.
Schedule	Minimal	Project completion date has been delayed one year to October 2008.
Manpower	None	The District is committed to provide labor resources to keep this project on schedule.

Section IV - Coordination with Partner

Partner's Position and Acknowledgement

Signature *Paul D. Ralfe* Date 6/21/04

Section V - PRB Action & Resolution

CESPK-DE-P Recommendation and Signature

Signature *MC W Connelly, LTR, EN* Date 22 Jun 04

District PRB Recommendation

Reason

- ☐ Approval
☐ Approval with Modifications
☐ Disapproval
☐ Returned to PM w/o Action
☐ Referred to Division

Contract # 4600000651, Am. 2

Exhibit D

Page 1 of 2

**EXHIBIT D—Special Terms and Conditions for
Department Of Water Resources
(Department of the Army Corps of Engineers)**

1. **AVAILABILITY OF FUNDS:** Work to be performed under this contract is subject to availability of funds through the State's normal budget process.
2. **AUDIT CLAUSE:** For contracts in excess of \$10,000, the contracting parties shall be subject to the examination and audit of the State Auditor for a period of three years after final payment under the contract (Government Code Section 8546.7).
3. **CONFLICT OF INTEREST:**
 - a. **Current and Former State Employees:** Contractor should be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.
 - (1) **Current State Employees:** (PCC §10410)
 - (a) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.
 - (b) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.
 - (2) **Former State Employees:** (PCC §10411)
 - (a) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.
 - (b) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.
 - b. **Penalty for Violation:**
 - (a) If the Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (PCC §10420)
 - c. **Members of Boards and Commissions:**
 - (a) Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC §10430 (e))

d. Representational Conflicts of Interest:

The Contractor must disclose to the DWR Program Manager any activities by contractor or subcontractor personnel involving representation of parties, or provision of consultation services to parties, who are adversarial to DWR. DWR may immediately terminate this contract if the contractor fails to disclose the information required by this section. DWR may immediately terminate this contract if any conflicts of interest cannot be reconciled with the performance of services under this contract.

e. Financial Interest in Contracts:

Contractor should also be aware of the following provisions of Government Code §1090:

"Members of the Legislature, state, county district, judicial district, and city officers or employees shall not be financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Nor shall state, county, district, judicial district, and city officers or employees be purchasers at any sale or vendors at any purchase made by them in their official capacity."

f. Prohibition for Consulting Services Contracts:

For consulting services contracts (see PCC §10335.5), the Contractor and any subcontractors (except for subcontractors who provide services amounting to 10 percent or less of the contract price) may not submit a bid/SOQ, or be awarded a contract, for the provision of services, procurement of goods or supplies or any other related action which is required, suggested, or otherwise deemed appropriate in the end product of such a consulting services contract (see PCC § 10365.5).

STATE OF CALIFORNIA

STANDARD AGREEMENT AMENDMENT

STD. 213 A (Rev 9/01)

☒ CHECK HERE IF ADDITIONAL PAGES ARE ATTACHED 8 Pages

AGREEMENT NUMBER

4600000651

AMENDMENT NUMBER

3

1. This Agreement is entered into between the State Agency and Contractor named below: 38600806136192.3
 STATE AGENCY'S NAME
Department of Water Resources/The Reclamation Board
 CONTRACTOR'S NAME
Department of the Army
2. The term of this Agreement is July 10, 1998 through Notice of completion This Agreement shall not become effective until approved by the Department of the Army.
3. The maximum amount of this Agreement after this amendment is: \$246, 000,000.00
Two hundred and forty six million dollars and no cents.
4. The parties mutually agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:

See the attached Amendment Number 3 to the Project Cooperation Agreement between the Department of the Army and the State of California for construction of the American River Watershed (Common Features), California Project.

All other terms and conditions of Contract No. B81560/4600000651, including Amendment 1 and Amendment 2 shall remain the same.

Signatures appear on page 4 of 8 of the Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR

CONTRACTOR'S NAME (If other than an individual, state whether a corporation, partnership, etc.)

BY (Authorized Signature)

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

ADDRESS

STATE OF CALIFORNIA

AGENCY NAME

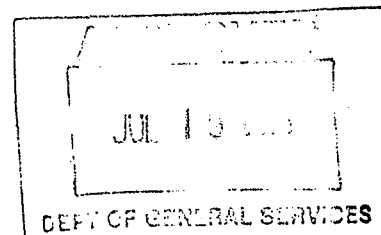
BY (Authorized Signature)

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

ADDRESS

CALIFORNIA
Department of General Services
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Contract No. 4600000651
Amendment 3
Page 1 of 6

AMENDMENT NUMBER 3
TO THE
PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA, THE RECLAMATION BOARD
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

THIS AMENDMENT is entered into this 20th day of JULY, 2006,
by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"),
represented by the U.S. Army Engineer, Sacramento District, and the STATE OF
CALIFORNIA, represented by the President of THE RECLAMATION BOARD
(hereinafter the "Non-Federal Sponsor").

WITNESSETH, THAT:

WHEREAS, construction of the American River Watershed (Common Features),
California Project was authorized by the Water Resources Development Act of 1996,
Public Law 104-303, as amended (hereinafter the "Project");

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public
Law 99-662, as amended, specifies the cost-sharing requirements applicable to the
Project;

WHEREAS, the Government and the Non-Federal Sponsor entered into a
Project Cooperation Agreement on July 13, 1998 (hereinafter referred to as the
"Agreement") for construction of the Project;

WHEREAS, the Government's engineering documentation for the Project
describes work urgently needed to assure the flood control benefits of the Project up to
a 100-year level of protection;

WHEREAS, the Non-Federal Sponsor proposes to accelerate its provision of
funds to the Government in an amount not to exceed the current estimate of the Non-

Contract No. 4600000651

Amendment 3

Page 2 of 6

Federal Sponsor's required cash contribution for the Project, less any funds previously contributed, for the immediate use by the Government for construction of the Project;

WHEREAS, the parties agree that such acceptance shall not represent or give rise to an obligation of the United States, including any obligation to provide reimbursement of the funds the Non-Federal Sponsor elects to provide or any obligation to request future funds to match the amount the Non-Federal Sponsor elects to provide, and that such funds will be credited against the Non-Federal Sponsor's future cost share only if additional Federal funds are appropriated.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree that the Agreement is hereby amended in the following particulars but in no others:

1. ARTICLE II – OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

Article II is amended by adding the following paragraphs at the end thereof:

"L. The Non-Federal Sponsor may offer in writing to accelerate a portion or all of its required cash contribution pursuant to Article II. D. of this Agreement during the period of construction for immediate use by the Government. This offer shall be limited to an amount that does not exceed the most current estimate of the total of the Non-Federal Sponsor's required cash contribution pursuant to Article II. D. of this Agreement, as determined by the Government in coordination with the Non-Federal Sponsor, less any funds previously contributed by the Non-Federal Sponsor. Upon receipt of such offer or offers, the Government, subject to receiving such approvals and concurrences as customarily are required to accept such funds, may accept the funds, or such portion thereof as the Government determines to be necessary to meet the costs of construction of the Project. If the Government elects to accept such funds, it shall notify the Non-Federal Sponsor of such acceptance in a writing that sets forth any applicable terms and conditions. In the event of a conflict between this Agreement and any such writing, this Agreement shall control. Such funds shall be used by the Government for construction of the Project.

M. As Federal appropriations are made available to pay the Federal share of construction of the Project, the Government shall afford credit for funds provided during the period of construction in accordance with Article II L. of this Agreement. The Government shall credit this amount, provided during the period of construction, toward the Non-Federal Sponsor's cash contribution required by Article II. D. of this Agreement. If after the final accounting at the end of the period of construction, it is

Contract No. 4600000651

Amendment 3

Page 3 of 6

determined that the Non-Federal Sponsor has provided funds in excess of its required cash contribution pursuant to Article II.D. of this Agreement, the Government shall proceed in accordance with Article VI.D.2. of this Agreement to determine whether a refund is applicable. However, if in the event of a final accounting due to termination pursuant to Article XIV.C. of this Agreement prior to the end of the period of construction, it is determined that the Non-Federal Sponsor has provided funds in excess of its required cash contribution pursuant to Article II.D. of this Agreement, the Government shall not reimburse the Non-Federal Sponsor for any such excess funds, except that any such excess funds which have not been obligated by the Government on the Project shall be refunded to the Non-Federal Sponsor, subject to the availability of funds."

2. ARTICLE VI – METHOD OF PAYMENT

a. The second sentence of Article VI.A. is amended by inserting the phrase: "of the credit to be afforded in accordance with Article II.M. of this Agreement," after "of the non-Federal proportionate share," and before "and of the funds the Government projects to be required from the Non-Federal Sponsor for the upcoming fiscal year."

b. The first sentence of Article VI.B.2. is amended by inserting the phrase: "after consideration of any credit afforded pursuant to Article II.M. of this Agreement," after "of construction," and before "the Government."

c. Article VI.B.3. is amended by adding at the end thereof: "; and (c) to the extent of funds accepted in accordance with Article II. L. of this Agreement, any other financial obligations for construction in excess of the non-Federal proportionate share as they are incurred during the period of construction."

d. Article VI.B.4. is amended by adding a comma after "the Government" in the first line and inserting the phrase: "after consideration of any credit afforded pursuant to Article II. M. of this Agreement," before "determines that additional funds will be needed from the Non-Federal Sponsor."

e. The first sentence of Article VI.D.2. is amended by adding the following phrase at the end thereof: ", and, if the final accounting results from termination pursuant to Article XIV.C. of this Agreement, the amount of excess contribution that was provided in accordance with Article II. L. of this Agreement and for which credit was not afforded pursuant to Article II.M. of this Agreement shall not be reimbursed." The second sentence of Article VI.D.2. is amended by adding the parenthesis: "(not including the non-reimbursable amounts referenced in the preceding sentence)" after "refund the excess."

Contract No. 4600000651
Amendment 3
Page 4 of 6

IN WITNESS WHEREOF, the parties hereto have executed this amendment to the Agreement, which shall become effective upon the date it is signed by the authorized representative of the Government.

THE DEPARTMENT OF THE ARMY

BY: 

Ronald N. Light
Colonel, Corps of Engineers
District Engineer

DATE: 7/20/06

THE STATE OF CALIFORNIA
Represented by The Reclamation Board

BY: 

Benjamin F. Carter
President
The Reclamation Board

DATE: 6/22/06

Contract No. 4600000651

Amendment 3

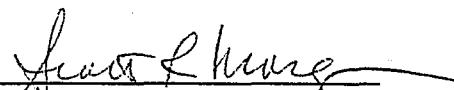
Page 5 of 6

CERTIFICATE OF AUTHORITY

I, _____, do hereby certify that I am the principal legal officer of The Reclamation Board of the State of California, that The Reclamation Board is a legally constituted public body with full authority and legal capability to perform, on behalf of the State of California, the terms of the Agreement between the Department of the Army and the State of California, as amended by Amendment Number 3 to the Agreement, in connection with the American River Watershed (Common Features), California, Project, and to pay damages in accordance with the terms of the amended Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Agreement on behalf of the State of California, acting by and through its Reclamation Board, have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification on this

23 day of June 2006.


Scott Morgan, Counsel
The Reclamation Board

Contract No. 4600000651
Amendment 3
Page 6 of 6

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

BY: Dan A. Fua
Dan Fua
Acting General Manager
The Reclamation Board

DATE: 6/23/06

**EXHIBIT D—Special Terms and Conditions for
Department Of Water Resources
(Department of the Army Corps of Engineers)**

1. AVAILABILITY OF FUNDS: Work to be performed under this contract is subject to availability of funds through the State's normal budget process.
2. AUDIT CLAUSE: For contracts in excess of \$10,000, the contracting parties shall be subject to the examination and audit of the State Auditor for a period of three years after final payment under the contract (Government Code Section 8546.7).
3. CONFLICT OF INTEREST:
 - a. Current and Former State Employees: Contractor should be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.
 - (1) Current State Employees: (PCC §10410)
 - (a) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.
 - (b) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.
 - (2) Former State Employees: (PCC §10411)
 - (a) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.
 - (b) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.
 - b. Penalty for Violation:
 - (a) If the Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (PCC §10420)
 - c. Members of Boards and Commissions:
 - (a) Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC §10430 (e))

d. Representational Conflicts of Interest:

The Contractor must disclose to the DWR Program Manager any activities by contractor or subcontractor personnel involving representation of parties, or provision of consultation services to parties, who are adversarial to DWR. DWR may immediately terminate this contract if the contractor fails to disclose the information required by this section. DWR may immediately terminate this contract if any conflicts of interest cannot be reconciled with the performance of services under this contract.

e. Financial Interest in Contracts:

Contractor should also be aware of the following provisions of Government Code §1090:

"Members of the Legislature, state, county district, judicial district, and city officers or employees shall not be financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Nor shall state, county, district, judicial district, and city officers or employees be purchasers at any sale or vendors at any purchase made by them in their official capacity."

f. Prohibition for Consulting Services Contracts:

For consulting services contracts (see PCC §10335.5), the Contractor and any subcontractors (except for subcontractors who provide services amounting to 10 percent or less of the contract price) may not submit a bid/SOQ, or be awarded a contract, for the provision of services, procurement of goods or supplies or any other related action which is required, suggested, or otherwise deemed appropriate in the end product of such a consulting services contract (see PCC § 10365.5).

STATE OF CALIFORNIA

STANDARD AGREEMENT AMENDMENT

STD. 213 A (Rev 6/03)

☒ CHECK HERE IF ADDITIONAL PAGES ARE ATTACHED 5 Pages

AGREEMENT NUMBER	AMENDMENT NUMBER
4600000651	4
REGISTRATION NUMBER	

1. This Agreement is entered into between the State Agency and Contractor named below:
STATE AGENCY'S NAME
Department of Water Resources
CONTRACTOR'S NAME
Department of the Army
2. The term of this Agreement is July 10, 1998 through Upon Completion of the Project This Agreement shall not become effective until approved by the Department of the Army Corps of Engineers.
3. The maximum amount of this Agreement after this amendment is: \$246,000,000.00 Two hundred and forty-six Million Dollars and No Cents.
4. The parties mutually agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:
 - A. Amending the Project Cooperation Agreement for the American River Watershed (Common Features) Project expands the Agreement's definition of "Project" and clarifies the scope of work to include certain improvements authorized in Section 366 of the Water Resources Development Act of 1999, Public Law 106-53. Article I.A under the Definitions and General Provisions is amended to add (1) Mayhew Drain, Raise Levee; (2) Mayhew Drain, Install Closure Structure; (3) Howe Avenue, Raise Levee; (4) Jacob Lane, Strengthen Levee; and (5) Lower American River near Natomas East Main Drainage Canal, Strengthen Levee.
 - B. All other terms and conditions of contract # 4600000651, including Amendments 1, 2, and 3 shall remain the same.

Signatures appear on pages 3 of 5 of the Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR

CONTRACTOR'S NAME (If other than an individual, state whether a corporation, partnership, etc.)

BY (Authorized Signature)

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

ADDRESS

STATE OF CALIFORNIA

AGENCY NAME

BY (Authorized Signature)

DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING

CALIFORNIA
Department of General Services
Use Only

APPROVED

JUN 18 2007

DEPT OF GENERAL SERVICES

Kyparis

Contract No. 4600000651, Am. 4
Page 1 of 5

AMENDMENT NUMBER 4
TO THE
PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA, THE RECLAMATION BOARD
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

THIS AMENDMENT is entered into this _____ day of _____, 2007,
by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"),
represented by the Assistant Secretary of the Army (Civil Works), and the STATE OF
CALIFORNIA, represented by the President of THE RECLAMATION BOARD
(hereinafter the "Non-Federal Sponsor").

WITNESSETH, THAT:

WHEREAS, construction of the American River Watershed (Common Features), California Project (hereinafter the "Project") was authorized by Section 101(a)(1) of the Water Resources Development Act of 1996, Public Law 104-303, at a total cost of \$56,900,000;

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, specifies the cost-sharing requirements applicable to the Project;

WHEREAS, the Government and the Non-Federal Sponsor entered into a Project Cooperation Agreement on July 13, 1998 (hereinafter the "Agreement") for construction of the Project;

WHEREAS, the Project authorization was modified by Section 366 of the Water Resources Development Act of 1999, Public Law 106-53, to include certain improvements as part of the overall Project, and was amended by Section 366 to increase the total cost of the Project to \$91,900,000;

WHEREAS, the Government and the Non-Federal Sponsor entered into Amendment Number 1 to the Agreement on June 13, 2003, to update the project cost to

Contract No. 4600000651, Am. 4
Page 2 of 5

\$120.6 million to accommodate the design and construction changes associated with deep foundation slurry cutoff walls required for the Project;

WHEREAS, the Project authorization was further modified by Section 129 of Public Law 108-137, the Energy and Water Development Appropriations Act, 2004, to increase the total cost of the Project to \$205,000,000, and the Government and the Non-Federal Sponsor entered into Amendment Number 2 to the Agreement on September 5, 2006 to update the project cost to \$205,000,000;

WHEREAS, the Government and the Non-Federal Sponsor entered into Amendment Number 3 to the Agreement on July 20, 2006 to allow for the Non-Federal Sponsor to accelerate its provision of funds to the Government; and

WHEREAS, the Government and the Non-Federal Sponsor wish to amend the Agreement's definition of "Project" to include certain improvements authorized in Section 366 of the Water Resources Development Act of 1999, Public Law 106-53.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree that the Agreement is hereby amended in the following particulars but in no others:

1. ARTICLE I – DEFINITIONS AND GENERAL PROVISIONS

Article I.A. is amended by adding the following paragraph at the end thereof.:

"The term Project shall also mean the following improvements: (1) Mayhew Drain, Raise Levee: raising the left bank of the non-federal levee upstream of the Mayhew Drain for a distance of 4,300 feet by an average of 2.5 feet; (2) Mayhew Drain, Install Closure Structure: constructing a closure structure with gates near mouth of Mayhew Drain; (3) Howe Avenue, Raise Levee: raising the right bank of the American River levee from 1,500 feet upstream to Howe Avenue to 12,000 feet downstream of Howe Avenue bridge (to Northrop Avenue) by an average of 1 foot; (4) Jacob Lane, Strengthen Levee: constructing a 4-foot-deep toe drain along the landside levee toe to control excessive exit gradient--repair work extending from 300 feet west of Jacob Lane to Harrington Way and from 800 feet upstream of River Walk Way to 700 feet downstream of Arden Way; (5) Lower American River near Natomas East Main Drainage Canal, Strengthen Levee: reshaping right bank landside levee side slope to provide a 2H to 1V slope from 500 feet upstream to 1,300 feet upstream of State Highway 160; as generally described in the American River Watershed Project (Common Features), California, Second Addendum to the Supplemental Information Report (SIR), dated March 2002 (revised July 2002), and approved by the Director of Civil Works on 21 October 2002.

Contract No. 4600000651, Am. 4
Page 3 of 5

IN WITNESS WHEREOF, the parties hereto have executed this amendment to the Agreement, which shall become effective upon the date it is signed by the authorized representative of the Government.

THE DEPARTMENT OF THE ARMY

BY: _____
Ronald N. Light
Colonel, Corps of Engineers
District Engineer

DATE: _____

THE STATE OF CALIFORNIA
Represented by the Reclamation Board

BY: *Benjamin F. Carter*
Benjamin F. Carter
President
The Reclamation Board

DATE: 5/30/07

Approved as to legal form
and sufficiency:

Scott R. May
Asst. Chief Counsel, DWR
Rec Bd.

Contract No. 4600000651, Am. 4

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CERTIFICATE OF AUTHORITY

I, Scott R. Morgan, do hereby certify that I am the principal legal officer of the Reclamation Board of the State of California, that the Reclamation Board is a legally constituted public body with full authority and legal capability to perform, on behalf of the State of California, the terms of the Agreement between the Department of the Army and the State of California, as amended by Amendment Number 4 to the Agreement, in connection with the American River Watershed (Common Features), California, Project, and to pay damages in accordance with the terms of the amended Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Agreement on behalf of the State of California, acting by and through its Reclamation Board, have acted within their statutory authority.

24 IN WITNESS WHEREOF, I have made and executed this certification on this day of May 2007.

Scott R. Morgan
Scott R. Morgan, Counsel
The Reclamation Board

Contract No. 4600000651, Am. 4
Page 5 of 5

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

BY: Jay S. Punia
Jay S. Punia
General Manager
The Reclamation Board

DATE: 5/29/07

AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE CALIFORNIA CENTRAL VALLEY FLOOD PROTECTION BOARD
FOR THE
AMERICAN RIVER COMMON FEATURES PROJECT
GENERAL REEVALUATION STUDY

THIS AGREEMENT is entered into this _____ day of _____, 2013, by and between the Department of the Army (hereinafter the “Government”), represented by the U.S. Army Engineer, Sacramento District and The State of California’s Central Valley Flood Protection Board (hereinafter the “Non-Federal Sponsor”), represented by the President, Central Valley Flood Protection Board.

WITNESSETH, THAT:

WHEREAS, construction of the American River Common Features Project at the city and county of Sacramento in the State of California was authorized by Congress in Section 101 of the Water Resources Development Act (WRDA) of 1996 (Pub. L. No. 104-303, § 101(a)(1), 110 Stat. 3658, 3662-3663 (1996)), as amended by Section 366 of WRDA 1999 (Pub. L. No. 106-53, § 366, 113 Stat. 269, 319-320 (1999)) and the Energy and Water Development Act of 2004 (Pub. L. No. 108-137, § 129, 121 Stat. 1844, 1947 (2003));

WHEREAS, the Government initiated a general reevaluation study (hereinafter the “Study”) without executing a feasibility cost sharing agreement for such Study;

WHEREAS, the Study has been performed by the Government through the effective date of this Agreement with the Non-Federal Sponsor contributing 25 percent of the costs of the Study;

WHEREAS, the Government has determined it is necessary to execute a feasibility cost sharing agreement with the Non-Federal Sponsor to share the costs of the Study in accordance with Section 105(a) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2215(a));

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate in cost-sharing and financing of the Study in accordance with the terms of this Agreement; and

WHEREAS, the Government and the Non-Federal Sponsor, in connection with this Agreement, desire to foster a partnering strategy and a working relationship between the Government and the Non-Federal Sponsor through a mutually developed formal strategy of commitment and communication embodied herein, which creates an environment where trust

and teamwork prevent disputes, foster a cooperative bond between the Government and the Non-Federal Sponsor, and facilitate the successful *Study*.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree as follows:

ARTICLE I – DEFINITIONS

A. The term “*Study*” shall mean the activities and tasks required to identify and evaluate alternatives and the preparation of a decision document that, when appropriate, recommends a coordinated and implementable solution for flood risk management at the city and county of Sacramento in the State of California, as generally described in the American River Common Features General Reevaluation Report Project Management Plan (PMP).

B. The term “*total study costs*” shall mean the sum of all costs incurred by the Non-Federal Sponsor and the Government in accordance with the terms of this Agreement directly related to performance of the *Study* including the costs of the *Study* incurred by the Non-Federal Sponsor and the Government prior to the effective date of this Agreement. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to: the Government’s costs of plan formulation and evaluation, including applicable economic, engineering, real estate, and environmental analyses; the Government’s costs of preparation of the decision document for the *Study*; the Government’s costs of Agency Technical Review and other review processes required by the Government; the Government’s costs of Independent External Peer Review, if required, except for the costs of any contract for an Independent External Peer Review panel; the Government’s supervision and administration costs; the Non-Federal Sponsor’s and the Government’s costs of participation in the Study Coordination Team in accordance with Article III of this Agreement; the Government’s costs of contract dispute settlements or awards; and the Non-Federal Sponsor’s and the Government’s costs of audit in accordance with Article VI.B. and Article VI.C. of this Agreement. The term does not include any costs of dispute resolution under Article V of this Agreement; any costs incurred as part of reconnaissance studies; the Non-Federal Sponsor’s costs of negotiating this Agreement; any costs of a contract for an Independent External Peer Review panel; or any costs of negotiating a design agreement for a project or separable element thereof.

C. The term “*Federal program funds*” shall mean funds provided by a Federal agency, other than the Department of the Army, plus any non-Federal contribution required as a matching share therefor.

D. The term “*fiscal year*” shall mean one year beginning on October 1 and ending on September 30.

E. The term “*PMP*” shall mean the project management plan, and any modifications thereto, developed by the Government, in consultation with the Non-Federal Sponsor, that specifies the scope, cost, and schedule for *Study* activities and guides the performance of the

Study.

ARTICLE II - OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

A. The Government, using funds appropriated by the Congress of the United States (hereinafter the “Congress”) and funds provided by the Non-Federal Sponsor, shall complete expeditiously the *Study*, applying those procedures usually applied to Federal projects, in accordance with Federal laws, regulations, and policies.

1. To the extent possible, the Government and the Non-Federal Sponsor shall complete the *Study* in accordance with the *PMP*.

2. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all products that are developed by contract or by Government personnel. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the final approval of all *Study* products shall be exclusively within the control of the Government.

3. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on the solicitations for all Government contracts, including relevant scopes of work, prior to the Government’s issuance of such solicitations. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all proposed contract modifications, including change orders. In any instance where providing the Non-Federal Sponsor with notification of a contract modification is not possible prior to execution of the contract modification, the Government shall provide such notification in writing at the earliest date possible. To the extent possible, the Government also shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract claims prior to resolution thereof. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the contents of solicitations, award of contracts or commencement of work on the *Study* using the Government’s own forces, execution of contract modifications, resolution of contract claims, and performance of all work on the *Study*, shall be exclusively within the control of the Government.

4. At the time the U.S. Army Engineer, Sacramento District (hereinafter the “District Engineer”) furnishes the contractor with the Government’s Written Notice of Acceptance of Completed Work for each contract awarded by the Government for the *Study*, the District Engineer shall furnish a copy thereof to the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall contribute 50 percent of *total study costs*. The Government shall determine the amount of funds that would be necessary to meet the Non-Federal Sponsor’s required share after subtracting the collective value of the Non-Federal Sponsor’s contributions under Article III and Article VI of this Agreement. The Non-Federal Sponsor shall provide such funds in accordance with Article IV.B. of this Agreement.

C. Upon completion of the *Study*, the Government shall conduct an accounting, in

accordance with Article IV.C. of this Agreement, and furnish the results to the Non-Federal Sponsor.

D. The Non-Federal Sponsor shall not use *Federal program funds* to meet any of its obligations for the *Study* under this Agreement unless the Federal agency providing the funds verifies in writing that such funds are authorized to be used to carry out the *Study*.

E. This Agreement shall not be construed as obligating either party to implement a project. Whether the Government supports a project authorization, if authorization is required, and budgets for implementation of the project depends upon, among other things, the outcome of the *Study* and whether the proposed solution is consistent with the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and with the budget priorities of the Administration.

ARTICLE III - STUDY COORDINATION TEAM

A. To provide for consistent and effective communication, the Non-Federal Sponsor and the Government, not later than 30 calendar days after the effective date of this Agreement, shall appoint named senior representatives to a Study Coordination Team. Thereafter, the Study Coordination Team shall meet regularly. The Government's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Study Coordination Team.

B. The Government's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Study Coordination Team informed of the progress of the *Study* and of significant pending issues and actions, and shall seek the views of the Study Coordination Team on matters that the Study Coordination Team generally oversees.

C. The Study Coordination Team shall generally oversee the *Study*, including matters related to: plan formulation and evaluation, including applicable economic, engineering, real estate, and environmental analyses; scheduling of reports and work products; independent technical review and other review processes required by the Government; external peer review, if required; completion of all necessary environmental coordination and documentation; contract awards and modifications; contract costs; the Government's cost projections; determination of anticipated future requirements for real property and relocation requirements and performance of operation, maintenance, repair, rehabilitation, and replacement of the proposed project including anticipated requirements for permits; and other matters related to the *Study*. This oversight of the *Study* shall be consistent with the *PMP*.

D. The Study Coordination Team may make recommendations to the District Engineer on matters related to the *Study* that the Study Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider the recommendations of the Study Coordination Team. The Government, having the legal authority and responsibility for performance of the *Study* has the discretion to accept or reject, in whole or in

part, the Study Coordination Team's recommendations.

E. The Non-Federal Sponsor's costs of participation in the Study Coordination Team shall be included in *total study costs* and shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article IV.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs. The Government's costs of participation in the Study Coordination Team shall be included in *total study costs* and shared in accordance with the provisions of this Agreement.

ARTICLE IV - METHOD OF PAYMENT

A. In accordance with the provisions of this paragraph, the Government shall maintain current records and provide to the Non-Federal Sponsor current projections of costs, costs incurred, and the contributions provided by the parties.

1. As of the effective date of this Agreement, *total study costs* are projected to be \$14,900,000; the value of the Non-Federal Sponsor's contributions under Article III and Article VI of this Agreement is projected to be \$620,000; and the amount of funds determined in accordance with Article II.B. of this Agreement is projected to be \$7,450,000. These amounts are estimates subject to adjustment by the Government, after consultation with the Non-Federal Sponsor, and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

2. By _____ and by each quarterly anniversary thereof until the *Study* is completed and all relevant claims and appeals are resolved, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of the following: *total study costs*; the value of the Non-Federal Sponsor's contributions under Article III and Article VI of this Agreement; the amount of funds determined in accordance with Article II.B. of this Agreement; ; and the total contribution of funds required from the Non-Federal Sponsor for the upcoming contract and upcoming *fiscal year*.

B. The Non-Federal Sponsor shall provide the contribution of funds required by Article II.B. of this Agreement in accordance with the provisions of this paragraph.

1. Not less than 7 calendar days after the effective date of this Agreement, the Government shall notify the Non-Federal Sponsor in writing of the funds the Government determines to be required from the Non-Federal Sponsor to meet: (a) the Non-Federal Sponsor's share of *total study costs* incurred prior to the effective date of this Agreement; (b) the projected non-Federal share of costs to be incurred for any contracts awarded during the first quarter; and (c) the projected non-Federal share of costs incurred using the Government's own forces through the first quarter. Within 30 calendar days of receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such required funds by delivering a check payable to "FAO, USAED, Sacramento District EROC L2" to the District Engineer, or verifying

to the satisfaction of the Government that the Non-Federal Sponsor has deposited such required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

2. Thereafter, until the work on the *Study* is complete, the Government shall notify the Non-Federal Sponsor in writing of the funds the Government determines to be required from the Non-Federal Sponsor, and the Non-Federal Sponsor shall provide such funds in accordance with the provisions of this paragraph.

a. The Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the scheduled date for issuance of the solicitation for each remaining contract for work on the *Study*, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the projected non-Federal share of costs to be incurred for such contract. No later than such scheduled date, the Non-Federal Sponsor shall make the full amount of such required funds available to the Government through any of the payment mechanisms specified in paragraph B.1. of this Article.

b. The Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the beginning of each quarter in which the Government projects that it will incur costs using the Government's own forces, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the projected non-Federal share of such costs. No later than 30 calendar days prior to the beginning of that quarter, the Non-Federal Sponsor shall make the full amount of such required funds for that quarter available to the Government through any of the payment mechanisms specified in paragraph B.1. of this Article.

3. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover: (a) the Non-Federal Sponsor's share of *total study costs* incurred prior to the effective date of this Agreement; and (b) the non-Federal share of costs as they are incurred. If at any time the Government determines that additional funds will be needed from the Non-Federal Sponsor to cover the Non-Federal Sponsor's share of costs for the current contract or to cover the Non-Federal Sponsor's share of costs for work performed using the Government's own forces in the current quarter, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required and provide an explanation of why additional funds are required. Within 60 calendar days from receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional required funds through any of the payment mechanisms specified in paragraph B.1. of this Article.

C. Upon completion of the *Study* and resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. If outstanding relevant claims and appeals prevent a final accounting from being conducted in a timely manner, the Government shall conduct an

interim accounting and furnish the Non-Federal Sponsor with written notice of the results of such interim accounting. Once all outstanding relevant claims and appeals are resolved, the Government shall amend the interim accounting to complete the final accounting and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. The interim or final accounting, as applicable, shall determine *total study costs*, each party's required share thereof, and each party's total contributions thereto as of the date of such accounting.

1. Should the interim or final accounting, as applicable, show that the Non-Federal Sponsor's required share of *total study costs* exceeds the Non-Federal Sponsor's total contributions provided thereto, the Non-Federal Sponsor, no later than 90 calendar days after receipt of written notice from the Government, shall make a payment to the Government in an amount equal to the difference by delivering a check payable to "FAO, USAED, Sacramento District EROC L2" to the District Engineer or by providing an Electronic Funds Transfer in accordance with procedures established by the Government.

2. Should the final accounting show that the total contributions provided by the Non-Federal Sponsor exceed the Non-Federal Sponsor's required share of *total study costs*, the Government, subject to the availability of funds, shall refund the excess amount to the Non-Federal Sponsor within 90 calendar days of the date of completion of such accounting. In the event the Non-Federal Sponsor is due a refund and funds are not available to refund the excess amount to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund.

ARTICLE V - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. Each party shall pay an equal share of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VI - MAINTENANCE OF RECORDS AND AUDIT

A. Not later than 60 calendar days after the effective date of this Agreement, the Government and the Non-Federal Sponsor shall develop procedures for keeping books, records, documents, or other evidence pertaining to costs and expenses incurred pursuant to this Agreement. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 C.F.R. Section 33.20. The

Government and the Non-Federal Sponsor shall maintain such books, records, documents, or other evidence in accordance with these procedures and for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence were required. To the extent permitted under applicable Federal laws and regulations, the Government and the Non-Federal Sponsor shall each allow the other to inspect such books, records, documents, or other evidence.

B. In accordance with 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507), as implemented by OMB Circular No. A-133 and Department of Defense Directive 7600.10. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable Federal laws and regulations, the Government shall provide to the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-Federal audits performed in accordance with this paragraph shall be allocated in accordance with the provisions of OMB Circulars A-87 and A-133, and such costs as are allocated to the *Study* shall be included in *total study costs* and shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. 7503, the Government may conduct audits in addition to any audit that the Non-Federal Sponsor is required to conduct under the Single Audit Act Amendments of 1996. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular A-87 and other applicable cost principles and regulations. The costs of Government audits performed in accordance with this paragraph shall be included in *total study costs* and shared in accordance with the provisions of this Agreement.

ARTICLE VII - FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government shall comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto and Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army".

ARTICLE VIII - RELATIONSHIP OF PARTIES

A. In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other.

B. In the exercise of its rights and obligations under this Agreement, neither party shall

provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights the other party may have to seek relief or redress against that contractor either pursuant to any cause of action that the other party may have or for violation of any law.

ARTICLE IX - TERMINATION OR SUSPENSION

A. Upon 30 calendar days written notice to the other party, either party may elect without penalty to suspend or terminate future performance under this Agreement.

B. If at any time the Non-Federal Sponsor fails to fulfill its obligations under this Agreement, the Assistant Secretary of the Army (Civil Works) shall suspend or terminate future performance under this Agreement unless the Assistant Secretary of the Army (Civil Works) determines that continuation of performance of the *Study* is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the *Study*.

C. In the event the Government projects that the amount of Federal funds the Government will make available to the *Study* through the then-current *fiscal year*, or the amount of Federal funds the Government will make available for the *Study* through the upcoming *fiscal year*, is not sufficient to meet the Federal share of *total study costs* that the Government projects to be incurred through the then-current or upcoming *fiscal year*, as applicable, the Government shall notify the Non-Federal Sponsor in writing of such insufficiency of funds and of the date the Government projects that the Federal funds that will have been made available to the *Study* will be exhausted. Upon the exhaustion of Federal funds made available by the Government to the *Study*, future performance under this Agreement shall be suspended. Such suspension shall remain in effect until such time that the Government notifies the Non-Federal Sponsor in writing that sufficient Federal funds are available to meet the Federal share of *total study costs* the Government projects to be incurred through the then-current or upcoming *fiscal year*, or the Government or the Non-Federal Sponsor elects to terminate this Agreement.

D. In the event that future performance under this Agreement is terminated pursuant to this Article, the parties shall conclude their activities relating to the *Study* and conduct an accounting in accordance with Article IV.C. of this Agreement. To provide for this eventuality, the Government may reserve a percentage of total Federal funds made available for the *Study* and an equal percentage of the total funds contributed by the Non-Federal Sponsor in accordance with Article II.B. of this Agreement as a contingency to pay costs of termination, including any costs of resolution of contract claims and contract modifications. Upon termination of this Agreement, all data and information generated as part of the *Study* shall be made available to the parties to the Agreement.

E. Any suspension or termination of future performance under this Agreement in accordance with this Article shall not relieve the parties of liability for any obligation previously incurred. Any delinquent payment owed by the Non-Federal Sponsor shall be charged interest at a

rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13 week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3 month period if the period of delinquency exceeds 3 months.

ARTICLE X - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally or sent by telegram or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor:

Central Valley Flood Protection Board
President, Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, CA 95821

If to the Government:

U.S. Army Corps of Engineers
District Engineer, Sacramento District
1325 J Street
Sacramento, CA 95814-2922

B. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

C. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

ARTICLE XI - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XII - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

Nothing in this Agreement is intended, nor may be construed, to create any rights, confer any benefits, or relieve any liability, of any kind whatsoever in any third person not party to this

Agreement.

ARTICLE XIII - OBLIGATIONS OF FUTURE APPROPRIATIONS

A. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the Legislature of the State of California, where creating such an obligation would be inconsistent with Section 1 of Article XVI of the Constitution of the State of California.

B. The Non-Federal Sponsor intends to fulfill its obligations under this Agreement. The Non-Federal Sponsor shall include in its budget request or otherwise propose appropriations of funds in amounts sufficient to fulfill these obligations for that year, and shall use all reasonable and lawful means to secure those appropriations. The Non-Federal Sponsor reasonably believes that funds in amounts sufficient to fulfill these obligations lawfully can and will be appropriated and made available for this purpose. In the event funds are not appropriated in amounts sufficient to fulfill these obligations, the Non-Federal Sponsor shall use its best efforts to satisfy any requirements for payments or contributions of funds under this Agreement from any other source of funds legally available for this purpose. Further, if the Non-Federal Sponsor is unable to fulfill these obligations, the Government may exercise any legal rights it has to protect the Government's interests related to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the District Engineer.

DEPARTMENT OF THE ARMY

The State of California's Central Valley
Flood Protection Board

BY: _____
Colonel Michael Farrell
District Engineer
Sacramento District

BY: _____
Bill Edgar
President, Central Valley Flood
Protection Board

DATE: _____

DATE: _____

CERTIFICATE OF AUTHORITY

I, _____, do hereby certify that I am the principal legal officer of The State of California's Central Valley Flood Protection Board for this project, that The State of California's Central Valley Flood Protection Board is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and The State of California's Central Valley Flood Protection Board in connection with the feasibility study for the American River Common Features Project's General Reevaluation Report, and to pay damages, if necessary, in the event of the failure to perform in accordance with the terms of this Agreement and that the persons who have executed this Agreement on behalf of The State of California's Central Valley Flood Protection Board have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this
_____ day of _____ 20____.

Jeremy Goldberg
Attorney, Office of the Chief Counsel,
California Department of Water Resources

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Bill Edgar
President Central Valley Flood
Protection Board

DATE: _____

LOCAL FEASIBILITY COST SHARING AGREEMENT
BETWEEN
THE CENTRAL VALLEY FLOOD PROTECTION BOARD
AND THE
SACRAMENTO AREA FLOOD CONTROL AGENCY
FOR THE
AMERICAN RIVER COMMON FEATURES PROJECT
GENERAL REEVALUATION STUDY

This AGREEMENT is made and entered into this _____ day of _____, 2014, by and between The State of California, acting through the Central Valley Flood Protection Board (hereinafter the Board) and the Sacramento Area Flood Control Agency, a joint powers authority.

RECITALS:

WHEREAS, construction of the American River Common Features Project at the city and county of Sacramento in the State of California was authorized by Congress in Section 101 of the Water Resources Development Act (WRDA) of 1996 (Pub. L. No. 104-303, § 101(a)(1), 110 Stat. 3658, 3662-3663 (1996)), as amended by Section 366 of WRDA 1999 (Pub. L. No. 106-53, § 366, 113 Stat. 269, 319-320 (1999)) and the Energy and Water Development Act of 2004 (Pub. L. No. 108-137, § 129, 121 Stat. 1844, 1947 (2003));

WHEREAS, Water Code sections 8615 authorizes the Board to participate in the Study; and

WHEREAS, the Board and the Sacramento Area Flood Control Agency (SAFCA) are authorized and empowered under their organizing acts and other state laws to participate in, fund, and carry out flood control activities; and

WHEREAS, the Board concurrent with this AGREEMENT is entering into a Feasibility Cost Sharing Agreement titled "Agreement Between the Department of the Army(hereinafter the "Government"), represented by the U.S. Army Corp of Engineers, Sacramento District, and the California Central Valley Flood Protection Board for the American River Common Features Project General Reevaluation Study" (FCSA), to be completed in accordance with the Project Management Plan (PMP); and WHEREAS, the Government initiated a general reevaluation study (hereinafter the "Study") without executing a feasibility cost sharing agreement for such Study;

WHEREAS, the Study has been performed by the Government through the effective date of this Agreement with the Non-Federal Sponsor contributing 25 percent of the costs of the Study;

WHEREAS, the Government has determined it is necessary to execute a feasibility cost sharing agreement with the Board as the "Non-Federal Sponsor" to share the costs of the Study in accordance with Section 105(a) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2215(a));

WHEREAS, the Board and SAFCA have agreed to be responsible for the functions of the “Non-Federal Sponsor” under the FCSA and have agreed to the terms of the Study and a maximum contribution described in the FCSA; and

WHEREAS, the Board and SAFCA desire to specify their respective contributions and other obligations during the term of the Study.

NOW, THEREFORE, the Board and SAFCA agree as follows:

1. Feasibility Cost Sharing Agreement. A copy of the FCSA is attached hereto as Exhibit A and incorporated by this reference. This AGREEMENT shall be subject to all applicable provisions of the FCSA and subsequent FCSA amendments.
2. Study Sponsor. The Board and SAFCA have agreed to jointly perform the functions of the Non-Federal Sponsor as stated in the FCSA.
3. Study Activities. Participation by the Board and SAFCA in the Study is limited to those activities described in the PMP, an attachment to the FCSA.
4. Local Cost-Sharing.

A. Contributions.

- 1) The Board and SAFCA agree that their contributions to the Study costs shall be as follows:

Table 1

Non-Federal Sponsor	Percent (Total Study)
Board	25%
SAFCA	25%
Total	50%

All or a portion of each of the respective contributions of SAFCA and the Board toward the Study costs may be either cash or In-Kind Services as defined in the FCSA. SAFCA’s In-Kind Services shall be subject to the requirements of the FCSA and may only be used as contributions after approval has been obtained from the USACE.

- 2) Cash contributed and/or authorized work performed by the SAFCA or their consultants prior to this AGREEMENT may only be used as contributions after approval has been obtained from the USACE.
- 3) At such time as the USACE notifies the Board that payments are due under the FCSA, SAFCA shall pay or contribute its respective share directly to the Board. Checks shall be made payable to the Department of Water Resources, Governmental Accounting Office, P.O. Box 942836 Sacramento, California 94236-0001. SAFCA shall provide notification of

payment to the Board, and the Board shall provide notification of payment to SAFCA.

- 4) Each party to this AGREEMENT shall be obligated only for the percentage shown in Table 1 above unless this AGREEMENT is amended in writing and signed by both parties.
 - 5) In the event that the Board does not secure any or all of the Board's share of Study costs during the term of this Agreement, SAFCA may, in its sole discretion, temporarily advance funds and/or In-Kind Services to cover the shortfall including the cost of any In-Kind Services. Alternatively, the SAFCA may decide to terminate the FCSA and this AGREEMENT pursuant to paragraph 8. The Board shall diligently pursue securing its share of such Study costs and, when secured, fund the non-federal share until such advance by SAFCA is covered, without interest thereon. In lieu of funding the non-federal share as described above, the Board, in its sole discretion, may opt to repay SAFCA for any such advance in whole or in part; in the event the Board opts to make a partial repayment, the Board shall cover the balance due by funding the non-federal share until the SAFCA's advance is recovered, without interest thereon.
- B. Final Accounting. The Board shall prepare and submit to SAFCA a final accounting of the expenses and revenues of the Study at or prior to termination of the FCSA. At such time, any cash surplus remaining from the cash contributions provided for in Paragraph 4.A.4 shall be credited and returned to the Board and SAFCA in proportion to their respective cash contributions added to their In-Kind Services contributions. It is understood in making such final accounting that any cash payments to the USACE shall be deemed to have been made first from the principal of the cash contributions, and then from the earned interest only if the principal has been exhausted. Any earned interest remaining at the time of the final accounting shall be credited and returned to the Board and SAFCA pro-rated according to the time the respective cash contributions were on deposit with the State's cash investment pool.
5. Disputes: SAFCA and the Board shall continue with their responsibilities under this AGREEMENT during any dispute, subject to the parties' respective rights to terminate or suspend the FCSA and this Agreement pursuant to paragraph 8 herein.
 6. Records and Reports.
 - A. The Board shall coordinate with the USACE in the maintenance of adequate records of the expenses and revenues of the Study, and such records shall be available for inspection and audit by the designated representatives of SAFCA within 14 days of any such records being compiled.

- B. SAFCA shall maintain adequate records of expenses and such records shall be available for inspection and audit by the Board throughout the life of this AGREEMENT and for a period of ten years after the termination of this AGREEMENT.
- C. The Board shall furnish SAFCA with copies of any financial or progress reports received from the USACE within 14 days of receipt of such by the Board.
- D. Upon completion of the Study, the Board shall furnish SAFCA two copies of the USACE Study within 14 days of receipt of such by the Board.
7. Designated Representative. The designated representative by the Board for administration of this AGREEMENT shall be the Executive Officer of the Central Valley Flood Protection Board. The designated representative for SAFCA for this AGREEMENT shall be its Executive Director. SAFCA may change its designated representative at any time, and shall notify the Board in writing of any such change.
8. Term of Agreement. The term of this AGREEMENT shall be co-extensive with the term of the FCSA. For good cause, the Board may exercise their independent rights, under the FCSA, to terminate or suspend the FCSA. "Good Cause" includes but is not limited to either of the parties' inability to renegotiate the provisions of this AGREEMENT that are affected by any changes to the Final FCSA, the Board's inability to secure the balance of its share of Study cost, and/or SAFCA's inability to appropriate necessary funding for its share of the Study cost (subject, however, to the provisions of Section 4.A.5 hereof). If the FCSA is terminated, this AGREEMENT shall be deemed terminated as of the effective date of the FCSA termination. Upon termination of this AGREEMENT, all data and information generated as part of the Study shall be made available to both parties.
9. Severability Clause. If any provision of this AGREEMENT is held invalid or unenforceable by any court of final jurisdiction, it is the intent of the parties that all other provisions of this AGREEMENT be construed to remain fully valid, enforceable and binding on the parties.
10. Notice. Any notice or other communication required under this AGREEMENT shall be in writing and shall be delivered in person to the other party or parties or deposited in the United States mail, postage prepaid, addressed to the other party or parties at the following addresses:

Executive Officer
The Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, CA 95821

(916) 574-0609

Executive Director
Sacramento Area Flood Control Agency

(916) 874-7606

1007 7th Street, 7th Floor
Sacramento, CA 95814

11. Successors and Assigns. This AGREEMENT shall be binding upon the successors and assigns of the respective parties.
12. Obligation of Future Appropriations. Nothing herein shall constitute nor be deemed to constitute an obligation of future appropriations by the Legislature of the State of California or an obligation of future appropriations by the SAFCA Board of Directors.
13. Independent Contractor: SAFCA, and its agents and employees, in the performance of this AGREEMENT, shall act in an independent capacity and not as officers or employees or agents of the State.
14. Non-Discrimination Clause: During the performance of this AGREEMENT, neither the Board nor SAFCA and its subcontractors shall unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40), marital status, and denial of family care leave. SAFCA and its subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. SAFCA and its subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12990 (a-f) et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this AGREEMENT by reference and made a part hereof as if set forth in full. SAFCA and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

SAFCA and the Board shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the AGREEMENT.

15. Child Support Compliance Act: For any Agreement in excess of \$100,000, the SAFCA acknowledges in accordance with Public Contract Code 7110, that:
 - A. SAFCA recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and

B. SAFCA, to the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

16. Department of General Services Approval. This AGREEMENT shall not be effective until approval by the Department of General Services has occurred.

IN WITNESS WHEREOF, this AGREEMENT has been executed as of the day and year first above written.

THE CENTRAL VALLEY
FLOOD PROTECTION BOARD
STATE OF CALIFORNIA

APPROVED AS TO LEGAL FORM
AND SUFFICIENCY:

By _____
William Edgar, President

By _____
Jeremy D. Goldberg, Legal Counsel

Date: _____

Date: _____

SACRAMENTO AREA FLOOD CONTROL
AGENCY

APPROVED AS TO LEGAL FORM
AND SUFFICIENCY:

By _____
Richard M. Johnson
Executive Director

By _____
M. Holly Gilchrist
Agency Counsel

Date: _____

Date: _____

American River Common Features Project Feasibility Phase Project Management Plan

A Partnership of
The U.S. Army Corps of Engineers and
The State of California's Central Valley Flood
Protection Board

18 December 2013

Foreword:

This Project Management Plan is intended to supplement the PMP prepared for the overall American River Watershed project. Partners to the original PMP include the Sacramento District, USACE and the State of California's Central Valley Flood Protection Board (formerly the Reclamation Board). A study has been under development since the beginning of Federal Fiscal Year (FY) 2011 under the original PMP. Specifically, this study is a general reevaluation report (GRR) for the American River Common Features (ARCF) Project. At the beginning of FY 2013, this study was rescoped to comply with SMART Planning guidance. This PMP documents the strategy to complete the ARCF GRR by December 2014.

An FCSA is currently being prepared. This FCSA will convert the study to a 50/50 cost share split from the 75/25 split, and will allow additional funds to be used on the study. The study cost summary is as follows: Funding used on the GRR from initiation to rescoping under planning modernization or FY 2011 and 2012, \$9.6 million; funding approved for use after rescoping in FY 2013, \$3 million; additional funding required to complete the GRR from the effective date of this agreement to study completion in December 2014, \$1.8 million.

This Project Management Plan (PMP) provides a summary of tasks required to complete the feasibility study and highlights PMP task and schedule revisions. It is expected that this PMP will detail the tasks necessary (including cost and schedule) for the complete study; at each milestone, this PMP will be reevaluated to determine if a revision is necessary in order to complete the study. The PMP may be developed utilizing tools such as Decision Management Plans (DMPs) and Risk Registers prepared by the PDT. The inclusion of general estimates showing less detail is included to support the remaining major decisions that are needed to complete the feasibility study, and lay out the outline for remaining tasks that are necessary for future milestones in order to complete a 3x3x3 compliant feasibility study by December 2014 for no more than the additional \$1.8 million.

Purpose:

This PMP provides an update of tasks that have been completed to date and additional tasks required to complete the feasibility study analysis and report. A description of project tasks is included in the following sections and revised time and cost estimates are attached.

Sponsor and Corps acceptance of the task descriptions, and time and cost estimates addressed in this PMP constitute agreement of the PMP overall, with the understanding that more detail will be provided for future tasks and milestones as the study progresses. Updates to this PMP will be prepared as needed, but no less frequently than around every milestone in the study. The information contained in this PMP will be used to update appropriate budgetary and other related documents for the feasibility study.

Project Management Plan Tasks:

This Task description gives details of work already completed as well as additional work required to complete the overall GRR. For each discipline, there is a section titled "Past Efforts" and "Efforts to Complete" reflecting these two periods of time. Efforts are broken down in general by Engineering Division, Real Estate Division, Planning Division, and Programs and Project Management Division. The "Past Efforts" time period in general covers from October 1, 2010 through May 2013. The "Efforts to Complete" time period in general covers from June 2013 through completion of the study which is scheduled for December 2014.

Hydraulics

Past Efforts: Developed a Sacramento River system wide HEC-RAS model in the NAVD 88 vertical datum; Developed without project condition water surface profiles and levee breach scenario runs; Developed Flo-2D models of the damage areas; Developed without project condition floodplains for various frequency flood events; Developed handoffs to Economics for without project conditions for HEC-FDA analysis; Coordinated with PDT and sponsors on alternative formulation; Developed HEC-RAS runs for with-project conditions for the array of alternatives; Developed with-project condition floodplains using Flo-2D for various frequency flood events; Developed handoffs to Economics for with project conditions for HEC-FDA analysis; Documented all efforts (hydraulic appendix); Substantially completed DQC of all analyses and documentation.

Efforts to Complete: Completion of DQC and revisions of hydraulic appendix for TSP milestone; Develop engineering description of erosion and DQC; Participation in VE study; Participation in PDT consistency review; Support for Planning and Environmental; ATR and revision of hydraulic appendix; Develop supporting data for additional NED data point; HEC Risk Review coordination; Responding to comments for ADM milestone; Revise document based on all review; DQC and revisions of document post ADM; Final ATR and revisions of document; Responding to comments for FRM and CWRB.

Geotechnical

Past Efforts: Performed without project seepage/stability analysis; Identified reaches that have seepage/stability deficiencies; Developed without project condition levee performance curves; Developed measures to address various deficiencies; Worked with PDT members and sponsors to package measures together to reflect various strategies such as minimize impacts to real estate; Developed comprehensive alternatives to address all deficiencies within various reaches; Developed with project condition levee performance curves; Documented entire analysis (geotechnical appendix); DQCed and revised analyses and appendix; ATRed and revised analyses and appendix; Coordinated with PDT, district management, and partners on levee safety policy.

Efforts to Complete: Draft Levee Safety appendix; DQC and revision of Levee Safety appendix; Develop engineering description of erosion and DQC; Participation in VE Study; Participation in PDT consistency review; ATR and revision of Geotechnical and Levee Safety appendices; HEC Risk Review coordination; Support for Planning; Develop supporting data for additional NED data point; Responding to comments for ADM; Revise documents based on review; DQC and revisions of documents; ATR and revisions of documents; Responding to comments for FRM.

Civil Engineering

Past Efforts: Developed quantities for screening level alternatives; Developed quantities for final array of alternatives; Developed footprints for final array of alternatives for use by Environmental and Real Estate; Developed documentation for all analyses (civil appendix).

Efforts to Complete: Completion of civil design appendix for TSP Milestone; DQC and revision of civil design appendix; Develop engineering description of erosion and DQC; Participation in VE study; Participation in PDT consistency review; ATR and revision of civil appendix; Support for Planning; Develop supporting data for additional NED data point; Responding to comments

for ADM; Revise document based on review; DQC and revisions of document; ATR and revisions of document; Responding to comments for FRM.

Cost Engineering

Past Efforts: Preliminary development of MCACES cost estimate.

Efforts to Complete: Update cost appendix for TSP Milestone; DQC and revision of cost appendix for TSP Milestone; Participation in VE Study; Participation in PDT Consistency Review; ATR and revision of cost appendix for TSP Milestone; Support for other disciplines for TSP Milestone; Coordination for VE Study; Responding to comments for ADM; Finalize NED MCACES estimate with final quantities; Develop draft total project schedule for NED; DQC review of MCACES estimate; Revise MCACES and schedule based on DQC review; Perform Cost and Schedule Risk Analysis; Prepare draft Cost Engineering appendix; DQC review of Cost Engineering appendix; Revise Cost Engineering appendix based on DQC; Walla Walla/ATR review of draft cost estimate, CSRA, and appendix; Respond to Walla Walla/ATR comments and revise analysis and appendix; Walla Walla certifies cost estimate; Responding to comments for FRM.

Surveying and Mapping

Efforts to Complete: Prepare plates and figures for EIS/EIR and GRR; Responding to comments for ADM; Responding to comments for FRM.

Construction

Efforts to Complete: Support for Planning; Responding to comments for ADM; Responding to comments for FRM.

Real Estate

Past Efforts: Developed real estate take and cost estimate for screening level alternatives; Developed real estate take and cost estimate for final array of alternatives; Developed gross appraisal for features that are common between alternatives; DQCed gross appraisal and made revisions; Nearly completed development of the real estate plan; Complete Navigational Servitude and Prior Federal Projects sections.

Efforts to Complete: Finalize draft real estate appendix; DQC and revision of real estate appendix; Prepare gross appraisal; Participation in VE Study; Participation in PDT Consistency Review; ATR and revision of real estate appendix; Support for Planning; Responding to comments for ADM; Responding to comments for FRM.

Economics

Efforts to Complete: DQC and revision of economics appendix; Conduct OSE/RED analyses; DQC and revision of RED/OSE analyses; Participation in VE Study; Participation in PDT Consistency Review; ATR and revision of economics appendix; Support for Planning; Responding to comments for ADM; Finalize RED/OSE; Update benefits and costs for net benefit

update; Update economics appendix; DQC and revision of economics appendix; ATR and revision of economics appendix.

Plan Formulation

Past Efforts: Developed FSM document for without project conditions; Developed read ahead packages for various IPRs and documented them afterwards; Worked on development of planning modernization supporting documents such as the decision log and risk register; Developed various portions of the draft GRR; Developed a draft project summary document for the TSP.

Efforts to Complete: Draft TSP read ahead package, DQC, and make revisions; Develop draft GRR for public release; DQC, ATR, and revision of GRR; Participation in VE Study; Participation in PDT Consistency Review; Overall coordination for TSP Milestone; Draft ADM read ahead package, DQC, and revisions; Provide support for IEPR; Prepare IEPR report; Public involvement; Responding to public comments; Revise document per comments from IEPR and public review; DQC and revision of ADM version of GRR; Overall coordination for ADM; Revise GRR with final technical appendices input; DQC, ATR, and revision of FRM version of GRR; Follow on PDT Consistency Review; Overall coordination for FRM; IPRs; Prepare draft chief's report; Coordinate with Vertical Team on preparation for the CWRB; Respond to Policy Review comments and revise the report and other documents accordingly; Prepare CWRB and OMP Briefing Slides; Brief Colonel on status of the project to prepare for CWRB; Coordinate Colonel's site visit prior to CWRB; Coordinate with Sponsors on messaging, support letters and briefing for CWRB; Attend and participate in the Civil Works Review Board; Prepare meeting notes documenting CWRB; Coordinate S&A review; Revise document after State & Agency review.

Cultural Resources

Past Efforts: Developed an archeological predictive model, performed DQC and ATR on said model and made necessary revisions; Developed a draft programmatic agreement for Section 106 compliance; Coordinated with SHPO and tribal representatives, and submitted draft PA to tribal representatives for review.

Efforts to Complete: Finalize input to EIS/EIR; DQC and revision of draft EIS/EIR; Coordinate PA with tribes and with SHPO; Participation in VE Study; Participation in PDT Consistency Review; ATR and revision of EIS/EIR; Support for Planning; Revise draft EIS/EIR based on TSP milestone comments; Revise PA post-draft EIS/EIR; Public review; Respond to public comments; Revise final EIS/EIR; DQC and revision of admin draft FEIS/EIR; ATR and revision of admin draft FEIS/EIR; Revise PA post-final EIS/EIR; Final 30-day review; Execute Final PA.

Environmental

Past Efforts: Developed the impact analyses for most categories needing to be covered in an EIS/EIR; Developed alternatives descriptions for both the EIS/EIR and for ESA consultation; Developed a draft biological assessment; Coordinated with resource agencies for the CAR and for ESA consultation; Coordinated with PDT members and with CEQA counterparts from DWR.

Efforts to Complete: Finalize draft EIS/EIR and address sponsor comments; DQC and revision of draft EIS/EIR; Revise Draft Biological Assessment; Perform Incremental Cost Analysis; Participation in VE Study; Participation in PDT Consistency Review; ATR and revision of EIS/EIR; Support for Planning; Revise draft EIS/EIR based on TSP Milestone comments; Revise Draft Biological Assessment; Initiate Section 7 Consultation; Coordinate with Resource Agencies; Public review; Respond to public comments; Prepare final EIS/EIR; DQC and revision of admin draft FEIS/EIR; ATR and revision of admin draft FEIS/EIR; Final 30-day review; Draft ROD.

Project Management

Past Efforts: Overall project support, PDT coordination, partner communication, upward reporting, etc.

Efforts to Complete: Project Support for TSP Milestone; Project Support for ADM; Project Support for FRM; Project Support for Chief's Report Milestone.

Other

Efforts to Complete: IEPR.

Summary Cost Estimates:

The Federal cost to complete the study is \$14,271,725. Details by discipline and fiscal year are shown on the attached table. Additional costs for non-federal actions include PDT participation in the amount of \$____, audit costs in the amount of \$____, and costs for development of a floodplain management plan in the amount of \$____. This brings the total study cost up to \$____. Cost share amounts and percentages are as shown in the FCSA.

Study Schedule:

The study schedule is as follows:

- TSP Milestone conference, January 2014
- ADM Milestone conference, May 2014
- FRM Milestone conference, June 2014
- CWRB, August 2014
- Chief's Report, December 2014