ENVIRONMENTAL ADDENDUM

ENVIRONMENTAL PLANNING AND COMPLIANCE

LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

ENVIRONMENTAL ADDENDUM A

PUBLIC SCOPING MATERIAL

(NOI, PUBLIC SCOPING MEETINGS, COMMENTS)

LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

US ARMY CORPS OF ENGINEERS
SACRAMENTO DISTRICT

Memorandum for Record

March 16, 2010

To: File

From: CESPK-PD-RP (Doug Edwards, Environmental Planner)

Subject: LSJRFS Scoping Meeting

Scoping Period

January 15 – February 15, 2010

Public Notices (Attachment 1)

Federal Register
State Clearing House
Newspapers
- Stockton Bulletin
- Manteca Bulletin
- Lodi News Sentinel
- Ripon Record
- Tracy Press

SAJAFCA Website
Email Distribution List

Scoping Meeting (Attachment 2)

University of Pacific, Regents Dining Room
Wednesday, January 27, 2010
6:00 – 7:00

Comment Letters (Attachment 3)

USPS/FAX

River Islands at Lathrop, Susan Dell'Osso, Project Director

City of Lathrop, Cary Keaten, City Manager

California Department of Transportation, Kathy Selsor

Neumiller & Beardslee, John W. Stovall, Attorney at Law

San Joaquin County, Misquito & Vector Control District, John R. Stroh, Manager

California Department of Fish and Game, North Central Region, Jeff Drongessen, Acting Conservation Program Manger

San Joaquin River Group Authority, Dennis W. Westcot, Project Administrator

U.S. EPA, Region IX, Kathleen M. Goforth

Email

Private Individual, Nicky Suard,

Insite Environmental, Inc., Charlie Simpson, Principal

Friant Water Authority, Bill Luce, P.E. Resources Manager

Private, Richard Riley

South Delta Water Agency, John Herrick Law, John Herrick, Esq.,

San Joaquin River Group Authority, Dennis W. Westcot, Project Administrator

U.S. EPA, Region IX, James Munson

Regional Water Quality Control Board, Central Valley (Region 5 Sacramento), Sanj Joaquin TMDL &NPS Unit, Christine Joab

California Department of Transportation, Kathy Selsor

U.S. Bureau of Reclamation, Policy and Administration, Theresa Taylor

ATTACHMENT 1

Federal Register Notice

Notice of Completion & Environmental Document Transmittal

Email Distribution List

Email Content

Webpage Confirmation Email

Newspaper List Email

The above rates are effective for services rendered on or after October 1, 2009.

Dated: December 18, 2009.

Patricia Toppings,

OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2010–598 Filed 1–14–10; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army; Army Corps of Engineers

Notice of Intent To Prepare a Joint Environmental Impact Statement and Environmental Impact Report for the Lower San Joaquin River Feasibility Study

AGENCY: Department of the Army, U.S. Army Corps of Engineers; DOD.

ACTION: Notice of intent.

SUMMARY: The action being taken is the preparation of a joint environmental impact statement/environmental impact report (EIS/EIR) for the Lower San Joaquin River Feasibility Study (LSJRFS). The EIS/EIR will be prepared in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The U.S. Army Corps of Engineers (USACE) will serve as lead agency for compliance with NEPA, and the San Joaquin Area Flood Control Agency (SJAFCA) will serve as lead agency for compliance with CEQA. The LSJRFS will evaluate alternatives, including a locally preferred plan, for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River system in the Central Valley of California. The approximate area of the proposed action and analysis is identified in Figure 1.

DATES: Written comments regarding the scope of the environmental analysis should be received at (*see* **ADDRESSES**) by February 15, 2010.

ADDRESSES: Written comments concerning this study and requests to be included on the LSJRFS mailing list should be submitted to Mr. Doug Edwards, U.S. Army Corps of Engineers, Sacramento District, *Attn:* Planning Division (CESPK–PD–R), 1325 J Street, Sacramento, CA 95814.

FOR FURTHER INFORMATION CONTACT: Mr. Doug Edwards via telephone at (916) 557–7062, e-mail at *Douglas.M.Edwards@usace.army.mil*, or regular mail at (*see* **ADDRESSES**).

SUPPLEMENTARY INFORMATION:

1. *Proposed Action.* USACE is preparing an EIS/EIR to analyze the environmental impacts associated with a range of alternatives for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River system (Figure 1).

2. *Alternatives.* The EIS/EIR will address an array of alternatives for providing flood risk management alternatives that are intended to reduce flood risk within the project area. Alternatives analyzed during the investigation may include, but are not limited to, a combination of one or more of the following flood damage reduction measures: adding, modifying, and/or re-regulating storage on major tributaries; new transitory storage within flood plains, increasing conveyance by raising levees; widening channels and floodway areas; dredging; and constructing or modifying weirs and bypasses; and various floodplain management measures. Ecosystem restoration measures may include, but are not limited to, restoring riparian, wetland, and floodplain habitats, and/or constructing setback levees for habitat restoration.

3. *Scoping Process.*

a. A public scoping meeting will be held to present an overview of the LSJRFS and the EIS/EIR process, and to afford all interested parties with an opportunity to provide comments regarding the scope of analysis and potential alternatives. The public scoping meeting will be held at the University of Pacific, Regent's Dining Room, 3601 Pacific Avenue, Stockton, CA on January 27, 2010, from 6–8 p.m.

b. Potentially significant issues to be analyzed in depth in the EIS/EIR include project specific and cumulative effects on hydraulics, wetlands and other waters of the U.S., vegetation and wildlife resources, special-status species, esthetics, cultural resources, recreation, land use, fisheries, water quality, air quality, and transportation.

c. USACE is consulting with the State Historic Preservation Officer to comply with the National Historic Preservation Act and with the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act. USACE is also coordinating with the U.S. Fish and Wildlife Service to comply with the Fish and Wildlife Coordination Act.

d. A 45-day public review period will be provided for all interested parties individuals and agencies to review and comment on the draft EIS/EIR. All interested parties are encouraged to respond to this notice and provide a current address if they wish to be notified of the draft EIS/EIR circulation.

4. *Availability.* The draft EIS/EIR is currently scheduled to be available for public review and comment in 2014.

Dated: December 29, 2009.

Thomas Chapman,

COL, EN Commanding.

[FR Doc. 2010–686 Filed 1–14–10; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Notice of Solicitation for Estuary Habitat Restoration Program

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of solicitation for project applications.

SUMMARY: Congress has appropriated limited funds to the U.S. Army Corps of Engineers (Corps) and the National Oceanic and Atmospheric Administration (NOAA) for implementation of the Estuary Habitat Restoration Program as authorized in Section 104 of the Estuary Restoration Act of 2000, Title I of the Estuaries and Clean Waters Act of 2000 (Pub. L. 106–457) (accessible at *http://www.usace.army.mil/CECW/ERA/Pages/home.aspx).* On behalf of the Estuary Habitat Restoration Council (Council) the Corps is soliciting proposals for estuary habitat restoration projects. The Council requests that all proposals address the potential effects of sea level change and other impacts related to climate change on the viability of the proposed restoration. This may take the form of considering climate change in the planning, design, siting, and construction of the project, or in testing new restoration technologies that may help to alleviate effects of climate change. This document describes project criteria and evaluation criteria the Council will use to determine which projects to recommend. Recommended projects must provide ecosystem benefits, have scientific merit, be technically feasible, and be cost-effective. Proposals selected for Estuary Habitat Restoration Program funding may be implemented in accordance with a cost-share agreement with the Corps; or a cooperative agreement with the Corps or NOAA, subject to availability of funds.

In addition to this solicitation and the application form, a Supplemental Guide for Prospective Applicants is available at: *http://www.usace.army.mil/CECW/*

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2010012027

Project Title: Lower San Joaquin River Feasibility Study

Lead Agency: San Joaquin Area Flood Control Agency | Contact Person: Doug Edwards

Mailing Address: 1325 J Street | Phone: (916) 557-7026

City: Sacramento | Zip: 95814 | County: Sacramento

Project Location: County: San Joaquin | City/Nearest Community: Stockton, Manteca, Lathrop

Cross Streets: _____ | Zip Code: _____

Longitude/Latitude (degrees, minutes and seconds): ____° ____' ____" N / ____° ____' ____" W Total Acres: _____

Assessor's Parcel No.: _____ | Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: _____ | Waterways: _____

Airports: _____ | Railways: _____ | Schools: _____

Document Type:

CEQA: ☑ NOP ☐ Draft EIR | NEPA: ☑ NOI | Other: ☑ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR | ☐ EA | ☐ Final Document
☐ Neg Dec (Prior SCH No.) _____ | ☐ Draft EIS | ☐ Other: _____
☐ Mit Neg Dec Other: _____ | ☐ FONSI

RECEIVED
JUN 14 2010
STATE CLEARINGHOUSE

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☑ Land Division (Subdivision, etc.) ☐ Other: _____

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☑ Other: Flood risk management and ecosystem restoration

Project Issues Discussed in Document:

☑ Aesthetic/Visual ☑ Fiscal ☑ Recreation/Parks ☑ Vegetation
☑ Agricultural Land ☑ Flood Plain/Flooding ☐ Schools/Universities ☑ Water Quality
☐ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☑ Water Supply/Groundwater
☑ Archeological/Historical ☑ Geologic/Seismic ☐ Sewer Capacity ☑ Wetland/Riparian
☑ Biological Resources ☑ Minerals ☑ Soil Erosion/Compaction/Grading ☑ Growth Inducement
☐ Coastal Zone ☑ Noise ☐ Solid Waste ☑ Land Use
☑ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☑ Cumulative Effects
☑ Economic/Jobs ☑ Public Services/Facilities ☑ Traffic/Circulation ☐ Other: _____

Present Land Use/Zoning/General Plan Designation:

Various

Project Description: *(please use a separate page if necessary)*

The EIS/EIR will be prepared to analyze environmental impacts associated with a range of alternatives for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River system. Alternatives may include, but are not limited to, a combination of one or more of the following flood damage reduction measures: adding modifying, and/or re-regulating storage on major tributaries; new transitory storage within flood plains, increasing conveyance by raising levees; widening channels and floodway areas; dredging; and constructing or modifying weirs and bypasses; and various floodplain management measures. Ecosystem restoration measures may include, but are not limited to, restoring riparian, wetland, and floodplain habitats, and/or constructing setback levees for habitat restoration.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2008

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

____	Air Resources Board	X	Office of Emergency Services
X	Boating & Waterways, Department of	X	Office of Historic Preservation
____	California Highway Patrol	____	Office of Public School Construction
X	Caltrans District # 10	X	Parks & Recreation, Department of
____	Caltrans Division of Aeronautics	____	Pesticide Regulation, Department of
____	Caltrans Planning	____	Public Utilities Commission
X	Central Valley Flood Protection Board	X	Regional WQCB # 5
____	Coachella Valley Mtns. Conservancy	____	Resources Agency
____	Coastal Commission	____	S.F. Bay Conservation & Development Comm.
____	Colorado River Board	____	San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
____	Conservation, Department of	____	San Joaquin River Conservancy
____	Corrections, Department of	____	Santa Monica Mtns. Conservancy
X	Delta Protection Commission	____	State Lands Commission
____	Education, Department of	____	SWRCB: Clean Water Grants
____	Energy Commission	____	SWRCB: Water Quality
X	Fish & Game Region # 2, 3	____	SWRCB: Water Rights
X	Food & Agriculture, Department of	____	Tahoe Regional Planning Agency
____	Forestry and Fire Protection, Department of	____	Toxic Substances Control, Department of
____	General Services, Department of	X	Water Resources, Department of
____	Health Services, Department of		
____	Housing & Community Development	____	Other:
____	Integrated Waste Management Board	____	Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date January 15, 2010 Ending Date February 15, 2010

Lead Agency (Complete if applicable):

Consulting Firm: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: _____

Applicant: San Joaquin Area Flood Control Agency
Address: 22 East Weber Avenue, Suite 301
City/State/Zip: Stockton, CA 95202-2317
Phone: (209) 937-7900

Signature of Lead Agency Representative: James B. Giottonini Roger Churchwell For **Date:** 01/14/2010

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

REGISTRY MAILING LIST

emailed via 1/15/10

First	Last	Title	Affiliation	Address	State/City/Zip	Phone	E-Mail
	Federal Participants						
Dennis	Cardoza	Congressman, 18th District	U.S. House of Representatives	Merced County Administration Bldg., 2222 M Street, Suite 305	Merced, CA 95340	(209) 383-4455	
Jerry	McNerney	Congressman, 11th District	U.S. House of Representatives	PO Box 12022	Pleasanton, CA 94588	(925) 833-0643	
Barbara	Boxer	Senator	U.S. Senate	501 I Street, Suite 7-600	Sacramento, CA 95814	(916) 448-2787	
Dianne	Feinstein	Senator	U.S. Senate	One Post Street, Suite 2450	San Francisco, CA 94104	(415) 393-0707	
Gary	Prost	Field Representative for Congressman McNerney	U.S. Government	2222 Grand Canal Blvd., #7	Stockton, CA	(202) 476-5552	gary.prost@mail.house.gov
Deedee	D'Adamo	Sr. Policy Advisor for Congressman Cardoza	U.S. Government	1010 10th Street, Suite 5800	Modesto, CA 95354	(209) 527-1914	DDADAMO@EARTHLINK.NET
Colonel	Chapman	District Commander	U.S. Army Corps of Engineers	1325 J Street	Sacramento, CA 95814	(916) 557-7490	Thomas.C.Chapman.COL@usace.army.mil
Frank	Piccola	Chief, Planning	U.S. Army Corps of Engineers	1325 J Street	Sacramento, CA 95814	(916) 557-6735	Francis.C.Piccola@spk01.usace.army.mil
Kevin	Knuuti	Chief, Engineering Div.	U.S. Army Corps of Engineers	1325 J Street	Sacramento, CA 95814	(916) 557-7623	Kevin.Knuuti@usace.army.mil
Brandon	Muncy	Chief, Civil Works Br.	U.S. Army Corps of Engineers	1325 J Street	Sacramento, CA 95814	(916) 557-6682	Brandon.C.Muncy@spk01.usace.army.mil
Michelle	Williams	Project Manager	U.S. Army Corps of Engineers	1325 J Street	Sacramento, CA 95814	(916) 557-7098	Michelle.R.Williams@usace.army.mil
Cindy	Tejeda	South Pacific Division	U.S. Army Corps of Engineers	1455 Market Street	San Francisco, CA 94105	(415) 503-6572	cindy.l.tejeda@usace.army.mil
Kathy	Schaefer	Region IX Engineer	Federal Emergency Management Agency	1111 Broadway, Suite 1200	Oakland, CA 94607-4052	(510) 292-9075	kathleen.schaefer@dhs.gov
Susan	Jones	Director	U.S. Fish & Wildlife Service	2800 Cottage Way, Rm. W-2605	Sacramento, CA 95825-1888	(916) 414-6600	susan_p_jones@fws.gov
	State Participants						
Jose	Morales	Rep for Lois Wolk Sen District #5	Rep. for Senator Lois Wolk	State Capitol, Room 5066	Sacramento, CA 95814	(916) 651-4005	jose.morales@sen.ca.gov
Jeff	Denham	Senator	State Senate, 12th District	1231 8th Street, Suite. 175	Modesto, CA 95354	(209) 577-6592	senator.denham@sen.ca.gov
Bob	Wiedman	Dep Dist Dir Rep for Dave Cogdill Sen Dist #14	Rep. for Senator Cogdill	1308 W. Main Street, Ste. C	Ripon, CA 95366	(209) 599-8540	bob.wiedman@sen,ca.gov
Dave	Cogdill	Senator	State Senate, 5th District	1308 W. Main Street, Ste. C	Ripon, CA 95366	(209) 599-8540	bob.wiedman@sen.ca.gov
Brian	Regnart	Rep for Bill Berryhill, Assembly Dist #26	Rep. for Assemblymember Berryhill	4557 Quail Lakes Dr. Ste C-3	Stockton, CA 95207	(209) 473-6972	adam.struck@asm.ca.gov
Bill	Berryhill	Assemblymember, 26th District	State Assembly	4557 Quail Lakes Dr. Ste C-3	Stockton, CA 95207	(209) 473-6972	adam.struck@asm.ca.gov
Anne	Baird	Rep. for Alyson Huber, Assembly Dist #10	Rep. for Assemblymember Huber	218 W. Pine Street	Lodi, CA 95240	(209) 333-5330	anne.baird@asm.ca.gov
Alyson	Huber	Assemlymember, 10th District	State Assembly	218 W. Pine Street	Lodi, CA 95240	(209) 333-5330	anne.baird@asm.ca.gov
Victor	Francovich	Rep Cathleen Galgiani, Assembly Dist #17	Rep. for Assemblymember Cathleen Galgiani	31 E. Channel St., Suite 306	Stockton, CA 95202	(209) 948-7479	victor.francovich@asm.ca.gov
Cathleen	Galgiani	Assemblymember, 17th District	State Assembly	31 E. Channel St., Suite 306	Stockton, CA 95202	(209) 948-7479	victor.francovich@asm.ca.gov
		Planning Department	CALTRANS District 10	1976 E Charter Way / East Dr. Martin Luther King Jr. Blvd	Stockton, CA 95205-7015	(209) 948-7543	robert_boswell@dot.ca.gov
Jay	Punia	Executive Officer	Central Valley Flood Protection Board	3310 El Camino Avenue, Rm LL40	Sacramento, CA 95821	(916) 574-0609	jpunia@water.ca.gov
Ben	Carter	Board President	Central Valley Flood Protection Board	3310 El Camino Avenue, Rm LL40	Sacramento, CA 95821	(916) 574-0609	lpendleb@water.ca.gov
Teri	Rie	Board Member	Central Valley Flood Protection Board	3310 El Camino Avenue, Rm LL40	Sacramento, CA 95821	(916) 574-0609	teririe@comcast.net
Gary	Bardini	Chief of Flood Management	Department of Water Resources	3310 El Camino Avenue, Rm LL60	Sacramento, CA 95821	(916) 574-0601	gbardini@water.ca.gov
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	Local Participants						
Leroy	Ornellas	Board Member	Board of Supervisors, District 5	44 N. San Joaquin St., 6th Flr., Ste 627	Stockton, CA 95202	(209) 468-3113	lornellas@sjgov.org
Carlos	Villapudua	Chairman	Board of Supervisors, District 1	44 N. San Joaquin St., 6th Flr., Ste 627	Stockton, CA 95202	(209) 468-3113	cvillapadua@sjgov.org

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Larry	Ruhstaller	Vice Chairman	Board of Supervisors, District 2	44 N. San Joaquin St., 6th Flr., Ste 627	Stockton, CA 95202	(209) 468-3113	lruhstaller@sjgov,org
Steve J	Bestolarides	Board Member	Board of Supervisors, District 3	44 N. San Joaquin St., 6th Flr., Ste 627	Stockton, CA 95202	(209) 468-3113	sbestolarides@sjgov.org
Ken	Vogel	Board Member	Board of Supervisors, District 4	44 N. San Joaquin St., 6th Flr., Ste 627	Stockton, CA 95202	(209) 468-3113	kvogel@sjgov.org
Anne	Castillou	Project Development/Habitat Plan	County of San Joaquin, Council of Governments	555 E Weber Avenue	Stockton, CA 95202-3016	(209) 235-0449	castillou@sjcog.org
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David E.	Wooten	Office of the County Counsel	San Joaquin County	44 N. San Joaquin St., 6th Flr., Ste 679	Stockton, CA 95202	(209) 468-2980	
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Phonxay	Keokham	Rep. County Administrators Office	San Joaquin County	222 E. Weber Avenue, Room 707	Stockton, CA 95202	(209) 468-3203	pkeokham@sjgov.org
Tom	Flinn	P W Director	San Joaquin County	1810 E. Hazelton Avenue	Stockton, CA 95202	(209) 468-3100	tflinn@sjgov.org
Steve	Winkler	Deputy PW Director	San Joaquin County	1810 E. Hazelton Avenue	Stockton, CA 95202	(209) 468-3031	swinkler@sjgov.org
Mel	Lytle	Water Resources Coordinator	San Joaquin County	1810 E. Hazelton Avenue	Stockton, CA 95202	(209) 468-9360	mlytle@sjgov.org
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Katina	Conn	Management Analyst II	San Joaquin County	1810 E. Hazelton Avenue	Stockton, CA 95205	(209) 468-3061	kconn@sjgov.org
Ron	Baldwin	Director, Emergency Ops	San Joaquin County	2101 E. Earhart Ave., Suite 300	Stockton, CA 95206	(209) 953-6200	rbaldwin@sjgov.org
Kerry	Sullivan	Director, Community Development Department	San Joaquin County	1810 E. Hazelton Avenue	Stockton, CA 95202	(209) 468-3121	ksullivan@sjgov.org
Susan	Palmeri	Director, Stockton Metro Airport	San Joaquin County	5000 S. Airport Way	Stockton, CA 95206	(209) 953-6000	spalmeri@sjgov.org
Donna	Heran, REHS	Environmental Health Department	San Joaquin County	600 E. Main Street	Stockton, CA 95202	(209) 468-3420	dbrownfield@sjcehd.com
Steve	Salvatore	Director, Public Works	City of Lathrop	390 Towne Centre Drive	Lathrop, CA 95330-9358	(209) 941-7491	ssalvatore@ci.lathrop.ca.us
		Planning Department	City of Lathrop	390 Towne Centre Drive	Lathrop, CA 95330-9358	(209) 941-7290	
		Planning Department	City of Lodi	221 West Pine Street	Lodi, CA 95241-1910	(209) 333-6711	
Jim	Stone	Dept. of Public Works	City of Manteca	1001 W. Center St.	Manteca, CA 95337	(209) 825-2592	jstone@ci.manteca.ca.us
Ken	Zuidervaart	Director of Planning	City of Ripon	259 N. Wilma Avenue	Ripon, CA 95366	(209) 599-2108	kzuidervaart@cityofripon.org
Jim	Giottonini	Executive Director	SJAFCA	22 E. Weber Ave., Suite 301	Stockton, CA 95202-2317	(209) 937-8339	jim.giottonini@ci.stockton.ca.us
Diana	Lowery	Councilmember Dist 4, SJAFCA Vice-Chairperson	Stockton City Council/SJAFCA Board	425 N. El Dorado Street	Stockton, CA 95202	(209) 937-8244	diana.lowery@ci.stockton.ca.us
		Administrator/Engineer	City of Stockton	City Hall, 425 N. El Dorado Street	Stockton, CA 95202	(209) 937-8460	
Connie	Cochran	Public Information Officer	City of Stockton	City Hall, 425 N. El Dorado Street	Stockton, CA 95202	(209) 937-8827	connie.cochran@ci.stockton.ca.us
Kevin	O'Rourke	Interim City Manager	City of Stockton, City Manager's Office	City Hall, 425 N. El Dorado Street	Stockton, CA 95202	(209) 937-8212	CityManager@ci.stockton.ca.us
Richard E.	Nosky, Jr.	City Attorney	City of Stockton, Office of the City Attorney	City Hall, 425 N. El Dorado Street	Stockton, CA 95202	(209) 937-8333	
John	Luebberke	Assistant City Attorney	City of Stockton, Office of the City Attorney	City Hall, 425 N. El Dorado Street	Stockton, CA 95202	(209) 937-8333	
Mike	Niblock	Director	City of Stockton, Community Development Services	345 N. Eldorado Street	Stockton, CA 95202	(209) 937-8561	
Mark	Madison	Director	City of Stockton Municipal Utilities District	2500 Navy Drive	Stockton, CA 952026	(209) 937-8700	Mark.Madison@ci.stockton.ca.us
Tony	Tovar	Senior Civil Engineer	City of Stockton Municipal Utilities District	2500 Navy Drive	Stockton, CA 952026	(209) 937-8790	Antonio.Tovar@ci.stockton.ca.us
Lance	Calkins	Chief	City of Stockton, Fire Department	City Hall, 425 N. El Dorado Street	Stockton, CA 95202	(209) 937-8801	Lance.Calkins@ci.stockton.ca.us
	Reclamation Districts						

REGISTRY
MAILING LIST

First	Last	Title	Affiliation	Address	State/City/Zip	Phone	E-Mail
Susan	Dell'Osso	Project Director	River Islands at Lathrop	73 W. Stewart Road	Lathrop, CA 95330	(209) 879-7900	sdellosso@cambaygroup.com
Ramon	Batista	Director of Planning	River Islands at Lathrop	73 W. Stewart Road	Lathrop, CA 95330	(209) 879-7900	rbatista@cambaygroup.com
John	Cain	Director, Restorations Program	Natural Heritage Institute	100 Pine St., Suite 1550	San Francisco, CA 94708	(415) 693-3000	jcain@n-h-i.org
Dante	Nomellini	Principal Attorney	RD 17	PO Box 1461	Stockton, CA 95201	(209) 465-5883	ngmplcs@pacbell.net
Chris	Neudeck	Kjeldsen-Sinnock, Nuedeck	RD1,2,17,524,544,2023,2027,2030, 2040, 2042,2089,2095,2113,2115, 2119, 2126	P.O. Box 844	Stockton, CA 95201	(209) 946-0268	cneudeck@ksninc.com
Drew	Meyers	District Trustee	RD 1608, Smith Track	3868 Fourteen Mile Dr.	Stockton, CA 95219	(209) 403-1223	cdrusn9057@aol.com
Al	Hoslet	Principal Attorney	RD 2042, Bishop Tract	311 East Main Street, Suite 504	Stockton, CA 95202	(209) 943-5551	ahoslett@sbcglobal.net
Anthony	Lopes	Siegfried Engineering	RD 2074	3244 Brookside Road	Stockton, CA 95219	(209) 943-2021	ajlopes@siegfriedeng.com
Jeff	Kasper	Deputy Port Director	Port of Stockton	2201 W. Washington Street	Stockton, CA 95203	(209) 946-0246	portmail@stocktonport.com
	Consultants						
Scott	Brown	Supervising Engineer	Parsons Brinckerhoff	3840 Rosin Court, Suite 200	Sacramento, CA 95834	(916) 567-2506	brownsc@pbworld.com
Cheryl	Creson	Local Business Executive	Parsons Brinckerhoff	3480 Rosin Court, Suite 200	Sacramento, CA 95834	(916) 526-2500	creson@pbworld.com
Dave	Peterson	Principal	Peterson Brusted Inc.	1180 Iron Point Road, Suite 260	Folsom, CA 95630	(916) 792-6285	dpeterson@pbieng.com
Barry	O'Regan	Vice President	Peterson Brusted Inc.	1180 Iron Point Road, Suite 260	Folsom, CA 95630	(916) 608-2232	boregan@pbieng.com
Jeff	Twitchill	Office Principal	Wood Rogers	3301 C Street, Bdlg 100B	Sacramento, CA 95816	(916) 326-5225	jtwitchell@woodrogers.com
Michael	Conrad	Office Principal	Michael Baker Jr., Inc.	1730 I Street, Ste. 100	Sacramento, CA 95834	(916) 329-3169	mconrad@mbakercorp.com
	Other Agencies/ Individuals/Groups						
Will	Price	Professor	UOP, Business and Engineering Management	3601 Pacific Ave.	Stockton, CA 95211	(209) 946-2638	wprice@pacific.edu
Ravi	Jain	Dean	UOP, School of Engineering and Computer Science	Baun 3rd Floor, 3601 Pacific Ave.	Stockton, CA 95211	(209) 946-3066	rjain@pacific.edu
Ted	Leland	Vice President	UOP, Community Relations	3601 Pacific Ave.	Stockton, CA 95211		tleland@pacific.edu
Mark	Plovnick	Director	UOP, Office of Economic Development	3601 Pacific Ave.	Stockton, CA 95211	(209) 946-2466	mplovnick@pacific.edu
Will	Stringfellow	Professor	UOP, Environmental Research Center	Sears 116, 3601 Pacific Ave.	Stockton, CA 95211	(209) 946-2497	wstringfellow@pacific.edu
Camilla	Saviz	Professor	UOP, School of Engineering and Computer Science	Anderson 208, 3601 Pacific Ave.	Stockton, CA 95211		csaviz@pacific.edu
Gary	Litton	Professor	UOP, School of Engineering and Computer Science	Anderson 205, 3601 Pacific Ave.	Stockton, CA 95211	(209) 946-3070	glitton@pacific.edu
Walter	McInnis	President	San Joaquin Audobon Society	PO Box 7755	Stockton, CA 95267	(209) 473-3904	kaseyfoley@sbcglobal.net
John	Beckman	Executive Director	Building Industry Association of the Delta	315 N. San Joauqin Street, 202	Stockton, CA 95202	(209) 235-7831	johnb@biadelta.org
			Sierra Club Foundation - Delta Sierra Group	PO Box 9258	Stockton, CA 95208		dsg.webmaster@mlc.sierraclub.org
Barbara	Barrigan-Parrilla	Campaign Director	Restore the Delta	PO Box 691088	Stockton, CA 95269	(209) 479-2053	Barbara@restorethedelta.org
Linda	Fiack	Executive Director	Delta Protection Commission	14215 River Road	Walnut Grove, CA 95690	(916) 776-2290	dpc@citlink.net
Margit	Aramburu	Director	UOP Natural Resources Institute	Baun Hall, 3601 Pacific Avenue	Stockton, CA 95211	(831) 419-0905	margithind@comcast.net
Bill	Jennings	Executive Director	California Sportfishing Protection Alliance	3536 Rainier Avenue	Stockton, CA 95204	(209) 464-5067	deltakeep@ol.com
Jeremy	Terhune	San Joaquin Valley Representative	Friends of the Lower Calaveras	4555 Pershing Ave., #33-373	Stockton, CA 95207	(209) 922-8215	jterhune@defenders.org
James	Ramos	Chairman	Native American Heritage Commission	915 Capital Mall, Room 364	Sacramento, CA 95814	(916) 653-4082	nahc@pacbell.net
Katerine	Perez	Representative	Connections North Valley Yokut Tribe	PO Box 4123	Stockton, CA 95204		
		CEQA-ISR Division	San Joaquin Valley APCD	1990 E. Gettysburg Avenue	Fresno, CA 93726		

REGISTRY
MAILING LIST

	First	Last	Title	Affiliation	Address	State/City/Zip	Phone	E-Mail
		UTILITIES						
			Aqueduct Section	East Bay Mud	PO Box 228	Stockton, CA 95201		
	George	Biagi, Jr.	President	Central Delta Water Agency	PO Box 1461	Stockton, CA 95201	(209) 465-5883	
				North Delta Water Agency	921 11th Street, #703	Sacramento, CA 95814		
	John	Herrick	Counsel & Manager	South Delta Water Agency	4255 Pacific Avenue, Suite 2	Stockton, CA 95207	(209) 956-0150	jherrlaw@aol.com
	Anders	Christiansen	General Manager	Woodbridge Irrigation District	18777 N. Lower Sacramento Rd.	Stockton, CA 95258	(209) 369-6808	wid2000@softcom.net
	Kevin	Kauffman		Stockton East Water District	PO Box 5157	Stockton, CA 95205-7015		
			Manager of Engineering	Union Paciic RailRoad	833 East 8th Street	Stockton, CA 95206		
			Attention: Land Agent	PG&E Land Rights Office	4040 West Lane	Stockton, CA 95201		
	Ed	Harrington	General Manager	San Francisco Public Utilities District	1155 Market Street	San Francisco, CA 95103	(415) 554-1600	eharrington@sfwater.org
	Juan	Acosta	Director, Govt. Affairs	Burlington Northern & SFRR	2500 Lou Menk Dr.	Fort Worth, TX 76131		
				California Water Service	1550 W Fremont Street, Suite 100	Stockton, CA 95203	(209) 547-7900	
				COMCAST	6505 Tam O'Shanter Drive	Stockton, CA 95210	(800) 866-2278	
	Robert	Ocosta		Pacific Bell	44 W Yokuts Avenue	Stockton, CA 95207		
	Thomas	Samaniego	Sr. New Business Rep.	Pacific Gas & Electric, Estimating & Mapping Department	PO Box 930	Stockton, CA 95201-0930	(209) 942-1793	TJS7@pge.com
				AT&T	4950 Pacific Avenue	Stockton, CA 95207-2307	(209) 952-9161	
	Greg	Carney	President, Chief Operating Officer	Stockton Terminal Eastern RR Co.	1330 N. Broadway Avenue	Stockton, CA 95205	(209) 466-7001	greg@sterailroad.com

Edwards, Douglas M SPK

From: Marlo Duncan [Marlo.Duncan@ci.stockton.ca.us]
Sent: Wednesday, January 13, 2010 3:03 PM
To: Marlo Duncan
Subject: Public Scoping Meeting Notice

Attachments: Scoping Meeting Notice Jan 27 at UOP.pdf

Scoping Meeting Notice Jan 27 ...

NOTICE OF INTENT TO PREPARE A JOINT ENVIRONMENTAL IMPACT STATEMENT AND ENVIRONMENTAL IMPACT REPORT FOR THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

Dear Mail Recipient,
Attached is a Public Scoping Meeting Notice concerning the Lower San Joaquin River Feasibility Study. The meeting will be held at 6:00 p.m. on Wednesday, January 27, 2010 at the University of the Pacific, Regent's Dining Room - Anderson Hall, 3601 Pacific Avenue, Stockton, CA. See attachment for further detail, available parking, etc.

You are receiving this email notification because you are on an mail registry list for public scoping meeting notices. If you wish to be removed from this mail recipient list, please reply to this email. Thank you.

Marlo A. Duncan
San Joaquin Area Flood Control Agency
22 E. Weber Avenue, Room 301
Stockton, CA 95202
Marlo.Duncan@ci.stockton.ca.us
(209) 937-7900
Visit our web site at www.sjafca.com <http://www.sjafca.com/>

SJAFCA
San Joaquin Area FLOOD CONTROL Agency
22 E. Weber Avenue, Room 301, Stockton, CA 95202-2317 (209) 937-7900

JOINT ENVIRONMENTAL IMPACT STATEMENT AND ENVIRONMENTAL IMPACT REPORT FOR THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

SCOPING MEETING NOTICE

DATE/TIME: **WEDNESDAY, JANUARY 27, 2010 AT 6:00 P.M.**

LOCATION: **UNIVERSITY OF THE PACIFIC**
REGENT'S DINING ROOM – ANDERSON HALL
3601 PACIFIC AVENUE, STOCKTON, CA

- Environmental Impact Study/Environmental Impact Report (EIS/EIR) Objectives, Process, and Opportunities for Public Input
- Lower San Joaquin River Feasibility Study EIS/EIR Discussion and Comments

Enclosures

Notice of Intent to Prepare a Joint Environmental Impact Statement and Environmental Impact Report for the Lower San Joaquin River Feasibility Study

AGENCIES: Department of the Army, U.S. Army Corps of Engineers; San Joaquin Area Flood Control Agency.

ACTION: Notice of intent/Notice of preparation.

SUMMARY: The action being taken is the preparation of a joint environmental impact statement/environmental impact report (EIS/EIR) for the Lower San Joaquin River Feasibility Study (LSJRFS). The EIS/EIR will be prepared in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The U.S. Army Corps of Engineers (USACE) will serve as lead agency for compliance with NEPA, and the San Joaquin Area Flood Control Agency (SJAFCA) will serve as lead agency for compliance with CEQA. The LSJRFS will evaluate alternatives, including a locally preferred plan, for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River system in the Central Valley of California.

DATES: Written comments regarding the scope of the environmental analysis should be received at (see **ADDRESSES**) by February 15, 2010.

ADDRESSES: Written comments concerning this study and requests to be included on the LSJRFS mailing list should be submitted to Mr. Doug Edwards, U.S. Army Corps of Engineers, Sacramento District, Attn: Planning Division (CESPK-PD-R), 1325 J Street, Sacramento, CA 95814.

FOR FURTHER INFORMATION CONTACT: Mr. Doug Edwards via telephone at (916) 557-7026, e-mail at *Douglas.M.Edwards@usace.army.mil*, or regular mail at (see **ADDRESSES**).

SUPPLEMENTARY INFORMATION:

1. ***Proposed Action.*** USACE is preparing an EIS/EIR to analyze the environmental impacts associated with a range of alternatives for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River system (Figure 1).

2. ***Alternatives.*** The EIS/EIR will address an array of alternatives for providing flood risk management alternatives that are intended to reduce flood risk within the project area. Alternatives analyzed during the investigation may include, but are not limited to, a combination of one or more of the following flood damage reduction measures: adding, modifying, and/or re-regulating storage on major tributaries; new transitory storage within flood plains, increasing conveyance by raising levees; widening channels and floodway areas; dredging; and constructing or modifying weirs and bypasses; and various floodplain management measures. Ecosystem restoration measures may include, but are not limited to, restoring riparian, wetland, and floodplain habitats, and/or constructing setback levees for habitat restoration.

3. ***Scoping Process.***

a. A public scoping meeting will be held to present an overview of the LSJRFS and the EIS/EIR process, and to afford all interested parties with an opportunity to provide comments regarding the scope of analysis and potential alternatives. **The public scoping meeting will be held at the University of Pacific, Regent's Dining Room, Anderson Hall, 3601 Pacific Avenue, Stockton, CA on January 27, 2010, from 6:00 – 8:00 p.m.**

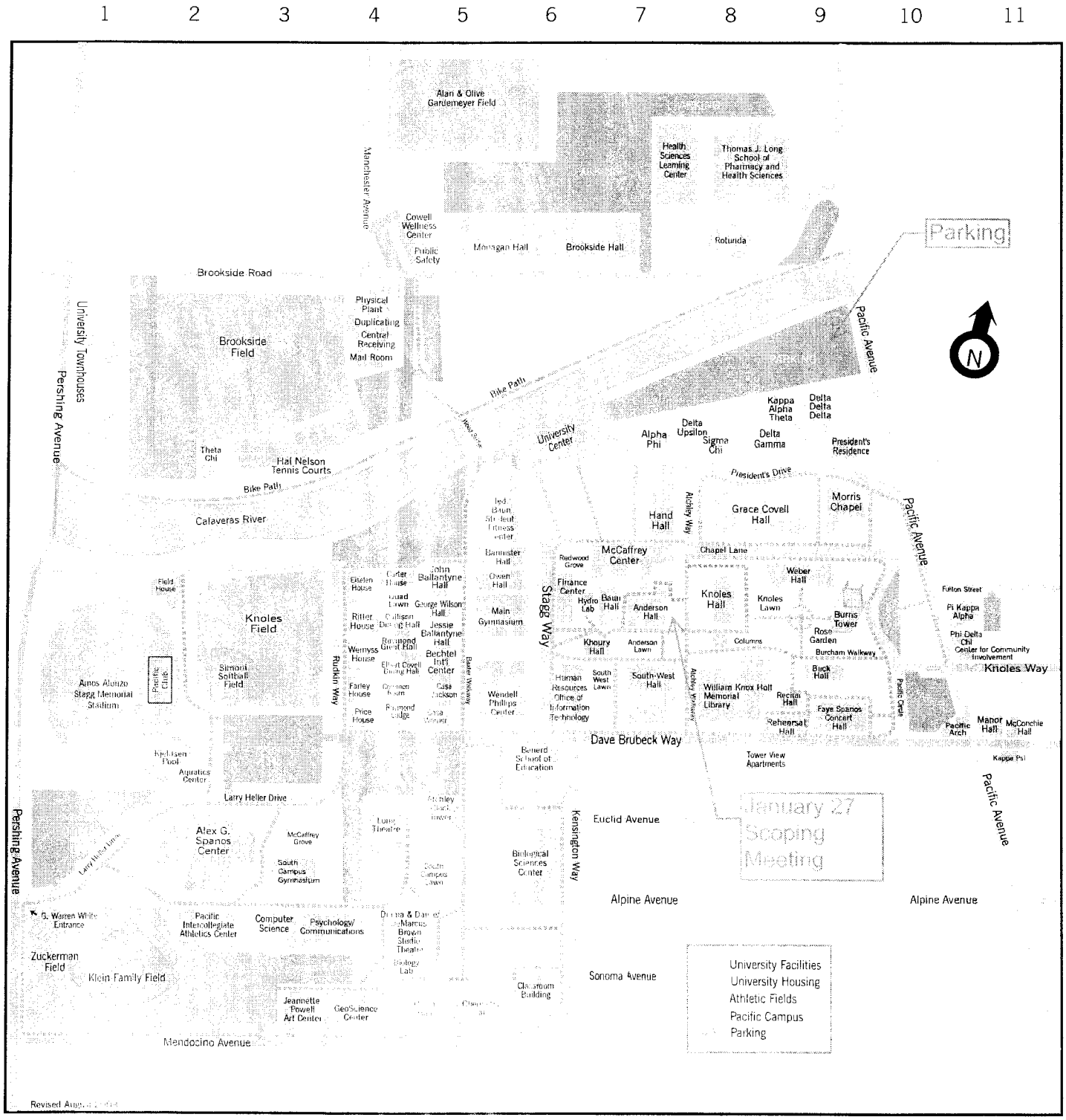
b. Potentially significant issues to be analyzed in depth in the EIS/EIR include project specific and cumulative effects on hydraulics, wetlands and other waters of the U.S., vegetation and wildlife resources, special-status species, esthetics, cultural resources, recreation, land use, fisheries, water quality, air quality, and transportation.

c. USACE is consulting with the State Historic Preservation Officer to comply with the National Historic Preservation Act and with the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act. USACE is also coordinating with the U.S. Fish and Wildlife Service to comply with the Fish and Wildlife Coordination Act.

d. A 45-day public review period will be provided for all interested parties individuals and agencies to review and comment on the draft EIS/EIR. All interested parties are encouraged to respond to this notice and provide a current address if they wish to be notified of the draft EIS/EIR circulation.

4. ***Availability.*** The draft EIS/EIR is currently scheduled to be available for public review and comment in 2014.

University of the Pacific



Campus Map

Edwards, Douglas M SPK

From: Marlo Duncan [Marlo.Duncan@ci.stockton.ca.us]
Sent: Tuesday, January 19, 2010 7:47 AM
To: Edwards, Douglas M SPK
Cc: Roger Churchwell; Williams, Michelle R SPK
Subject: RE: Public Scoping Meeting Notice

Yes! This posted on 1/15 ~ our web address is www.sjafca.com and the item can be found on our "News" page. Thanks,

Marlo A. Duncan
San Joaquin Area Flood Control Agency
22 E. Weber Avenue, Room 301
Stockton, CA 95202
Marlo.Duncan@ci.stockton.ca.us
(209) 937-7900
Visit our web site at www.sjafca.com <http://www.sjafca.com/>

>>> "Edwards, Douglas M SPK" <Douglas.M.Edwards@usace.army.mil>
>>> 1/15/2010 8:37 AM >>>

Did SJAFCA post the notice on its website?

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

-----Original Message-----
From: Marlo Duncan [mailto:Marlo.Duncan@ci.stockton.ca.us]
Sent: Wednesday, January 13, 2010 3:03 PM
To: Marlo Duncan
Subject: Public Scoping Meeting Notice

NOTICE OF INTENT TO PREPARE A JOINT ENVIRONMENTAL IMPACT STATEMENT AND ENVIRONMENTAL IMPACT REPORT FOR THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

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Marlo A. Duncan
San Joaquin Area Flood Control Agency
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Marlo.Duncan@ci.stockton.ca.us
(209) 937-7900
Visit our web site at www.sjafca.com <http://www.sjafca.com/>

Edwards, Douglas M SPK

From: Marlo Duncan [Marlo.Duncan@ci.stockton.ca.us]
Sent: Tuesday, January 19, 2010 7:46 AM
To: Edwards, Douglas M SPK
Cc: Roger Churchwell
Subject: RE: Public Scoping Meeting Notice

The Stockton Record (on 1/15)
Manteca Bulletin (1/15)
Lodi News Sentinel (1/15)
Ripon Record (1/13)
Tracy Press (1/16)

>>> "Edwards, Douglas M SPK" <Douglas.M.Edwards@usace.army.mil>
>>> 1/15/2010 8:28 AM >>>

Thanks Marlo. In which newspapers were the notices published?

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

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San Joaquin Area Flood Control Agency
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Marlo.Duncan@ci.stockton.ca.us
(209) 937-7900
Visit our web site at www.sjafca.com <http://www.sjafca.com/>

ATTACHMENT 2

Agenda

PowerPoint Presentation

Handouts

Sign-in Sheet

Transcripts

Lower San Joaquin River Feasibility Study
NEPA/CEQA Scoping Meeting

January 27, 2010
6:00 - 7:30 P.M.

University of Pacific, Regent's Dining Room
3601 Pacific Avenue, Stockton, CA

AGENDA

1. **Housekeeping Items**

2. **Host's Welcome**

3. **Local Conditions**

4. **Corps Planning Process**

5. **Environmental Compliance**

6. **Comments**

7. **Open House**

Written comments concerning this study and requests to be included on the Lower San Joaquin River Feasibility Study mailing list should be submitted to Mr. Doug Edwards, U.S. Army Corps of Engineers, Sacramento District, Attn: Planning Division (CESPK-PD-R), 1325 J Street, Sacramento, CA 95814.

Mr. Doug Edwards can be contacted via telephone at (916) 557-7026, or e-mail at Douglas.M.Edwards@usace.army.mil.

US ARMY CORPS OF ENGINEERS

Lower San Joaquin River Feasibility Study

NEPA/CEQA Scoping Meeting
January 27, 2010
6:00 - 7:30 P.M.

University of Pacific, Regent's Dining Room
3601 Pacific Avenue, Stockton, CA

Lower San Joaquin River Feasibility Study

Local Perspective

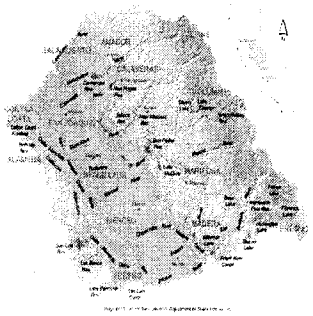
Jim Giottonini
Executive Director

San Joaquin Area Flood Control Agency
(SJAFCA)

www.SJAFCA.com

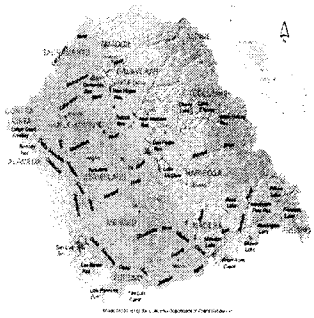
Lower San Joaquin River Feasibility Study

- Flood Damage Reduction Study with opportunities for Ecosystem Restoration
- Study cost estimate at $11Million
- Feasibility Cost Share Agreement signed on February 19, 2009
- Co-sponsors are SJAFCA, and the US Army Corps of Engineers and in the future the State and San Joaquin County Flood Control and Water Conservation District



Lower San Joaquin River Feasibility Study

- Locally we are at the "bottom of the bathtub"
- Streams and Rivers Include: Bear Creek, Mosher Slough, Calaveras River (New Hogan Reservoir), San Joaquin River, French Camp Slough (Duck Creek, and Littlejohns)
- On the west side, levees provide protection from the Delta, an infinite supply of Flood Waters
- Is there a threat of flooding? Living behind levees there is always the threat of a storm larger than the 100-year event or even a levee failure.

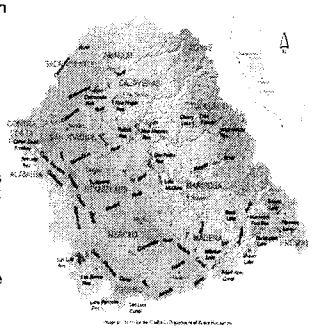


Lower San Joaquin River Feasibility Study

- Locally we are partnering with 10 Reclamation Districts including:

  Mossdale (RD 17), Boggs Tract (RD 404), Rough &Ready (RD 403) Weber Tract (RD 828), Smith Tract (RD 1614) Brookside (RD 2074), Lincoln Village (1608), Shima Tract (RD 2115), Atlas Tract (RD 2126, Bishop Tract (RD 2042)

  Also San Joaquin County Flood Control and Water Conservation District, and the City of Lodi.



Current Status of Levees

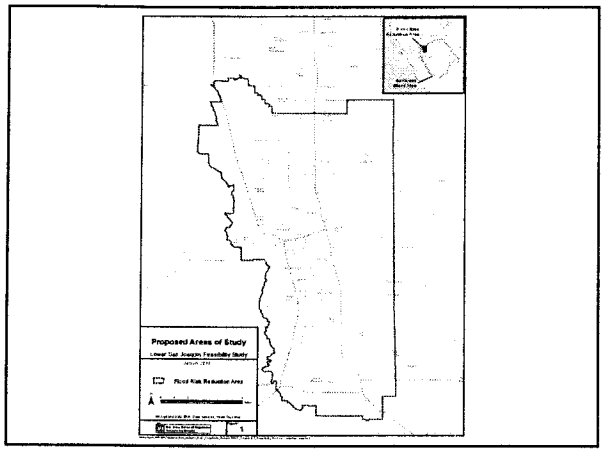
- The majority of our levees protecting urban areas meet FEMA 100-year flood protection requirements or are Provisionally Accredited by FEMA
- The levees along Smith Canal have been disaccredited by FEMA

SB 5 Requirements

- New State legislation went into law in 2007.
  - Mandating 200-year level of protection for urban areas
    - Plan in place by 2015
    - Protection in place by 2025

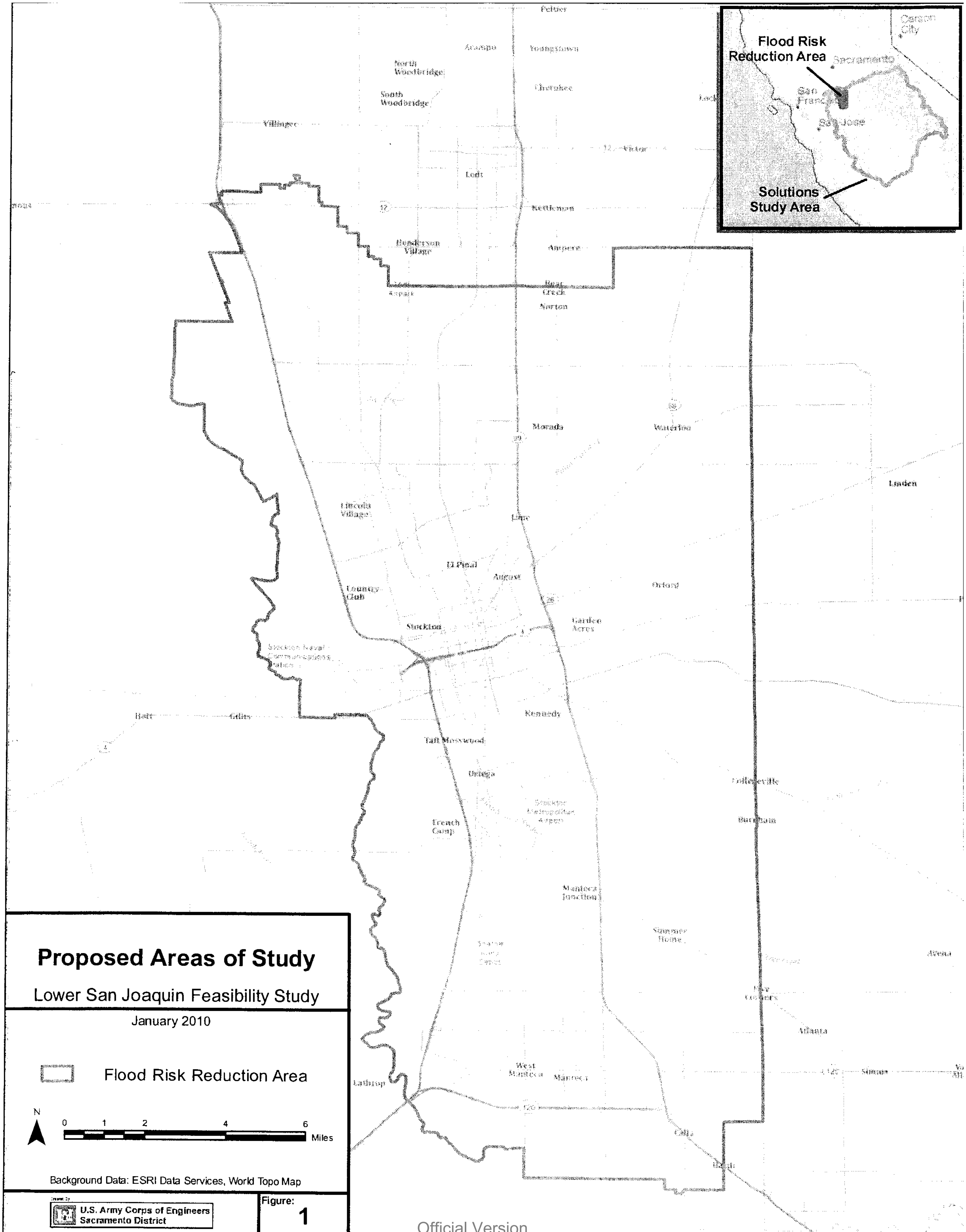
U.S. ARMY CORPS OF ENGINEERS

- Project Delivery Team
- Study Evolution and Milestones
- Corps Planning Process
- Environmental Compliance



US ARMY CORPS OF ENGINEERS: PLANNING AND ENVIRONMENTAL COMPLIANCE

Planning Process Steps	Corps Feasibility Study Milestone System	NEPA/CEQA Requirements
Identify Problems and Opportunities	Initiate Feasibility Study (F1)	Define project purpose and need, Publish Notice of Intent/Notice of Preparation
	Public Workshop/Scoping (F2)	Conduct scoping process
Inventory and Forecast	Feasibility Scoping Meeting (F3)	Write description of proposed action and statement of purpose and need. Describe existing conditions
Alternative Formulation	Alternative Review Conference (F4)	Define Alternatives/Begin evaluation of impacts
Alternative Evaluation		
Alternative Comparison	Alternative Formulation Briefing (F4a)	Evaluate impacts/compare alternatives/develop mitigation
Identify Tentatively Recommended Plan	Draft Feasibility Report (F5)	Draft Environmental Impact Statement (EIS) / Environmental Impact Report (EIR). Public notice and 45-day public review
	Public Meeting(s) (F6)	
	Feasibility Review Conference (F7)	
	Final Report to Division and HQ (F8)	Final EIS/EIR. Respond to comments and concerns
	Civil Works Review Board	
Select Recommended Plan	State/Agency 30-day review	Final EIS/EIR. Public notice and 30-day public review
	Chief of Engineer's Report to ASA (CW)	
	ASA (CW) transmits Chief's Report to OMB	Record of Decision
	ASA transmits Chief's Report to Congress	
	Congressional Authorization	



\Amethyst\CIVCAD\CA\Lower_San_Joaquin_River_Feasibility_Study\GIS\GIS_Projects\9-3_Projects\lsj_flood_risk_reduction_area.mxd

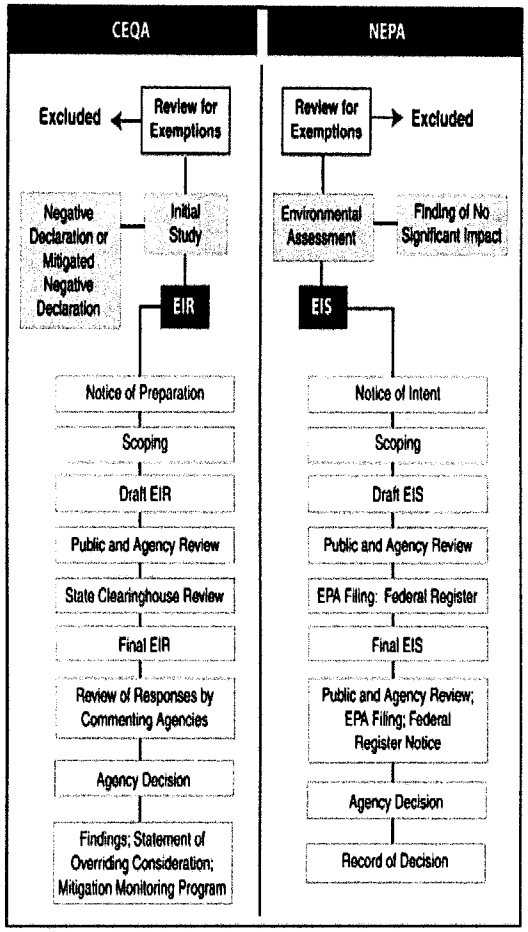
US CORPS OF ENGINEERS: NEPA/CEQA OVERVIEW

National Environmental Policy Act (NEPA): Requires that federal agencies prepare an Environmental Impact Statement (EIS) for major federal actions that may significantly affect the quality of the human and natural environment.

California Environmental Quality Act (CEQA): Requires that California state and local agencies prepare an Environmental Impact Report (EIR) for actions that significantly affect the quality of the human and natural environment.

EIS/EIR: An EIS/EIR is a public document that provides an assessment of the potential environmental impacts resulting from a proposed action and alternatives. The EIS/EIR will be comprised of the following sections:

Project Description
Project Alternatives
Existing Conditions
Environmental Consequences
Mitigation Measures



NEPA/CEQA FLOWCHART

Impact Analysis: Environmental resource areas to be evaluated in an EIS/EIR include, but are not limited to: air quality, biology, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation and traffic.

Outreach: Official notification of project milestones (i.e. initiation of the study, availability of the draft and final EIS/EIR, and issuance of the record of decision) will be made through the following channels: the Federal Register, the State Clearinghouse, appropriate regional newspapers, the project mailing list, and lead agency websites.

Public Input: There are several opportunities for input regarding the project's potential to impact the quality of the human and natural environment.

Scoping Period (30 days)
Draft EIS/EIR (45 days)
Final EIS/EIR (30 days)

US ARMY CORPS OF ENGINEERS: PLANNING AND ENVIRONMENTAL COMPLIANCE

Planning Process Steps	Corps Feasibility Study Milestone System	NEPA/CEQA Requirements
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	Public Meeting(s) (F6)	
Select Recommended Plan	Feasibility Review Conference (F7)	Final EIS/EIR: Respond to comments and concerns
	Final Report to Division and HQ (F8)	
	Civil Works Review Board	
	State/Agency 30-day review	Final EIS/EIR: Public notice and 30-day public review
	Chief of Engineer's Report to ASA (CW)	Record of Decision
	ASA (CW) transmits Chief's Report to OMB	
	ASA transmits Chief's Report to Congress	
	Congressional Authorization	

US Army Corps of Engineers
BUILDING STRONG ®

SIGN IN SHEET / MAILING LIST

SCOPING MEETING: **LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY**

NAME	ADDRESS	ORGANIZATION	MAILING LIST? YES	NO
Bob Hurst	[redacted]	[redacted]	X	
Ellen Powell	1317 E. Weber	Us Congress Candidate	X	
Elyabeth Hevert	1416 9th St room 1148, 95814	DWR - FESSRO	X	
John Brodie	3422 W. Hammer Ln. Ste A. 95219	SJ County RCD	X	
Michael Sabbaghian	3310 El Camino Ave, #140, Sacto	DWR - DFM		
STEVE MAYO	555 E. WEBER AVE STE 95202	SJCOG	X	
GEMMA FISCOCHO	22 E. WEBER AVE, #301, STOCKTON, CA 95202	SJAFCA		
Eric Elia's	345 N. EL DORADO ST Stockton CA 95202	C.O.S. BUILDING	X	
ROGENE REYNOLDS	[redacted]	LANDOWNER	X	
Max Vargas	31 E. Channel St. #396, Stockton, CA 95202	Assemblymember Galgiani's Office	✓	
Cheryle Lawson		SJAFCA		
Barry O'Rego	[redacted]		✓	
Katina Conn	San Joaquin County 1810 E Hazelton		✓	
Margit Aramburu	Pacific	Pacific	E-list	
RICHARD RILEY	[redacted]	COUNTY RESIDENT	✓	
JUAN NEERA	22 E WEBER AVE	SJAFCA	✓	

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SCOPING MEETING: **LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY**

NAME	ADDRESS	ORGANIZATION	MAILING LIST? YES	MAILING LIST? NO
John Giehl	[redacted]	—	X	
Kris Brown	630 K St Sacramento 95814	ICF International	~~X~~	X
Dennis Westcot	716 Valencia Ave, Davis 95616	SJRGA	Need to be X	
Jessica Ludy	1413 Pine, Martinez	American Rivers		x
WTStringfellow	3601 Pacific Ave, UOP, Sears Hall	Univ of Pacific	X	
~~Teresa [illegible]~~	—	WI for the Port of Stockton		
Dominick Gulli	1314 Paloma STKN 95209	Green Mtn Engineering	✓	
John VanRyn	3422 W Hammer Lane Stockton 95219	USDA-NRCS	x	
Tom Rosten	227 Alvarado Way, Tracy CA 95376	R.D. 404	✓	

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SCOPING MEETING: **LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY**

NAME	ADDRESS	ORGANIZATION	MAILING LIST?	
			YES	NO
Dan Gifford	[redacted]	CDFG	X	
N.J. Towey	[redacted]			X
Charlie Simpson	[redacted]	In Site Env	X	
Marlo Duncan	22 E Weber Ave #301 Stockton 95202	SJAFCA		X
Ravi Jain	3601 Pacific Ave Stockton	Univ. of the Pacific		X
Deborah Condon	2825 Watt Ave Sacramento 95211	DWR-DFM	X	
Julie Rentner	1301 L St. #4 Modesto 95354	River Partners	X	

1/27/2010

Notice of Intent to Prepare a Joint Environmental Impact Statement and Environmental Impact Report for the Lower San Joaquin River Feasibility Study

JUDITH: You came here to get information and have a presentation this evening, so I'll get on with it. First, I'm going to go through a couple of housekeeping details. My name is Judith Buethe. I'm to here facilitate the meeting this evening, and I want to thank the different parties for hosting the meeting. And in just a couple of minutes, we'll hear from the Dean of the School of Engineering. Again, this meeting is to provide information about the study that's underway. You'll hear speakers and also we'll provide the opportunity for you to provide comments that should be addressed in the environmental studies. So, it's kind of a listening evening. If you would, please hold your comments until the comment period, so we can go through the entire presentation, and if you haven't filled out a request-to-speak card, or a comment card, you still have plenty to have time to do so. Marlo back there will be happy to hand one to you. And when we do get to the comment period, I'm going to ask you to limit your comment to three minutes, so that everybody who is here has an opportunity to speak. And then if

there's time at the end, and you still want to make a second comment, you'll be welcome to do that.

I want to ask, how did you hear about the meeting? First of all, how many saw an article or a notice in the newspaper? Okay. How many might have received a postcard or a letter? How many might have heard about it from a neighbor or a friend? Okay. And let's see, I also wanted to ask how many attendees are a part of the Lower San Joaquin River Feasibility Delivery Team? Okay. And how many people here are University of the Pacific students? How many are teachers or professors or deans? Okay. How many are with friends of the Calaveras River? Okay.

And I want to remind you to sign in, so that we can be sure that you're given notice as the project progresses. Before I review the agenda, there are a couple of people here that I'd like to introduce here representing their bosses. And first, representing Congressman Dennis Cardoza is Ellen Powell. Thank you, Ellen. And representing Assemblymember Cathleen Galgiani is Max Vargas. And do we have any others representing representatives of the state or national legislators? Okay. And again I remind you to sign in. That's good.

We will be starting and providing information from a variety of speakers. The first one that I'd like to introduce to you to is the Dean of the School of Engineering. He's also a professor here, Ravi Jain.

RAVI: I'm delighted that you selected this as your venue. Many people marvel at this beautiful campus. The last report said it is not as good as Harvard, but better than Yale. I wish to tell you that I have a long history with the Corps. U.S. Army Corps of Energy helped me finish my PhD. I worked with the Corps for many years. I had a secondary fellowship after my PhD. They sent me to Harvard to study public policy, public administration. I got a degree there. And then later on after five years, they gave me a year off, because I had almost spent a year extra some time working. And so they sent me to learn proper English. So I learned a great deal from many of civilians in the military officers who work with the Corps of Engineers. It's a great organization; and any time, any of your kids want to go to school and they want to study engineering or computer science, please let me know. It's a great place. If any of you are very wealthy, we have a new building. We still need only 1.4 million dollars; for equipment we need 2.5. But if you have a million you want to give to society, you have another opportunity. If you want to name the laboratory after you, that costs only half a million dollars. So it's a lovely campus, great people. You have some of the finest people working with you: Will Price. And he works very hard. He wants to make sure your meeting here is enjoyable, successful, and professionally rewarding. He has a great deal of experience in planning and, certain qualities in many other areas. He stayed

back from going home just because of you today. Because usually he leaves by 5:30, 6:00 because he lives about an hour away from here. So I'm delighted. Thank you very much for inviting me and have a productive meeting. Any time you want to have any meetings here, please contact one of the faculty members because they are the key to the success of your enterprise. Thank you very much.

JUDITH: Thank you. One of the things I want to mention so you can be thinking about this, is that I mentioned an opportunity to comment, and there's several ways that you can comment. One is after the meeting, at the end of the presentation. By the way, we do have a public stenographer here who will be taking down comments. If you want to fill out one of the comment cards, and if you want to take one home with you and send it in within a few days; you're welcome to e-mail them, of course; or send a letter. So there's several different ways that you can comment. We do appreciate those comments in writing. And that's one of reasons why we have Kate here and why we provide those comment cards.

And with that, the next person I'd like to introduce is: Jim Giottonini of the San Joaquin County Area Flood Control Agency.

JIM: Thank you. I hope I can handle the PowerPoint. First, I'd like to introduce the SJAFCA staff. Well, would you please stand, Roger,___ , Cheryl and Marlo. It's a fairly small staff and you can ask any of these members for answers tonight. So please, avail yourself of that if you want to talk about the local perspective and why we're preparing this Feasibility Study.

So, basically it's a flood reduction project that we're undertaking. So, it has not only some flood benefits but restoration of all the projects. It's about 11 million dollars, plus a year project study. The cost-share agreement was signed on February 19th, 2009. Cosponsors are currently a joint powers agency between the City of Stockton, San Joaquin County and the San County Flood Control District. Many of you know it was formed in the mid '90s, during the last flood threat that we had back then. What we intend to do is as soon as the two parties have signed the cost-share agreement, we want to add the study, and we will talk about that in a few minutes. And then after, that the County Flood Control Water Conservation District will be to your [unclear]. Many of you have lived in the area and the river drains north. And then we have a lot of streams from the East. And considering that we are dealing with global warming, or whatever the term is called now, sea level rise, you know, since we're kind of lower in sea level, in some parts of your community, so that's a big threat that we also need to deal

with. Not just the stream to the east of us. It's the threat of flooding. It's amazing how many people live next to a levee and don't give it a thought until maybe something breaks or something. We have the flood in '97. We evacuated Weston Ranch because the threat of flooding. So there, it's a levee. It's a levee - it's a manmade structure made of dirt. You know these things have a tendency to fail. They are designed for a hundred-year storm event. Locally -- we've partnered with reclamation districts and in the urban Stockton area, those are the areas west _____. As well, we've partnered with the City of Lodi because they have a sewer treatment plant that's kind of ___. So, so they're also interested and also the County Flood Control is a local partner. They are going to sign the cost-share agreement shortly. The majority of your levees protecting Stockton are certified by FEMA as providing hundred-year flood protection or their professional credibility, and I suggest talking about that if you want to corner one of the SJAFCA staff to talk about what a protective levee means. But the only area that has been put into the flood plain in the Stockton area by FEMA is the _____ area, and it was because of the levees on the north side of the ____ could not be certified to the FEMA standards requirements mainly because of ___ and ____ and swimming pools and all sorts of things. So it couldn't be certified. The real reason that we started the Feasibility Study is when legislation was passed. It was <his> legislation

that was passed in '08. It requires us to have a plan in place to get to two-hundred-year flood protection by 2015. That's basically when we embarked on the project levees. Streams that come from the west, most of these are federal and state project levees. And so really the only way to improve those is to involve the Corps of Engineers and the state of California in order to increase the flood protection that we need because it is required by legislation. And I'm going to turn it over to Mike Sabbaghian. I'm sure I'm butchering that: Mike from the Department of Resources. I streamed over Judith. She was going to introduce him. Mike, it's all yours.

MIKE: Hello everyone. I'm not using the PowerPoint. I'm just speaking. So whatever it says on there, it's not mine. Since we live in California, we obviously have to get interested in flood protection within California to ensure that all the citizens are protected. Our effort has always continued. However, because lack of ____ is it today because the bonds that were passed in 2006. Bonds that you guys all voted for and passed, allowed us a significant amount of money -- almost five billion dollars -- to start moving some of the projects forward. Based on this, we have many flood protection measures and this Feasibility Study is one of those. Unfortunately to date, we haven't had the contract. But that's to be happening in the very near future due to several reasons. We had some issue with

the bond money and we had some issues. So just because of the times and the time it takes to get some money in place. The intent to have the Feasibility Study as Jim mentioned, it is to get Federal authorization to be accomplished, and that's the key for the major projects and protection - to bring the level of protection to the point that's necessary for all their urban areas. In advance of that, the state's already funded what we call the early implementation program. We're funneling another 60 billion dollars right now. That actually started last year some in 2009 and 2008, and they're going to continue working on that in 2010 and '11, to do some improvements as it is to be completed. And we have great interest in the study for two reasons: Get the Federal authorization to actually bring the flood protection to the area; also secure the Federal credit for the money that we already put in. Both the state and local and state of California are putting money in to grow the ideas for those projects as they advance to ensure that those monies are available for future projects. One thing else I want to do: I want to introduce _____ sitting in the back. Could you stand up? He is the project manager we have for this study. He recently was promoted to supervisor of the project and supervisor ____. The last couple of weeks we hired his replacement to take another project, so he's here answering questions, and obviously I will be here to answer your questions, also. Thank you.

JUDITH: Thank you. And the next person that we would like to introduce you to . . . His name is Michael Sabbaghian: S-A-B-B-A-G-H-I-A-N. And he's with the Department of Water Resources of California. Department of Water Resources. And the next person I'd like to introduce you to is Michelle Ulm. She is the project manager for the U.S. Corps of Engineers.

MICHELLE: Before I get too far along in my introduction, I'd like to thank the University of the Pacific, the faculty. I have been told UOP is gorgeous and we mentioned in our earlier meeting that the windows are refreshing when conducting a meeting. So as Judith mentioned, my name is Michelle, and I'm the project manager for the Corps of Engineer for the Lower San Joaquin River Project Feasibility Project. Our team is, our Project Delivery Team includes your local representatives and so that includes San Joaquin County and California Department of Water Resources. Your local supporting representation districts as well as University of the Pacific. Today our Project Delivery Team is here to execute our second project milestone and that is our public scoping meeting. We are here to listen to the concerns of the locals and get your input on the study. My colleagues from the Corps of Engineers Project Study, would you raise your hand? And project Environmental Planner, Doug Edwards, as well our Senior Oversight Deputy Chief Alicia _____.

They'll be here shortly presenting the Corps of Engineers planning process. But before we get into the planning process, I'd like to share a little bit about where the study came from. Because of expressed interest to the Corps of Engineers to study the problems and opportunities, through Congressional authorization, the Corps of Engineering was able to execute ____. And that resulted in the Feasibility Study we are conducting today. Once the Feasibility Study is completed, the project will go back to Congress for authorization for design and construction. During the length of the project, the project is funded through Congressional appropriations and the local agency contributions. Let's briefly discuss our upcoming Project Delivery Team milestones. We are here today, as I mentioned, conducting our public scoping meeting. In 2012, we will have ___ our project allows us Feasibility scoping meeting. [unclear] In 2015, we will make public our draft feasibility report and all the reports for public review. And finally, in 2016, we will submit our final report to Congress for approval and authorization. Now without further ado, I give you Stacey to talk about the planning process. Thank you, Stacey.

STACEY: Thank you, Michelle. Well, as Michelle alluded to, we're at the point of the planning process where we are asking for your input for the study area as explained in this next slide. Also, what you have on your handout -- it's not real

clear on the screen here-- is called the study area. The major footprint is in the area and that's pretty much a watershed area, but kind of narrows that down and kind of shortens the scope, or not shortens the scope, but just reduces the vast area that we would have to look at for opportunities and problems within this area. The team, as defined in boxed area ___ as the primary focus area for opportunities, problems and opportunities to address flood risks reduction in our study. So, we have, have this primary area that we'll be looking at to reduce economic damages from flood risk or reduction in flood risks and flood damages as a focus of this study. So, this meeting is kind of the first step in this. You have this public workshop scoping meeting. This is where, where we want to know what you folks think. Your issues, concerns are to help the team, is worked on, identifies problems and opportunities within the study area. This is an opportunity for you folks to bring things to us that we may not be aware of, and so we can look at those in the course of this study process. The next major step that we'll be looking at is the Feasibility Scoping meeting or kind of beyond that to the Alternative Formulation Briefing. But the, the Feasibility Scoping meeting that we'll do is tied down without _____ and the informal kind of the baseline where is the system now. And then we'll,… the team with input from you folks, we'll start developing alternatives and the Alternative Formulation Briefing, which is shown as F4a on this slide, is

where we will present the range of alternatives that the team developed to our leadership for a policy check. The policy check is whether the alternatives can be implemented within policy, and our leadership will provide to us and we'll finalize the document. So that's the next major thing. And then the draft report, which has many alternatives, which will be the national economic development plan, the local referred plan which as Mr._____ said, basically complies with the SP five requirements and any other alternative plans or range of alternatives that the team developed over time will be presented for public review and comment. So once the document is finalized and goes out for public review and those comments are addressed, then it goes up for change for approval. And that's pretty much the planning steps in here. And so, once it goes from, you know, the Feasibility Study is finalized, it will go to our division headquarters and on up, as Michelle alluded to, back to Congress for authorization of the plan as recommended by our leadership. And with that, I'm going to turn this over to Doug Edwards who will get into the meat of why were here tonight.

DOUG: Thank you. A couple of weeks ago, I was worried that the State of the Union was going to conflict with the start of the Lost final season and there was word they were taking it off, but apparently, the President was not aware there was a scoping

meeting tonight. So we're a bit ____ sometimes, that will limit the crowds, but where we have so many people out here, because it is an important opportunity to reach out and say. I'm the Environmental Planner for the Corps of Engineers. My role in this PDT meeting study is through the column on your right-hand side here and the process which is integrated with the Corps planning process. My goal tonight is to kind of give a _____ on compliance and the process and how people can participate in that process very early on. They help out on that. Again, I'm going to be rather brief up here tonight, but on the backside of the handout that this plan and the compliance matrix and of the compliance process is going to be two ____ that are going to take place with the study. On the Federal side and that's for the National Environmental Policy Act, also known as NEPA. And for that, the Corps engineers will be the lead agency and then on the state/local side will be compliance with the state of California, CEQA. That's what you hear about all the time. And really, when you boil it down, there's two main purposes for both of those: the Federal and the State Environmental Compliance Act that I just mentioned. And that's the first one, is that the agency making decisions to implement the projects needed to identify and assignment to folks. And then when, the second thing that these studies really are out there to do, is to allow the public to have an opinion in the studies that are done, before the decisions are made. Again, that's simplified and there's some difference between them, but I don't think I

need to go into that at this moment. For both of those, rather than one at a time, we're going do, we've determined to do a combined document, which is the scope of the study to form environmental compliance documentation, which is called, Environmental EIR study, which is the EIS. So we're doing an EIR/EIS for this study. And if you follow along, your term allows it, and maybe these will sink in and they'll make sense to you after a while. In doing both of those compliances, we're also accomplishing other compliance acts in relationships that you've probably heard before, including the Endangered Species Act, Clean Air and Water Act, and other such acts that State and Federal agencies must comply with. Then I quickly wanted to touch on the process. And the first step in that is the scoping process. Again, we're doing this at the very early stage. Scoping is 30 days and a minimum of 30 days, and it starts with the, the Notice of Intent or Notice of Preparation in the mail. Also known as NOI/NOP. That was distributed quite widely. We wanted input. It's important. And what we're trying to do is get input, as I mentioned before. There's a variety of ways to give input, too. Tonight, read it, make sure if you don't take a moment for a written comment, you can mail those to me or to the others. Make sure that you are on the mailer list and sign in if you want to be informed as it goes along. When we did the draft EIS/EIR, it will include the alternatives that will be provided along with this study. Look at the existing conditions and then, then the area. Once that document is ___, we have a

draft of that document. Again, this is important that there will be public opportunity for you folks to provide comments on that draft. And again, if you get on the mailing list now, this is available to you and you will know how it will end up and you can read it. Provide all the comments you want, and by law, we have to consider all those comments. When we first started on this study and did a draft or an, excuse me, a final document, the public has to have a minimum of 30 days to review and then issue a final EIS/EIS 30 days before they issue or record a decision on that. And on that again, that's, that's a quick overview of the environmental process. And I'd like to thank you for your time and again invite you to give comments. Judith is going to come up here and do that.

Notice of Intent to Prepare a Joint Environmental Impact Statement and Environmental Impact Report for the Lower San Joaquin River Feasibility Study

FACILITATOR: Judith Buethe

JOHN BRODIE

3422 W. HAMMER LANE, SUITE A

STOCKTON, CA. 95632

Thank you. I'm here representing the San Joaquin County Resource Conservation District. We work with local agriculture producers to conserve natural resources. The district is happy to see that dredging will be one of the considerations here for some of the channels. For a couple of reasons: One, it will improve channel capacity. For another, it will help with some conveyance. We've got a lot of sedimentation issues in the Delta and water areas, and that's one thing that the district is working to help our producers solve. But along with the dredging, we hope that you will consider the use of the dredge spoils to enhance our levees and that way we can solve two problems at once: the flooding problem and then the levee stabilization problem. We know our levees are weakening. So if you consider dredging and are considering the use of dredge pipes to help solve some of those levee problems, we think that

will go a long way and the District itself stands ready to be a partner in this project. We have a history of partnering with other agencies and a very good history of successful habitat restoration and enhancement projects using both state and Federal dollars, and because of agriculture we do a lot of work with private landowners. And I'm sure you're going to need help with a lot of private landowners as well. We stand ready to help with that.

JUDITH: Thank you, Mr. Brodie. And then, Klaus Garcia.

KLAUS GARCIA

He pretty much covered it. No comments. I'll make a comment. Okay? So I got three minutes here. I'm kind of new here to Stockton and the project engineer said something about like she wasn't from the area either and you know we have a lot of water usage and know some of the issues were as far as environment goes has to do with wildlife and something about "ecosystem restoration measures may include but not limited to restoring riparian, wetland, and floodplain habitats, and/or constructing setback levees." So I'm not really sure what

setback levees are. I know this isn't a water issue, although it is in a sense. But maybe we can just take into consideration the fact that we've already moved into an area that was wetland and swamps and dredged everything and pushed the wildlife that we had into these small areas we call sloughs, and excuse me, I'm a little nervous. So, you know, just take into consideration the fact that, that how much impact we've already made on the environment, and maybe we can mitigate some of that. Or take into account our water usage and Southern California water usage and not let the environment be harmed too much. And, or, you know, actually make something that could help the wildlife in the area. This place is going to dry up and we got to stop pushing water out of here. And I don't know if that's one of the interests--to make this a larger collection reservoir. I say build more reservoirs down South.

ANONYMOUS: One question I have is this whole environmental impact and the environmental review process. This is all just for the Feasibility Study; is that correct? What kind of environmental impact could we have just doing the study? I don't really understand how there can be such an impact when we are just studying something. I'd like to second that gentleman's statement about making the channel deeper and making the levees higher.

ANONYMOUS: Sir, sir, this is a study and although there's an effect on the environment with an environmental study, the scope of the study perhaps can be influenced by them knowing that there's people out there that will go and talk.

KLAUS GARCIA: Ask Southern California water people who are empowered by whom, by proxy, by election, take control of the situation and make things and kill this area, rape this area, 'cause that's what's going to happen. So that's why I made that comment.

JUDITH: Next commenter.

ANONYMOUS: My comment is can someone explain that please? The San Joaquin River. The San Joaquin system is a fairly stronger system, you will recall, and are you going to be looking up the environment on the San Joaquin River? You want to request that that action be taken? That's what I want to know--if that's being considered.

JUDITH: So the answer to that is yes, but we would like to stick to comments this evening, and so that comment will be considered in the environmental study.

# # #

ATTACHMENT 3

Letters/Faxes

Emails

RIVER ISLANDS

AT LATHROP

February 8, 2010

Mr. Doug Edwards
U.S. Army Corps of Engineers
Sacramento District
Attn: Planning Division (CESPK-PD-R)
1325 J Street
Sacramento, CA 95814

Subject: Comments on Notice of Intent/Notice of Preparation for the Lower San Joaquin River Feasibility Study (LSJRFS)

Dear Mr. Edwards:

We are providing you the following comments in response to USACE's Notice of Intent/Notice of Preparation (NOI/NOP) for the proposed Lower San Joaquin River Feasibility Study Draft EIS/EIR.

By way of background, I am the Project Director of the River Islands master planned community located within the City limits of Lathrop. I am also the President of Reclamation District 2062 which has a boundary coterminous with the River Islands development on the Stewart Tract. As the project developer, we own the portion of the Paradise Cut Bypass located to the west of the Union Pacific Railroad west of I-5, and we control the land in the Bypass just west of the weir on the San Joaquin River through a long term option agreement. In essence, we own and/or control the entire area within the Paradise Cut Bypass which is the only bypass located in the South County and is instrumental for diverting flood waters away from urban areas along the San Joaquin River.

River Islands has worked for years analyzing the hydrology and hydraulics in the Lower San Joaquin River area. Our consultant, MBK Engineers of Sacramento, developed a HEC-RAS hydraulic model for the area from Vernalis to Grant Line Road and the Stockton Deep Water Channel which was reviewed extensively by DWR and the USACE during the process. We have expended over $1.5 million on the modeling effort. Additionally, we have already completed significant flood protection on the River Islands project and have taken about 25% of our project area out of the 200 year flood plain through a "super-levee" program.

During the approval process for the super levees, the project and the State of California were sued by several environmental groups including Natural Resources Defense Council and the Natural Heritage Institute. We successfully settled our disputes with these entities and have mutually agreed to work together on enlarging the Paradise Cut Bypass to divert more flood flows away from the urban areas of Lathrop and Stockton. Our agreement is to work together to

enlarge the bypass in order to take 20" of flood flows off the San Joaquin River at Mossdale during the 100 year storm event. The River Islands development is not dependent upon the success of this extended project but we have been working and we will continue to work in good faith with our environmental partners on this extended project.

In summary, we are surprised and disappointed that the Stewart Tract is not included in the Flood Risk Reduction Zone as proposed in the LSJRFS. We believe that the Stewart Tract must be included in the Flood Risk Reduction Zone because of the following reasons:

- The project site is completely within the Secondary Zone of the legal Delta where urban development may take place and planning entitlements (specific plan approval, zoning, etc.) for the entire project have already been obtained by the City of Lathrop. The rest of the City of Lathrop (the area east of the San Joaquin River) is already included in the Flood Risk Reduction Zone, so the current proposal is in essence bifurcating Lathrop into two halves; one in which flood risk reduction makes sense, and another that apparently the member agencies of the LSJRFS feels does not.

- The first 4,300 dwelling units, the entire mixed use Town Center and 3 million square feet of the Employment Center are within the first phase of development and are included in a vesting tentative map with all project level approvals. The first two lakes, initial grading and utilities have been provided to this area and when market conditions improve, vertical construction will begin (e.g. homes). In other words, development of the Stewart Tract is imminent and permanent.

- The entire River Islands area will contain up to 30,000 residents and 20,000 employees who will ultimately reside and work on the Stewart Tract. To not include these 50,000 persons within in the Flood Risk Reduction Zone would be sending a message that protecting this significant sum of people is not important.

- Initial construction of high ground plateaus and the 300 foot wide super-levees has already been completed as mentioned and a large part of the River Islands project already meets a minimum 200 year level of flood protection. We are the only such area so designated in the region. As the USACE is aware, all areas of the Central Valley subject to flooding and slated for urban development must meet the new 200 year flood protection standard in the near future. River Islands is the only project we are aware of that currently meets this standard.

- Paradise Cut, the only flood control bypass in the south Delta region is owned and controlled by River Islands and already has CEQA approvals for the River Islands based flood protection improvements. These improvements include setback levees, eco-system/habitat improvements and improvements near Paradise Weir that will assist in bringing Paradise Cut closer to its original design capacity and alleviate downstream

flooding impacts to the existing urban areas of Stockton, Lathrop and Manteca. As mentioned earlier, Paradise Cut is the linchpin of an extended flood bypass project and without River Islands' participation; the LSJRFS goal of better protecting hundreds of thousands of San Joaquin County residents affected by the LSJRFS will be much more difficult to meet.

It is interesting to note that other areas along the San Joaquin River, in particular the northern portion of the Bishop Tract north of Stockton, is included in the Risk Reduction Zone. That area is outside the City of Stockton city limits and faces several hurdles for development to occur there. Why would the USACE include that area but exclude a project that has full entitlements, initial infrastructure already completed and is fully within a member city's corporate limits? We do understand that Paradise Cut and the Stewart Tract are included in the proposed "Study Area" for the LSJRFS. That seems appropriate. However, it seems illogical to not include the River Islands development area in the Flood Reduction Zone where 50,000 people will reside in the future.

Additionally, there are hundreds, if not thousands of acres within the planning areas of Stockton and Manteca that are not currently within the corporate limits of those cities, do not yet have project level entitlements for development, are not included in SJFCA's boundaries and yet, are included within the Flood Risk Reduction Zone. To embark on such a large regional flood protection project but exclude the Stewart Tract which is already approved for significant new population, seems shortsighted and would result in an incomplete scope for the CEQA/NEPA study.

As we have offered to SJAFCA in the past, we have significant "in-kind" work that could be helpful to your analysis. As a participant in the process, we could make available the hydraulic information that we have already gathered for the area, as well as environmental data that we have developed for Paradise Cut. Paradise Cut could also be a significant habitat resource for the environmental impacts that are certain to require mitigation in conjunction with any improvements associated with the LSJRFS. As noted, our proposals for Paradise Cut include levee setbacks, habitat restoration and the creation of a sustainable habitat for the Riparian Brush Rabbit. By not including River Islands, the USACE and other LSJRFS partners would not receive the benefit of our previous and current modeling efforts and studies and the full participation of River Islands and the inclusion of Paradise Cut within the LSJRFS.

We appreciate the opportunity to comment. We request that we be placed on the mailing list for all future documents and studies relating to the LSJRFS and all environmental documentation. Any such documentation should be forwarded to my attention at the address shown on page one of this correspondence. Should you have any questions or comments regarding our comments, please contact me at (209) 879-7900 or at sdellosso@cambaygroup.com.

Sincerely,

Susan Dell'Osso
Project Director

Attachment

cc: Steve Bestolarides, SJAFCA
John Herrick, SDWA
Alex Hildebrand, SDWA
Robert Brown, Reclamation District No. 2107
Colonel Thomas Chapman, U.S. Army Corps of Engineers
Robert Charney, Department of Water Resources
Roger Churchwell, SJAFCA
Mark Connelly, San Joaquin County Public Works Department
Thomas R. Flinn, San Joaquin County Public Works Department
Dale Fritchen, SJAFCA
Jim Giottonini, SJAFCA
Karna Harrigfeld, Herum Crabtree
Al Hoslett, Reclamation District No. 2107
Cary Keaten, City of Lathrop
Manuel Lopez, Chief Administrative Officer, San Joaquin County
Diana Lowery, SJAFCA
Tom Ruark, Acting City Engineer
Larry Ruhstaller, SJAFCA
Steve Salvatore, Director of Public Works
Monty Schmitt, NRDC
Michelle Williams, U.S. Army Corps of Engineers
Scott Woodland, DWR

City of Lathrop

Office of the City Manager

390 Towne Centre Dr. – Lathrop, CA 95330
Phone (209) 941-7220 – fax (209) 941-7248
www.ci.lathrop.ca.us

February 2, 2010

Mr. Doug Edwards
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, CA 95814
Attn: Planning Division (CESPK-PD-R)

Subject: Notice of Intent/Notice of Preparation – Lower San Joaquin River Feasibility Study

Dear Mr. Edwards:

The City of Lathrop is providing you the following comments in response to the Corps' Notice of Intent/Notice of Preparation (NOI/NOP) for the proposed draft EIS/EIR, regarding Lower San Joaquin River Feasibility Study.

In short, the City is concerned about the lack of the entire City of Lathrop being included with the Flood Risk Reduction Zone boundaries. The proposed boundaries "split" the City of Lathrop in half (see attached Exhibit A). Lathrop is the only urban jurisdiction in the proposed area in which this happens. Both Stockton and Manteca are wholly included within the proposed boundaries and even areas outside their City limits are included. The areas east of the City limits are rural and may not ever be developed, but there are some areas outside of City limits adjacent to the San Joaquin River that could face extensive permitting for flood control improvements.

The City respectfully requests that the entirety of the area within the City limits be included within the scope of the draft EIS/EIR and within the proposed Flood Risk Reduction area. This includes not only the City area within Reclamation District 17, but also Reclamation Districts 2062 and 2107. The Stewart Tract, in which all of Reclamation District 2062 is included, has been in the City limits of Lathrop since 1996. The entire area has been zoned for development and the first 4,300 dwelling units need no further entitlements in order to be constructed. The project developer has already embarked on their phased flood protection program and the first 900 acres of the project is flood protected to a 200 year level of protection as per State of California standards. We believe this is the only such area to achieve this designation within the Central Valley Flood Protection Board's jurisdiction.

Another request that we have is that the Study analyze improvements to Paradise Cut. While it makes sense not to include Paradise Cut in the proposed Flood Risk Reduction Zone, we do believe that this bypass will play a critical role in reducing flood risk along the San Joaquin River.

We request that the City be placed on the mailing list for all future documents and studies relating to the project. Please forward any applicable documents to:

City Manager
City of Lathrop
390 Towne Centre Drive
Lathrop, California 95330

Should you have any questions or comments regarding this letter, you may contact me at (209) 941-7220, or by email at ckeaten@ci.lathrop.ca.us.

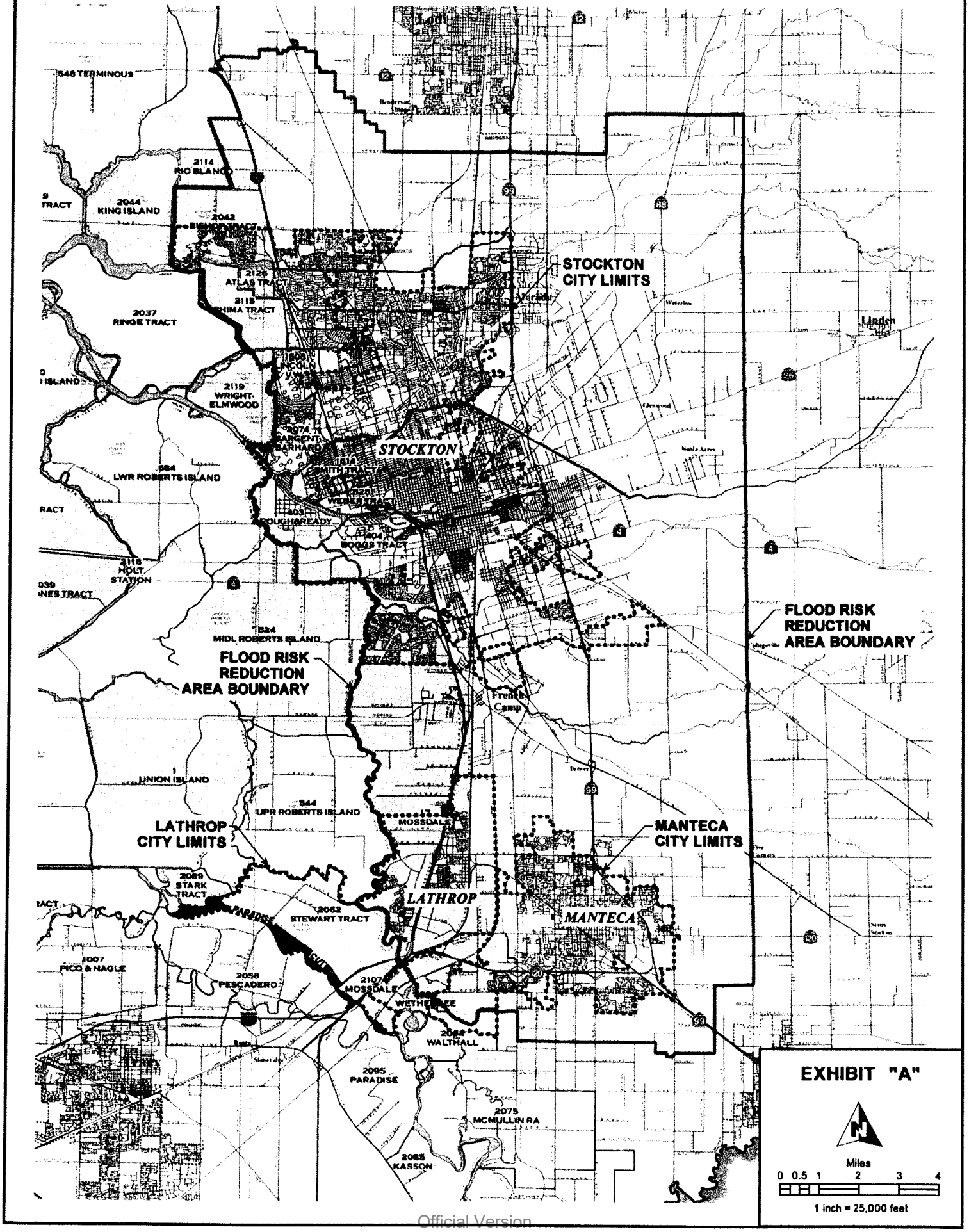
Thank you for the opportunity to comment.

Sincerely,

Cary Keaten
City Manager

Enclosure

cc: Mayor Kristy Sayles and the Lathrop City Council
Steve Salvatore, Director of Public Works
Tom Ruark, Acting City Engineer
Colonel Thomas Chapman, U.S. Army Corps of Engineers
Michelle Williams, U.S. Army Corps of Engineers
Robert Brown, Reclamation District No. 2107
Susan Dell'Osso, Reclamation District No. 2062
Al Hoslett, Reclamation District No. 2107
Robert Charney, Department of Water Resources
Manuel Lopez, County Administrator, San Joaquin County
Thomas R. Flinn, San Joaquin County Public Works Department
Mark Connelly, San Joaquin County Public Works Department
Steve Bestolarides, SJAFCA
Roger Churchwell, SJAFCA
Dale Fritchen, SJAFCA
Jim Giottonini, SJAFCA
Diana Lowery, SJAFCA
Larry Ruhstaller, SJAFCA
Karna Harrigfeld, Herum Crabtree



STATE OF CALIFORNIA
FACSIMILE COVER
10-2A-0049 (NEW 10/92)

ATTENTION:	FROM:	
Doug Edwards	**Kathy Selsor** **Department of Transportation** **1976 East Charter Way** **Stockton, CA 95205**	
UNIT/COMPANY: San Joaquin County Area Flood Control Agency 1325 J Street Sacramento, CA 95814	DATE: **2/2/10**	TOTAL PAGES (Including Cover Page)
	FAX # (Include Area Code) (209) 948-7194	ATSS FAX 8-423-7194
DISTRICT/CITY	PHONE # (& Area Code) (209) 948-7190	ATSS 8-423-7190
PHONE # (& Area Code) (916) 557-7026 FAX # (& Area Code) **(916) 557-7856**	ORIGINAL DISPOSITION: Destroy ☐ Return ☐ Call for Pickup ☐	

COMMENTS:

SJ-Various
SCH# 2010012027
Lower San Joaquin River Feasibility Study

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
P.O. BOX 2048 STOCKTON, CA 95201
(1976 E. CHARTER WAY/1976 E. DR. MARTIN
LUTHER KING JR. BLVD. 95205)
TTY: California Relay Service (800) 735-2929
PHONE (209) 941-1921
FAX (209) 948-7194

Flex your power!
Be energy efficient!

February 2, 2010

10-SJ-Various
SCH#2010012027
SJCO. Flood Agency

Doug Edwards
San Joaquin County Area Flood Control Agency
1325 J Street
Sacramento, CA 95814

Dear Mr. Edwards:

The California Department of Transportation (Department) appreciates the opportunity to have reviewed the Notice of Preparation (NOP) for the Lower San Joaquin River Feasibility Study draft Environmental Impact Report. The Department has the following comments:

Hydraulics:
Modification, including the increase of conveyance and channel widening, to the San Joaquin River System will potentially impact adjacent and/or spanning infrastructure. Potential scour and substandard hydraulic efficiency around bridges will need to be analyzed and mitigated if necessary. Modified levees may impact the roads atop the levee or adjacent to the levee. Encroachments to the State right of way may require modifications and upgrades to drainage systems.

If you have any questions or would like to discuss our comments in more detail, please contact Kathy Selsor (209) 948-7190 (e-mail: kathy_selsor@dot.ca.gov) or me at (209) 941-1921.

Sincerely,

Kathy Selsor for

TOM DUMAS, CHIEF
OFFICE OF METROPOLITAN PLANING

c: SMorgan CA Office of Planning & Research

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73671-30655

John W. Stovall

509 WEST WEBER AVENUE
FIFTH FLOOR
STOCKTON, CA 95203

POST OFFICE BOX 20
STOCKTON, CA 95201-3020

(209) 948-8200
(209) 948-4910 FAX

FROM MODESTO:
(209) 577-8200
(209) 577-4910 FAX

January 25, 2010

Via U.S. Mail & Email: Douglas.M.Edwards@usace.army.mil

Mr. Doug Edwards
U.S. Army Corps of Engineers
Sacramento District
Attn: Planning Division (CESPK-PD-R)
1325 J Street
Sacramento, CA 95814

Re: LSJRFS Mailing List

Dear Mr. Edwards:

I will not be able to attend the Public Scoping Meeting o the Lower San Joaquin Feasibility Study that will be held on January 27, 2010. However, I would like to request that you add my name to the SJSRFS mailing list. Here is my contact information:

John W. Stovall
Attorney at Law
Neumiller & Beardslee
P.O. Box 20
Stockton, CA 95201-3020
Phone: (209) 948-8200
Fax: (209) 948-4910
Email: jstovall@neumiller.com

Thank you for your courtesy and cooperation.

Very truly yours,

JOHN W. STOVALL
Attorney at Law

JWS/ect

601714-1

SAN JOAQUIN COUNTY
MOSQUITO & VECTOR CONTROL DISTRICT

JOHN R. STROH
MANAGER

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CHESTER C. MILLER

SAN JOAQUIN COUNTY
FRANK DEBENEDETTI

SAN JOAQUIN COUNTY
MICHAEL MANNA

SAN JOAQUIN COUNTY
MARC WARMERDAM

LEGAL ADVISOR
CHRISTOPHER K. ELEY

February 1, 2010

Mr. Doug Edwards
U.S. Army Corps of Engineers, Sacramento District
Attn: Planning Division (CESPK-PD-R)
1325 J Street
Sacramento, CA 95814

San Joaquin Area Flood Control Agency
22 E. Weber Avenue, Room 301
Stockton, CA 95202-2317

Re: Joint Environmental Impact Statement and Environmental Impact Report for the Lower San Joaquin River Feasibility Study

Dear Doug Edwards:

The San Joaquin County Mosquito and Vector Control District (the District) has received the Notice of Intent to Prepare a Joint Environmental Impact Statement and Environmental Impact Report for the Lower San Joaquin River Feasibility Study. As the local agency responsible for surveillance and control of mosquitoes and mosquito-borne diseases, we strongly recommend that the EIS/EIR include an analysis of wetland development and management as it relates to 1) potential-increases in local and regional mosquito populations, and 2) promotion of mosquito-borne diseases (e.g. West Nile virus).

Seasonal and semi-permanent wetlands are a significant source of mosquitoes in San Joaquin County and the Northern San Joaquin Valley. The District's ability to respond to increased mosquito populations and mosquito-borne disease outbreaks is finite. The development of wetlands and other aquatic features capable of producing mosquitoes will need to be planned, built, and managed to prevent mosquito development.

Do not hesitate to contact me at (209) 982-4675 if you any questions or need additional information.

Sincerely,

John R. Stroh
Manager

7759 SOUTH AIRPORT WAY, STOCKTON, CALIFORNIA 95206-3918
(209) 982-4675 • FAX (209) 982-0120

California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
(916) 358-2900
http://www.dfg.ca.gov

ARNOLD SCHWARZENEGGER, *Governor*
John McCamman, *Director*

January 28, 2010

Doug Edwards
U.S. Army Corp of Engineers
Sacramento District, Attn: Planning Division (CESPK-PD-R)
1325 J Street
Sacramento, CA 95814

Dear Mr. Edwards:

The Department of Fish and Game (DFG) has reviewed the Notice of Preparation of a draft joint Environmental Impact Statement/Environmental Impact Report (DEIS/DEIR) for the Lower San Joaquin River Feasibility Study (project) (SCH #2010012027). The project consists of a plan to analyze environmental impacts associated with a range of alternatives for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River system. Alternatives may include, but are not limited to, a combination of one or more of the following flood damage reduction measures: adding modifying and/or re-regulating storage on major tributaries, new transitory storage within flood plains, increasing conveyance by raising levees, widening channels and floodways areas, dredging and constructing or modifying weirs and bypasses, and various floodplain management measures. The project is located on the San Joaquin River and its tributaries in San Joaquin County.

Wildlife habitat resources consist of the lower San Joaquin River, its tributaries, and their associated floodplains. Significant natural resources include habitat for sensitive species of terrestrial and aquatic wildlife.

We recommend that the DEIR discuss and provide adequate mitigation for the following concerns:

1. The project's impact upon fish and wildlife and their habitat. To facilitate the environmental analysis the DEIS/DEIR should contain maps which depict the amounts and kinds of habitat that will be affected by various alternatives.

2. The project's impact upon significant habitat such as wetlands including vernal pools and riparian habitat. The project should be designed so that impacts to wetlands are avoided. Mitigation should be provided for unavoidable impacts based upon the concept of no net loss of wetland habitat values or acreage.

3. The project's impact to special status species including species which are State and Federal-listed as threatened and endangered.

4. The project's growth inducing and cumulative impacts upon fish, wildlife, water quality, and vegetation.

5. The DEIS/DEIR should provide an analysis of specific alternatives which reduce impacts to fish, wildlife, water quality and vegetation.

6. The DEIS/DEIR should contain an evaluation of the proposed projects consistency with the applicable land use plans, such as General Plans, Specific Plans, Watershed Master Plans, and the San Joaquin Multi-Species Habitat Conservation Plan.

The DEIS/DEIR should consider and analyze whether implementation of the proposed project will result in reasonably foreseeable potentially significant impacts subject to regulation by the DFG under Section 1600 et seq. of the Fish and Game Code. In general, such impacts result whenever a proposed project involves work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel, including ephemeral streams and water courses. Impacts triggering regulation by the DFG under these provisions of the Fish and Game Code typically result from activities that:

- Divert, obstruct, or change the natural flow or the bed, channel or bank of any river, stream, or lake;
- Use material from a streambed; or
- Result in the disposal or deposition of debris, waste, or other material where it may pass into any river stream, or lake.

In the event implementation of the proposed project involves such activities, and those activities will result in reasonably foreseeable substantial adverse effects on fish or wildlife, a Lake or Streambed Alteration Agreement (LSAA) will be required by the DFG. Because issuance of a LSAA is subject to review under the California Environmental Quality Act (CEQA), the DEIS/DEIR should analyze whether the potentially feasible mitigation measures set forth below will avoid or substantially reduce impacts requiring a LSAA from the DFG.

This project will have an impact to fish and/or wildlife habitat. Assessment of fees under Public Resources Code Section 21089 and as defined by Fish and Game Code Section 711.4 is necessary. Fees are payable by the project applicant upon filing of the Notice of Determination by the lead agency.

Pursuant to Public Resources Code Sections 21092 and 21092.2, the DFG requests written notification of proposed actions and pending decisions regarding this project. Written notifications should be directed to this office.

Thank you for the opportunity to review this project. If the DFG can be of further assistance, please contact Mr. Dan Gifford, Staff Environmental Scientist,

telephone (209) 369-8851 or, Mr. Jeff Drongesen, Acting Conservation Program Manager, telephone (916) 358-2919.

Sincerely,

Jeff Drongesen
Acting Conservation Program Manager

ec. Jeff Drongesen
Dan Gifford
Department of Fish and Game
North Central Region

jdrongesen@dfg.ca.gov
dgifford@dfg.ca.gov

Ellen McBride
U.S. Fish and Wildlife Service
2800 Cottage Way, Room W2605
Sacramento, CA 92825-1888

San Joaquin River Group

- Modesto Irrigation District
- Turlock Irrigation District
- South San Joaquin Irrigation District
- San Joaquin River Exchange Contractors

716 Valencia Ave
Davis, CA 95616-0153
(530) 758-8633
(530)297-2603-Fax

- Merced Irrigation District
- Oakdale Irrigation District
- Friant Water Authority
- City and County of San Francisco

9 February 2010

Mr. Doug Edwards
U.S. Army Corps of Engineers
Sacramento District
Attn: Planning Division (CESPK-PD-R)
1325 "J" Street
Sacramento, CA 95814-2922

Subject: Notice of Intent to Prepare a Joint EIS/EIR for the Lower San Joaquin River Feasibility Study

Your Notice of Intent for this study is based on the need to provide 200-year flood protection for the Stockton Area. Your Notice of Intent indicates that you will be looking at a range of alternatives such as adding, modifying, and/or re-regulating storage on major tributaries to the San Joaquin River as well as widening and deepening channels in the Stockton area.

During your January 27th scoping meeting it was learned from the San Joaquin Area Flood Control Agency (SJAFCA) that the Corps would be working with DWR to model upstream flow and reservoir operations but they could not provide me with any additional information. Any study of upstream flow and reservoir operations must include all the upstream operators as the present operations are regulated by a number of agencies for a number of beneficial uses including agriculture, municipal, recreation, clean hydropower and fish management. Experience teaches that having all parties involved working together leads to more effective and lasting solutions to complex problems.

Solving ongoing problems with loss of critical habitat and dissolved oxygen problems must also be considered in the proposed study. The study must take into account the ongoing problems with salmon survival during outmigration caused in part by the previous widening and deepening of the channels in the Stockton area. The loss of critical habitat caused by the present levee system may be in part responsible for low salmon survival in the Lower San Joaquin River. In addition the periodic dissolved oxygen problems in the Stockton Deep Water Ship Channel caused by previous widening and deepening of this channel by the Corps must be eliminated before any further channel modifications should be considered.

We appreciate the opportunity to comment on the proposed study and look forward to working with the Corps in development of flood protection alternatives that enhance all the River uses. If you have any questions, please contact me.

Dennis Westcot

Dennis W. Westcot
Project Administrator
San Joaquin River Group Authority

cc: SJRGA Managers

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

FEB 12 2010

Doug Edwards, PhD, AICP
U.S. Army Corps of Engineers
1325 J Street, Planning Division, CESPK-PD-R
Sacramento, CA 95814

Subject: Scoping Comments for the Lower San Joaquin River Feasibility Study, in the Central Valley of California.

The Environmental Protection Agency (EPA) has reviewed the Notice of Intent to prepare an environmental impact statement (EIS) for the Lower San Joaquin River Feasibility Study (LSJRFS) in the Central Valley of California. Our scoping comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

Per our conversation on January 27th, 2010, the scope of work for this project has not yet been identified nor have any detailed alternatives been suggested. We further understand that the U.S. Army Corps of Engineers (USACE) released the LSJRFS NOI to solicit comments pertaining to the geographic area depicted in Figure #1of the NOI and its geomorphology; therefore, another NOI will be released for the LSJRFS project prior to release of a DEIS. This letter provides general comments for the LSJRFS area and does not address specific impacts that may result from actual work performed as a result of this study.

The DEIS should clearly describe the effects of the project on water quality, river flows, channel alignment, riparian and oak habitat, floodplain habitat, anadromous fish, and other sensitive species. If the project involves floodplains, there may be a risk of introducing pollutants such as mercury, boron, selenium and arsenic. We recommend the DEIS evaluate potential impacts to biota and human health and discuss strategies to avoid or reduce impacts. Methylation of mercury on periodically wetted floodplains is a particular concern, and the project will need to consider requirements that would be applicable through the Delta methylmercury TMDL (currently draft).

Of specific interest is the relationship between this proposal and other large scale planning for the Delta and San Joaquin. The DEIS should address potential direct, indirect, and cumulative effects on efforts to restore the San Francisco-San Joaquin River Bay Delta and San Joaquin River such as San Joaquin River Restoration Program and the Bay Delta Conservation Plan.

EPA advocates an integrated management approach which balances flood control, water quality, water supply, and fisheries restoration with other beneficial uses of the Lower San Joaquin River, such as wetlands, wildlife habitat and municipal water supply. The project design should give full consideration to water quality, habitat, and ecosystem functions in floodplains and riparian areas.

We recommend the DEIS include a description of climate change implications for the Lower San Joaquin River project area. For example, describe and evaluate projected climate change effects such as sea level rise and increased frequency of high intensity storms. The DEIS should consider the consequences of these effects on levees protecting Lower San Joaquin River and the proposed levee improvements. A clear evaluation of all project-related air emissions should be evaluated in the DEIS. Offsets should not be considered for air quality conformity applicability analysis.

We understand that the methods for determining flood risk, appropriate flood protection levels, and management of levee vegetation have been evolving over the years. The DEIS should provide a detailed description of the current Federal Emergency Management Agency (FEMA) floodplain management and insurance regulations, the FEMA and USACE flood risk assessment for the Lower San Joaquin River area, and USACE levee vegetation management policies. We recommend USACE contact FEMA's Region IX Mitigation Division, Map Modernization Unit to insure that the latest regulation guidelines are integrated into the DEIS. Where possible, levee setback alternatives should be considered.

We appreciate the opportunity to review this NOI. When the new NOI is released, please send a copy to our office. Likewise when the DEIS is released for public review, please send one hard copy and one CD ROM to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact James Munson, the lead reviewer for this project. James can be reached at (415) 972-3800 or munson.james@epa.gov.

Sincerely,

FOR Kathleen M. Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

EPA DETAILED SCOPING COMMENTS FOR THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY, IN THE CENTRAL VALLEY OF CALIFORNIA

Floodplain and Riparian Habitat

Maximize restoration and enhancement of functioning floodplains and riparian habitat where feasible. EPA is especially interested in evidence that the project design gives full consideration to habitat and ecosystem functions in floodplains and riparian areas. We believe ecosystem restoration provides an excellent opportunity to enhance and restore such areas.

> ***Recommendations:***
> Options for incorporating riparian and floodplain habitat, which are important elements of river system restoration, should be addressed in the project alternatives. The Draft Environmental Impact Statement (DEIS) should also explain how monitoring and program assessments will track how floodplains and riparian areas respond to restoration actions and whether functions are being restored.

Water Quality

Water quality impairments could interfere with restoration success. Therefore, we urge development of an analytic framework and plan of action for information gathering and assessment to better target and address problems. Any water storage strategies should take into consideration water diversion practices in place that could diminish Lower San Joaquin River volume.

> ***Recommendation:***
> The DEIS should evaluate the potential effects of storage alternatives on water quality, flows, hydrology, fisheries, and riparian habitat.

Conduct analysis at a level of detail (spatial and temporal) that allows for pinpointing water quality problems and remedies. It will be important to identify in the DEIS, areas and periods of time during the year when water quality conditions could have effects on the food web or direct impacts on fish and other animals.

> ***Recommendation:***
> The DEIS should conduct analysis at a level of detail (spatial, i.e., reach-specific, and temporal) that allows for pinpointing problems and remedies. For example, describe when the presence of agricultural use chemicals may be a limiting factor for restoration goals.

Edwards, Douglas M SPK

From: Edwards, Douglas M SPK
Sent: Tuesday, January 26, 2010 1:44 PM
To: 'Taylor, Theresa J'
Cc: Kleinsmith, Douglas H
Subject: RE: ER 10/74
Attachments: lsj_flood_damage_reduction_area.pdf

Theresa and Doug,

Attached is a figure showing the Flood Risk Reduction Area and Solutions Study Area for the Lower San Joaquin River Feasibility Study. As this point, we are at the front end of a feasibility study to address flooding of a large watershed. As such, the details of proposed alternative will emerge gradually over the course of the study. I will add you to the project mailing list to ensure you receive all the information as it becomes available.

Don't hesitate to contact me if you have any questions.

Doug

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

-----Original Message-----
From: Taylor, Theresa J [mailto:TTaylor@usbr.gov]
Sent: Tuesday, January 26, 2010 1:23 PM
To: Edwards, Douglas M SPK
Cc: Kleinsmith, Douglas H
Subject: ER 10/74

Dear Mr. Edwards,

Thanks for returning my call. Attached is what we call an "Assignment Memo" that the Department of the Interior sends out to its agencies when they find a project that may be of interest. I am sending my co-worker, Doug Kleinsmith, a copy of this message as I am thinking your project is within his Regional Office boundaries. Would you please reply to both of us with the map you have? If it is too big to send, maybe we could just talk over the phone as to where the project falls. Please call me if you have any questions. I appreciate your help!

Sincerely,

Theresa Taylor

San Joaquin River Group

- Modesto Irrigation District
- Turlock Irrigation District
- South San Joaquin Irrigation District
- San Joaquin River Exchange Contractors

716 Valencia Ave
Davis, CA 95616-0153
(530) 758-8633
(530)297-2603-Fax

- Merced Irrigation District
- Oakdale Irrigation District
- Friant Water Authority
- City and County of San Francisco

9 February 2010

Mr. Doug Edwards
U.S. Army Corps of Engineers
Sacramento District
Attn: Planning Division (CESPK-PD-R)
1325 "J" Street
Sacramento, CA 95814-2922

Subject: Notice of Intent to Prepare a Joint EIS/EIR for the Lower San Joaquin River Feasibility Study

Your Notice of Intent for this study is based on the need to provide 200-year flood protection for the Stockton Area. Your Notice of Intent indicates that you will be looking at a range of alternatives such as adding, modifying, and/or re-regulating storage on major tributaries to the San Joaquin River as well as widening and deepening channels in the Stockton area.

During your January 27th scoping meeting it was learned from the San Joaquin Area Flood Control Agency (SJAFCA) that the Corps would be working with DWR to model upstream flow and reservoir operations but they could not provide me with any additional information. Any study of upstream flow and reservoir operations must include all the upstream operators as the present operations are regulated by a number of agencies for a number of beneficial uses including agriculture, municipal, recreation, clean hydropower and fish management. Experience teaches that having all parties involved working together leads to more effective and lasting solutions to complex problems.

Solving ongoing problems with loss of critical habitat and dissolved oxygen problems must also be considered in the proposed study. The study must take into account the ongoing problems with salmon survival during outmigration caused in part by the previous widening and deepening of the channels in the Stockton area. The loss of critical habitat caused by the present levee system may be in part responsible for low salmon survival in the Lower San Joaquin River. In addition the periodic dissolved oxygen problems in the Stockton Deep Water Ship Channel caused by previous widening and deepening of this channel by the Corps must be eliminated before any further channel modifications should be considered.

We appreciate the opportunity to comment on the proposed study and look forward to working with the Corps in development of flood protection alternatives that enhance all the River uses. If you have any questions, please contact me.

Dennis Westcot

Dennis W. Westcot
Project Administrator
San Joaquin River Group Authority

cc: SJRGA Managers

Edwards, Douglas M SPK

From: Edwards, Douglas M SPK
Sent: Tuesday, January 19, 2010 1:00 PM
To: 'Munson.James@epamail.epa.gov'
Subject: FW: San Joaquin River Feasibility Study
Attachments: lsj_flood_damage_reduction_area.pdf

James,

Please see attached and don't hesitate to contact me if you have any questions.

Doug

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

-----Original Message-----
From: Edwards, Douglas M SPK
Sent: Tuesday, January 19, 2010 10:13 AM
To: 'Munson.James@epamail.epa.gov'
Subject: RE: San Joaquin River Feasibility Study

Hi James,

Got your voice mail and email. I'm working on getting an electronic version of the map and will send it to you as soon as possible.

Doug

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

-----Original Message-----
From: Munson.James@epamail.epa.gov [mailto:Munson.James@epamail.epa.gov]
Sent: Tuesday, January 19, 2010 8:44 AM
To: Edwards, Douglas M SPK
Subject: San Joaquin River Feasibility Study

Hi Mr. Edwards,

I also left a message regarding the San Joaquin River Feasibility Study.
The summary references a "Figurer #1". Is this a map?

We could really use any information you have in the way of maps or coordinates to define the project area.

Thanks,

James Munson
Environmental Protection Specialist
Environmental Review Office
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, Ca 94105
(415)972-3800, Fax:(415)947-3562

Edwards, Douglas M SPK

From: Edwards, Douglas M SPK
Sent: Tuesday, January 26, 2010 1:58 PM
To: 'Christine Joab'
Subject: RE: Public Scoping Meeting for the LSJRFS and EIS/EIR
Attachments: lsj_flood_damage_reduction_area.pdf

Christine,

Attached is a figure showing the Flood Risk Reduction Area and Solutions Study Area for the Lower San Joaquin River Feasibility Study. As this point, we are at the front end of a feasibility study to address flooding of a large watershed. As such, the details of proposed alternative will emerge gradually over the course of the study. I will add you to the project mailing list to ensure you receive all the information as it becomes available.

Don't hesitate to contact me if you have any questions.

Doug

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

-----Original Message-----
From: Christine Joab [mailto:CJoab@waterboards.ca.gov]
Sent: Thursday, January 21, 2010 6:49 PM
To: Edwards, Douglas M SPK
Cc: Christine Joab
Subject: Public Scoping Meeting for the LSJRFS and EIS/EIR

Mr. Edwards,

My name is Christine Joab and I am one of the Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff that is working on a Total Maximum Daily Load (TMDL) in the lower San Joaquin River. I saw the meeting announcement for the Public Scoping Meeting for the Lower San Joaquin River Feasibility Study and EIS/EIR posted on the Delta News Newsletter.

I am interested in being added on the mailing list for this project. Staff from the Central Valley Water Board's TMDL unit will not be available to attend this meeting but we (Dissolved Oxygen, Pesticides, and Mercury TMDL staff) are interested in knowing more about this feasibility Study and EIS/EIR. Is there anyway we can get a copy of the presentation that you will be presenting at the Public Scoping Meeting or at least some other documentation outlining your alternatives?

Thanks.

Christine Joab
Environmental Scientist
San Joaquin TMDL & NPS Unit
Regional Water Quality Control Board,
Central Valley (Region 5 Sacramento)
11020 Sun Center Dr., Ste 200
Rancho Cordova, CA 95670-6114
Phone: (916) 464-4655
Fax: (916) 464-4800

Edwards, Douglas M SPK

From: Edwards, Douglas M SPK
Sent: Thursday, January 21, 2010 1:12 PM
To: 'kathy_selsor@dot.ca.gov'
Subject: LSJRFS Figure 1
Attachments: lsj_flood_damage_reduction_area.pdf

Attached is the figure you requested via phone today. Let me know if you have any questions.

Doug

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

Edwards, Douglas M SPK

From: Trujillo, Elvia [etrujillo@neumiller.com]
Sent: Monday, January 25, 2010 4:19 PM
To: Edwards, Douglas M SPK
Cc: Stovall, John
Subject: Lower San Joaquin Feasibility Study
Attachments: LSJRFS Mailing List.pdf

Mr. Edwards:

Attached you will find a letter from John Stovall requesting that you please add his name to the LSJRFS mailing list. If you should have any questions, please don't hesitate to call.

Thank you,

Elvia C. Trujillo

Assistant to

John W. Stovall

Neumiller & Beardslee
P.O. Box 20
Stockton, CA 95201-3010
(209) 948-8200 Phone
(209) 948-4910 Fax
etrujillo@neumiller.com

NEUMILLER & BEARDSLEE
A PROFESSIONAL CORPORATION • ATTORNEYS & COUNSELORS
ESTABLISHED 1903

73671-30655

John W. Stovall

509 WEST WEBER AVENUE
FIFTH FLOOR
STOCKTON, CA 95203

POST OFFICE BOX 20
STOCKTON, CA 95201-3020

(209) 948-8200
(209) 948-4910 FAX

FROM MODESTO:
(209) 577-8200
(209) 577-4910 FAX

January 25, 2010

Via U.S. Mail & Email: Douglas.M.Edwards@usace.army.mil

Mr. Doug Edwards
U.S. Army Corps of Engineers
Sacramento District
Attn: Planning Division (CESPK-PD-R)
1325 J Street
Sacramento, CA 95814

Re: LSJRFS Mailing List

Dear Mr. Edwards:

I will not be able to attend the Public Scoping Meeting o the Lower San Joaquin Feasibility Study that will be held on January 27, 2010. However, I would like to request that you add my name to the SJSRFS mailing list. Here is my contact information:

John W. Stovall
Attorney at Law
Neumiller & Beardslee
P.O. Box 20
Stockton, CA 95201-3020
Phone: (209) 948-8200
Fax: (209) 948-4910
Email: jstovall@neumiller.com

Thank you for your courtesy and cooperation.

Very truly yours,

JOHN W. STOVALL
Attorney at Law

JWS/ect

601714-1

Environmental Protection Specialist

Bureau of Reclamation

Policy and Administration

Mailstop: 84-55000

PO Box 25007

Denver, CO 80225

303-445-2806 (office)

303-445-6683 (FAX)

ttaylor@usbr.gov

From: oepchq@ios.doi.gov [mailto:oepchq@ios.doi.gov]
Sent: Thursday, January 21, 2010 3:44 PM
To: Sutton, Loretta B; Rai, Vijai N; Taylor, Theresa J; Stephanie Nash; Dickey, Marchelle; Johnson, Brenda J; Lecain, Gary D; Morlock, Dale; Kraus, Victoria; Treasure, Donald W; Singleton, Ellen; Meyer, Elizabeth A; Wilson, Judith; Carriero, Joe; Runkel, Roxanne; Demarest, Chip; Perez, John A; Port, Patricia; oepcsfn@aol.com
Subject: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER 10/74

This e-mail alerts you to an ER request from the Office of Environmental Policy and Compliance (OEPC). To access electronic ERs visit the OEPC Natural Resources Management Team website at: http://www.doi.gov/oepc/nrm.html <http://www.doi.gov/oepc/nrm.html%20> Under Quick Links select: Environmental Review Distributions (Bureau ER Notifications). For assistance, please contact the Natural Resources Management Team, at 202-208-5464.

Edwards, Douglas M SPK

From: Nicky Suard [redacted]
Sent: Friday, January 22, 2010 8:23 AM
To: Edwards, Douglas M SPK
Subject: San Juaquin River eir/eis

The notice refers to Figure 1, which is apparently a map showing the area of the study. Can you email me the draft map please?

Thank you.

Nicole (Nicky) Suard, Esq

Edwards, Douglas M SPK

From: Edwards, Douglas M SPK
Sent: Tuesday, January 26, 2010 1:55 PM
To: 'Nicky Suard'
Subject: RE: San Juaquin River eir/eis

Attachments: lsj_flood_damage_reduction_area.pdf

lsj_flood_damage_r
eduction_are...

Please see attached and don't hesitate to contact me if you have any questions.

Doug

Doug Edwards, PhD, AICP
Senior Environmental Planner
U.S. Army Corps of Engineers
1325 J Street, Planning Division
Sacramento, CA 95814-2922
(916) 557-7026

-----Original Message-----
From: Nicky Suard [mailto:[redacted]]
Sent: Friday, January 22, 2010 8:23 AM
To: Edwards, Douglas M SPK
Subject: San Juaquin River eir/eis

The notice refers to Figure 1, which is apparently a map showing the area of the study. Can you email me the draft map please?

Thank you.

Nicole (Nicky) Suard, Esq

Edwards, Douglas M SPK

From: Charlie Simpson [csimpson@insite-env.com]
Sent: Thursday, January 28, 2010 10:07 AM
To: Edwards, Douglas M SPK
Cc: Vicki Jordan
Subject: Lower San Joaquin River Feasibility Study

Hi Doug,

It was a pleasure to meet you last night at UOP. Best of luck on the project, and I'll look forward to seeing you again at future events.

My firm, InSite Environmental, has done literally hundreds of urban development and other projects within the study area (the smaller area, Stockton, Lathrop, Manteca), many of them adjacent to waterways, including Smith Canal. If I or InSite may be of assistance as the LSJRFS process unfolds, even informally, I would be pleased to be able to do so.

Again, best wishes.

Charlie

Charlie Simpson, Principal
InSite Environmental, Inc.
6653 Embarcadero Drive, Suite Q
Stockton, CA 95219
209-472-8650
csimpson@insite-env.com <mailto:csimpson@insite-env.com>

Edwards, Douglas M SPK

From: William Luce [wluce@friantwater.org]
Sent: Tuesday, February 02, 2010 6:55 AM
To: Edwards, Douglas M SPK
Subject: Notice of Intent to Prepare a Joint Environmental Impact Statement and Environmental Impact Report for the Lower San Joaquin River Feasibility Study

Dear Mr. Edwards:

Would you please add me to the mailing list for the Lower San Joaquin River Feasibility Study?

Thank you.

Bill Luce, P.E., Resources Manager

Friant Water Authority

1974 N. Gateway Blvd., Suite #104

Fresno, CA 93727

Office: 559-562-6931

Cell: 559-802-0091

Fax: 559-562-6308

Email: wluce@friantwater.org <mailto:wluce@friantwater.org>

Edwards, Douglas M SPK

From: Richard Riley [redacted]
Sent: Wednesday, February 03, 2010 9:49 AM
To: Edwards, Douglas M SPK
Subject: Requested Comments-Lower San Joaquin River Feasibility Study

Thank-You for holding the meeting January 27. Thanks also goes to the University of Pacific for a very nice location for the meeting.
I am just an interested county resident that attended the meeting. I have no true direction to give you. I was overwhelmed by the scope of the area under discussion. It is more to the East, when I thought it would be more to the West. It would have been very beneficial to individuals like myself if someone would have given more examples of what other studies like this one included. I still do not understand what is truly involved. My knowledge of what the U.S. Army Corps of Engineers does, amount of authority with such projects, etc is very limited.
All I can add is that you should hold another presentation at a public building more the center of the propsed study area. Most residents have no idea about all of this.

Sincerely,
Richard Riley
Stockton

Edwards, Douglas M SPK

From: Jherrlaw@aol.com
Sent: Monday, February 08, 2010 4:14 PM
To: Edwards, Douglas M SPK
Cc: sdellosso@cambaygroup.com
Subject: Comment LSJR Feasibility Study

Attachments: JH to Corps re River Islands 2-15-10.pdf

JH to Corps re River Islands 2...

Please see attached

JOHN HERRICK, Esq.
4255 Pacific Ave. Ste. 2
Stockton, CA 95207
(209) 956-0150 ph
(209) 956-0154 fax

SOUTH DELTA WATER AGENCY

4255 PACIFIC AVENUE, SUITE 2
STOCKTON, CALIFORNIA 95207
TELEPHONE (209) 956-0150
FAX (209) 956-0154
E-MAIL Jherrlaw@aol.com

Directors:
Jerry Robinson, Chairman
Robert K. Ferguson, Vice-Chairman
Natalino Bacchetti
Jack Alvarez
Mary Hildebrand

Engineer:
Alex Hildebrand
Counsel & Manager:
John Herrick

February 15, 2010

Mr. Doug Edwards
U.S. Army Corps of Engineers
Sacramento District
Attn: Planning Division (CESPK-PD-R)
1325 J Street
Sacramento, CA 95814

Re: Comments on Notice of Intent/Notice of Preparation for the Lower San Joaquin RiverFeasibility Study (LSJRFS)

Dear Mr. Edwards:

On behalf of the South Delta Water Agency I would like to add our support and endorsement to River Islands' request that its project be included in the Flood Reduction Zone. As stated by Ms. Dell'Osso, the Project Director of River Islands, their proposed improvements to Paradise Cut are a necessary part of any overall solution to San Joaquin River flood control.

Paradise Cut is the designed overflow channel for high San Joaquin River flows. Unfortunately, over the years it has degraded to the point where it will no longer hold its originally designed capacity. River Islands proposes to restore much of this capacity, while at the same time significantly increasing habitat. River Islands has also worked with SDWA on additional plans to improve flood flow capacity throughout the area, and is an eager partner to actually begin work.

As Ms. Dell'Osso also stated, River Islands' has already done significant engineering and modeling on its and other local flood control proposals. This information is not just a starting point for analyzing local issues, but the basis on which solutions will rest. It is inconceivable to us that River Islands' project for improvements to Paradise Cut would not be included in your Flood Reduction Zone analysis or as part of your Feasibility Study. We strongly encourage you to include it.

/ / / /

Please feel free to contact me if you have any questions.

Very truly yours,

JOHN HERRICK

cc: Susan Dell'Osso

Edwards, Douglas M SPK

From: Dennis Westcot [westcot-sjrga@sbcglobal.net]
Sent: Tuesday, February 09, 2010 2:36 PM
To: Edwards, Douglas M SPK
Cc: amontgomery@waterboards.ca.gov
Subject: NEPA/CEQA Scoping Meeting

Attachments: Final Letter to US Army Corps on Lower SJR.pdf

Final Letter to US Army Corps ...

Mr. Edwards:

Attached are comments from the San Joaquin River Group Authority on the NEPA/CEQA Scoping work being done on providing 200-year flood protection as part of the Lower San Joaquin River Feasibility Study. A signed copy will follow in the mail.

If you have any questions, please call me.

Dennis W. Westcot
Project Administrator
San Joaquin River Group Authority
716 Valencia Ave.
Davis, CA 95616-0153
Phone: (530) 758-8633
FAX: (530) 297-2603
e-mail: westcot-sjrga@sbcglobal.net

ENVIRONMENTAL ADDENDUM B

FISH AND WILDLIFE COORDINATION ACT REPORT

LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

United States Department of the Interior

FISH AND WILDLIFE SERVICE
San Francisco Bay-Delta Fish and Wildlife Office
650 Capitol Mall, Suite 8-300
Sacramento, California 95814

In Reply Refer to:
08ESMF00-
2014-CPA-0012

JUL 25 2016

Ms. Alicia Kirchner
Chief, Planning Division
Sacramento District
U. S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814

Subject: Transmittal of the final Fish and Wildlife Coordination Act report for the Lower San Joaquin River Feasibility Study

Dear Ms. Kirchner:

Please find enclosed the U.S. Fish and Wildlife Service's final Fish and Wildlife Coordination Act report for the Lower San Joaquin River Feasibility Study.

If you have any questions, please contact Steven Schoenberg of my staff at (916) 414-6564.

Sincerely,

Kaylee Allen
Field Supervisor

Enclosure

cc:
Tanis Toland, COE, Sacramento, CA
Jeffrey Stewart, NMFS, Sacramento, CA
Kursten Sheridan, CDFW, Rancho Cordova, CA
Jim Starr, CDFW, Stockton, CA
Ruth Darling, DWR, Sacramento, CA
Roger Churchwell, SJAFCA, Stockton, CA

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

FINAL FISH AND WILDLIFE COORDINATION ACT REPORT FOR THE

LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

PREPARED BY:

Steven Schoenberg, Senior Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Habitat Conservation Division
San Francisco Bay-Delta Fish and Wildlife Office
Sacramento, California

PREPARED FOR:

U.S. Army Corps of Engineers
Sacramento District
Sacramento, California

July 2016

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FINAL FISH AND WILDLIFE COORDINATION ACT REPORT FOR THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

INTRODUCTION

This document constitutes the Fish and Wildlife Service's (Service) final detailed report on the U.S. Army Corps of Engineers (Corps) Lower San Joaquin River Feasibility Study. The Lower San Joaquin River Feasibility Study covers a region that includes the communities of Stockton, Lathrop, and Manteca, where there is a significant risk associated with flooding. The feasibility study has planning objectives to reduce flood risk, develop plans to address and communicate residual flood risks, and develop ecosystem restoration or enhancement features coincident with flood risk management.

Prior Service involvement began with attendance at a kick-off meeting in 2009. A 2-day site visit to representative locations occurred on May 29-30, 2013. On August 15, 2013, we provided a staff-level Planning Memorandum outlining the potential effects of the project in the north, central, and south areas of the project, based on the 2013 site visit and prior involvement on a separate, Section 408 proposal known as the Reclamation District (RD) 17 Phase III Seepage Area Project; this project overlaps one of the elements considered in the feasibility study, but differs in the extent and types of work (Service 2013). A formal coordination document was not prepared for the 408 project due to lack of Corps or other funding. However, we did attend a site visit in March 2011 to RD 17, and submitted a comment letter on the Draft Environmental Impact Statement/Report (DEIS/R) for the RD 17 Phase III Seepage Area Project, which we appended to the 2013 Planning Memorandum for this project (Service 2011).

The Service transmitted a draft detailed report for the feasibility study in June 2014 (Service 2014). That report was based on incomplete information about the affected habitat and mitigation. We recommended that the Corps develop additional information on affected resource quantities, including by ground surveys, develop a setback alternative for the RD 17 element, consult with the Service and other agencies on listed species, and develop enhancement and restoration opportunities to the maximum extent possible. In February 2015, the Corps issued its Draft Interim Integrated Feasibility Report/Environmental Impact Statement for the project that included responses to our recommendations (Corps 2015a). In those responses, the Corps stated it had used assumptions to estimate impacts and would conduct field surveys later to verify these estimates, and develop other specifics such as staging and borrow areas during the Preliminary Engineering and Design (PED) phase of planning. The Corps believed it had considered restoration opportunities already, but none were included in the proposed action. The Corps also stated that more extensive setback levees were screened out due to costs.

The Corps initiated formal consultation with the Service in February 2015 under Section 7 of the Endangered Species Act (ESA). That formal consultation process included Corps field surveys in summer 2015 to assess elderberry shrubs and identify giant garter snake habitat, an additional site visit with the Service in January 2016, developing revised information on closure gate operations, and developing conservation measures for all listed species including, where appropriate, site-specific measures, and near-site mitigation or conservation bank credit purchase

appropriate to offset effects. This information is summarized in the Corps' revised Biological Assessment (Corps 2015c) and the Service's Biological Opinion (Service 2016).

Coordination between the Service and other resource agencies has remained limited throughout project planning. Initially, we had made brief informal contact with the National Marine Fisheries Service (NMFS) and the Environmental Protection Agency staff on their views. These agencies had previously commented on the RD 17 Phase III section 408 project in 2011. The California Department of Fish and Wildlife (CDFW) was previously contacted regarding their general guidance on mitigation for urban trees, but not specifically on the feasibility study. Since our draft detailed report, the Corps held one meeting with the resource agencies on July 22, 2014 which included general discussions of the consultation process and mitigation possibilities. In June 2016, the Service informally contacted representatives of NMFS (Jeff Stewart, Sacramento, West Coast Region) and one of two CDFW regions with regulatory authority for this project (Kursten Sheridan, Rancho Cordova, Region II) to discuss concerns and recommendations for this detailed report. This limited coordination between the Service and other resource agencies has been a consequence of funding and schedule constraints under the Corps' 3x3x3 planning guidance rule (Corps 2015b), and the Corps' desire to first complete consultation requirements with the resource agencies, which limited the time remaining in the schedule for interagency coordination.

Information considered in this report includes observations during site visits, draft materials transmitted informally for our use by the Corps on this project (e.g., image files, tables, powerpoint presentations, revised draft narratives for the feasibility study), the DEIS/R for the RD 17 Phase III Seepage Project (Corps and RD 17 2011), our files for the Corps formal consultation on this project including revised vegetation loss estimates by location (see Service 2016, Appendix B), information on potential temporary and permanent impacts on upland and aquatic giant garter snake habitat (March 10, 2016 email), revised description and projected operations of the Fourteenmile Slough closure structure (June 2 and 3, 2016 emails), a partial "working draft" mitigation plan (June 17, 2016 email), and other materials in our files.

ALTERNATIVES

The Corps considered a variety of structural measures and work elements for a study area that included central and north Stockton, and RD 17 to the south. Below, we describe these measures, how they would be applied to each potential work element, and then the combinations of work elements which form the alternatives. A separate section of this report follows which provides more detail on the preferred alternative, which is the Corps' proposed project.

Structural Measures:

Cutoff Walls: This measure is used to address seepage issues. Sites are cleared, grubbed, and the levee is degraded at least one half its height. A 3-foot minimum width trench is excavated to impermeable soil (variable depth) and filled with bentonite slurry during this excavation. After the slurry has cured, an impervious cap is installed. Finally, the levee is reconstructed. In some areas which cannot be easily accessed such as around utilities and at bridges along levees, a jet grouting method will be used to install the cutoff wall.

Slope Reshaping: This measure is used to restore levees to Corps design criteria for sideslope and crown width. It is done by clearing and grubbing the waterside crest, crown, and landside slope, removing 0.5-1 feet (ft) and sometimes up to 2 ft of material. Suitable material is then placed on the landside and the slope shaped to meet Corps design criteria. Material needed to correct levee geometry will be placed only on the land side, but reshaping may occur on both land and water sides. If this reshaping requires removal of rock revetment, the rock will be replaced. Relocation of land side toe drains and ditches will be done where required.

Levee Raise: For this study, levee raising would be done where needed to achieve 200-year protection and/or for sea level rise protection. The work is accomplished in the same manner as with slope reshaping, except that after suitable material is placed, the levee is rebuilt to a greater specified height. These locations will also first require either a cutoff wall or seismic fix measure. Borrow material will be added to the land side after cutoff walls and levee reshaping improvements are completed.

Seepage Berm: This measure is an alternative treatment to cutoff walls to address seepage issues. It is a berm built on the landside of the levee, usually ranging from 150-200 ft wide, and is 3-5 ft high. Construction involves clearing and grubbing, and placement of successive layers of sand, gravel and soil (with filter fabric between the gravel and soil). Seepage berms are not proposed in the preferred alternative, but are proposed in intermittent sections of RD 17 in other alternatives.

New Levee: This measure is used to reduce the flood risk of outflanking, or as an alternative to repairing existing levees by setting the levee back. Construction involves clearing and grubbing, then excavating an inspection trench. Material is placed, watered, and compacted, then shaped to design specifications. A cutoff wall is also installed, if determined by inspection to be needed. Slopes are then armored with stone riprap as needed, and the remainder reseeded with grasses to prevent erosion. This measure applies to portions of Duck Creek, Smith Canal, and RD 17 work.

Erosion Protection: This measure applies to areas which could be subject to high flows, tides, or wave action, during large events, which includes the Delta Front and RD 17 work elements, depending on alternative. It entails placing stone riprap on the entire slope of the levee from toe to crown.

Seismic Remediation: Used to reduce deformations during earthquakes, this measure involves installing a grid of soil-cement mix columns. This measure will be applied to Fivemile, Fourteenmile, and a portion of Tenmile Sloughs. It requires clearing, grubbing, and degrading the levee to one-half its height. The columns are created using a deep soil mixing auger, and then the levee is reconstructed with suitable material.

Setback: This measure involves constructing the levee away from the edge of the waterway, providing an area outside of the levee profile that would be relatively free of maintenance and can support vegetation. It would be used in sections of RD 17 and Fourteenmile Slough.

Closure Structure: This measure is proposed at the mouth of Smith Canal and across Fourteenmile Slough at the location where it transects the delta front levees. The purpose is to

prevent flooding from the San Joaquin River and Delta; for Fourteenmile Slough, it also will limit the level and duration of water saturation due to higher tides on private levees to the east to reduce the risk of their failure. Each structure will consist of a fixed sheet pile wall with a 50-foot-long opening gate structure to allow tidal flows and boats to pass when open. The structure will tie into high ground, either the new berm for the Smith Canal structure or the levee for the Fourteenmile Slough structure. A small building will be needed for each structure. The structures will be routinely closed during any water stage equal to or greater than 8 ft North American Vertical Datum of 1988 (NAVD88) caused by high tides or high tide in combination with rain on snow flood events, as well as during emergency (e.g., failure along Smith Canal and Fourteenmile Slough levees to the east). The frequency and duration of gate closure operation is expected to increase during wetter water years, and will become much more common over the project life due to sea level rise. After project completion, around 2025, the closure structures would be operated only during the wettest year types such as was the case in 1983 and 1997. By 2070, sea level rise is expected to require gate closure for a full tidal cycle every day in wet years for months at a time. In other water year types, there will also be frequent, shorter-term closures for 2-4 hours per day for several days to weeks in all months.

Control Structure and Bypass Channel: This measure would allow use of old Mormon Slough, or "Mormon Channel," as a flood bypass which runs from the Stockton Diverting Canal to the San Joaquin River. By taking off the peak of flood flows, this measure is an alternative to improvements along the Stockton Diverting Canal and portions of the lower Calaveras River. To do this, a box culvert with a 12-foot-high radial gate would be installed where Mormon Channel meets the Stockton Diverting Canal. There are a number of low-water crossings which need to be removed or replaced with bridges, some channel widening, and several culvert modifications. It is designed to carry 1,200 cubic ft per second at most, and would be operated not more than every 2 years or so. The amount of flow and duration varies with the size of the event but it would be intermittent, flowing a few days, every few years. There may be other necessary work in Mormon Channel, such as remediation of any contaminants present in the slough, and restoration actions involving earthwork or plantings, but these have not yet been described.

Work Elements:

The Corps developed work elements described by location, with individual or combinations of structural measures in reaches, or collections of reaches, as follows:

Mosher Slough: In Mosher Slough, the Corps would use cutoff walls and levee raise as needed for sea level rise protection.

Delta Front (Shima Tract, Fivemile, Tenmile, and Fourteenmile Sloughs): In these reaches, the Corps would install cutoff walls and place erosion protection on west facing slopes. Seismic protection would be applied to Fourteenmile, and portions of Fivemile and Tenmile Sloughs. Slope reshaping would be used in all of Tenmile and portions of Fourteenmile Slough. Fourteenmile Slough would have a closure structure where it meets the westernmost extent of the delta front levees. In the portion of the project along Fourteenmile Slough where a setback is proposed as part of a conservation measure, seismic remediation measures would be constructed landward (west) of the setback from the slough, and a new levee will be constructed there. The

old levee would be partially degraded. The land between the new and old levees would become a mitigation area for project impacts. The setback width would be 60-90 ft, and would occur within reach FM_30_L.

Smith Canal: A closure structure would be installed between Brown's Island and Dad's Point, and a short berm (considered new levee) would be built from the southern portion of Dad's Point to Louise Park.

Calaveras River: Cutoff walls and some slope reshaping would be used for both banks between the San Joaquin River to as far east as Cherryland Avenue for the north bank and the Stockton Diverting Canal for the south bank. The extent of this work is reduced in Alternatives 7 and 9 compared to Alternative 8 (see Alternatives, below).

French Camp Slough: Cutoff walls would be installed on the north levee between the mouth at the San Joaquin River east to I-5 (includes part of Walker Slough). Specific sections of this reach have been repaired by RD 404 and are excluded from the proposed project.

Stockton Diverting Canal: Cutoff walls would be installed in the entire south levee between old Mormon Slough and the Calaveras River.

Mormon Channel: Work in this reach involves a control structure and other work, as described above (see Structural Measures).

San Joaquin River: Cutoff walls would be installed on the right bank levee of the San Joaquin River from Burns Cutoff extending south and east to the north bank of French Camp Slough near Horton Avenue, and on a separate section from 2,100 ft upstream of the Calaveras River to the Smith Canal Closure Structure (this latter section would also be raised). Some slope reshaping would also be done in Burns Cutoff.

Duck Creek: For several alternatives, about a mile of new levee would be built between about Interstate Highway 5 to Odell Avenue. Between Odell and McKinley Avenues, the levee would be reshaped, raised as needed, and a cutoff wall would be installed.

RD 17: This element involves various measures applied to levee sections bordering RD 17, beginning at the left (south) bank of French Camp Slough 600 ft southeast of Carolyn Weston Boulevard, continuing south along the right (east) bank of the San Joaquin River to Lathrop Road, and turning east at the southern end of the existing tie back levee. It involves cutoff walls along the south bank of French Camp Slough. Along the mainstem San Joaquin River, plans call for a large section of cutoff walls and/or slope reshaping, significant sections of seepage berms, levee reshaping, levee raise for certain sections near Stewart Tract, and a new setback levee section with erosion protection in the vicinity of Old River. For the southernmost, east-west dryland section of levee, this levee would be extended east by a new levee section, the existing levee would be raised, and both existing and new levees would also receive erosion protection.

The alternatives include a No Action alternative (Alternative 1), and six action alternatives consisting of implementing different combinations of the work elements as described below:

Alternative 1: No Action. Under this alternative, the Corps would not participate in flood risk management.

Alternative 7a: Delta Front, Mosher Slough, Lower Calaveras River (both banks to El Dorado Street), Smith Canal, San Joaquin River, French Camp Slough, and Duck Creek. This is the Corps' preferred alternative or "tentatively selected plan." Table 1 summarizes the work elements in this alternative, and the locations are shown in Figure 1.

Alternative 7b: Delta Front, Mosher Slough, Lower Calaveras River (both banks to El Dorado Street), Smith Canal, San Joaquin River, French Camp Slough, and RD 17.

Alternative 8a: Delta Front, Mosher Slough, Lower Calaveras River, Stockton Diverting Canal, Smith Canal, San Joaquin River, French Camp Slough, and Duck Creek.

Alternative 8b: Delta Front, Mosher Slough, the Lower Calaveras River, the Stockton Diverting Canal, Smith Canal, San Joaquin River, French Camp Slough, and RD 17.

Alternative 9a: Delta Front, Mosher Slough, less work on the Lower Calaveras River (north bank terminating at North Pershing Avenue, south bank terminating at about I-5), Smith Canal, San Joaquin River, Mormon Channel, French Camp Slough, and Duck Creek.

Alternative 9b: Delta Front, Mosher Slough, less work on the Lower Calaveras River (north bank terminating at North Pershing Avenue, south bank terminating at about I-5), Smith Canal, San Joaquin River, Mormon Channel, French Camp Slough, and RD 17.

PROPOSED PROJECT

The construction work for the Corps' preferred alternative 7a consists of flood protection improvements to 24 miles of levees in the the north and central Stockton areas. The purpose of this work is to address seepage, slope stability, overtopping, and erosion concerns of levees adjacent to urban areas. Construction is proposed on Mosher, Tenmile, Fivemile, Fourteenmile, and French Camp Sloughs, the San Joaquin and Lower Calaveras Rivers, Duck Creek, and Shima Tract. A set of treatments and combination of flood control measures will be done to improve levees depending on specific location, including 20.1 miles of cutoff walls, 6.1 miles of geometric improvement (slope and crown reshaping), 3.5 miles of levee raises, 3 miles of seismic protection, 4.9 miles of erosion protection, two closure structures encompassing several acres total, and 0.95 mile of new levee[1].

[1] Quantities are approximate lineal distances; work width and total area of work vary with location and depend on levee height and other factors. The floodwall now to be substituted with a berm is considered new levee.

Table 1: Proposed measures by location, from north to south, for the tentatively selected plan (alternative 7a) of the Lower San Joaquin River Feasibility Study.

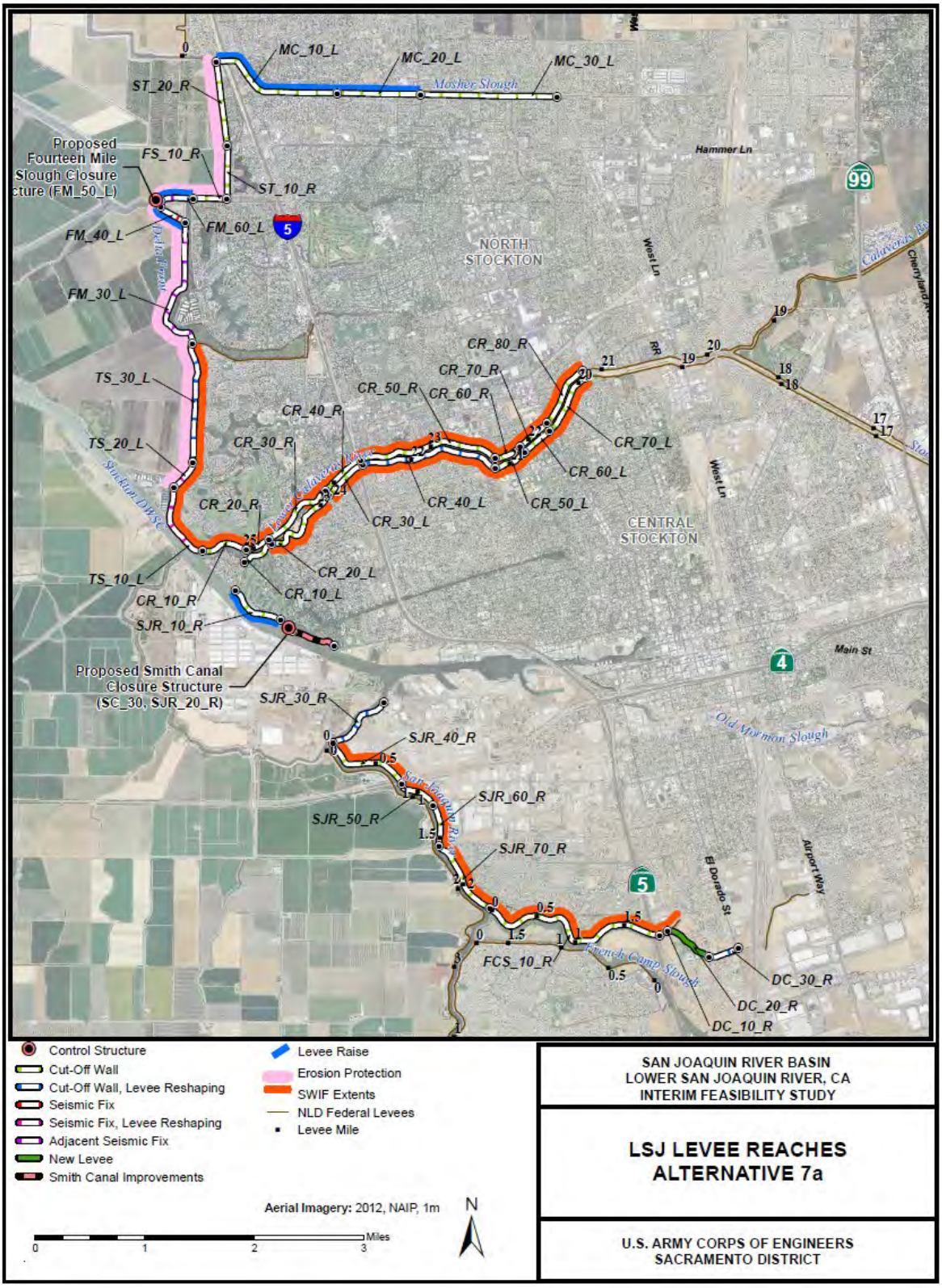
Waterway	Reach	Proposed
	North Stockton	
Mosher Slough	Thornton Road to UPRR railroad tracks	Cutoff wall
Mosher Slough	Shima Tract to Thornton Road	Cutoff wall Levee height fix (sea level rise)
Shima Tract	Mosher Slough to Fivemile Slough	Cutoff wall Erosion protection
Fivemile Slough	Shima Tract to Fourteenmile Slough	Cutoff wall Erosion protection
Fourteenmile Slough	Fivemile Slough to proposed Closure Structure	Seismic Fix Slope Reshaping Levee height fix (sea level rise) Erosion protection
Fourteenmile Slough	Approximately 1,500 ft west of Fivemile Slough	Closure Structure
Fourteenmile Slough	Approximately 1,250 ft southeast setback out from proposed closure structure	Seismic fix Levee height fix (sea level rise) Erosion protection
Fourteenmile Slough	From setback cut south to Tenmile Slough	Seismic fix Adjacent levee slope reshaping Erosion protection
Tenmile Slough	Fourteenmile Slough to March Lane	Cutoff wall Slope reshaping Erosion protection
Tenmile Slough	March Lane to West March Lane/Buckley Cove Way	Seismic fix Slope reshaping Erosion protection
Tenmile Slough/ Buckley Cove Marina/ San Joaquin River	West March Lane/ Buckley Cove Way to Calaveras River	Seismic fix Slope Reshaping
Calaveras River – Right/ North Bank	San Joaquin River to North El Dorado Street	Cutoff wall

Table 1, continued		
Waterway	**Reach**	**Proposed Measure**
	Central Stockton	
Calaveras River – Left/South Bank	San Joaquin River to approximately I-5	Cutoff wall
Calaveras River- Left/South Bank	Approximately I-5 to approximately North Pershing Avenue	Cutoff wall Slope Reshaping
Calaveras River – Left/South Bank	Approximately North Pershing Avenue to approximately El Dorado Street	Cutoff wall
San Joaquin River	From approximately 2,100 ft upstream of the Calaveras River to the proposed Smith Canal Closure Structure	Cutoff wall Levee height fix (sea level rise)
Smith Canal	At the mouth of the canal between Brown's Island and Dad's Point	Closure structure
Smith Canal	Dad's Point from the closure structure to approximately375 ft down Monte Diablo Avenue	Short berm (new levee)
San Joaquin River	Railroad Bridge just upstream of the Port of Stockton to Burns Cutoff	Cutoff wall Slope Reshaping
San Joaquin River	Burns Cutoff to French Camp Slough	Cutoff wall
French Camp Slough – Right/North Bank	French Camp slough confluence with the San Joaquin River to approximately 500 ft southwest of I-5	Cutoff wall
Duck Creek	500 ft past I-5 crossing to approximately Odell Avenue	New Levee
Duck Creek	Approximately Odell Avenue to McKinley Avenue	Cutoff wall Levee Reshaping Levee height fix

Vegetation ETL requirement: The Corps has determined that a vegetation free zone (i.e., no woody vegetation, grasses and forbs only), as required by the Corps' Engineering Technical Letter 1110-2-571 (ETL), would be established for all elements of the project at the time of construction of flood features in each reach. However, the ETL includes a variance request process whereby vegetation may be permitted in certain portions of the levee profile if in depth engineering analysis shows that it would not cause a risk to flood protection features. This engineering analysis has not yet been done for any part of the project. As part of the ESA consultation with the Service, the Corps used its preliminary judgement to estimate the outcome of a variance request. For this project, the Corps would establish a vegetation free zone that extends normally from 15 ft landward of the levee over the crown, and encompasses the upper half of the waterside slope.

For the lower half of the waterside slope, from the midpoint of the levee to 15 ft waterward of the levee toe, the Corps has assumed a variance would be approved which would allow between 25 and 50% of the existing vegetation to remain in that zone. This would not necessarily be in

Figure 1. Lower San Joaquin River Feasibility Study Recommended Plan



the same form, height, or species composition, as the current vegetation. Specifically, large diameter trees, some non-native trees including nut trees, and brambles and vines, would be completely removed. Remaining and future vegetation will be limited by basal or stem diameter to be decided, but probably on the order of 8 to 12 inches at most. While variance areas may have some allowances for vegetation, these areas still may be subject to other forms of maintenance such as mowing or grouting. The Corps will establish an operation and maintenance manual which define these maintenance needs and vegetation limitations, and the required routine measures to maintain these vegetation free and variance zones.

Operation and Maintenance (O&M): To establish, reestablish, or maintain the required O&M and inspection road on the landside of the levee, the Corps has determined for this project that trees and shrubs would be removed from the landside levee from the levee toe approximately 20 ft landward on new levees and between 10 and 20 ft on existing levees, consistent with existing O&M agreements (i.e., O&M can exceed the ETL requirement). This O&M easement, and the vegetation ETL requirement zones described above, would be maintained clear of trees and shrubs, or within limits described for variance areas, through routine O&M (up to four times per year). The areas would be regularly mowed, animal holes grouted, and subject to inspection and various forms of repair for any deficiencies.

Borrow Areas: The estimated area of disturbance to obtain materials for the proposed work ranges from 132-461 acres. Specific locations have not been identified, however, the source is most likely to be fallow lands or agriculture.

Staging: Additional areas of disturbance would also be involved in construction for staging. There is no information on the locations or estimates of area at this time.

Mitigation: In its February 2015 DEIS/R, the Corps stated that compensatory mitigation would be used to mitigate for project impacts but did not include a mitigation plan for all impacts, and a plan was still not available at the time of the writing of this report. The Corps is at least required to compensate for effects to listed species as described in the Service's biological opinion, by purchase of 123 conservation credits for delta smelt and 37.76 credits for giant garter snake, and by planting 196 elderberries and 196 associated plantings in the setback area on Fourteenmile Slough (Service 2016). As explained later in this report (see Discussion), such credit purchase is one acceptable option but not necessarily the Service's preferred form of mitigation for all species or habitats. NMFS (2016) stated that 19,630 ft of Shaded Riverine Aquatic (SRA) cover habitat would be affected by the preferred alternative. This SRA cover may necessitate separate compensation to offset impacts to listed anadromous fishes, however, amounts and locations are not known at this time. Beyond listed species impacts and compensation, the Corps estimates that there are 139 and 10.75 acres, respectively, of riparian and wetlands impacted by the recommended plan. It is not yet known how these effects on riparian, wetland, and SRA cover types would be mitigated.

EXISTING BIOLOGICAL RESOURCES

Vegetation:

Existing resources were examined during site visits to the project area by Service staff on May 29-30, 2013, and January 7, 2016. Our examination of the project area was limited to brief visual inspection of a few representative locations of each project reach at most. As such, our discussion in this report is not intended to be comprehensive or quantitative. The Corps developed an estimate of the areas of cover types within the impact area of potential elements of the project using Google Earth, in which the impact boundaries were laid over satellite aerial photography. The impact area was divided into polygons of various cover types which were summarized in tables. The Corps provided this information to the Service on April 30, 2014 and it has not been updated since. Previously (March 1, 2011), the Service also participated in a more extensive site visit of RD 17, including most - but not all - of the areas included in the RD 17 element proposed in this study. Notes and photographs by Service staff from the site visits were used to grossly evaluate the type and quality of resources present. Below, we first describe the vegetation, then the cover types, for the project area.

Although much of the vegetation in the project area is in a highly altered and fragmented landscape, it is a large area (~676 acres, all elements combined; ~24-53 levee miles affected by construction, depending on alternative), and varies considerably with location and even within a levee segment, as summarized below.

Mosher Slough is a drainage on the northern border of the project that connects to Bear Creek to the north, is tidally influenced, and has partially perennial water (west of the confluence of Little Bear Creek). There is a dense tree canopy to the west of Don Avenue, encompassing about half the work on this reach, but only scattered trees to the east. The trees are a mix of natives and non-natives.

The Delta Front section of the project includes, from north to south, levees on Shima Tract, Fivemile Slough, Fourteenmile Slough, and Tenmile Slough. Wetland vegetation margins were seen during the site visit wherever soil and standing water occurred, including the dryland levee area of the Delta Front, but usually not when there was a rock riprap toe, which was the much more common condition.

On Shima Tract, there are occasional large trees scattered on both the land and water sides of the impact areas. The land side has a series of basins with wetland vegetation that extends about 0.7 miles south to Hammer Lane, that appear to function as part of an irrigation system to serve agriculture to the west. The rest of this levee length exhibits little if any riparian or wetland vegetation. Wetland plants are relatively uncommon, although there are some patches (up to ~1000 square ft) to the west. The Fivemile Slough levee work is an east-west section bordering the slough with this name. Based on the site visit, this appears to be a relatively unvegetated levee although we did not examine it in detail.

Fourteenmile Slough is the major waterway connecting the Delta to the project area. The levee work is proposed for the west facing section of the levee which borders this slough before it

turns east into north Stockton. The margin of this slough where the work is proposed is riprapped, with wetland vegetation in the forms of floating fragments of water hyacinth and rooted emergent vegetation. Emergent aquatic vegetation becomes increasingly prominent near Village West Marina, and there are much larger areas of such vegetation within the waterway in the section which turns east as it enters greater Stockton. Virtually all of this vegetation is outside the work footprint, but is in the area to the east of the closure structure that could be affected by its operation. The levees east of the closure structure are also heavily rocked but have occasional individual trees, perhaps saved by local ordinances, and plantings associated with encroachments (e.g., gardens, boat docks). The west face has upland and shrub vegetation, and at least portions with a ditch and wetland vegetation outside the levee toe.

Tenmile Slough is the next levee section to the south. The levee slopes are a mix of granular rock surface, shrubs, and annual grassland cover, depending on location. There is a significant amount of shrub on or near the lower half of the west slope, including a few elderberry shrubs. Where it borders agriculture, there is a ditch with intermittent or continuous water on the water side that would be relocated with the project. The observation of duckweed in our first visit (May 29-30, 2013), suggests there are at least sections where water is perrenial. Farther south, past March Lane, this levee borders the San Joaquin River in a marina area known as Bulkley Cove; patches of emergent aquatic vegetation and more water hyacinth fragments are present.

The Calaveras River areas where work could occur also vary in habitat quality and vegetation type with location. Habitat is impaired near the mouth by rock riprap and for the first mile or so east of the mouth by boat docks. However, there is significant woody vegetation on the bank slopes, and on islands and land areas between the levees. Additionally, upstream to around Pershing Avenue, there is significant wetland vegetation in backwaters and other shallow areas with this woody vegetation. East of Pershing Avenue upstream to the Stockton Diverting Canal, the habitat character changes to a narrower channel with little emergent or woody vegetation, surrounded by a wider expanse of annual grassland, all within the levees. This condition is likely the result of routine channel maintenance.

Smith Canal was not examined, however, aerial imagery seems to indicate that it supports urban vegetation in the form of large individual trees, most of which are growing in or near the levee which rings the canal. It also has a significant number of boat docks and other structures throughout its length except for a park at the eastern end (American Legion Park).

The relatively barren appearance of the Stockton Diverting Canal in aerial imagery, typed as ruderal, is consistent with the limited ground observations made during the site visit; although there were native and non-native trees adjacent to the canal (a Swainson's hawk was observed landside near such trees during the site visit). However, there are often urban trees on the landside near enough to the levees that they would be affected by construction. These trees may be used by wildlife such as hawks, which forage in the predominant dry portions of channels.

Mormon Channel has some significant vegetation in sections with mature oaks and other understory riparian species, mainly between South Wilson Way and the Stockton Diverting Canal. Further west, the vegetation is sparse up to Commerance Street; west of which the

vegetation becomes thicker again, possibly supported by the charging of groundwater by tidal influence.

The vegetation along the San Joaquin River and French Camp Slough, including RD 17, is variable. There is more abundant woody riparian along the waterside of the levees of French Camp Slough, particularly the left (south) bank. Although much of the north bank levee, which is included in the Corps' preferred alternative, appears maintained and partially riprapped, it supports a significant albeit narrow margin of vegetation at the toe of the levee. More riparian and wetland vegetation is present just beyond the levee toe but within the waterside easement zone. Vegetation on the land sides of both north and south levees is also present to varying extents, either urban or associated with a golf course.

Woody vegetation is much less frequent along the mainstem San Joaquin (both the San Joaquin and RD 17 elements) primarily because the levees, which are heavily rocked, form the land-water margin interface and do not provide a substrate for establishment. The vegetation which is present is limited and occurs in various forms: isolated trees or shrubs (or small groups) on the levee or at the land-water interface; shrub-scrub on levees sections that may be less vigorously maintained; limited groves of large trees on the landside (valley oak, in RD 17); and portions where the levee is set back a modest distance from the river, creating a riparian berm or oxbow (cottonwood riparian, in RD 17 and French Camp Slough). These berm areas in RD 17 are relatively infrequent and discontinuous, but could provide important fish and wildlife values due to the location. A significant quantity of this remaining vegetation is within the impact footprint, particularly within the San Joaquin River, RD 17, and Mormon Channel elements.

Wildlife:

In urbanized areas, the impact areas are often riprapped and bordered by homes or other developments on the landside, with occasional trees at most. The adjacent waterside habitat varies with location - it can be a dry maintained floodway, open water, or open water with nearby marsh vegetation. These areas often lack ground cover or a soil layer. The most likely wildlife to occur there are those adapted to human disturbance such as house sparrow, house finch, rock pigeon, mourning dove, American crow, gulls, Norwegian rat, raccoon, and opossum. Great egret, great blue heron, and a number of species of ducks and other waterbirds would be expected in and near wetlands or other waters in the project area.

Where there is remnant forest or shrub cover, a much wider variety of wildlife can be expected, including birds such as acorn woodpecker, black phoebe, house wren, oak titmouse, western kingbird, yellow warbler, and spotted towhee, and mammals like beaver, cottontail rabbit, and (rarely) the listed riparian brush rabbit - which is known from locations of RD 17. Raptors such as the Swainson’s and red-tailed hawk would be expected to be present where there are mature trees adjacent to agricultural lands (RD 17, Mormon Channel), or urban trees adjacent to maintained dry floodways (Stockton Diverting Canal).

Fisheries:

Fish diversity and abundance in the project area depends on permanence of water, and tidal influence. In the nontidal urbanized waters to the east, one would expect introduced species such as mosquitofish, catfish, and carp, and perhaps a few others. In the tidal areas, including all of the sloughs and mainstem San Joaquin River, a much greater variety of fish species, both native and non-native species, are likely to be present. The San Joaquin River, its tributaries, and sloughs, are considered a major migration corridor for important anadromous species, and can also provide rearing habitat for these species. Species of major significance include fall-run chinook salmon, delta smelt, Sacramento splittail, and white and green sturgeon. Many other native and nonnative species are also likely present in the tidal waterways, including catfish, black bass, sunfish, and minnow species.

Endangered Species:

Under the ESA, the Service has consultation responsibility for species other than anadromous fishes and marine mammals, which are the responsibility of NMFS. Of these, there have been recent sightings of the endangered riparian brush rabbit in portions of RD 17. Elderberry occurs within portions of the impact area of the project in a number of locations (often as individual shrubs within the levee cross-section), and is the host plant of the threatened valley elderberry longhorn beetle - whose range includes the project area - with nearby records on the Calaveras, Cosumnes, Middle, San Joaquin, and Stanislaus Rivers. The threatened giant garter snake is also known from the project vicinity, with nearby records on the Stockton Diverting Canal and Pixley Slough, among other locations. All of the listed fishes, including delta smelt, are considered to be present in the mainstem San Joaquin River and adjacent waters that are part of the proposed project, as indicated in their occasional occurrence in sampling records over the long term. The Corps has completed consultation with the Service and National Marine Fisheries Service (Service 2016, NMFS 2016).

Cover types, Resource Categories, and Mitigation Goals:

The Service's Mitigation Policy (Policy) (FR 46:15 January 23, 1981) provides general guidance in making recommendations to conserve fish and wildlife resources. Under the Policy, resources are assigned to one of four Resource Categories, with a mitigation goal consistent with the values provided to fish and wildlife and the rarity of that habitat (cover type). A mitigation goal is assigned ranging from "no loss of existing habitat value" (Resource Category 1) for the most valuable kinds of habitat, to "minimize loss of habitat value" (Resource Category 4) for the less valuable and most common kinds of habitat. Application of the Policy involves designating cover types which may be affected, and assigning evaluation species based on the sensitivity of those species to the project action, their role in the ecosystem, or association with Service-wide resource management issues such as anadromous fish and migratory birds. We then state the Resource Category, the rationale for that selection, and the corresponding mitigation goal.

Oak woodland: This cover type is characterized by an overwhelming dominance by oaks, usually valley oak, with other species like box elder, blue and live oak, and black walnut as associates. Understory can be grass only, or include shrubs like poison oak and wild grape. It

provides important resting, nesting, cover, and forage functions for deer and squirrels, and is especially important in the project area for birds like the red-shouldered hawk, which would be an evaluation species. It is present in groves near RD 17, the old Mormon Slough channel, and in portions of French Camp Slough which could be affected by the project. Due to the importance of oak woodland to the evaluations species and limited extent in the project area, we designate it Resource Category 2, with a mitigation goal of no net loss of in-kind habitat value.

Riparian Forest: This cover type is characterized by an overstory which is often dominated by cottonwood, and which includes other species like California sycamore, valley oak, box elder, and Oregon ash; the understory includes willow species, grape, wild rose, blackberry, poison oak, and elderberry. Riparian forest supports a relatively high diversity of bird and mammal species, including woodpeckers, squirrels, rabbits, towhees, salamanders, and others which utilize different layers and niches within the forest. It is present in the project area in the forms of sporadic patches or individual trees throughout the project area at the levee toe, and on waterside berms or oxbows, where these exist, such as in RD 17, French Camp Slough, Calaveras River, and Mosher Slough. Appropriate evaluation species reflecting this use would be the downy woodpecker. Due to the importance to the evaluation species and limited extent in the project area and region, we designate it Resource Category 2, with a mitigation goal of no net loss of in-kind habitat value.

Riparian Scrub-shrub: This cover type consists of smaller stature woody species, frequently less than two meters in height. Shrub-scrub in the project area is often dominated by willows with a significant component of Himalayan blackberry. This can support a range of wildlife but not birds or species such as woodpeckers or hawks that depend on larger mature trees for forage or nesting. Individual elderberry plants are a component of scrub-shrub in the project area, often within the existing levee (e.g., RD 17 south of Weston Boulevard; Dos Reis Park). The riparian scrub-shrub in the project area supports two listed species, the endangered riparian brush rabbit - which has been documented in the RD 17 element, and the threatened valley elderberry longhorn beetle - which was last documented in the region in a 1984 sighting along Middle River, near the project area. An appropriate evaluation species which uses this habitat would be the yellow warbler. Due to the importance to the evaluation species and limited extent in the project area, we designate riparian scrub-shrub as Resource Category 2, with a mitigation goal of no net loss of in-kind habitat value.

Annual Grassland: This cover type consists exclusively of annual grasses and, in the project area, is dominated by common grasses like ripgut brome, foxtail barley, weeds such as yellow starthistle and Italian thistle, and others. It is present on levee slopes and adjacent land side and water side areas throughout the project area that are not rocked, as well as within the upper portions of the Calaveras River and Stockton Diverting Canal floodways, which are dry outside of the flood season. Much of this area is subject to regular mowing as a maintenance and fire control activity, as well as grouting of animal holes. These areas do have wildlife value such as to foraging hawks, and their prey such as the California vole, which could serve as an evaluation species. However, this cover type is relatively common in the region. Due to this abundance, we designate it Resource Category 4, with a mitigation goal to minimize loss of habitat value.

Orchard: This cover type consists of fruit or nut trees, and is present in the impact footprint of the Mormon Channel bypass element. It does have value to some common mammals and bird species, although generally not to hawks. This cover type is locally common in the planning area, and provides somewhat different values to wildlife than annual grassland. Scrub jay would be an appropriate evaluation species. Considering its importance and abundance, we designate orchard as Resource Category 3, with a mitigation goal of no net loss of habitat value, while minimizing loss of in-kind habitat value.

Wetland: This cover type occurs in or near permanent or temporary waters, and features wetland plants such as cattails, tules, and others. It provides cover and forage for songbirds associated with wetlands such as the tricolored and red-winged blackbirds, as well as wading birds like the great egret, which would serve as an evaluation species. It is sporadically present in the impact area of the project; in or near the margins of ditches, sloughs, and other waterways, usually as small-to-moderate sized patches or thin strips wherever there is an intersection of soil with shallow water. It is present in varying amounts in the planning area. The largest wetlands are east of the proposed closure structure on a portion of Fourteenmile Slough, with significant amounts of wetland in French Camp Slough, portions of the Calaveras River, and Duck Creek. Some wetlands are also present in portions of irrigation ditches bordering the west side of the delta front levees, and in what appears to be irrigation delivery system ponds located just east of the northerly Shima Tract levee. Elsewhere limited fragments of wetland vegetation exist on Mosher Slough and the San Joaquin River. Due to the importance to the evaluations species and limited extent in the project area, we designate wetland as Resource Category 2, with a mitigation goal of no net loss of in-kind habitat value.

Shaded Riverine Aquatic Cover: Shaded Riverine Aquatic Cover (SRA cover) is defined as the zone of interface of water with the land margin, projected over the water to the maximum extent of overhead vegetation. The habitat value within the SRA cover zone varies with factors such as water depth, overhead cover from nearby riparian trees, instream cover elements such as wood, boulders, and submerged vegetation, and the type of aquatic substrate. SRA cover is considered essential habitat to a variety of fish species, and is used as cover, forage, spawning, and rearing habitat for fishes, both anadromous species and resident native and nonnative fishes. It also provides habitat for birds such as the kingfisher. An appropriate evaluation species would be the chinook salmon, for which evaluation models for SRA cover are available. SRA cover is extremely limited in the project footprint as well as the region, the result of clearing and bank protection from prior flood control, urban development, and/or navigation projects. Due to the vital importance to the evaluations species and very limited extent in the project area, we designate SRA cover as Resource Category 2, with a mitigation goal of no net loss of in-kind habitat value.

Tidal Open Water: Tidal open water is defined as unvegetated, permanently inundated areas, typically below MLLW, that are at a low enough elevation to exhibit tidal cycles. It is represented in the project area by the areas east of the proposed closure structures on Fourteenmile Slough and Smith Canal, which could be affected by gate operations, and other sloughs and waterways which are unaffected. Tidal open waters in freshwater systems such as these provide habitat for resident and migratory native and non-native fishes, including native and non-native species. These areas can provide rearing habitat for juvenile fish, although the

quality of that habitat may be impaired by predatory fish and physico-chemical factors during some seasons. Tidal waters in the project area also have ecological functions of contributing to the tidal prism that sustains the salinity gradient in the delta, and distributing forage organisms and detritus. Since these functions are general, we have not assigned an evaluation species. However, tidal waters are very limited in extent in the project area, and have been affected by adjacent development such as docks and other structures and the input of chemicals from urban drainage. Due to the general importance to all species in the Delta, and limited abundance in the project area, we designate tidal open water as Resource Category 2, with a mitigation goal of no net loss of in-kind habitat value.

Urban landscaping: Urban landscaping is a term applied to trees which are planted in or near residences, golf courses, parks, and other developed grounds. These are typically non-native species or varieties of native species which are obtained from nurseries for shade and aesthetic values. There is urban landscaping near as well as within the project footprint in residential areas, where some plants have been placed within the maintenance zone of existing levees, including the cross-section of the levee itself (considered encroachments). Urban landscaping can have wildlife value particularly when, as here, it is in proximity to other cover types like annual grassland or riparian forest or scrub, and open water. We do not typically designate evaluation species or a mitigation goal for urban landscaping, which is abundant in the planning area. Rather, the Service would recommend mitigation consistent with either State or local ordinances governing removal and replacement of this type of vegetation[2].

Agriculture: Agriculture exists in the form of row crops in portions of the project footprint, and in the RD 17 and Mormon Channel elements. These are harvested regularly, leaving fallow, tilled ground. This cover type provides forage and habitat for ground-dwelling small mammals like the California vole, which are prey items for hawks; either of which can serve as evaluation species. It is common in the planning area and region, so we designate it Resource Category 4, with a mitigation goal to minimize loss of habitat value.

Disturbed Areas: This term is used to encompass other areas that lack vegetation and/or are so frequently disturbed as to have minimal or no resource value. It would include the upper rocked faces of levees (outside of any actual or potential SRA cover), roads whether paved or not, structures (homes, boat docks), and manicured lawns and shrubs. These areas do not have an evaluation species or mitigation goal.

FUTURE WITHOUT THE PROJECT (NO-ACTION ALTERNATIVE)

Under the no-action alternative, the various deficiencies in the project levees would remain. ETL non-compliant vegetation would probably remain, including native and non-native shrubs, trees, and other cover in and near the various levees. The future in RD 17 without the project would depend on whether or not separate action is taken to improve those levees, such as with the proposed Section 408 project for phase III. If the RD 17 phase III project were not built (by

[2] For example, if the State or local ordinance specified equal replacement of trees greater than 3-inches on the basis of 1:1 diameter at breast height, such that a 3-inch tree is compensated by the planting of three, one-inch saplings, the Service would recommend the same. Such policies/requirements have not been researched at the time of this final report.

either the Section 408 project or the feasibility study), planned expansions of the Cities of Stockton and Lathrop would likely not occur. Under this scenario, the habitat conditions would remain as current, with relaxed maintenance of the existing levees, allowing limited shrub-scrub, oak woodland, and riparian forest. The adjacent landscape would continue as annual grassland or agriculture. If RD 17 phase III were built separately, it would have similar effects to the RD 17 element of the feasibility study (see Future With The Project, below).

Habitat conditions in the waterways of the project are likely to change over the life of the project due to climate change, which will result in sea level rise and regional changes in the timing of precipitation and runoff. Changes in average water depth with sea level rise could affect the distribution of wetland vegetation, possibly reducing the extent of it in French Camp Slough and the Calaveras River near the confluence, and possibly in Fourteenmile Slough as well. Tidal waters may extend farther inland in all of the sloughs. Depending on the rate of sea level rise and vegetation allowance, it may be possible for marsh to accrete organic matter fast enough so that it keeps pace with sea level rise. Other consequences of sea level rise are likely, such as decisions affecting operations and new facilities for water export. This could in turn affect the salinity distribution and other water quality factors throughout the Delta, but the precise effects in the project area are uncertain at this time.

FUTURE WITH THE PROJECT

The future with the project is presented in this report in several ways: (1) description of the effects of the project on individual work elements, or similar groups of elements based on examination of aerial imagery and calculations provided by the Corps; and (2) a semi-quantitative evaluation of the amounts of habitat loss, also provided by the Corps, for the elements that form the alternatives (Table 3; Corps 2015a). We have not conducted ground verification of these impacts, nor can we judge the habitat quality factors beyond gross vegetation stature as revealed by aerial images and limited direct observation and ground photographs. Information not available at this time includes the amounts of annual grassland and developed areas in each of the work sites, the amounts of temporary and permanent impacts on all vegetation types, and the types and locations of mitigation for impacts to woody and wetland vegetation types.

In all of the affected footprint areas, we assume the levee slopes and easements would be maintained, free of vegetation on the landside slope and easement, crown, and upper half of the waterside slope, and that an ETL variance would permit at least 25% of the current vegetation to remain on the lower half of the waterside slope. This future is also described in our Biological Opinion and is considered a reasonable worst case scenario. The eventual variance allowance on the lower waterside slope is expected to vary from 25-50%. The impact estimates in the descriptions below for the elements of the preferred alternative were done assuming this worst-case scenario with a variance and apply only to those elements which are included in the preferred alternative (from Service 2016, Appendix B). The impact quantities discussed in this report for the additional elements in the other alternatives (Stockton Diverting Canal, Mormon Slough, RD 17 including the French Camp Slough south bank) have not been adjusted to consider a minimum variance allowance and are based on the Corps DEIS/R (Tables 5-38 and 5-40 *in* Corps 2015a) . Although a variance would have net impacts to the quality and quantity

of riparian vegetation, there could be some benefits, such as reduction in non-native plants, creation of canopy openings that would provide basking habitat for reptiles such as the listed giant garter snake, and providing opportunity for recruitment (or planting) of elderberry, which is the host plant of the listed valley elderberry longhorn beetle. Nevertheless, a general reduction in habitat values is expected with the project, related to the reduced height and width of riparian zone associated with ETL variance limits, which effects not only terrestrial wildlife use, but also inputs of wood and organic matter to the adjacent waterway that supports aquatic species. Burrowing animals would be affected by increased grouting activity which would include variance areas - thereby reducing refugia for reptiles such as the giant garter snake.

Mosher Slough: Levee raise and cutoff wall construction in this reach is expected to impact about 4 acres of woody riparian on the waterside slope and easement, and about 18 acres of woody vegetation on the land side. This would be a significant loss within this particular area, which is about half of the length of the levee work. This loss includes a number of moderately large individual trees, 12 inches or more basal diameter, in the levee and easement profile that would need to be removed. The Corps has estimated a loss of 3 acres of wetland, however, we observed only limited wetland during a site visit to most of this reach, so actual losses are probably less than 3 acres. There would also be a temporary impact to roughly 20-30 acres of annual grassland. The levee toe is undercut at least in portions of the western 1/3-1/2 of this levee which have woody vegetation. With a variance, vegetation would be thinner in this reach downstream, and possibly slightly thicker upstream. The quality of any allowed vegetation would be reduced, due to limitations on size, but some aspects of habitat quality may improve due to the removal of non-natives, and opening of the canopy - which could promote wetland vegetation as depths allow.

Delta Front: The vast majority of the western front work within Shima Tract, Fivemile Slough, Fourteenmile Slough, and Tenmile Slough, and in the footprint of the closure structure appears to be mostly either bare ground (some with granular rock surface) and ruderal upland vegetation, with scattered individual shrubs and trees. All of this vegetation would be removed and the levee face covered with rock riprap. The westward irrigation ditch and associated wetland vegetation, where present, would be temporarily impacted but would likely be replaced and recover to similar habitat quantity and quality as preproject. It is assumed that the waterways and wetland vegetation to the east of the levees (unless within easements) would not be affected. The Corps has estimated losses of 31 and 4 acres of woody vegetation and wetland, respectively. We could not confirm the extent of woody vegetation during our site visit. It is possible that these areas are low scrub, have recently changed since the imagery, or that some areas were mistyped based on aerial imagery. Another 30-40+ acres would be impacted, of which perhaps 20 acres at most is annual grassland, and the rest is some form of developed or regularly disturbed ground (granular rock, riprap, paved or dirt road surface). The quality of the annual grassland varies; much is a thinly vegetated, regularly mowed surface, but some is higher and thicker growth. Estimated wetland losses could increase due to temporary ditch impacts that would be replaced, and possibly effects on wetland and/or woody vegetation where present in the easement area (e.g., Shima Tract).

With the project, the west slope would be covered with rock riprap. Habitat values would be eliminated on these rock sections. Other disturbed areas would be returned to annual grassland.

Subjecting these grassland portions of the levee and easements to Corps maintenance would only slightly reduce habitat values, because much of these levees is already heavily maintained.

Fourteenmile Slough and Smith Canal (including areas east of closure structures): The construction of the closure structures on both of these waterways will have modest direct effects in the footprint of the structures of several acres, and more widespread effects of operation throughout the ~233 acres of surface water isolated by the structures and adjacent waters (Service 2016). Tidal exchange is prevented when the gates are closed, which prevents normal fish movement for that period. The tidal prism, defined as the amount of water exchanged between low and high tide, will be incrementally reduced. Tidal flows distribute food organisms and detritus associated with the flows between the sloughs and connected waterways. These flows will be delayed and reduced by gate operation. Urban waterways such as these are typically used to receive runoff, which can include contaminants. These contaminants could become elevated and salinity reduced when the gates are closed.

Because the gate openings are relatively small (50 ft) compared to the width of the sloughs (300-900 ft), increased velocities will result at the opening, with relatively still adjacent water. This could result in increased predation during operation (NMFS 2016). The higher velocities might attract migratory fish when open, and then temporarily entrap them when closed. These effects will progressively increase in frequency and intensity over the project life as sea level rise requires more frequent operation. Depending on temperature and duration, dissolved oxygen could be measurably reduced during gate operation. Ecological processes related to natural tidal cycles, particularly the slack high tide which would be affected by the gate operation, include fish schooling behavior, bird feeding, and colonization by plants; all such processes will be affected in some fashion by gate operation. The gate structures and operations could also affect the movement and accumulation of fine sediment in the sloughs. With the project, the gates would permit encroachments to remain, including existing individual trees and boat docks. Boating and fishing activities would become increasingly regulated by gate operations as sea level rises and, in doing so, modestly reduce disturbance of fish and wildlife.

The setback area can at least be used to provide compensation for impacts to the valley elderberry longhorn beetle in accordance with our Biological Opinion (Service 2016). It could also potentially provide compensation for some of the values of riparian woodland and urban landscaping which needs to be removed, but not all of them. Specifically, the woodlands which are to be removed provide not only wildlife values, but also organic matter inputs that support resources in adjacent waterways. The wildlife values could be improved in some respects from the lost habitat by design and management to promote native plant species, and because the area would be less affected by the many disturbance factors associated with urban vegetation (i.e., human activity). However, while the setback area is adjacent to a waterway, it would be separated by the old levee which must be retained in order to protect the area in perpetuity from sea level rise. This separation will limit the interaction between the vegetation and the waterway, including inputs of organic matter to the waterway. Finally, the gate operations will adversely affect any floodplain benefits of the proposed levee setback area, because it is upstream of the Fourteenmile Slough closure structure.

Calaveras River (including Tenmile Slough south of the Delta Front work): A small amount of wetland might be impacted on the levee portion of Tenmile Slough which borders the Bulkley Cove marina, although this impact would be avoided if work is limited to the land side. For the preferred alternative, the Corps estimates effects in this area to total 12 acres of woody vegetation impacts on the waterside including easements, and 41 acres of woody vegetation, possibly including some urban landscaping, on the land side and easements. Removal of encroachments in the levee including boat docks and other structures would be needed on the lower reaches of this element, but boat-related recreation would not be otherwise restricted. The amount of waterside vegetation and hence the impacts, are less beginning east of North Pershing Avenue, and the effects are mostly on annual grassland and landside woody vegetation (probably urban landscaping). However, west of North Pershing Avenue, many of the trees are either on the upper half of slope and/or are larger than would be considered allowable with a variance. This means that the proposed project would remove nearly all woody vegetation in some locations. Some other habitat would remain untouched between the levees, including riparian terraces and shallow water wetlands that are inside levees and beyond easements, as well as a number of riparian islands. Within the levee profile and easements, the quality of any allowed vegetation will probably decline somewhat due to the limitations on size and density of vegetation. Impacts to annual grassland would be on the order of 40-50 acres, and largely temporary.

For alternatives 8a and 8b, which have continued work on the Calaveras River east of El Dorado Street to the Stockton Diverting Canal, impacts would increase to 58 acres of woody vegetation impact on the land side, with a substantially greater amount of temporarily impacted annual grassland.

Stockton Diverting Canal: This location would not be affected by the preferred alternative, but would experience effects in alternatives 8a and 8b. As reported by the Corps, imagery does appear to confirm that the bulk of the impact of work in this reach is on ruderal vegetation or disturbed lands, with occasional lost landside trees. The Corps estimates that there is 1 acre of woody vegetation impact on the landside. The waterside impacts are believed to be largely temporary in nature, and this vegetation would regrow after the work is done, asuming the same level of maintenance on the levee. Currently, this reach is heavily maintained by regular mowing, and limited, young woody vegetation occurs in a thin band along the low-flow channel of the canal.

Mormon Channel: This work element is included in Alternatives 9a and 9b only, and not the preferred alternative. As stated above, there is considerable mature vegetation in sections of this relict channel, and it is probably better described as riparian forest, oak forest and riparian scrub/shrub based on our limited ground observations during the site visit than “mixed trees and shrubs” as reported by the Corps, of which 10 acres would be impacted by channel improvements (almost entirely east of Highway 99). These estimated impacts should be considered minimums, as the thickness of this vegetation varies, and ground examination may reveal more may have to be removed for the bypass channel to convey the intended 1,200 cubic ft per second capacity than assumed based on the aerial images (i.e., west of Highway 99, where vegetation is also apparent in imagery). Of the impacts disclosed, the woody vegetation in these locations appears (both in satellite images and during the prior site visit) to be mature and of

apparent high habitat quality in some areas (i.e., west of Walker Lane to Wilson Way), but of lesser quality west of Wilson Way. There could be some benefits if wetland habitat were enhanced in some way, or other restoration actions such as management of non-native herbaceous and woody species, were taken. By providing some peak flow relief, this work element reduces the need for impacts associated with the Stockton Diverting Canal work (i.e., in Alternatives 8a and 8b).

San Joaquin River: This work is common to all alternatives. From Burns Cutoff to French Camp Slough, there is limited vegetation on the waterside of the levee, but the project work would remove most (18 acres on both slopes and easements) of what little vegetation is left, because most of this length (a few miles) is completely rocked, and most of the existing vegetation is within the levee and easements subject to removal or reduction under the ETL.

French Camp Slough north bank and Duck Creek: There would be a significant amount of riparian vegetation affected by this work, mostly on French Camp Slough but also isolated trees on Duck Creek (total ~16 acres). Some of this appears to be land side golf course landscaping and, as with the Calaveras element, there would be a significant amount of unaffected riparian vegetation remaining between the levees. During the site visit, we observed trees not only adjacent to but, in some cases, within the existing levee profile.

RD 17 and French Camp Slough south bank: This work is not included in the preferred alternative, but is associated with Alternatives 7b, 8b, and 8b, and would affect a fairly long (~8+ mile) right bank section of the mainstem San Joaquin River and the more heavily vegetated left (south) bank of French Camp Slough bordering Weston Ranch. Based on aerial imagery and comparing DEIS/R Tables 5-35 and 5-36 (Corps 2015a), impacts would involve 35 acres of riparian on French Camp Slough, including numerous larger diameter trees within the profile of the levee and easement. Another 53 acres of riparian would be affected by the intermittent fixes along the mainstem San Joaquin River along RD 17. There are long sections with rock and either only occasional waterside trees or young riparian as the only vegetation, much of which are in the impact footprint of the work or levee easement where vegetation is subject to maintenance. We noted some such trees or shrubs were on the margin of the impact zone or within the waterside easements, but were not marked by polygons as having been impacted, so the impacts reported are probably a minimum. For the northern half of the work on the San Joaquin River in RD 17, from French Camp Slough to about Manila Road, this would result in removal of virtually all of the remaining woody vegetation. Most of the vegetation would be removed in the southern half of the element as well, although there would be some unaffected vegetation in the vicinity of the setback segment across from the Old River confluence, a few oxbows, and some other narrow waterside berms. In the east-west dryland portion of the levee work at the south end, impacts appear to be limited to ruderal vegetation and some agriculture (95 acres orchard/vineyard; 18 acres row/field crops).

If the RD 17 levees were improved, this would permit the near-term development of most of this adjacent land into residences and commercial/industrial structures; roughly 4,700 acres on which would be built 24,000 residences and about 800 acres of commercial property. This would include all lands up to the O&M easement of the improved levee. Habitat remaining after the RD 17 work would be limited to ETL compliant vegetation outside the O&M zones, probably

very limited riparian on discontinuous waterside berms and oxbows. Wildlife would be at risk of disturbance from human activities, and movement between habitat patches would likely be impaired in that location. The outcome of formal consultation with the Service and NMFS under authority of the Endangered Species Act would ensure that any such project does not jeopardize the existence and recovery of any listed species and may include measures and/or other project alternatives to provide such assurance. Although the Corps has elected not to include RD 17 in its preferred alternative for the Feasibility Study, it requested initiation of formal consultation with the Service as a Section 408 project (letter dated February 27, 2015). We responded with a request for additional information (letter dated October 2, 2015) and are awaiting a response.

Comparison of Alternatives: Overall impact estimates in Corps (2015a) and other information provided to date suggest that the impacts in terms of habitat loss will be significant, reflecting the large scope of the project (~24 miles with the preferred Alternative 7a or 43-50+ miles of levees with other Alternatives)(Table 2). The amounts of loss for the preferred alternative 7a is less than other alternatives, and includes 139 acres of native woodlands, and 4-7+ miles of SRA cover, depending on the estimate. Alternative 8a has more impact due to additional work on upstream portions of the Calaveras River and to a minor extent on the Stockton Diverting Canal. Alternative 9a also has more impact due to effects on woody vegetation in Mormon Channel. Another ~80 acres and 22,000+ lineal ft of riparian and SRA cover loss, respectively, is expected for alternatives 7b, 8b, and 9b, due to RD 17 impacts. While we expect that Alternative 9a may have more impact than Alternatives 8a or 7a on woody vegetation due to effects on woody vegetation in Mormon Channel, these may be offset by (p. 4-12; Corps 2015a) "...ecosystem restoration benefits..." Such benefits are not explained nor quantified in Corps (2015a), but may relate to promoting other vegetation types and/or tidal functions, consistent with the flood control function.

DISCUSSION

Our 2014 draft report emphasized the need to develop better and more complete information regarding the quantities of effect that the proposed project would have on fish and wildlife resources. Some of this is provided in the DEIS/R (Corps 2015a), but it is still based on coarse aerial imagery. This imagery cannot discern the quality of the affected habitat, in terms of vegetation species, height, diameters, associated ground cover, plant number (in many cases), health, and other characteristics such as inundation frequency. Aerial imagery probably has some error in distinguishing woody and herbaceous vegetation and/or wetland vegetation. These characteristics are of importance to determining effects of the project and the need for and amount of mitigation. Additional ground-based study is warranted, at least for the alternative that is to be constructed.

No formal analysis was done by the Service or Corps to quantify changes in habitat value. This is a consequence of the limited information on existing conditions, lack of a mitigation plan, and schedule and funding constraints under the Corps' 3x3x3 guidance. Therefore, we cannot currently determine whether the project has met our mitigation goals for the more important resource categories being affected, including riparian forest, riparian scrub-shrub, SRA cover, wetland, and tidal open water.

Table 2. Existing vegetation (exclusive of herbaceous upland) within the composite project footprint of all action alternatives (Alternatives 7a, 7b, 8a, 8b, 9a and 9b). The footprint is comprised of the construction footprint, constructed features and easements required for operation and maintenance . The footprint does not include borrow sites, which have not been yet been specifically identified. Staging is assumed to occur within the footprint or on existing off-site developed lands. Vegetation numbers are in acres except for shaded riverine aquatic habitat (SRA), which is provided in lineal ft. Information is from the February 2015 DEIS/R (Corps 2015).

Cover Type	Mosher Slough	Delta Front[1]	Calaveras	SDC[3]	Mormon Channel	San Joaquin River Downstream of FCS[2]	French Camp Slough & Duck Creek	San Joaquin River along RD 17	TOTAL
WATERSIDE SLOPE									
Woody Riparian	3	2	7	0	0	5	13	16	**46**
Wetlands	0	0	1	0	0	0	0	0	**1**
Irrigated Grass/ Park	0	0	3	0	0	0	0	0	**3**
WATERSIDE EASEMENT									
SRA	6790	5,522	10,572	0	0	7,949	6,673	23,938	61,444
Woody Riparian	1	1	5	0	0	5	10	17	39
Wetlands	3	4	1	0	0	0	1	6	15
Irrigated Grass/ Park	0	0	1	0	0	0	0	0	1
LANDSIDE SLOPE									
Woody Riparian	8	25	47	1	0	5	20	6	112
Irrigated Grass/ Park	0	2	3	0	0	0	0	0	5
LANDSIDE EASEMENT									
Woody Riparian	7	3	11	1	0	3	3	9	37
Wetlands	0	0	0	0	0	0	0	0	0
Irrigated Grass/ Park	0	1	2	0	0	1	0	0	4
Orchard/Vineyard	0	0	0	0	0	0	0	0	0

Cover Type	Mosher Slough	Delta Front[1]	Calaveras	SDC[3]	Mormon Channel	San Joaquin River Downstream of FCS[2]	French Camp Slough & Duck Creek	San Joaquin River along RD 17	TOTAL
Row/ Field Crops	0	0	0	0	0	0	0	8	8
LEVEE CROWN									
Developed	2	12	25	14	0	2	3	34	92
Woody Riparian	3	0	0	0	0	0	4	0	7
SEEPAGE BERM									
Woody Riparian	0	0	0	0	0	0	0	5	5
Wetlands	0	0	0	0	0	0	0	0	0
Orchard/Vineyard	0	0	0	0	0	0	0	86	86
Row/Field Crops	0	0	0	0	0	0	0	0	0
NEW LEVEE									
Woody Riparian	0	0	0	0	0	0	2	0	2
Upland Trees & Shrubs	0	0	0	0	0	0	0	0	0
Wetlands	0	0	0	0	0	0	2	0	2
Orchard/Vineyard	0	0	0	0	0	0	0	9	9
Row/ Field Crops	0	0	0	0	0	0	1	18	19
MORMON CHANNEL									
Woody Riparian	0	0	0	0	47	0	0	0	47
Wetlands	0	0	0	0	1	0	0	0	1
Orchard/Vineyard	0	0	0	0	7	0	0	0	7
Row/Field Crops	0	0	0	0	0	0	0	0	0
TOTALS									
SRA	**6,790**	**5,522**	**10,572**	**0**	**0**	**7,949**	**6,673**	**23,938**	**61.444**
Woody Riparian	**22**	**31**	**70**	**2**	**47**	**18**	**52**	**53**	**295**

Cover Type	Mosher Slough	Delta Front[1]	Calaveras	Stockton Diverting Canal	Mormon Channel	San Joaquin River Downstream of FCS[2]	French Camp Slough & Duck Creek	SJR along RD 17	TOTAL
Upland Trees & Shrubs	0	0	0	0	0	0	0	0	0
Wetlands	3	4	2	0	1	0	3	6	19
Irrigated Grass/ Park/Golf Course	0	3	9	0	0	1	0	0	13
Orchard/Vineyard	0	0	0	0	7	0	0	95	102
Row/ Field Crops	0	0	0	0	0	0	1	18	19

[1] Delta Front = Fourteenmile Slough, Tenmile Slough, Fivemile Slough; [2] Includes Smith Canal Closure Structure; [3] Stockton Diverting Canal

Table 3. Vegetation and Land Type Effects by Alternatives (updated information provided by the Corps on June 15, 2016). Values are in acres except for SRA, which is lineal ft.						
Land Cover types	**Alt 7a**	**Alt 7b**	**Alt 8a**	**Alt 8b**	**Alt9a**	**Alt 9b**
Natural Lands						
SRA*	19,630	49,586	25,674	51,985	25,508	51,819
SRA (Corps 2015a)	37,820	59,898	37,986	64,297	37,820	64,131
Riparian Trees and Shrubs	139	274	160	245	152	237
Agricultural Lands						
Orchards/Vineyards	0	95	0	95	4	99
Row/Field Crops**	15	32	15	32	16	33
Developed/Disturbed Areas						
Irrigated Grass	10	10	10	10	10	10
Ruderal	Not Estimated					
Paved/Graveled/Scraped						

* - Based on June 15, 2016 Corps email; SRA values are lower than in Corps (2015a) because they do not include ~12,000 lineal ft of SRA affected in Mosher Slough and portions of the delta front not considered in the NMFS biological opinion. The variation in this difference (10,000-18,000 ft) is not explained.
**Row/Field Crop effect values are 15 acres greater than in Corps (2015a) so as to include a setback area redesign which occurred after publication.

Even when this type of information is available, habitat in urbanized areas such as in the project area is not well-suited for analysis by traditional Habitat Evaluation Procedures models which are aimed at natural habitats in larger contiguous units. In the project area, vegetation is a mix of young volunteer growth on the water side, individual trees within the levee profile which are "protected" from immediate loss by State regulation of levee maintenance, and urban plantings on the land side. Urban terrestrial habitats are often considered lower quality than natural habitats because of limitations on size from maintenance, lack of multiple canopy layers, non-native species composition, smaller unit size, and disturbance from urban activities. Urban aquatic habitats are also viewed as secondary because of water and sediment chemical factors, bank hardening, dock structures, dredging, and association of non-native fish predators to this type of environment. Nevertheless, these urban habitats can provide important values on a regional scale because they represent the only remaining habitat remaining. If there is loss or further reduction in quality of this habitat without on- or at least near-site replacement, it can create a habitat void in the landscape.

Despite the limited quantitative analysis, the general effects of the preferred alternative can be summarized as follows. For the proposed project, permanent riparian losses are expected primarily along the margins of French Camp and Mosher Sloughs and Calaveras River due to construction as well as to establish and maintain compliance with the ETL. At best, a variance may permit a thin margin of managed vegetation to remain. A larger amount of urban trees land side but near to these waterways would also be lost. Some scrub and trees would also be removed for the delta front work. The gate closure structures would not directly affect much habitat, but will result in increasing effects on tidal function with sea level rise.

Once built, the levees must be maintained in accordance with Corps standards, with whatever variance is permitted. Detailed analyses during the PED phase may not result in an approved variance that is consistent with the assumption made during formal consultation for all reaches. Factors affecting the Corps' decision may include more detailed information on the composition, slope angle, extent of irregularities and undercuts, and other suspected factors that are not fully known at this time. The variance process will likely provide opportunity to improve some aspects of habitat quality, such as by removing non-natives in favor of natives. If an ETL variance is approved per the Corps' assumption in our Biological Opinion, a significant portion of the SRA impact could be avoided, or at least, have an allowance for some vegetation at the land-water interface. Benefits provided by this SRA, even in a limited form, include overhead and in-water cover, inputs of organic matter and insect drop, and forage and nesting habitat for birds and mammals. The assumption of an ETL variance, even if granted, would not allow the same kinds or densities of vegetation as is currently present. Limitations on woody vegetation size and type, and other maintenance requirements for maintaining visual sight lines and limiting animal burrowing are anticipated as part of that variance. Therefore, in addition to the 75-87% reduction in area which would allow woody vegetation, the quality of that remaining vegetation will be significantly reduced compared to existing conditions. Nevertheless, vegetation allowed under a variance would be far more desireable than full ETL compliance - which would create substantial corridor gaps and limit margin habitat to maintained annual grassland.

Although mitigation for the project as proposed must at least include that which is required by the formal consultation, those requirements only offset effects to listed species. Our Biological Opinion makes a finding, based on the Corps' project description including conservation measures, and other required Terms and Conditions, that the project does not jeopardize the existence or recovery of those listed species under our authority. The Biological Opinion does not address effects to other resources not involving a listed species. This detailed report represents the Service's recommendations for all resource effects of the project, and makes recommendations for the Corps to consider that we believe would best avoid and minimize effects. Included in these recommendations are possible changes to the project or form of mitigation. These do not change the finding or requirements in our Biological Opinion. If the Corps adopts any of these recommendations, reinitiation of formal consultation may be required.

In order of decreasing preference, the Service's preference for type and location of mitigation action for this project would be: (1) avoidance of impact, such as through changes in design or design approach; (2) minimization of impact, by similar means; (3) compensation on-site, as in the same location of the impact; (4) compensation near-site, and in-kind, as in very close proximity to the impact site on the same waterway, and of the same or similar habitat type, or, if an alternative habitat type - one which will benefit the affected fish and wildlife resources; (5) off-site compensation, also in-kind; and (6) off-site compensation, out-of-kind, meaning a moderately or completely different habitat type, but preferably, a cover type which is as or more desireable than that being affected. Existing conservation banks, due to their siting and other factors, would be considered of relatively low priority in this scheme.

Consistent with this hierarchy, we first recommend the effects of tidal gates be avoided by deleting the tidal gates and instead improving the slough levees up tide of the proposed gates (i.e., with levee raises and cutoff walls, as needed). We consider elimination of the tidal gate on

Fourteenmile Slough to be a much higher priority than the one proposed on Smith Canal. Fourteenmile Slough is a significant waterway in terms of length, size, and included tidal habitat which, like the lower portion of French Camp Slough, has been partially preserved over the last 100 or so years. The proposed gates and operation will have an increasingly restrictive effect on tidal flows and ecological functioning as sea level rises. The slough is largely surrounded by levees on both sides. Deficiencies and resultant needs to bring these slough levees up to the project design standards (200 year event + sea level rise) probably relate to levee height, seepage as a consequence of the materials in the existing levees, as well as numerous encroachments in the forms of boat docks, other structures, and individual trees. These encroachments would need to be removed, and much of the slough levees would need to be raised and have cutoff walls installed. More work would be needed on the right bank, because part of the left bank is already included in the delta front element. In order to maximally preserve tidal habitat, any additional land needed for these improvements would need to come from the land side of the levees. This would overlap back yards of residential properties immediately adjacent to the levees and possibly homes as well, requiring some relocations and other infrastructural work.

Smith Canal is of lessor priority as it connects to deep water in a more highly modified section of the mainstem San Joaquin River. Its location and straight alignment suggest it may be an artificial channel. A variety of fish have been collected in the State's beach seining program, which has a station at Dad's Point near the mouth of Smith Canal, including delta smelt and chinook salmon, so there seems to be at least some incidental use of the canal in some years.

The Corps should weigh the risks of retaining these gates in its design versus eliminating them in light of the uncertainties regarding the status and distribution of delta smelt and its habitat in the future. Delta smelt are currently infrequently seen in the project area, but this circumstance may change with sea level rise and changes to the water export system; this may cause salinity to intrude further, pushing the entrapment zone inland, including to the east towards the project area. Habitat restorations might be done in closer proximity to the project area which could affect the species distribution. Delta smelt populations, while currently very low, might increase. One study published since the Corps DEIS/R concludes that the Antarctic ice sheet may add more than a meter of sea level rise by the year 2100 (DeConto and Pollard 2016) which, if realized, would require even longer and more frequent gate operations than modeled by the Corps. These and other factors may further affect the abundance and distribution of delta smelt and, as a consequence, take of the species by this project. Our biological opinion establishes a fixed low threshold of take for reinitiation of consultation (i.e., two (2) larval or adult delta smelt east of the gate structures throughout the project life). While the need and outcome of such reinitiation in the future is uncertain, this can be avoided entirely by substituting the gate structures with slough levee improvements.

We also recommend the Corps consider near site locations in the French Camp Slough vicinity for habitat mitigation. One of these is an undeveloped area between Walther Slough and French Camp Slough just west of I-5. In 1913 topographic maps, this appears as open water or marsh (Figure 2). It apparently has since been used as a landfill, is higher ground, and is now capped. This past use and position within a floodway may explain the lack of urban development of this area. One mitigation concept would be to remove the landfill materials and restore tidal marsh and open water values, replacing functions and values of the types affected by gate closure

operation. Another idea would be to repurpose Van Buskirk golf course, which borders the left bank of French Camp Slough and the San Joaquin River, into natural habitats. Here, a setback levee could be constructed which could support riparian forest and other habitat types.

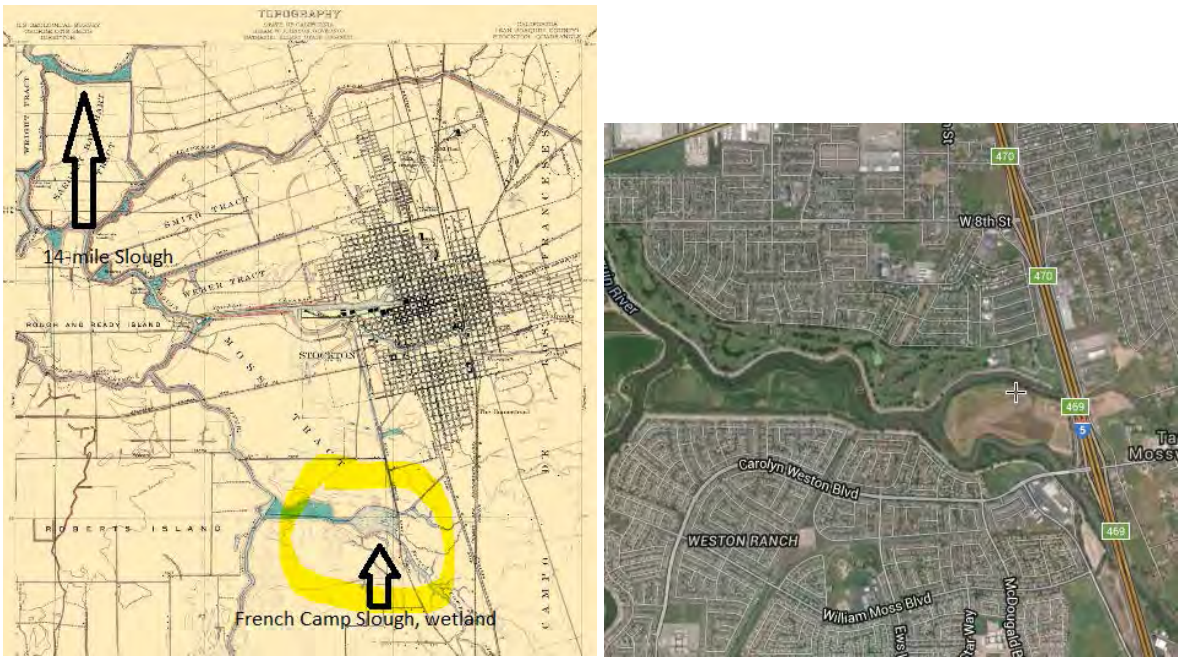


Figure 2. Location of potential mitigation site for tidal wetland and other cover types between Walther and French Camp Sloughs shown as a historic wetland in 1913USGS map (left, highlighted area) and current closed landfill in 2015 (right, near I-5). Van Buskirk golf course is to the left (east) of the closed landfill and is identified as a potential mitigation site for SRA and riparian cover.

The Corps should consider commissioning a custom mitigation option that provides tidal wetland/channel and SRA values much closer to the project area. Candidate areas for tidal restoration would be the low-lying, predominantly agricultural lands adjacent to major waterways and sloughs, in closest proximity to the areas being affected, in this case, Shima, Wright, and/or Rindge Tracts. These are also the areas which were the most recently reclaimed, appearing as tidal marsh around the turn of the century (Figure 3).

Approved conservation banks are an acceptable form of mitigation for the proposed project, although the least preferred option in this case. The Liberty Island and North Delta Conservation Banks are shallow tidal wetlands which provide values to the delta smelt. The Cosumnes Floodplain Mitigation Bank has SRA, floodplain wetland, and floodplain riparian habitat credits which would provide values to listed salmonids. The service area of these banks includes the proposed project area, but they are all at least 20 miles from the project area, and would be considered off-site. There are also differences in the nature of the project effects and the benefit of such bank credits. The project effects include both local losses of access to habitat, as well as functions as a result of tidal exchange. These will not be replaced on site. The distribution of

Figure 3. Upper: 1895 San Joaquin county map depicting the extent of marsh (shaded area) on Shima, Wright, and Rindge Tracts in proximity to Fourteenmile Slough (arrow); Lower: 2015 satellite image of same, showing urban expansion, and the rerouting and widening of some channels in the vicinity.

this habitat over the landscape can be a factor in determining the benefit to a species. For example, delta smelt may migrate to different parts of the Delta, depending on water year, flow, and other factors. Juvenile salmonids may use a series of locations to rear and grow. An accumulation of impacts in some portions of the Delta that are mitigated elsewhere can, over the long term, affect the range of a species or local subpopulations.

There is a ~0.5 mile long section located on the left bank of the Calaveras River where the levee is set back away from the water's edge (Figure 4). It appears to be higher ground which may be partially fill. A portion of the section appears to be a covered dock or marina. This site should be considered as potential on- or near-site mitigation to offset SRA and riparian value losses.

Figure 4. Location of existing set back area of levee on the right (south) bank of the Calaveras River recommended for consideration as SRA and riparian cover mitigation. Red shading is the extent of the existing levee profile plus maintenance easements.

As a possible option to the setback area along Fourteenmile Slough, there is considerable opportunity to increase SRA and riparian cover along RD 17 phase III if a modified design were developed there and then added to the preferred alternative. Rather than the fix-in-place approach with cutoff walls, seepage berms, and limited setbacks currently proposed as a Section 408 project, it could be done with a larger setback(s) that would allow significantly more SRA and riparian cover types. The Corps' version for RD 17 (Alternative RD 17-E *in* Corps 2015a), which was not included in the preferred alternative, had one significant setback area, <1 mile long out of the ~9+ mile east bank length, in the vicinity of Old River. However, the Corps previously conceived a much larger setback in the northern portion of RD 17 (Alternative RD 17-G *in* Corps 2015a) that would yield 4-5 miles of such SRA, but did not carry it forward because it had lower net economic benefits. The State has included a concept similar to

Alternative RD 17-G in the tentatively recommended plan for its San Joaquin Basin Wide Feasibility Study (BWFS) (Figure 5). The BWFS identifies those components which the State would recommend be included in the preferred alternative in future State-Federal feasibility studies. This modified option for RD 17 would induce significant development of much of RD 17, but less than that which is currently proposed as a Section 408 project, while providing for habitat enhancement and buffer distance between urban development and the river.

Neither the tentatively selected plan, nor any of the alternatives, appears to address the original planning objective of ecosystem enhancement or restoration, which would be beyond that required for mitigation of impacts. Examples of enhancement opportunities already identified in the BWFS include levee setbacks that would allow more habitat (RD 17, River Miles 60-65 on the mainstem San Joaquin River, Paradise Cut, Mormon Slough; Figure 5), protection to ensure the future of existing habitat (e.g., through the creation of conservation easements), or additional measures to facilitate restoration on otherwise protected lands, consistent with any flood control purpose (plantings, earthwork, habitat structure). We recommend the Corps review these opportunities, and include ecosystem restoration and enhancement elements in its preferred alternative that would achieve this planning objective.

Figure 5. Elements of the State's Basin-Wide Feasibility Study tentative recommended plan in the vicinity of the proposed project include several regional options for habitat enhancement. Improvement to RD 17 with an additional setback area downstream of Middle River in lieu of fix-in-place improvement is highlighted (alignment offset within yellow circle).

CONCLUSION

For the San Joaquin River Feasibility Study, our findings are limited by the comparatively low level of quantification for a Federal project of this scope. Based on the available information, we conclude that the preferred alternative will result in reductions in the amount and value of riparian and SRA cover on several urbanized waterways in the greater Stockton area that will require mitigation. Due to the local rarity of this remaining habitat, and uncertain future consequences of sea level rise and urban development, we recommend project modification in the form of deleting at least one tidal gate, the one on Fourteenmile Slough, and instead raising the slough levees. We also prefer mitigation be done nearer to the project area than existing conservation banks.

RECOMMENDATIONS

For the proposed Lower San Joaquin River Feasibility Study, the Service recommends the Corps:

1. Resolve uncertainties and information gaps in the study, as follows:

   a) Determine vegetation impacts and future allowances in all project locations with certainty, prior to construction;
   b) Comprehensively evaluate the effects of tidal gate operation on salinity, flow, temperature, other water quality factors, and all relevant ecological processes and related recreational activities, in the affected sloughs and adjacent waterways; this should include analysis for reasonable sea level rise predictions over the project life.
   c) Conduct ground-based assessment of vegetation losses, including but not limited to cover typing, species, height, diameter, substrate, and inundation frequency; and a habitat evaluation procedures study if deemed appropriate by the Service;
   d) Develop and propose mitigation to offset habitat losses, using the guidance provided in this report (see Discussion, above), with exact locations and quantities of all mitigation plantings, and plans for monitoring;
   e) Complete a quantitative assessment of impacts for the preferred alternative; and
   f) Identify staging and borrow areas.

2. Evaluate and consider the following alternative measures to avoid impacts, and locate mitigation sites as near to the impact sites as possible before going off-site to approved conservation banks:

   a) Eliminate the proposed tidal gates, especially the one on Fourteenmile Slough, and instead improve the slough levees, as a means to avoid impacts of gate operation to tidal habitat and function;
   b) Restore the historic wetland between Walther and French Camp Sloughs, including removal of capped landfill material;
   c) Create tidal wetlands as near as possible to impact sites on Shima, Wright, and/or Rindge Tract lands;

d) Create SRA and riparian cover as near as possible to impact sites on candidate areas identified on French Camp Slough north bank (Van Buskirk golf course) and the lower Calaveras River south Bank (existing set back levee area);
e) Develop an alternative for RD 17 phase III improvements that combines a setback levee with restoration of SRA cover to the maximum extent possible.

3. Develop an operations and maintenance manual for completed project features to provide maximal habitat value conditions consistent with any approved ETL variance, other maintenance standards needed for project reliability and safety, and the Service's and NMFS' Biological Opinions. This may include measures such as selective removal of non-natives and planting of natives

4. Reinitiate section 7 consultation with the Service and NMFS as appropriate for any changes in the project description, including but not limited to development of a mitigation plan;

5. Conduct appropriate consultation with the CDFW on effects to State-listed species;

6. Develop enhancement and restoration opportunities for incorporation to the maximum extent possible into the preferred alternative for the project.

REFERENCES

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ENVIRONMENTAL ADDENDUM C

NATIONAL HISTORIC PRESERVATION ACT, SECTION 106, COMPLIANCE

(PROGRAMMATIC AGREEMENT & CORRESPONDENCE)

LOWER SAN JOAQUIN FEASIBILITY STUDY

PROGRAMMATIC AGREEMENT
BETWEEN
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY PROJECT,
SAN JOAQUIN COUNTY, CALIFORNIA

WHEREAS, the U.S. Army Corps of Engineers (Corps) has been conducting a study of flood protection systems on the Lower San Joaquin River area as described in the Lower San Joaquin River Feasibility Study (LSJRFS), generally in accordance with the Corps Section 905(b) Analysis [in accordance with the Water Resources Development Act (WRDA) 1986, Public Law (PL) 99-662] dated 23 September 2004. The Section 905(b) Analysis was approved by the Commander, South Pacific Division (SPD) on 10 June 2005. The Section 905(b) Analysis was prepared in response to House Report 105-190, which accompanied the Energy and Water Development Appropriations Act of 1998 (PL 105-62); and

WHEREAS, the purpose of the study is to determine the level of Federal interest in providing increased flood protection that is adaptable to future physical and environmental conditions and in implementing any necessary flood protection improvements in the study areas as soon as possible; and

WHEREAS, the study has identified a set of construction and management measures that when approved and implemented (the Project, described at Attachment 1), would provide sufficient flood protection meeting Federal requirements for taking part in the Project, such measures including approximately 24 miles of levee improvements including cutoff wall, deep soil mixing (seismic), new levee, levee geometry improvements, and erosion protection, as well as two closure structures on tributaries; and

WHEREAS, the Project area is along the San Joaquin River parallel to the City of Stockton in San Joaquin County, and maps of the Project's Area of Potential Effects (APE) are included as Attachment 1, Figure 1 to this Programmatic Agreement (Agreement); and

WHEREAS, the Corps is proceeding with the Project and has determined that the approved Project constitutes an Undertaking as defined in the Advisory Council on Historic Preservation Procedures, 36 CFR § 800.16(y) and therefore is subject to Section 106 of the National Historic Preservation Act of 1966, 54 U.S.C. § 306108 (NHPA); and

WHEREAS, the Corps has determined that effects on properties that are either included in, or are eligible for inclusion in the National Register of Historic Places (NRHP) cannot be fully determined prior to final approval of the Project; and

WHEREAS, pursuant to 36 C.F.R. § 800.4(b) (2), the Corps may implement the Project in phases as funding is available and construction authority is provided and, as a result, efforts to identify and evaluate Historic Properties and the determination of effects pursuant to 36 C.F.R. §

800.14(b) (1) (ii), for all phases and segments of the Project may be deferred until more specific project information for each phase is known; and

WHEREAS, a determination of effect and, if necessary, an Historic Properties Treatment Plan (HPTP), cannot be developed until after approval and execution of this Agreement because the specific project designs that may alter the levees will not be developed until after the Project has been approved for design; and

WHEREAS, this Agreement will establish the processes the Corps will follow for compliance with 54 U.S.C. § 306108 (formerly 16 U.S.C. § 470f, referred to hereinafter as "Section 106"), taking into consideration the views of the Signatory and Concurring Parties; and

WHEREAS, a total of 35 recorded potentially historic resources (Attachment 2) are known to be present adjacent to or within levee footprints in a portion of the Project study area, and although archaeological inventories has been completed within parts of the Project study area through other projects, substantial portions of the Project study area have not been inventoried; and

WHEREAS, levees, alluvial deposition, and other built environment features have obscured historic properties and a full assessment of archeological sites cannot be made in advance of construction, and there is a high probability for buried potentially historic resources that may not be identified prior to construction and that also may be eligible for inclusion in the NRHP, and therefore this Agreement documents a framework for managing post-review discoveries per 36 C.F.R. § 800.13(a)(1) as necessary; and

WHEREAS, the Corps has consulted with the California State Historic Preservation Officer (SHPO) pursuant to Section 106 and the implementing regulations described under 36 CFR Part 800; and

WHEREAS, the Corps has consulted with the San Joaquin Area Flood Control Agency, The Central Valley Flood Protection Board and the California Department of Water Resources and has invited them to participate as Concurring Parties; and

WHEREAS, in accordance with 36 C.F.R. §§ 800.2(c)(2)(ii)(A), 800.3(f)(2), and 800.14(b)(2)(i), the Corps has consulted with and invited the Buena Vista Rancheria of Me-Wuk Indians, the California Valley Miwok Tribe, the Ione Band of Miwok Indians, the Nototomne/Northern Valley Yokuts, the United Auburn Indian Community, and the Wilton Rancheria (Tribes) to be Concurring Parties to this agreement and will continue to consult with them on its implementation; and

WHEREAS, the Corps will make the terms and conditions of this Agreement part of the conditions of any contracts issued by the Corps for this Project; and

WHEREAS, the definitions set forth in 36 C.F.R. § 800.16 are incorporated herein by reference and apply throughout this Agreement; and

WHEREAS, the definitions for Signatory Parties set forth in 36 C.F.R. § 800.6(c)() (1), and the definitions for Concurring Parties set forth in 36 C.F.R. § 800.6(c)(3), are incorporated herein by reference and apply throughout this Agreement; and

WHEREAS, in accordance with 36 C.F.R. § 800.14(b)(3), the Corps notified and invited the Advisory Council on Historic Preservation (ACHP) on January 13, 2016 per 36 C.F.R. § 800.6(a)(1)(C) to participate in consultation to resolve potential adverse effects of the Project, including development of this Agreement, and the ACHP has declined to participate in a letter dated April 7, 2016; and

WHEREAS, in accordance with 36 C.F.R. § 800.6(a)() (4) and 36 C.F.R. § 800.14(b)(2)(ii), the Corps has notified the public of the Project and provided an opportunity for members of the public to comment during the National Environmental Policy Act (NEPA) public review (public review comment period ended on April 13, 2015) on the Project and the Section 106 process as outlined in this Agreement;

NOW, THEREFORE, the Signatories agree that the Undertaking will be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties and to satisfy the Corps' Section 106 responsibilities for all individual aspects of the Undertaking.

The Corps will ensure that the following measures are carried out:

STIPULATIONS

I. REVIEW PROCEDURES AND TIMEFRAMES

For all documents and deliverables produced in accordance with the stipulations of this Agreement, the Corps shall provide a draft document to the SHPO, Concurring Parties, and Native American interested parties and Tribes for review. Any written comments provided by the SHPO, Concurring Parties, and Native American interested parties and Tribes, within thirty (30) calendar days from the date of receipt, shall be considered in the revision of the document or deliverable. The Corps shall document and report the written comments received for the document or deliverable and how comments were addressed. The Corps shall provide a revised final document or deliverable to the SHPO for concurrence. The SHPO shall have thirty (30) calendar days to respond.

Failure of the SHPO, Concurring Parties, and Native American interested parties and Tribes to respond within thirty (30) calendar days of any submittal shall not preclude Corps from moving to the next step in this Agreement.

Should the SHPO object to the final document or deliverable submitted for concurrence, the Corps and SHPO shall consult for a period not to exceed fifteen (15) calendar days following

the receipt of the SHPO's written objection in an effort to come to agreement on the issues to which the SHPO has objected. Should the SHPO and the Corps be unable to agree on the issues to which the SHPO has objected, the SHPO and the Corps shall proceed in accordance with **Stipulation XVI (Dispute Resolution),** below. The timeframe to consult to resolve a disagreement or objection may be extended by mutual consent of the Corps and the SHPO.

II. QUALIFICATIONS

A. Professional Qualifications: All technical work required for historic preservation activities implemented pursuant to this Agreement will be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the Secretary of Interior's Professional Qualifications Standards for archeology, architectural history, or history, as appropriate (48 FR 44739). "Technical work" here means all efforts to inventory, evaluate, and perform subsequent treatment of potential Historic Properties that is required under this Agreement. This stipulation will not be construed to limit peer review, guidance, or editing of documents by SHPO and associated Project consultants.

B. Historic Preservation Standards: Historic preservation activities carried out pursuant to this Agreement will meet the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-44740), as well as standards and guidelines for historic preservation activities established by the SHPO. The Corps will ensure that all reports prepared pursuant to this Agreement will be provided to the Signatories, Concurring Parties, and Native American interested parties and Tribes and are distributed in accordance with **Stipulation XV**, and meet published standards of the California Office of Historic Preservation, specifically, Preservation Planning Bulletin Number 4(a), "Archaeological Resources Management Reports (ARMR): Recommended Contents and Format" (December 1989).

C. Archeological Monitor Standards: Archeological monitoring activities required for exploratory, construction, or construction related ground disturbing activities implemented pursuant to this Agreement will be carried out by a person meeting, at a minimum, the Secretary of Interior's Professional Qualifications Standards for prehistoric or historic archaeology, as appropriate (48 FR 44739). "Archeological monitoring" here includes monitoring ground disturbing activities that have been determined by the Corps to be occurring in areas that are likely to have Historic Properties or buried resources.

III. AREA OF POTENTIAL EFFECTS

An overall APE map for the Project is included as Attachment 1, Figure 1. Because the Project will occur in phases, it may be necessary to revise the APE for each phase as phases are authorized and funded for design and construction. Prior to activities under **Stipulation V**, the Corps will submit to the SHPO, Concurring Parties, and Native American interested parties and Tribes a map of the revised APE for the current phase and a description of the Project activities

occurring for that phase, in accordance with **Stipulation I**. Revision of the APE will not necessitate modifications to this Agreement.

A. For purposes of this Agreement, the APE for each phase will include the levee segment and a corridor extending not less than 300 meters to either side of the centerline of the levee and will take into account the likelihood of direct and indirect effects to Historic Properties resulting from the Project.

B. the APE also will include:

1. The extent of all Project construction and excavation activity required to construct flood control facilities and to modify irrigation and drainage infrastructure; and

2. The additional right-of-way/easements obtained by the Corps as part of the Project's features; and

3. All areas used for excavation of borrow material and habitat creation (environmental mitigation); and

4. All construction staging areas, access routes, spoil areas, and stockpiling areas; and

5. Sensitive structures within range of vibratory or sonic disturbances and historic properties and districts close enough to project construction that the integrity of their setting or feeling could be affected.

C. After a revised APE has been defined and consulted on in accordance with **this stipulation**, construction or other Project activities may require revisions to the APE. If an APE is revised, the Corps will consult on each revision in accordance with **Stipulation I**, and the Corps will determine the potential for Project activities in a revised APE to affect potential Historic Properties, in accordance with **Stipulation V**.

IV. HISTORIC PROPERTIES MANAGEMENT PLANNING

A. Historic Property Management Plan: The Corps, in consultation with the Signatories, Concurring Parties, Tribes, and other Native American tribes or other interested parties, will develop a Historic Property Management Plan (HPMP), which provides the framework by which remaining identification, evaluation of eligibility, findings of effect, and general approaches to resolution of adverse effect efforts to Historic Properties will occur. The HPMP will follow the outline in Attachment 3. The HPMP will be appended to this Agreement (Attachment 4) and will form the basis for any Historic Property Treatment Plans (HPTPs) that may be required for one or more phases of the Project. The HPMP will be developed after execution of the Agreement, but before construction commences and reviewed in accordance with **Stipulation I**. For the overall Project and individual phases, the HPMP provides standardized methods for dealing with unanticipated discoveries in accordance with 36 C.F.R. § 800.13(a). The HPMP

may be amended consistent with **Stipulation I** and appended to this Agreement without amending the Agreement. In addition to the matter in Attachment 3, the HPMP will address the following topics:

1. **Historic Context, Recordation, Evaluation and Treatment of Levees**: There are no known National Register-eligible levees within the Project APE. Seven levees have been recorded, of which two have been evaluated for their individual eligibility for listing in the NRHP, and found not eligible. However, no overall historic context, identification or evaluation of the levee system has been developed. In order to document the levees for evaluation, the Corps will develop an historic context and evaluation plan for recordation of the Lower San Joaquin River levees as historic structures within the Project APE to support evaluation of Project effects. If an historic context and/or evaluation plan for the levees within a Project APE is subsequently developed, the Corps may incorporate it as needed. The Evaluation Plan shall consider the levees in the context of the entire San Joaquin levee system. Additionally, the evaluation plan shall require the development of clear and specific criteria for determining: (1) recordation guidelines for the levees within the APE, (2) contributing and non-contributing elements of the levee system, (3) thresholds of adverse effect, and (4) general planning for treatment of adverse effects. The evaluation plan shall be developed after execution of the Agreement and before construction commences. The Corps shall submit the evaluation plan for review, in accordance with **Stipulation I**.

2. **Standard Protection Plans**: The Corps and the SHPO may develop standard protection plans (SPP) for classes of resources that commonly occur in the APE and that may be encountered during construction. SPPs will include a clear description of the class or classes of resources covered and the specific actions that the Corps will take to avoid or address adverse effects to those resources. The Corps will submit all SPPs for concurrent review to the SHPO, Concurring Parties and appropriate Native American Tribes, following the procedures in **Stipulation I**.

B. Historic Property Treatment Plans: The Corps will consult the SHPO, pursuant to 36 C.F.R. § 800.5, when the Corps has determined that a Project activity will result in adverse effects to a Historic Property. The Corps will prepare a Historic Property Treatment Plan (HPTP) specific to the phase of the Project or a particular Historic Property to describe how the Corps intends to resolve adverse effects. The HPTP may be appended to the HPMP. HPTPs will be consistent with the HPMP and may incorporate by reference historic contexts, methods, procedures, and research designs from the HPMP, as appropriate. When incorporating portions of the HPMP by reference, the HPTP will at a minimum include the date of the HPMP and where the HPMP is available to be viewed.

1. Scope: An HPTP may address individual or multiple Historic Properties or Historic Property types. An HPTP will stipulate those actions the Corps will take to resolve the adverse effects of the Project on Historic Properties within the project phase or specific action specified by the HPTP. For properties eligible under criteria specified in 36 C.F.R. § 60.4 (A) through (D), mitigation other than data recovery may be considered in the

treatment plan (e.g., HABS/HAER, oral history, historic markers, exhibits, interpretive brochures or publications, or other means as deemed appropriate by the signatories). In addition to the SHPO, Concurring Parties, and Native American interested parties and Tribes, the Corps may invite the interested public, in accordance with **Stipulation XIII** (Public Consultation and Public Notice), to comment on the means of mitigation, as appropriate. HPTPs will include specifications (including content and number of copies) for publication of brochures, pamphlets or synthesis reports for distribution to the general public. The Corps will ensure that all provisions of an HPTP are carried out as stipulated in the HPTP.

2. Review: HPTPs will be submitted and reviewed in accordance with **Stipulation I**, except for those HPTPs developed for Historic Properties discovered during construction activities, which will follow the review timeframes identified in **Stipulation VIII**. Circulation of an HPTP will not include a recirculation of the HPMP.

3. Amendments/Addendums/Revisions: If an Historic Property type that is not covered by an existing HPTP is discovered within the APE subsequent to an initial inventory effort for a phase, or if there are previously unexpected effects to an Historic Property, and the Corps and SHPO agree that the Project may adversely affect the Historic Property, the Corps will submit an addendum to the HPTP or a new HPTP to the SHPO and Concurring Parties for review and comment, and will follow the provisions of **Stipulation VIII**. The HPTP may cover multiple discoveries for the same property type.

4. Data Recovery: In consultation with the SHPO, if data recovery is proposed to address adverse effects, the Corps will ensure that HPTPs are developed consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation and the ACHP's "Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites" (ACHP, May 18, 1999) and 36 C.F.R. § 800.6(b), and submitted to SHPO consistent with Stipulation I of this PA.

5. Final Phase Report Documenting Implementation of the Historic Properties Treatment Plan(s): Within one year after the completion of all work for each phase of the Project, the Corps will submit to the SHPO, Signatory Parties, Concurring Parties, and Native American interested parties and Tribes, a Final Phase Report documenting the results of all work prepared for that phase under the HPTPs, and the information learned from each of the Historic Properties. A Final Public Synthesis Report will be developed documenting the entire project that will discuss any cumulative effect that the work may have created. The submittal of the Final Phase Report and the Final Public Synthesis Report will be in accordance with **Stipulation I**.

V. IDENTIFICATION AND EVALUATION BEFORE HPMP APPROVAL

Should the HPMP not be finalized at the time that a phase of the Project may be proceeding to design and construction, the Corps will consult with the Signatory Parties before issuing a notice

to proceed on any phase of the Project. Should the Signatory Parties agree that the work may proceed, the Corps will comply with **Stipulation V A, B, and C** and, as necessary, **Stipulation VI** until the HPMP is finalized following the procedures in **Stipulation I** , at which time the Corps will follow the HPMP. The Corps will complete any identification and evaluation, and as necessary, any assessment of effects to Historic Properties prior to proceeding with construction and review will be in accordance with **Stipulation I.** If the Signatory Parties do not agree to proceed with the phase of the Project, the Corps will follow **Stipulation XVI.**

A. Identification of Potential Historic Properties: The Corps will initiate an inventory of Historic Properties within the APE, consistent with the Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716–44740) for the Project, or for individual phases of the Project, as construction details become available.

Inventory recordation will include features, isolates, and re-recordation of previously recorded sites, as necessary. The inventory will ensure that all potential Historic Properties such as historical structures and buildings, historical engineering features, landscapes, viewsheds, and traditional cultural properties (TCPs) with significance to Native American or other communities, and archeological sites, and districts are recorded. Recordation of historic structures, buildings, objects, and sites will be prepared using the appropriate California Department of Parks and Recreation (DPR) 523 Site Record forms. Specific efforts to be undertaken will include (but not be limited to) the following

1. The Corps will acquire a current and complete records and literature search from the Central California Information Center at California State University, Stanislaus, prior to conducting archaeological surveys of the APE. Records and literature searches will be considered complete and current for a period of five years after they are conducted unless, in the professional opinion of Corps archaeologists, more frequent updates are required.

2. The Corps will maintain ongoing consultation with Native American Tribes and individuals, as described in **Stipulation XI**, to identify properties that are of religious and cultural significance to them and that may be eligible for the National Register. Traditional Cultural Properties will be inventoried and evaluated in accordance with the guidance presented in *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties* and consistent with the ACHP guidance documents *Native American Traditional Cultural Landscapes and the Section 106 Review Process: Questions and Answers* and *Native American Traditional Cultural Landscapes Action Plan.*

3. The Corps will complete and report the results of all required potential Historic Properties inventories of the Undertaking's APE in a manner consistent with the "Secretary of the Interior's Standards and Guidelines for Identification" (48 FR 44720-23) and take into account the National Park Service's publication, "The Archeological Survey: Methods and Uses" (1978: GPO stock #024-016-00091). Inventories will include archeological surveys and inventories of historic buildings, structures, districts, and landscapes. The Corps will include a geoarcheological evaluation of the APE in its

survey and will undertake subsurface reconnaissance as the evaluation recommends. Surveys will include areas not previously surveyed and those where the Corps, in consultation with SHPO, deems previous surveys to be inadequate, e.g. areas with changes in landscape due to fire, erosion, flooding episodes which may have exposed previously unknown potential Historic Properties. The Corps will also include additional areas that may be affected by changes in the project design, borrow areas, haul roads, staging areas, extra work space, mitigation sites, and other ancillary areas related to the Undertaking. If identified potential Historic Properties can be evaluated for the NRHP based on the results of survey, context statements, and historic documentation, then the Corps may request SHPO concurrence with those eligibility determinations without further study.

4. The Corps will include in its site recordation documents all unrecorded archeological sites, linear features, and isolates encountered in the course of the survey. The Corps will prepare updated records of previously recorded sites if there has not been an update in the past two years. The Corps' survey will record all prehistoric sites and all historical sites, structures, buildings, and engineering features greater than forty-five (45) years of age. Historic sites to be recorded will include, but not be limited to: commercial, residential, and ecclesiastical buildings, roads, trails, railways, bridges, levees, culverts, and agricultural features, including ditches.

5. The Corps will use the California Department of Parks and Recreation (DPR) Form 523 to record all newly discovered historic or prehistoric archeological sites and isolates, previously recorded archeological sites, and where necessary, will create updated site records using the DPR 523 Form. Isolates will be numbered sequentially, plotted on a map, and recorded on a single table within the report. The Corps will examine non-linear sites that extend outside of the APE in their entirety unless access to land is prohibited or the scale of the resource makes doing so prohibitive. In the event access cannot be gained, the Corps will consult with SHPO regarding appropriate means of evaluating a given site.

B. Property Types Exempt from Evaluation: Attachment 5 to this Agreement lists the property types that the Signatories agree will be exempt from evaluation as determined by the Corps in consultation with the SHPO. The Corps will evaluate all other identified properties in accordance with **Stipulation V C**.

C. Evaluation of Potential Historic Properties: The Corps, in consultation with SHPO, other parties to the Agreement, and Native American Tribes, as appropriate, will ensure that determinations of eligibility are made for all potential Historic Properties within Project APE **(Stipulation III)** not covered by an SPP (see **Stipulation IV A 2**). Potential Historic Properties will be evaluated by a qualified professional, per **Stipulation II** , for their eligibility for listing in the NRHP consistent with the Secretary of Interior's Standards for Evaluation, 36 C.F.R. § 60.4. In accordance with **Stipulation I**, the Corps will submit a completed inventory and evaluation for each phase of Project work.

1. Evaluation Plan: If determining the National Register significance of a potential Historic Property requires testing or another form of formal evaluation, an Evaluation Plan (EP) will be developed to provide for consistent and thorough evaluation. The Corps will ensure that EPs prepared for previously unevaluated potential Historic Properties identified within the APE are consistent with the "Secretary of the Interior's Standards and Guidelines for Evaluation" (48 FR 44723-26) and include a research design and historic context, as appropriate. The Corps will develop individual EPs to address different categories of property types. An EP will be used whenever the Corps, in consultation with the SHPO, other parties to the Agreement, and Native American Tribes, as appropriate, determines that a potential Historic Property should be evaluated and use of the EP is essential to determine the boundaries and data potential of the site. If the Corps undertakes any archaeological testing, such testing will be sufficient to define and delineate the site clearly, and to determine the site's eligibility for inclusion in the NRHP. Archaeological excavation undertaken by the Corps under this Stipulation will occur only within the areas of proposed ground disturbance for the undertaking and will not exceed four (4) cubic meters of soil or five percent (5%) of the surface of the site without consultation with the SHPO. The Corps will submit all EPs for concurrent review to the SHPO, Concurring Parties and appropriate Native American Tribes, following the procedures in **Stipulation I.**

2. Eligibility Determination: After carrying out an Eligibility Plan, if the Corps and the SHPO cannot agree on the eligibility of a property for the NRHP, the Corps will obtain a determination from the Secretary of the Interior in accordance with 36 CFR Part 63. The determination of the Secretary will be final for purposes of this Agreement. Any other disputes will be settled following the procedure set forth under **Stipulation XVI.**

VI. ASSESSMENT OF EFFECTS

The Corps will apply the criteria of adverse effect, pursuant to 36 C.F.R. § 800.5(a)(1), to all Historic Properties within the APE. The Corps will submit findings of effects in accordance with **Stipulation I.**

If effects to Historic Properties are found to be adverse, provisions at **Stipulation IV. B** will be followed.

VII. NOTICES TO PROCEED WITH CONSTRUCTION

Notices to Proceed may be issued by the Corps for individual construction segments, defined by the Corps in its construction specifications, after an Historic Properties inventory including that segment has been completed (per **Stipulation IV** or **Stipulation V**), and before treatment of adverse effects on Historic Properties within the APE provided that:

A. A plan to respond to inadvertent archeological discoveries for that phase of the Project has been prepared by the Corps, reviewed in accordance with the provisions **Stipulation I,** and approved by the SHPO; and

B. Project actions do not encroach within 30 meters (100 feet) of the known boundaries of any potential Historic Property as determined from archeological site record forms, other documentation, or as otherwise defined in consultation with the SHPO, Concurring Parties, and Native American interested parties and Tribes, as appropriate; and

C. A monitor meeting the professional qualifications as described in **Stipulation II,** is present during any Project activities that are anticipated to extend either vertically or horizontally into any areas designated to be culturally sensitive by the Corps, in consultation with SHPO, except in phases of construction for slurry walls where visual inspection of the construction area cannot be safely or feasibly accomplished.

VIII. GEOTECHNICAL INVESTIGATIONS

For the purposes of gathering engineering data for Project planning and design, it may be necessary for the Corps to conduct limited geotechnical investigations at areas within the Project before all inventory and evaluation of Historic Properties within the Project is completed.

A. The Corps may conduct geotechnical investigations (e.g., borings, potholing, or trenches) for planning and exploratory efforts. The Corps will follow **Stipulation VIII (A1)** and **(2),** or may follow **Stipulation VIII (A) (3)** if unable to follow Stipulation **VIII (A) (1)** and **(2):**

> **1.** A records and literature search and consultation with Native Americans has been conducted and it has been determined there are no known potential Historic Properties located within 50 feet of the areas identified for geotechnical investigations, and an archeological field survey of the areas identified for geotechnical investigations has been conducted and it has been determined there are no known potential Historic Properties present;
>
> **2.** A potential Historic Property is identified during the records and literature search or field survey and consultation process as being within an area where geotechnical investigation will occur, and the geotechnical investigation is relocated at least 50 feet outside the site boundaries; or
>
> **3.** Provisions for an archeological monitor meeting the qualifications described in **Stipulation II C** are included in the contract specifications for the geotechnical investigations. As appropriate, or when geotechnical activities may occur in sensitive areas, an archeological monitor will be present for all ground disturbing activities.

B. If potential Historic Properties are discovered during geotechnical investigations, the Corps will follow **Stipulation IX;**

C. The Corps will prepare a Memorandum for Record documenting the results of the records and literature search, the archeological field survey, any decisions to relocate geotechnical investigation areas, the determination for inclusion of an archeological monitor for ground disturbing activities, and a record of communication with Native American interested parties and Tribes, as appropriate. The document will be reviewed in accordance with **Stipulation I.**

IX. DISCOVERY OF UNKNOWN POTENTIAL HISTORIC PROPERTIES

The Corps is responsible for complying with 36 C.F.R. § 800.13(a) in the event of inadvertent discoveries of potential Historic Properties at any time during implementation of the Project. The HPMP will provide procedures for complying with post review and inadvertent discoveries of potential Historic Properties. If the Corps authorizes work before the HPMP is finalized and there is a discovery of a previously unknown potential Historic Property, the Corps will follow 36 C.F.R. § 800.13(b). Additionally, the Corps will apply the following procedures:

A. Workforce Training: During implementation of Project activities, the Corps, or archeologists meeting the professional qualifications as described in **Stipulation II**, will provide training to all construction personnel, before they begin work, regarding proper procedures and conduct in the event that archeological materials are encountered during construction.

B. Human Remains: Treatment of human remains is governed by **Stipulation XII**.

X. CURATION

There are no Federal lands within the Project. The Project must acquire real estate rights from the underlying landowners sufficient to allow construction, including rights sufficient to manage potential Historic Properties that may be affected by construction, operation and maintenance of the project. The rights to be taken will not convey ownership of artifacts or other materials to the Federal government, but will provide for Federal custody of such artifacts and materials until analyses specified in planning documents called for in the stipulations of this Agreement are completed. Federal custody during that time will be in accordance with the provisions at 36 C.F.R. § 79. At the end of the studies, as agreed upon by consultation among the Parties to this Agreement, the Corps will relinquish custody of the artifacts and other materials to the owner.

The Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. § 3001 *et seq.*) does not apply to this Project as there is no Federal land but this Agreement incorporates by reference the definitions for "human remains" and "funerary objects" set forth in 43 C.F.R § 10.2(d), which will apply to actions under this Agreement. Further treatment of Human remains is addressed in **Stipulation XII**.

Although artifacts and other materials will not be Federal property, all original data and records concerning those items are Federal property and will be archived in accordance with 36 C.F.R. § 79 and other Federal regulations. To assure that the objectives of Federal preservation law may

be met, copies of all information specific to a discrete collection of artifacts and other materials will be provided to an owner when Federal custody of the artifacts and other materials is extinguished. If a collection from a single site is relinquished among multiple owners, owners will be provided with only the information that pertains to their portion of the collection.

XI. TRIBAL INVOLVEMENT

A. In consultation with Native American interested parties and Tribes the Corps will make a reasonable and good-faith effort to identify historic properties of religious and cultural significance to Indian tribes. The Corps will ensure that consultation with Native American Tribes is initiated early with respect to the Project and continues throughout the Section 106 process.

B. In accordance with the guidance provided in National Register Bulletin 38 and Preservation Brief 36, the Corps will seek comments from all potentially interested Native American interested parties and Tribes in making determinations of NRHP eligibility for any Traditional Cultural Properties (TCPs) and Cultural Landscapes (as defined in Bulletin 38 and Preservation Brief 36), and in accordance with guidance in *Native American Traditional Cultural Landscapes and the Section 106 Review Process: Questions and Answers* and *Native American Traditional Cultural Landscapes Action Plan*. Review of documentation will be consistent with **Stipulation I**.

C. Pursuant to 36 C.F.R. § 800.6(c)(2)-(3), the Corps will consider requests by Native American Tribes to become Concurring Parties to this Agreement. In accordance with **Stipulation XV**, Concurring Parties to this Agreement will receive documents produced under this Agreement, as appropriate.

D. Native American Tribes may choose not to sign this Agreement as a Concurring Party. Native American Tribes and individuals not acting as Concurring Parties to the Agreement will be contacted when the Corps identifies potential interest in a specific phase or action of the project or is contacted by a Native American individual or Native American Tribe expressing interest in the Project. The Corps will make a good faith effort to identify any Native American organizations and individuals with interest in the proposed treatment of Historic Properties. The Corps will contact each identified organization and individual by mail, inviting them to consult about the specific treatment of Historic Properties. If interest from the contacted parties is received by the Corps, the Corps will proceed to consult in accordance with **Stipulation XI**. Further consultation may also be carried out through either letters of notification, public meetings, site visits, and/or other method requested by a Native American interested party and Tribe. Where consultation is carried out outside of the normal Section 106 process, the Corps will clearly state to the Tribes that the NEPA process includes compliance with Section 106. Failure of any contacted group to comment within thirty (30) calendar days will not preclude the Corps from proceeding with the Project.

E. The Corps will make a reasonable and good-faith effort to ensure that Native American Tribes, acting as either Concurring Parties or those expressing interest in the project, will be

invited to participate in the development and implementation of the terms of this Agreement, including, but not limited to, the identification and definition of the APE, identification of potential Historic Properties, determinations of eligibility, findings of effect, the resolution of adverse effect for those Historic Properties and consultation on confidentiality issues under **Stipulation XV**. Review periods will be consistent with **Stipulation I** except in situations involving unanticipated discoveries and treatment, which will follow the review schedules of **Stipulation IX**. The Corps will ensure that all interested Native American reviewers will receive copies of all final survey and evaluation reports.

XII. TRIBAL CONSULTATION AND TREATMENT OF HUMAN REMAINS

As there is no federally owned property within the designated APE, NAGPRA would not apply. The San Joaquin Area Flood Control Agency (SJAFCA) and landowner will ensure that Native American human remains and grave goods encountered during the Undertaking that are located on state or private land are treated in accordance with the requirements in California State Health and Safety Code, Section 7050.5 and Public Resources Code 5097.98. The HPMP will identify a clear means of identifying human remains and grave goods. The Corps will coordinate any procedures described in the HPMP or a subsequent HPTP regarding the handling or treatment of human remains with the landowner to ensure that they are consistent with Public Resources Code 5097.98. In the event that any Native American human remains or associated funerary items are identified, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission, will be invited by the Corps to advise the SJAFCA and landowner in the treatment of any Native American human remains and items associated with Native American burials. The definitions of human remains and funerary objects set forth in the Native American Graves Protection and Repatriation Act 43 CFR Part 10, Subpart A, 10.2(d)(1-2) will be applied when human remains are discovered, regardless of land ownership.

XIII. COOPERATING GROUP

A. Purpose: Effective communication, coordination, and consultation among the Corps, SHPO, Concurring Parties, and Native American interested parties and Tribes ("consulting parties") are critical to the successful implementation of this Agreement. As a general principle, the Corps will seek to involve consulting parties in an open and interactive manner in the planning for and implementation of activities pursuant to this Agreement. The primary mechanism for accomplishing this objective will be a Project Cooperating Group (Attachment 6). A Cooperating Group serves as a regular forum in support of intergovernmental communications for the purpose of exchanging views, technical information, and planning advice relating to the Corps' Section 106 compliance, with the exception of procurement implementation (development and issuance of contracts for compliance activities) which remain the sole responsibility of the Corps. Communication within the Cooperating Group contributes toward and facilitates consultation pursuant to 36 C.F.R. § 800, and often will precede the consultation and documentation processes described in elsewhere in this Agreement. Communication within the Cooperating Group also facilitates, but does not replace, Government to Government consultation with tribes.

B. Cooperating Group Responsibilities: The Cooperating Group will prepare Operating Guidelines and meet regularly on a schedule agreed upon by the members. Meeting frequency generally should be in proportion to the tempo of work on the Project. The Operating Guidelines will describe the scope of discussion and the internal processes for the group.

The Cooperating Group may assist the Corps by, among other things:

1. Providing input to aid with determining the Project APEs.

2. Helping the Corps determine the appropriate priorities and phasing for compliance activities.

3. Participating in drafting plans and schedules for activities to implement this Agreement.

4. Helping to draft or review HPMP and other plans identified in **Stipulation IV**.

5. Providing data and reporting accomplishments to incorporate into Annual Reports.

6. Providing information or recommendations to the Corps on other matters relating to the implementation of this Agreement.

Timely input from the Cooperating Group is essential to allow the Corps to effectively consider offered information, advice, and recommendations. Timely input is particularly important on short-term plans, APE development, review of Project documents, and other discrete action items. Failure by the Cooperating Group to establish a schedule, or failure by the Group or its members to meet an established schedule, shall not prevent the Corps from proceeding with an action. A decision by the Corps to proceed when the Cooperating Group is unable to provide input in a timely or agreed upon manner is not a violation of this Agreement.

C. Inability to Attend Cooperating Group Meetings: A governmental entity who participates in the Cooperating Group may be unable to attend Cooperating Group meetings. It is the Corps' responsibility to provide a reasonable opportunity for that governmental entity to continue to provide input on activities in this Agreement. Processes to achieve that goal would be defined in HPMPs, or the Cooperating Group's Operating Guidelines.

D. Failure of the Cooperating Group to meet on a Regular Basis or Dissolution of the Cooperating Group: If the Cooperating Group ceases to meet on a regular basis or is dissolved, the Corps will identify alternative processes to meet the Cooperating Group purposes. These processes may be further refined in the HPMP, or Cooperating Group Operating Guidelines. At a minimum, the Lead Federal Agencies will:

1. Provide draft plans identified in **Stipulation IV** and elsewhere, for input and comment; and

2. Request input and comment on eligibility, effect, and treatment activities using processes identified in **Stipulation I** and elsewhere.

XIV. PUBLIC CONSULTATION AND PUBLIC NOTICE

A. Pursuant to 36 C.F.R. § 800.6(c) (2)-(3), the Corps will consider requests by interested parties to become Concurring Parties to this Agreement.

B. The Corps will invite the interested public to provide input on the identification, evaluation, and proposed treatment of Historic Properties. This may be carried out through either letters of notification, public meetings, and/or site visits. Where consultation is carried out outside of the normal Section 106 process, the Corps will clearly state to the public that the NEPA process includes compliance with Section 106. The Corps will ensure that any comments received from members of the public are taken under consideration and incorporated where appropriate. Review periods will be consistent with **Stipulation I**. In seeking input from the interested public, locations of Historic Properties will be handled in accordance with **Stipulation XV**. In cases where the release of location information may cause harm to the Historic Property, this information will be withheld from the public in accordance with Section 304 of the NHPA (54 U.S.C. § 307103).

XV. REPORTING AND CONFIDENTIALITY

The Corps will distribute technical reports and data pertaining to the inventory, evaluation, and treatment of effects on Historic Properties to SHPO, Concurring Parties to this Agreement, Native American Tribes, and other members of the public, consistent with **Stipulation XV** of this Agreement, unless parties have indicated through consultation that they do not want to receive a report or data. Information regarding the nature and location of the archaeological sites and any other potential Historic Properties discussed in this Agreement will be kept confidential and limited to appropriate Corps personnel, Corps contractors, Native American tribes, the SHPO, and those parties involved in planning, reviewing and implementing this Agreement to the extent allowed by Section 304 of the NHPA (54 U.S.C. § 307103).

XVI. DISPUTE RESOLUTION

A. Should any Signatory Party to this Agreement object in writing to any action proposed or carried out pursuant to this Agreement, the Corps will immediately notify the SHPO and the Concurring Parties of the objection, invite their participation, and proceed to consult with the objecting party for a period of time, not to exceed thirty (30) calendar days, to resolve the objection. If the objection is resolved through consultation, the Corps may authorize the disputed action to proceed in accordance with the terms of such resolution. If the Corps determines that the objection cannot be resolved, the Corps will notify Signatory and Concurring

Parties and forward all documentation relevant to the dispute to the ACHP. Within forty-five (45) calendar days after receipt of all pertinent documentation, the ACHP will either:

1. Advise the Corps that the ACHP concurs in the Corps' proposed response to the objection, whereupon the Corps will respond to the objection accordingly; or

2. Provide the Corps with recommendations, which the Corps will consider in reaching a final decision regarding the objection; or

3. Notify the Corps that the ACHP will comment in accordance with the requirements of Section 106 of the NHPA, and proceed to comment. Any ACHP comment provided in response will be considered by the Corps, pursuant to the requirements of Section 106 of the NHPA.

B. Should the ACHP not exercise one of the options under **Stipulation XVI A** within forty-five (45) calendar days after receipt of all submitted pertinent documentation, the Corps' responsibilities under Section 106 of the NHPA are fulfilled upon implementation of the proposed response to the objection.

C. The Corps will consider any ACHP recommendation or comment and any comments from the SHPO to this Agreement provided in accordance with this stipulation with reference only to the subject of the objection; the Corps' responsibility to carry out all actions under this Agreement that are not the subjects of the objection will remain unchanged.

D. The Corps will provide the Signatories and Concurring Parties with a written copy of its final decision regarding any objection addressed pursuant to **Stipulation XVI A.**

E. At any time during implementation of the measures stipulated in this Agreement should an objection pertaining to the Agreement be raised by a Concurring Party, Native American Tribe, or a member of the public, the Corps will notify the Signatory and Concurring Parties and take the objection under consideration, consulting with the objecting party and, should the objecting party request, any of the Signatory and Concurring Parties to this Agreement, for no longer than fifteen (15) calendar days. The Corps will consider the objection, and in reaching its decision, will consider all comments provided by the other parties. Within fifteen (15) calendar days following closure of the comment period, the Corps will render a decision regarding the objection and respond to the objecting party. The Corps will promptly notify the other parties of its decision in writing, including a copy of the response to the objecting party. The Corps' decision regarding resolution of the objection will be final. Following issuance of its final decision, the Corps may authorize the action that was the subject of the dispute to proceed in accordance with the terms of that decision. The Corps' responsibility to carry out all other actions under this Agreement will remain unchanged.

XVII. NOTICES

A. All notices, demands, requests, consents, approvals or communications from all parties to this Agreement to other parties to this Agreement will be personally delivered, sent by United States Mail, or emailed. For communications sent by United States Mail, all parties will be considered in receipt of the materials five (5) calendar days after deposit in the United States mail, certified and postage prepaid, return receipt requested.

B. Signatory and Concurring Parties agree to accept facsimiles or copies of signed documents and agree to rely upon such facsimiles or copies as if they bore original signatures.

XVIII. AMENDMENT, REVIEW, TERMINATION AND DURATION

A. Amendment: Any Signatory Party to this Agreement may propose that the Agreement be amended, including but not limited to extending the duration of the Agreement, whereupon the Signatories will consult for 30 days to consider such amendment. The Agreement may be amended only upon written concurrence of all Signatories.

All attachments to this Agreement, and other instruments prepared pursuant to this agreement including, but not limited to, the Project's description, initial inventory report and maps of the APE, the HPMP, HPTPs, and monitoring and discovery plans, may be individually revised or updated through consultation consistent with **Stipulation I** and agreement in writing of the Signatories without requiring amendment of this Agreement, unless the Signatories through such consultation decide otherwise. In accordance with **Stipulations X, XII, and XIII**, the Concurring Parties, interested Native American Tribes, and interested members of the public, will receive amendments to the Project's description, initial inventory report and maps of the APE, the HPMP, HPTPs, and monitoring and discovery plans, as appropriate, and copies of any amendment(s) to the Agreement.

B. Termination: Only the Signatories may terminate this Agreement. If this Agreement is not amended as provided for in **Stipulation XVIII.A**, or if any Signatory proposes termination of this Agreement for other reasons, the Signatory proposing termination will notify the other Signatory in writing, explain the reasons for proposing termination, and consult with the other Signatory to seek alternatives to termination, within thirty (30) calendar days of the notification.

Should such consultation result in an agreement on an alternative to termination, the Signatories will proceed in accordance with that agreement.

Should such consultation fail, the Signatory proposing termination may terminate this Agreement by promptly notifying the other Signatory and Concurring Parties in writing.

Beginning with the date of termination, the Corps will ensure that until and unless a new agreement is executed for the actions covered by this Agreement, such undertakings will be reviewed individually in accordance with 36 C.F.R. § 800.4-800.6.

D. Duration: This Agreement will remain in effect for five (5) years from the date of execution unless amended in accordance with **Stipulation XVIII**.

XIX. ANNUAL REPORTING

Annually, by January 30th, the Corps will provide all parties to this Agreement a summary report detailing work carried out pursuant to its terms, if any. Such report will describe progress made implementing the terms of the Agreement; include any scheduling changes proposed, any problems encountered, and any disputes and objections received in the Corps' efforts to carry out the terms of this Agreement. The Corps will arrange a meeting with the Signatories within 30 days after the submission of the annual summary report to discuss the on-going implementation of the Agreement.

XX. EFFECTIVE DATE

This Agreement will take effect on the date that it has been fully executed by the Corps and the SHPO.

EXECUTION of this Agreement by the Corps and the SHPO, its transmittal to the ACHP, and subsequent implementation of its terms evidence that the Corps has afforded the ACHP an opportunity to comment on the undertaking and its effects on Historic Properties, that the Corps has taken into account the effects of the undertaking on Historic Properties, and that the Corps has satisfied its responsibilities under Section 106 of the NHPA and applicable implementing regulations for all aspects of the undertaking.

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

SIGNATORY PARTIES:

U.S. Army Corps of Engineers

By _____ Date 29 Apr 16
Michael J. Farrell
Colonel, U.S. Army
District Commander

California State Office of Historic Preservation

By _____ Date 11 May 2016
Julianne Polanco
State Historic Preservation Officer

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

The Central Valley Flood Protection Board

By _____ Date _____

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

The San Joaquin Area Flood Control Agency

By _____ Date _____

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

Buena Vista Rancheria of Me-Wuk Indians

By _____ Date _____

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

California Valley Miwok Tribe

By _____ Date _____

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

Ione Band of Miwok Indians

By _____ Date _____

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

Nototomne/Northern Valley Yokuts

By _____ Date _____

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

United Auburn Indian Community

By _____ Date _____

PROGRAMMATIC AGREEMENT
AMONG
THE U.S. ARMY CORPS OF ENGINEERS AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY,
SAN JOAQUIN COUNTY, CALIFORNIA

CONCURRING PARTY:

Wilton Rancheria

By _____ Date _____

ATTACHMENT 1
PROJECT DESCRIPTION: MEASURES AND AREAS

Introduction

This Programmatic Agreement (Agreement) is designed to support a Federal action as described in the following paragraphs, specifically an undertaking that has been formulated by a multi-year feasibility study as described below. When authorized and funded, the undertaking would modify flood control structures. The actions comprising the undertaking are described as of 20 April 2016.

Background

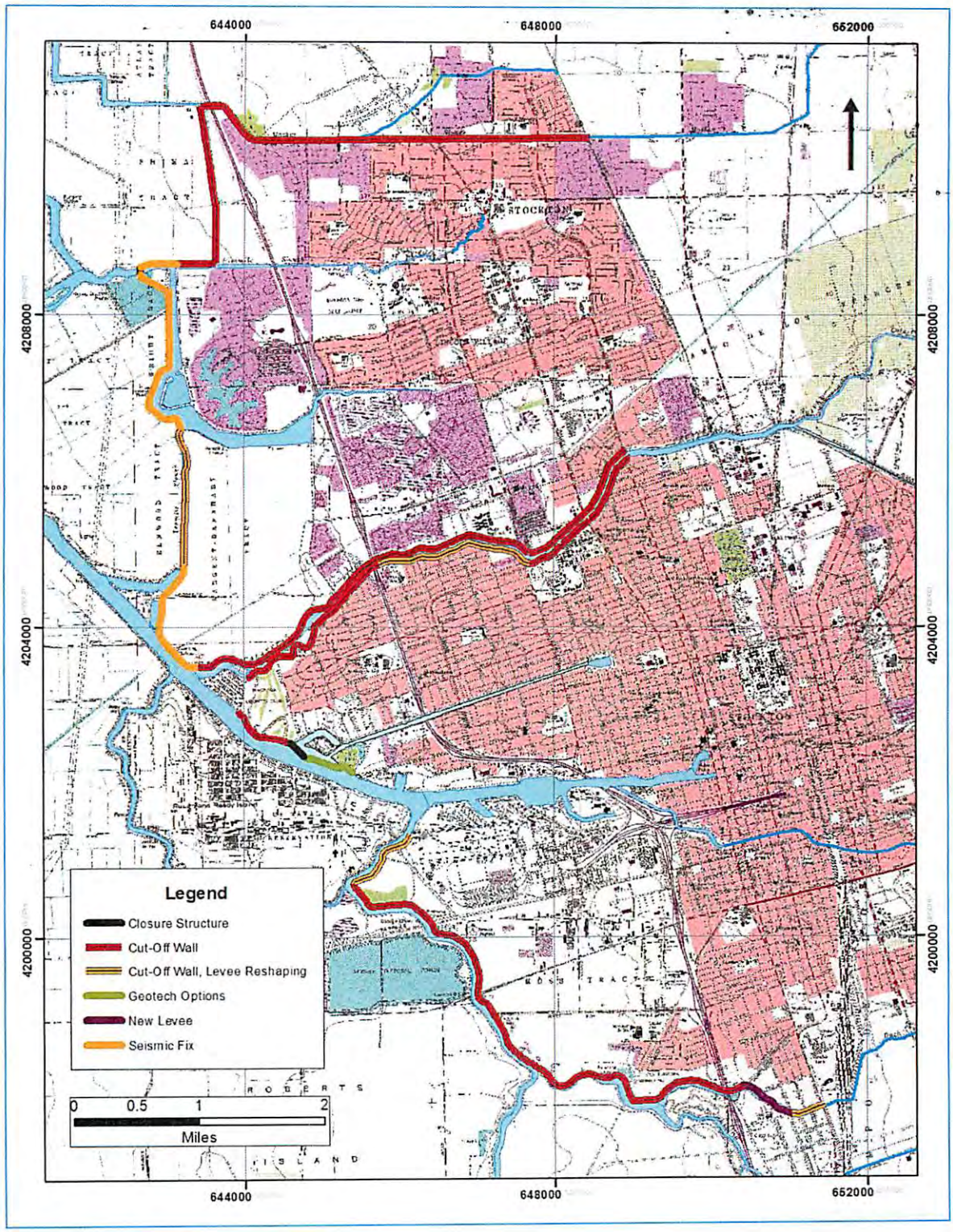
The Corps and its non-Federal sponsors, the San Joaquin Area Flood Control Agency (SJAFCA) and the State of California Central Valley Flood Protection Board, represented by the California Department of Water Resources (DWR), have been conducting the Lower San Joaquin River Interim Feasibility Study (LSJRFS) (Study) to investigate and determine the extent of Federal interest in a range of alternative plans designed to reduce the risk of flooding in the cities of Stockton, Lathrop, Manteca, and surrounding urbanizing areas. Levees in the system require improvements to address seepage, seismic and slope stability, overtopping, and erosion concerns.

Structural features of the Project include levee improvements and two closure structures. The levee improvements are comprised of cutoff wall, deep soil mixing (seismic), new levee, levee geometry improvements, and erosion protection. Table 1 identifies and describes the structural measures proposed for each area within the Project; construction associated with each structural measure is described in text. Table 2 summarizes the extent of structural measures. The Agreement addresses structural measures, including staging areas and borrow sites, and any environmental mitigation sites that may be required.

Project Location

The Project (Figure 1) area is in the lower (northern) portion of the San Joaquin River system in the Central Valley of California. The San Joaquin River originates on the western slope of the Sierra Nevada and emerges from the foothills at Friant Dam. The river flows west to the Central Valley, where it is joined by the Fresno, Chowchilla, Merced, Tuolumne, Stanislaus and Calaveras rivers, and smaller tributaries as it flows north to the Sacramento-San Joaquin Delta.

Figure 1. Lower San Joaquin River Feasibility Study's Proposed Project



The Project area includes the main stem of the San Joaquin River from the Mariposa Bypass downstream to the city of Stockton. The Project also includes the distributor channels of the San Joaquin River in the southernmost reaches of the Delta: Paradise Cut and Old River as far north as Tracy Boulevard and Middle River as far north as Victoria Canal. Based on availability of potential non-Federal sponsors, the Study focused on approximately 305 square miles encompassing incorporated areas of Stockton, Lathrop and Manteca as well as unincorporated portions of San Joaquin County.

Structural Measures

The Project is composed of different structural measures, or building blocks to address issues identified during the Study. A summary of Project structural measures by reach is shown in Figure 1 and summarized in Table 1. A summary of the quantity of each structural measure in the Project is shown in Table 2. Overall, the Project includes: (1) 20.1 miles of seepage cutoff walls; (2) 6.1 miles of geometric improvements consisting of levee slope and crown reshaping to meet Federal standards, including levee height raises mainly to reestablish the design levee height; (3) 0.2 miles of grade rising; (4) 3 miles of seismic improvements; (5) 0.75 miles of new levee; (6) 4.9 miles of new erosion protection (a majority of the new protection would be on the landside only; however, existing erosion protection disturbed by construction would be replaced); and (7) 2 closure structures. ***Note well***: these features overlap one another and cannot be added up to describe the total project extent. However, in general terms, the total linear extent of flood control features (including closure structures) is approximately 24 miles. These measures would be implemented primarily by fixing levees in place. In addition to levee improvements, the Project includes two in-water closure structures.

Excavated and Borrow Material Staging

Excavated and borrow material (from nearby borrow sites) would be stockpiled at staging areas. Haul trucks, front end loaders, and scrapers would bring borrow materials to the site. The material would then be spread evenly and compacted according to levee design plans.

North Stockton Area

Levee Improvements

The North Stockton area include and s improvements to the Mosher Slough south levee, Shima Tract east levee, Five-mile Slough/Fourteen-mile Slough north levee, Fourteen-mile Slough west levee, Ten-mile slough east levee, and San Joaquin River east levee. The measures proposed to improve the levees in the North Stockton area include Cutoff walls, levee height fixes, erosion protection, seismic (deep soil mixing) fixes, and slope reshaping. In addition, a closure structure would be installed across Fourteen-mile Slough, approximately 1,500 feet west of Five-mile Slough. The locations of each of the fixes are shown on Figure 1.

Closure Structure on Fourteen-mile Slough

In addition to the levee improvement measures, there is also a closure structure proposed for Fourteen-mile Slough. The closure structure would be located across Fourteen-mile Slough from the Five-mile Slough/Fourteen-mile Slough north (right) levee to the Fourteen-mile Slough south/west (left) levee.

Central Stockton Area/

Levee Improvements

The Central Stockton area includes levee improvements to the Calaveras River, San Joaquin River, Smith Canal, and French Camp Slough. For the Calaveras River, approximately 4.25 miles of the north bank (to

approximately El Dorado Street) and approximately 3.3 miles of the south bank (to approximately Pacific Street) would be improved with a combination of cutoff walls, slope reshaping, and height fixes. The locations of each of the fixes are shown on Figure 1.

Closure Structure on Smith Canal and Grade Rising Structure on Dad's Point

In addition to the levee improvements, a closure structure would be installed across the mouth of Smith Canal from the San Joaquin River east levee at Brown's Island to the end of Dad's Point. A grade rising structure (5 to 10 feet high) would also be constructed on Dad's Point to tie the closure structure into the high ground on the shoreline

New Levee on Duck Creek

A new levee would also be constructed at Duck Creek. This levee would be an extension of the existing French Camp Slough north levee and would extend approximately three-fourths of a mile from French Camp Slough to the rail yard.

Table 1. Structural Measures by Area and Waterway/Reach

Area: North Stockton

Waterway	Reach	Measure(s)
Mosher Slough	Shima Tract to Thornton Road	Cutoff wall Levee height fix (sea level rise)
Shima Tract	Mosher Slough to Five-mile Slough	Cutoff wall Erosion protection (landside)
Five-mile Slough	Shima Tract to Fourteen-mile Slough	Cutoff wall Erosion protection (landside)
Fourteen-mile Slough	Five-mile Slough to Proposed Closure Structure	Seismic Fix Slope Reshaping Levee height fix (sea level rise) Erosion protection (landside)
Fourteen-mile Slough	Approximately 1,500 feet west of Five mile Slough	Closure Structure
Fourteen-mile Slough	Approximately 1,250 feet southeast setback out from proposed closure structure	Seismic Fix Levee height fix (sea level rise) Erosion protection (landside)
Fourteen-mile Slough	From setback cut south to Ten-mile Slough	Seismic Fix Adjacent levee Slope Reshaping Erosion protection (landward)
Ten-mile Slough	Fourteen-mile Slough to March Lane	Cutoff wall Slope Reshaping Erosion protection (waterside)
Ten-mile Slough	March Lane to West March Lane/Buckley Cove Way	Seismic Fix Slope Reshaping Erosion protection (waterside)
Ten-mile Slough/ Buckley Cove Marina/ San Joaquin River	West March Lane/Buckley Cove Way to Calaveras River	Seismic Fix Slope Reshaping.
Calaveras River – Right/North Bank	San Joaquin River to North El Dorado Street	Cutoff wall

Area: Central Stockton

Waterway	Reach	Measure(s)
Calaveras River – Left/South Bank	Approximately I-5 to approximately North Pershing Avenue	Cutoff wall Slope Reshaping
Calaveras River – Left/South Bank	Approximately North Pershing Avenue to approximately El Dorado Street	Cutoff wall
San Joaquin River	From approximately 2,100 feet upstream of the Calaveras River to the proposed Smith Canal Closure Structure	Cutoff wall Levee height fix (sea level rise)
Smith Canal	At the mouth of the canal between Brown's Island and Dad's Point	Closure Structure
Smith Canal	Dad's Point from the Closure Structure to approximately 375 feet down Monte Diablo Avenue	Floodwall
San Joaquin River	Railroad bridge just upstream of the Port of Stockton to Burns Cutoff	Cutoff wall Slope Reshaping
San Joaquin River	Burns Cutoff to French Camp Slough	Cutoff wall
French Camp Slough – Right/North Bank	French Camp Slough confluence with the San Joaquin River to approximately 500 feet southwest of I-5[1]	Cutoff wall
Duck Creek	500 feet past I-5 cross to approximately Odell Avenue	New levee
Duck Creek	Approximately Odell Avenue to McKinley Avenue	Cutoff wall Levee reshaping Levee Height Fix

Table 2. Summary of Project Structural Measures by Quantity

Structural Measure	Quantity
Cutoff walls	20.1 miles
Levee Reshaping	6.1 miles
Grade Rising	0.2 miles
New Levee	0.75 miles
Erosion Protection (landside)	4.9 miles
Seismic Remediation (about 1.3 miles will include a Setback and partial degrade of the existing level)	3 miles
Closure Structure- Smith Canal	1
Closure Structure Fourteen mile Slough	1

Borrow Material and Sites

A maximum of 1.4 million cubic yards (cy) of borrow material and 138 acres of borrow lands could be required to construct the Project. Because Project development is in the preliminary stages of design, detailed studies of borrow needs have not been completed.

Overall Schedule and Sequencing

For planning purposes, construction is estimated to begin in the *Central Stockton* area in 2018. Construction in that area is expected to last approximately 3 years, concluding in 2020. Construction of the full project would take 12 years, optimally funded.

Annual Work

The average breakdown of work per year per area is described in this paragraph. For *Central Stockton* the work averages out to 3 miles of slurry cutoff wall, two-thirds of a mile of geometric improvements, and a half mile of new levee construction per year. During the 3 year span a closure gate would be constructed for Smith Canal, but would likely be accomplished mainly over 2 summers. For *North Stockton* the work averages out to one and a quarter miles of slurry cutoff wall, half of a mile of geometric improvements, three-eighths of a mile of seismic remediation, and three-fifth of a mile of rock revetment per year.

Construction Intensity

Existing levee work in general is considered low to moderately intensive construction work. New levee work and vibratory equipment for sheet pile is likely classified as moderately intense construction work. Impact hammer use for sheet pile work would be considered high intensity construction work. It has not been uncommon for the Corps to issue construction specifications requiring vibration monitoring associated with the use of impact hammers.

Real Estate

All real estate interest will be provided by the local sponsor; there will be no Federal real estate at the Project. All real estate interest will comprise easements as described below.

Temporary and Permanent Easements

Table 3 identifies total area for the construction footprint, and for construction and O&M easements for the Project. The construction footprint includes the footprint of the existing levee plus the waterside and landside easements. The easements identified in Table 3 are permanent easements. They will be used during construction and maintained permanently for O&M.

Table 3. Construction Footprint (Structural Features) and Construction and O&M Easements

Construction and Easement	Quantity
Construction footprint	158 acres
Waterside 15-foot easement	42 acres
Landside 15-foot easement[1]	56 acres
New levee easement	2.5 acres

[1] Note that the minimum landside easement for existing federally authorized levees is 10 feet.

Construction Easements

Access to the levee toe would be provided in all areas where construction is occurring on the levees. Either a 10 foot (minimum) or a 15 foot (maximum) landside access easement would be provided wherever levee remediation is completed as a result of this project.

O&M Easements

Post construction Maintenance

Typical maintenance activities would include vegetation control through mowing, herbicide application, and/or slope dragging; rodent control; patrol road maintenance; and erosion control and repair. Vegetation control typically would be performed twice a year. Herbicide and bait station application would be conducted under county permit by experts licensed by the state for pest control. Erosion control and slope repair activities would include re-sloping and compacting; fill and repair of damage from rodent burrows would be treated similarly. These activities are performed for approximately 20 days annually. Patrol road reconditioning activities would typically be performed once a year and would include placing, spreading, grading, and compacting aggregate base or substrate.

Attachment 2. Recorded Resources within the Area of Potential Effects

List of Sites within 150 Meters Each Side of Alignment Centerlines (Total 300 Meter Corridor Width)

Primary Number	Label	Resource Name	Trinomial	Eligible	Resource Type	Resource Age	Comments
	Bridge 29C-239	Bridge 29C-239 Built 1969		No	Bridge	Historic	
	Bridge 29C-134	Bridge 29C-134 Built 1972		No	Bridge	Historic	
	Bridge 29C-096	Bridge 29C-096 Built 1976		No	Bridge	Historic	
	Bridge 29C-240	Bridge 29C-240 Built 1972		No	Bridge	Historic	
P-39-004269	P-39-4269	Bruins #1		No		Historic	
P-39-004270	P-39-4270	Bruins #2		TBD		Historic	
P-39-004399	P-39-4399			Yes	Aqueduct	Historic	Segment of aqueduct
	Unrecorded Burial			NA	Burial	Prehistoric	Unrecorded burial Actual location of burial
P-39-000220	P-39-220	Schenck-Dawson 84	CA-SJO-84	TBD		Prehistoric	Site is possibly larger
	Bridge 29C-141	Bridge 29C-141		No	Bridge	Historic	
P-39-000237	P-39-237		CA-SJO-103	TBD		Prehistoric	Approximate location
P-39-000425	P-39-425			Contributing	Entry Gate	Historic	Contributing to NSAS Historic District
	Union Pacific Railroad	Union Pacific RR		TBD	Railroad	Historic	Unrecorded section of P-39-000098
P-39-004918	P-39-4918	Mosher Slough Levees		TBD	Levee	Historic	
P-39-004917	P-39-4917	Shima Tract Levee		TBD	Levee	Historic	

Primary Number	Label	Resource Name	Trinomial	Eligible	Resource Type	Resource Age	Comments
P-39-004922	P-39-4922	Brookside Levee		TBD	Levee	Historic	Levee
	Bridge 29C-140	Bridge 29C-140		No	Bridge	Historic	
	Bridge 29C-58	Bridge 29C-58		No	Bridge	Historic	
	Bridge 29C-243	Bridge 29C-243		No	Bridge	Historic	
	Unrecorded Railroad			TBD	Railroad	Historic	RR spur unrecorded spur WP? SP?
P-39-004516	P-39-4516	Stockton RWCF Eastern Levee Segment		TBD	Levee	Historic	
P-39-000112	P-39-112	Atchison, Topeka and Santa Fe Railroad	CA-SJO-293H	TBD	Railroad	Historic	
P-39-004517	P-39-4517	Stockton RWCF Western Levee Segment		TBD	Levee	Historic	Levee
P-39-005152	P-39-5152	Burns Cutoff Levee (Left Bank		TBD	Levee	Historic	
P-39-002513	P-39-2513	Bridge 29-50		No	Bridge	Historic	HRR #5208-700
	Bridge 29C-399	Bridge 29C-399		No	Bridge	Historic	
	Bridge 29C-400	Bridge 29C-400		No	Bridge	Historic	
P-39-002824	P-39-2824	Bridge 29C-23		Contributing	Bridge	Historic	Mitigated
P-39-002865	P-39-2865	Railroad Tracks (Bridge)		Contributing	Railroad Bridge	Historic	Mitigated
P-39-002864	P-39-2864	Railroad Tracks		Contributing	Railroad Tracks	Historic	Mitigated
P-39-000244	P-39-244	Bear Creek	CA-SJO-112	TBD		Prehistoric	
P-39-000427	P-39-427	Marginal Wharf		Contributing	Wharf	Historic	Mitigated
P-39-004854	P-39-4854	Central United Methodist Church		Recommended Eligible	Church	Historic	
P-39-004576	P-39-5476	NSAS Historic District		Yes	Historic District	Historic	NSAS Historic District

Attachment 3
Standards and Guidelines for Historic Property Management Planning Documents

A. Historic Property Management Plan

At a minimum, the HPMP or its supporting materials will contain the following:

- Documentation of the APE and its segments, and description of how APE segments were determined.
- A Research Design that provides an historic context for property evaluation for eligibility to the National Register. The Research Design will define research domains or historic themes applicable to the area, define characteristics of property types associated with historic themes, identify data gaps, and identify data requirements to address important research questions. The Research Design will consider the needs of Historic Property Treatment Plans and Evaluation Plans and should be readily adaptable for use in those documents without extensive adaptation.
- A summary of significant past investigation and management activities, and a list of associated products.
- A list of known properties, with their National Register eligibility status indicated.
- Information about historic property types present or likely to be present.
- Discussion of the nature and source of how the Project affects resources.
- Further actions needed to identify, evaluate, and manage historic properties. General long term priorities will be identified.
- A process for integrating investigations of Traditional Cultural Properties, Historic Properties of Religious and Cultural Significance to Indian Tribes, and Traditional Cultural Landscapes with the archeological and historical site identification and evaluation activities.
- Inventory and evaluation strategies for all potential historic property types. If the timing is right, the HPMP may include actual Inventory and Evaluation Plans.
- Historic property management and treatment strategies that might be used, consistent with the treatment/recovery plan principles described below. If the timing is right, the HPMP may include actual Historic Property Treatment Plans.
- A plan to address the requirements of **Stipulation X**.
- A plan to address how emergency management actions (such as responses during floods and follow-on levee rehabilitation) within the Project will be managed during the life of the Project.
- A process to update records to reflect new data developed during the course of the Project.
- Any Standard Protection Plans or measures that will be employed to ensure effects to historic properties are avoided or minimized.
- A process for determining when and how to conduct peer review of Project investigation reports or educational products.
- A process for public outreach and education.
- General standards for field work, analysis, reporting, and site treatment.

- A plan for handling post review discoveries, or discoveries during construction, consistent with CFR Part 800.13.
- For a version of the HPMP that will be reviewed and approved by Corps higher authority, a complete and detailed cost estimate with proper funding allocations for all of the compliance actions proposed, including a schedule for implementation.

B. Historic Property Treatment Plans

Historic Property Treatment Plans (HPTP) will address, at a minimum:

- The historic properties or portions of historic properties where treatment will be implemented;
- Any historic properties or portions of historic properties that will be destroyed or altered without treatment;
- If the property or properties are eligible under criteria (A), (B), or (C), a mitigation plan other than data recovery may be considered. These may include, but are not limited to HABS/HAER recordation, oral history, historic markers, exhibits, interpretive brochures or publications.
- If the property or properties are eligible under criterion (D), a Research Design that would include, but not be limited to:
    - A list and discussion of the property, or properties, or portions of properties where data recover is to be carried out;
    - A list and discussion of any property, or properties or portions of properties that will be destroyed with data recovery;
    - The research questions to be addressed through data recovery, with an explanation of their relevance and importance;
    - The field methods to be used, with an explanation of their relevance to the research questions;
    - The methods to be used in analysis, data management, and dissemination of data, including a schedule;
    - The proposed disposition of recovered materials and records, including curation sources, in accordance with **Stipulation X**;
    - Identification of appropriate groups that may contribute to the analysis, such as Native American Tribes, other ethnic groups, or historic societies;
    - Methods by which the parties to the Programmatic Agreement and Native American Tribes will be kept informed of the data recovery work and afforded the opportunity to participate; and
    - A schedule for the submission of progress reports to the California State Historic Preservation Officer.
- The methods to be used for managing and disseminating data other than that from data recovery, including a schedule;
- The proposed disposition and archiving of materials and records, other than from data recovery, in accordance with **Stipulation X**;

- Proposed methods for disseminating results of all treatment work to cultural resources professionals and separately to the interested public;
- Proposed methods by which interested Native American Tribes and individuals, local governments, and other interested persons will be kept informed about the implementation of the HPTP and afforded an opportunity to comment;
- A proposed schedule for submission of progress reports to the Corps, SHPO, Concurring Parties, Native American Tribes, and the ACHP, consistent with the Agreement;
- Methods and procedures for the recovery, analysis, treatment, and disposition of human remains, associated grave goods, and objects of cultural patrimony that reflect any concerns and/or conditions identified as a result of consultations between the Corps, State agency and any affected Native American Group (see **Stipulation XII**);
- Qualifications of consultants employed to undertake the implementation of the HPTP, will meet, at minimum, those standards described in **Stipulation II**.

Avoidance of adverse effects on historic properties is the preferred treatment approach. The HPTP will discuss and justify the chosen approaches to the treatment of project historic properties and those treatment options considered, but rejected. If preservation of part or all of any historic properties is proposed, the treatment plan will include discussion of the following:

- Description of the area or portions of the historic properties to be preserved in-place, and an explanation of why those areas or portions of sites were chosen;
- Explanation of how the historic properties will be preserved in-place, including both legal and physical mechanism for such preservation;
- A plan for monitoring and assessing the effectiveness of mechanisms to preserve the historic properties; and
- A plan for minimizing or mitigating future adverse effects on the historic properties, if preservation in-place mechanisms prove to be ineffective.

C. Standard Protection Plan

A Standard Protection Plan will include (but not be limited to):

- A clear description of the class or classes of resources covered; and
- The specific actions that the Corps will take to avoid or address adverse effects to those resources.

D. Evaluation Plan

An Evaluation Plan will include (but not be limited to):

- A historic context and Research Design (addressing relevant topics identified in specification B preceeding), if the elements of the Research Design provided in the HPMP are not sufficient;
- Discussion of the categories of potentially eligible historic properties to which the plan will apply;

- Methods and techniques that would be used to determine the boundaries and data potential of the site;
- For archaeological testing, discussion of the sampling intensity, and rationale for exceeding four (4) cubic meters of soil or five percent (5%) of the surface of the site, along with a request for SHPO concurrence;
- Discussion of disposition of artifacts and materials retained for the study, in accordance with **Stipulation X**; and
- Analysis and reporting requirements and schedules.

Attachment 4
Historic Property Management Plan

(to be attached)

Attachment 5

Property Types Exempt from Evaluation
This attachment defines categories of properties that do not warrant evaluation pursuant to **Stipulation V B** of this Agreement. Only individuals meeting the Secretary of the Interior's Professional Qualification Standards pursuant to **Stipulation II** of this agreement are authorized to determine whether properties meet the requirements of this attachment and are therefore exempt from evaluation and consultation with SHPO. Exempted properties may be documented, if documentation is warranted, at a level commensurate with the nature of the property (e.g., DPR 523 Primary Form, Location Map, memo). The Corps Cultural Resources staff will make any final determinations on level of documentation required under this agreement.

Exempt Property Type 1: Archaeological Property Types and Features

- Isolated prehistoric finds consisting of fewer than three items per 100 m^2
- Isolated historic finds consisting of fewer than three artifacts per 100 m^2 (several fragments from a single glass bottle, and similar vessels are to be counted as one artifact)
- Refuse scatters less than 50 years old (scatters containing no material that can be dated with certainty as older than 50 years old)
- Features less than 50 years old (those known to be less than 50 years old through map research, inscribed dates, etc.)
- Isolated refuse dumps and scatters over 50 years old that lack specific associations
- Isolated mining prospect pits
- Placer mining features with no associated structural remains or archaeological deposits
- Foundations and mapped locations of buildings or structures more than 50 years old with few or no associated artifacts or ecofacts, and with no potential for subsurface archaeological deposits

Exempt Property Type 2: Minor, Ubiquitous, or Fragmentary Infrastructure Elements

The following list does not apply to properties 50 years old or older that could be potentially important, nor does it apply to properties that may contribute to the significance of larger historic properties such as districts or cultural landscapes.

Water Conveyance and Control Features

- Natural bodies of water providing a water source, conveyance, or drainage
- Modified natural waterways
- Concrete-lined canals less than 50 years old and fragments of abandoned canals
- Roadside drainage ditches and secondary agricultural ditches
- Small drainage tunnels
- Flood storage basins
- Reservoirs and artificial ponds

- Levees and weirs
- Gates, valves, pumps, and other flow control devices
- Pipelines and associated control devices
- Water supply and waste disposal systems
- Rip-rap

Recent Transportation or Pedestrian Facilities

- Railroad grades converted to other uses, such as roads, levees, or bike paths
- Bus shelters and benches
- Vista points and rest stops
- Bike paths, off-road vehicle trails, equestrian trails, and hiking trails
- Parking lots and driveways

Highway and Roadside Features

- Isolated segments of bypassed or abandoned roads
- Retaining walls
- Highway fencing, sound walls, guard rails, and barriers
- Drains and culverts, excluding culverts assigned a Caltrans bridge number
- Cattle crossing guards
- Roadside landscaping and associated irrigation systems
- Signs and reflectors
- Telecommunications services, including towers, poles, dishes, antennas, boxes, lines, cables, transformers, and transmission facilities
- Utility services, including towers, poles, boxes, pipes, lines, cables, and transformers
- Oil and gas pipelines and associated control devices

Adjacent Features

- Fences, walls, gates, and gateposts
- Isolated rock walls and stone fences
- Telephone booths, call boxes, mailboxes, and newspaper receptacles
- Fire hydrants and alarms
- Markers, monuments, signs, and billboards
- Fragments of bypassed or demolished bridges

- Temporary roadside structures, such as seasonal vendors' stands
- Pastures, fields, crops, and orchards
- Corrals, animal pens, and dog runs
- Open space, including parks and recreational facilities
- Building and structure ruins and foundations less than 50 years old

Movable or Minor Objects

- Movable vehicles
- Stationary vehicles less than 50 years old or moved within the last 50 years
- Agricultural, industrial and commercial equipment and machinery
- Sculpture, statuary, and decorative elements less than 50 years old or moved within the last 50 years

Attachment 6
Example Cooperating Group Operating Guidelines[1]

We have tried to keep these few in the interest of simplicity. The main things are:

- The Cooperating Group (CG) exists because no one entity or person has all of the knowledge, ability, power or funding to properly manage the complex historic properties at the project.

- The CG is inclusive. Representatives of all governmental stakeholders in HPM at the project are welcome to participate in whatever way their governments authorize. Others may be invited to attend meetings to present information on an as-needed basis but will not be members of the CG. The CG only works because the members want it to work.

- The CG's foundation is mutual trust and respect. Simplicity of purpose and action and openness of mind and heart help maintain both.

- A certain amount of formality is good for respect but too much tends to hinder trust and waste funds. CG prefers to operate by consensus in making decisions.

- CG is a *technical recommendations group*; that is, the group decides what to recommend to the Corps for program work plans, focus and effort levels, but under the law the Corps ultimately is responsible for making decisions and carrying out the program, and cannot delegate its fiduciary responsibilities.

- CG also does not make policy, but helps implement policies of the organizations its members represent. In the course of its work it may identify policy issues and may decide to carry those issues to the appropriate organizations for resolution.

- CG tries to meet regularly during a year, decides on locations to best suit the needs of the members, and tries to give at least 2 weeks' notice before meetings (4 is better). To save travel funds, CG tries to schedule meetings concurrent with other meetings. Although the Corps assumes the lead for setting up regular meetings, any member may call for a meeting to address emergent issues. Topical subgroups also may convene as needed.

- CG shares information among itself openly (except as specifically restricted by Federal law), and decides as a group what to share with other groups or interested parties. CG members who attend specialized training or meetings are encouraged to share information and knowledge from those meetings with other members. CG encourages use of most effective means for rapidly sharing information, including personal contacts, e-mail, fax, etc.

- The prime evidence that the CG is working is in the Project's plans and the contract activity pursuant to those documents. Words may be nice, but deeds are the basis of judgment.

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[1] This example is adapted from a Cooperating Group that has existed since 1994 at one of the Federal Columbia River Power System projects.

Preserving America's Heritage

April 7, 2016

Ms. Alicia Kirchner
Chief, Planning Division
Environmental Resources Branch
U.S. Army Engineer District, Sacramento
1325 J Street
Sacramento, CA 95814-2922

Ref: *The Lower San Joaquin River Feasibility Study/Project*
San Joaquin County, California

Dear Ms. Kirchner:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Programmatic Agreement (PA), developed in consultation with the California State Historic Preservation Office's (SHPO's) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the PA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Brian Lusher at 202 517-0221 or via e-mail at blusher@achp.gov.

Sincerely,

Artisha Thompson
Historic Preservation Technician
Office of Federal Agency Programs

ENVIRONMENTAL ADDENDUM D

CLEAN WATER ACT

CENTRAL VALLEY REGIONAL WATER QUALITY BOARD LETTER OF SUPPORT

303(D) LIST

SECTION 404(b)(1) CLEAN WATER ACT EVALUATION

LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

29 April 2016

Colonel Michael J. Farrell
United States Army Corps of Engineers
Sacramento District Headquarters
1325 J Street, 14th Floor
Sacramento, CA 95814

LETTER OF SUPPORT: SAN JOAQUIN RIVER BASIN, LOWER SAN JOAQUIN RIVER INTERIM FEASIBILITY STUDY RECOMMENDED PLAN

This letter is in response to your request for a letter supporting the San Joaquin River Basin, Lower San Joaquin River Interim Feasibility Study Recommended Plan (Project), which proposes to reduce flood risk to the Stockton metropolitan area by improving levees along the San Joaquin River, Mosher Slough, Tenmile Slough, Fivemile Slough, Fourteenmile Slough, Smith Canal, Calaveras River, French Camp Slough, and Duck Creek. The Project proposes to improve levees by addressing seepage, stability, overtopping, and erosion through the implementation of a combination of cutoff walls, geometric levee improvements, levee raises, seismic remediation, bank protection, and a short reach of new levee. In addition, the proposed Project includes two in-water closure structures with operable gates, one on Smith Canal and one on Fourteenmile Slough. Overall, I am supportive of the Project as it will work to stabilize levees, reduce flood risk, and erosion and look forward to working with you on addressing potential water quality concerns during the process of issuing a Water Quality Certification.

Water Quality Certification pursuant to Section 401 of the federal Clean Water Act will be required to authorize construction of the Project. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) usually reviews applications for Certification during the detailed, final design process that occurs near the completion of a final environmental document. We plan to consider issuing Certification for the Project following completion of Project review in compliance with the requirements of the California Environmental Quality Act (CEQA) and after review of near-final Project designs. Water quality concerns for this project include the potential for temporary construction related impacts associated with levee improvement activities and the potential for significant short term impacts on water quality conditions during operation of the proposed gates on Smith Canal and Fourteenmile Slough.

Water quality eastward of the proposed gates could degrade for dissolved oxygen and invasive species, and experience temporary but recurring degradation when the gates are closed, particularly if the gates are closed for several weeks. Tidal exchange and dilution from freshwater flows will be restricted when the gates are closed and contaminants in stormwater runoff may increase contaminant concentrations in waters eastward of the proposed gates. In addition, increased retention time combined with increased concentrations of contaminants may result in decreased dissolved oxygen concentrations and increased production of methylmercury. Any decreases in dissolved oxygen levels, or increases in methylmercury and other contaminant concentrations, may cause or contribute to temporary exceedances of water

quality objectives for Clean Water Act Section 303(d) listed impairments or cause new impairments. The 2012 Clean Water Act Section 303(d) list identifies many of the waterways within the proposed Project areas as impaired by low dissolved oxygen and multiple contaminants (Table 1, attached).

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) includes control programs and total maximum daily loads (TMDLs) to reduce the amounts of diazinon, chlorpyrifos, methylmercury and mercury throughout the Delta, as well as to reduce the amount of pathogens in Stockton's sloughs and rivers, and to increase dissolved oxygen in the Stockton Ship Channel. Project measures identified in the final environmental document will need to include practices that ensure the Project does not cause or contribute to an exceedance of a water quality objective and must ensure continued compliance with the TMDL control programs. My staff will work with you in addressing these concerns during the process of issuing a Water Quality Certification.

In summary, I am supportive of the Lower San Joaquin River Interim Feasibility Study Recommended Plan and other projects that propose to reduce flood risk to communities in the Central Valley Region. I look forward to continuing to work with you to complete the Water Quality Certification process as further design details are provided. Furthermore, I would like to engage with the United States Army Corps of Engineers earlier in the project development process to include in the discussion the impacts on water quality from future flood management projects. If you have questions regarding the Water Quality Certification process, please contact Elizabeth Lee at (916) 464-4787 or at Elizabeth.Lee@waterboards.ca.gov.

for Pamela C. Creedon
Executive Officer

Attachment: Table 1: 2012 Clean Water Act 303(d) Listed Impairments in Proposed Project Area

Table 1: 2012 Clean Water Act 303(d) Listed Impairments in Proposed Project Area

Waterway	303(d) Listing
Delta Waterways (Stockton Ship Channel)	Chlorpyrifos, DDT, Diazinon, Dioxin, Furan Compounds, Group A Pesticides, Invasive Species, Mercury, Organic Enrichment/Low Dissolved Oxygen, Pathogens, PCBs, Unknown Toxicity
Delta Waterways (eastern portion) <includes Fourteenmile Slough>	Chlorpyrifos, DDT, Diazinon, Group A Pesticides, Invasive Species, Mercury, Unknown Toxicity
Mosher Slough (upstream of I-5)	Pathogens
Mosher Slough (downstream of I-5)	Chlorpyrifos, Diazinon, Mercury, Organic Enrichment/Low Dissolved Oxygen, Pathogens
Fivemile Slough (Alexandria Place to Fourteen Mile Slough)	Chlorpyrifos, Diazinon, Organic Enrichment/Low Dissolved Oxygen, Pathogens
Smith Canal	Organic Enrichment/Low Dissolved Oxygen, Organophosphorus Pesticides, Pathogens
Calaveras River, Lower (from Stockton Diverting Canal to the San Joaquin River)	Chlorpyrifos, Diazinon, Mercury, Organic Enrichment/Low Dissolved Oxygen, Pathogens
French Camp Slough (confluence of Littlejohns and Lone Tree Creeks to San Joaquin River)	Chlorpyrifos, Diazinon, E. coli, Dissolved Oxygen, Sediment Toxicity, Unknown Toxicity
Duck Creek	Chlorpyrifos, E.coli, Mercury

APPENDIX D-2

SECTION 404(b)(1) WATER QUALITY EVALUATION

LOWER SAN JOAQUIN RIVER PROJECT
FEASIBILITY REPORT/ ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT

SAN JOAQUIN COUNTY, CALIFORNIA

December 2017

Section 404(b)(1) Clean Water Act Compliance Evaluation
Lower San Joaquin River Feasibility Study

I. Introduction

This document constitutes the Statement of Findings, and review and compliance determination according to the Section 404(b)(1) guidelines for the proposed project described in the Final integrated Feasibility Report and Environmental Impact Statement/ Environmental Impact Report (FR/EIS/EIR) issued by the Sacramento District. This analysis has been prepared in accordance with 40 CFR Part 230- Section 404(b)(1) guidelines and U.S. Army Corps of Engineers (USACE) Planning Guidance Notebook, Engineering Regulation (ER) 1105-2-100.

The Clean Water Act sets national goals and policies to eliminate the discharge of water pollutants into navigable waters. Any discharge of dredged or fill material into Waters of the United States by USACE requires a written evaluation that demonstrates that a proposed action complies with the guidelines published at 40 CFR Part 230. These guidelines, referred to as the Section 404(b)(1) Guidelines (Guidelines) are the substantive criteria used in evaluating discharges of dredged or fill material under Section 404 of the Clean Water Act.

Fundamental to the Guidelines is the precept that "dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated such a discharge will not have an unacceptable, adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern."

The procedures for documenting compliance with the Guidelines include the following:

- Examining practicable alternatives to the proposed discharge that might have fewer adverse environmental impacts, including not discharging into a Water of the U.S. or discharging into an alternative aquatic site.

- Evaluating the potential short-term and long-term effects, including cumulative effects, of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment.

- Identifying appropriate and practicable measures to mitigate the unavoidable, adverse environmental impacts of the proposed discharge.

- Making and documenting the Findings of Compliance required by §230.12 of the Guidelines.

This Clean Water Act, Section 404(b)(1) evaluation of compliance with the Guidelines is not intended to be a "stand alone" document; it relies heavily on information provided in the integrated FR/EIS/EIR to which it is attached.

II. Project Description

a. Proposed Project

The Lower San Joaquin River Project (LSJR Project) is a cooperative effort by USACE and non-Federal sponsors, the Central Valley Flood Protection Board and the San Joaquin Area Flood Control Association. USACE has completed an integrated FR/EIS/EIR dated February 2015. The Final FR/EIS/EIR will be referenced throughout the document to describe the existing conditions near the project site, as well as some potential impacts of the proposed project and the other alternatives. Information on alternatives is taken from Chapters 3 and 4 of the Final FR/EIS/EIR.

The primary and permanent structures consist of roughly 23.6 miles of improved levee, a segment of floodwall, and a segment of new levee surrounding the City of Stockton and two in-water closure structures. Staging areas on the landside of the levees would be cleared for construction use, and temporary concrete batch plants would be constructed on the landside of existing levees as necessary to facilitate the construction of slurry walls, flood gates, and flood wall along levee reaches. Along Calaveras River, where waterside earthen benches are present, staging may also occur on the waterside of the levee.

The proposed project would require discharge of fill material into Waters of the United States under Section 404 of the Clean Water Act and could include the following proposed elements:

Levee Cut-off Walls, Slope Reshaping, and Levee Height Fixes – These elements are proposed to address seepage and slope stability concerns and would be applied to nearly all of the 23.6 miles of levees around North and Central Stockton. Construction activities would cause a temporary disturbance to provide space to construct the footing for the floodwall. Upon completion of the levee slopes, easement areas would be seeded with native herbaceous plant species.

Floodwall – A floodwall is proposed from the southern portion of Dad's Point to high ground at Louise Park. The floodwall would be constructed of sheet piles. Construction activities would cause a temporary disturbance to provide space to construct the footing for the floodwall. Upon completion of the floodwall, the waterside slopes would be seeded with native herbaceous species.

Erosion Protection - For any required erosion protection, quarry stone riprap would be applied to armor the newly completed levee's waterside slope. To reduce erosion concerns, rock bank protection would be placed either on the waterside of the levee or the landside, above the waterline, where the levees are at risk from storm surges, wind wave erosion, and water flanking the levee system. Approximately 75,000 tons of imported quarry stone would be placed to a thickness of 2 feet along the landside to prevent wind wave erosion. A sand filter would also be

placed prior to the riprap layer to prevent gravel instability and decreased erosion protection performance. The purpose of the North Stockton erosion protection is to protect the project from wind and wave run-up erosion which could occur if Delta levees to the west of the project were to fail. The purpose of the Central Stockton erosion protection on Duck Creek is to protect the backside (landside) from flanking erosion that could occur if floodwaters moving from the south to the northeast were to wrap around the end of the project levee and back up against it. Any existing riprap would be replaced.

New Levee – This measure involves new construction on the upstream 0.75 mile of Duck Creek to tie the existing levee into the railroad berm on the north side of Duck Creek to reduce flood risk, or to prevent waters from outflanking (flowing around the ends of the levees and entering the protected area) the levee system during high water events.

New Setback Levee with Cutoff Wall and Existing Levee Degrade - This improvement consists of degrading the top half of the existing levee and placing the degraded material landward. The land between the remnant levee and new levee would become a mitigation planting area to offset project environmental impacts. About 14 acres of habitat would be created between the existing levee and the vegetation free zone of the new landside levee. The length of the offset area would be 7,000 feet, and the width would vary from about 60 feet to 90 feet. Prior to construction, the construction area would be cleared and grubbed. The crest of the levee would then be reconstructed with suitable material to comply with the USACE levee design criteria. A determination may be made during the future design that all of the degraded material may not be necessary to extend the levee to the proposed toe, located along an imaginary line extending from the landward face of the proposed levee to existing grade. During the current feasibility planning, the maximum extent of the reconstruction berm is shown in order to illustrate the maximum impacts which could occur.

Control Structure and Bypass Channel – Installing a diversion structure on the left downstream bank of the Stockton Diverting Canal would divert up to 1,200 cfs down Mormon Channel Bypass. The design would divert the maximum flow that could be handled by the channel without levees or floodwalls. Implementation of these measures would reduce water levels during flood events on the Stockton Diverting Canal and the Calaveras River, as well as provide some incidental ecosystem restoration benefits to the Mormon Channel Bypass.

Seismic Remediation – This project element would improve seismic stability to a portion of the Stockton Deep Water Ship Channel that is vulnerable to liquefaction, retains a permanent pool, and protects the Brookside neighborhood and the East Bay Municipal utility District pipeline. The seismic (deep soil mixing) remediation measure would involve installation of a grid of drilled soil-cement mixed columns aligned longitudinally with, and transverse to, the alignment of the levee extending beyond the levee prism. This measure would minimize significant deformation of the levee during a seismic event.

Deep soil mixing augers would be used to construct a continuous grouping of cells spaced equally in both the longitudinal and transverse direction to the levee alignment as shown in the plan view in Figure 4-6 of the FS/EIS/EIR. The deep soil mixing is a seismic

strengthening feature meant to keep the levee from liquefying during seismic activity. After construction is completed, the levee crest would then be topped with a 6-inch aggregate road, and slopes would be hydroseeded for erosion control.

Closure Structures on Smith Canal and on Fourteenmile Slough – This measure would include construction of closure structures at the mouth of backwater sloughs at Smith Canal and on Fourteenmile Slough to reduce flood risk. The structure would extend from the end of Dad's Point to the right bank of the San Joaquin River at the Stockton Golf and Country Club. The closure structures would control back-flooding from the San Joaquin River and Delta during high water events. Construction would require sheet pile walls on land after the clearing and grubbing of vegetation for a 35-ft wide footprint. It also requires a working platform (barge) and a tug boat in order to move the barge around. The survey equipment for use in and around water would likely be a laser guided system. The in-water work would be accomplished without the use of a separate cofferdam. The cofferdam and the permanent sheet pile are one in the same except for the gate construction where the sheet pile will be cut away upon completion of the concrete structure. The "wing" structures supporting the operable gates and related floodwalls would permanently block a portion of each of these waterways. The gate would be 50 feet wide and constructed of stainless steel attached to a concrete foundation using stainless steel anchor bolts. A small building, about 400 square feet, would be built at the end of Dad's Point, directly adjacent to the closure structures, and would be designed to store equipment required to operate the gate. As needed, a sheet pile floodwall would be constructed adjacent to the control structures to tie the structures into the adjacent levee or high ground areas.

b. Location

The study area for the LSJRFS is located along the lower (northern) portion of the San Joaquin River system in the Central Valley of California (Figure 1 of the FS/EIS/EIR). The San Joaquin River originates on the western slope of the Sierra Nevada and emerges from the foothills at Friant Dam (Figure 2 of the FS/EIS/EIR). The river flows west to the Central Valley, where it is joined by the Fresno, Chowchilla, Merced, Tuolumne, Stanislaus and Calaveras Rivers, and smaller tributaries as it flows north to the Sacramento-San Joaquin Delta.

This proposed project area includes the flood risk management system (primarily levees) and the adjacent waterways and lands in the North and Central Stockton area. Rivers, streams, and sloughs in the project area include the San Joaquin River, Stockton Deep Water Ship Channel, French Camp Slough, Duck Creek, Lower Calaveras River, Tenmile Slough, Fivemile Slough, Fourteenmile Slough, and Mosher Creek.

c. Purpose and Need

The overall purpose of the project is to reduce flood risk to urban and urbanizing parts of the study area, including the City of Stockton. Reducing flood risk would reduce the potential for loss of life and damage to property from flooding. The Federal objective of water resources

planning is to contribute to National Economic Development (NED) consistent with protecting the Nation's environment, in accordance with National environmental statutes, applicable executive orders, and other Federal planning requirements. The non-Federal Partners' objective is to meet the requirements of California Senate Bill (SB) 5 of 2007, the Central Valley Flood Improvement Act, to achieve a 200-year level of protection for the urban and urbanizing areas within the study area. These areas have experienced multiple flooding events since records have been maintained. The existing levee system within the study area protects over 71,000 acres of mixed-use land, with a current population estimated at 264,000 residents and an estimated $21 billion in damageable property.

d. Authority

The general authority for flood control investigations in the San Joaquin River Basin arises under the Flood Control Act of 1936 (Public Law [PL] 74-738), Sections 2 and 6 and amended by the Flood Control Act of 1938 (PL 75-761). The Flood Control Act of 1936, Section 6 explicitly permits further reports to be authorized by Congressional resolutions. Further studies of this river system were directed in the May 8, 1964 resolution adopted by the Committee on Public Works of the House of Representatives.

e. Alternatives [40 CFR 230.10]

(1) Alternative 1 - No Action

The No Action Alternative serves as a benchmark against which the effects and benefits of the action alternatives are evaluated. The No Action Alternative assumes that current conditions and operation and maintenance practices would continue to occur in the foreseeable future if the project were not implemented, based on current plans and consistent with available infrastructure and community services. The No Action Alternative would have no extra impact to wetlands or other Waters of the United States; however, this would not achieve improved flood risk management for the City of Stockton, nor enhance public safety. This alternative is not practicable as it would not meet the purpose and need of the proposed project.

(2) Other project designs:

Alternative 7a, North and Central Stockton, Delta Front, Lower Calaveras River, and San Joaquin River Levee Improvements excluding RD 17. This would include 23 miles of levee improvements and two closure structures, one at Fourteenmile Slough and the other at Smith Canal. The levee improvements include a cutoff wall, deep soil mixing (seismic), a new levee, levee geometry improvements, and erosion protection. In addition, the Recommended Plan (RP) also includes non-structural features to further reduce the consequences of flooding. These include Comprehensive Flood Warning Emergency Evacuation Planning and Flood Plain Management.

This alternative is considered practicable and will be retained. An evaluation of the impacts of Alternative 7a will be discussed throughout this document in order to determine if it is the Least Environmentally Damaging Practicable Alternative (LEDPA).

Alternative 7b, North and Central Stockton, Delta Front, Lower Calaveras River, and San Joaquin River Levee Improvements including RD 17. This alternative would implement the same improvements as Alternative 7a, but would also include additional levee fixes in RD 17, along the northern, western, and southern levees, and lengthening and raising the RD 17 tieback levee. The difference would be an additional 20.7 miles of levee improvements, and no closure structures are being considered in RD-17.

This alternative is not considered practicable because it is not consistent with USACE water resources policies. Therefore, Alternative 7b will not be retained in this analysis.

Alternative 8a, North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River, and Stockton Diverting Canal Levee Improvements excluding RD 17. This alternative would implement the same levee improvements as Alternatives 7a, along with additional improvements along the Calaveras River and Stockton Diverting Canal.

This alternative is considered practicable and will be retained. An evaluation of the impacts of Alternative 8a will be discussed throughout this document in order to determine if it is the Least Environmentally Damaging Practicable Alternative (LEDPA).

Alternative 8b, North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River, and Stockton Diverting Canal Levee Improvements including RD 17. This alternative would implement the same levee improvements as Alternatives 7b, along with additional improvements along the Calaveras River and Stockton Diverting Canal.

This alternative is not considered practicable because it is not consistent with USACE water resources policies. Therefore, Alternative 8b will not be retained in this analysis.

Alternative 9a, North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River Levee Improvements and Mormon Channel Bypass excluding RD 17. This alternative would implement the same levee improvements as Alternatives 7a, but would also include construction of a flood bypass and diversion structure in the Old Mormon Channel.

This alternative is considered practicable and will be retained. An evaluation of the impacts of Alternative 9a will be discussed throughout this document in order to determine if it is the Least Environmentally Damaging Practicable Alternative (LEDPA).

Alternative 9b, North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River Levee Improvements and Mormon Channel Bypass including RD 17. This alternative would implement the same levee improvements as Alternatives 7b, but would also include construction of a flood bypass and diversion structure in the Old Mormon Channel.

This alternative is not considered practicable because it is not consistent with USACE water resources policies. Therefore, Alternative 9b will not be retained in this analysis.

f. General Description of Dredged or Fill Material

For each of the retained action alternatives (Alternatives 7a, 8a, and 9a), the following project elements would require dredging and/or placement of fill into waters of the United States:

- In-water closure structure on Fourteenmile Slough
  - 0.5 acres permanent impacts
  - 1 acre temporary construction impacts
- In-water closure structure on Smith Canal
  - 0.5 acres permanent impact
  - 3 acres temporary construction impacts
- Levee slope reshaping
  - 8.75 acres permanent impact
- New Levee
  - 2 acres permanent impact
- Seepage berms
  - Seepage berms and levee slope reshaping together could impact up to 40 acres of toe drains and ditches
- Vegetation clearing to establish USACE Vegetation ETL "vegetation free zones"

(1) General Characteristics of Material

Fill into Waters of the United States is required for the purpose of 1) reshaping levee slopes and repairing levee heights, and 2) constructing two closure structures (flood gates). Materials for levee slope and height repairs would be suitable soils acquired from within 25 miles of the project area. Fill materials for bank protection, seepage berms, and adjacent levees would consist of large stone riprap to armor the waterside slope. Construction of closure structures would require excavation of fines, and the placement of the concrete and sheet pile for the control structure. The substrate is mostly fine sand and silt. The proposed fill for the alternatives would come from on-site construction or imported fill material. The No Action Alternative would result in no changes.

(2) Quantity of Material

There is no dredging or in-water excavation associated with construction of the closure structures. Landside toe drains and ditches would be relocated to construct seepage berms and levee slope reshaping under all action alternatives. Levee improvements could affect waterside wetlands where slope reshaping is required at Mosher Slough, Delta Front, and the Calaveras River. The new Duck Creek levee would result in the removal of 2 acres of wetlands. There would be temporary impacts to up to 40 acres of landside toe drains and ditches during one

construction season, but all of these features would be replaced following construction. There would be permanent impacts to 10.75 acres of waterside wetlands.

(3) Source of Material

Potential sources for borrow material include the existing levees and suitable lands within 25 miles of the project area. Potential locations for borrow would be based on current land use patterns, soil types from U.S. Soil Conservation Service, and USACE's criteria for material specifications. Borrow sites would be lands that are the least environmentally damaging and would be obtained from willing sellers. Any required supplemental NEPA/CEQA compliance associated with the selected borrow sites would be conducted by the Corps. Compliance with other construction-related permits would be the responsibility of the construction contractor. Any borrow activities would be subject to the Surface Mining and Reclamation Act (SMARA) of 1975 (Public Resources Code, Sections 2710-2796). The SMARA requirements apply to anyone, including State government agencies, engaged in surface mining operations in California (including those on Federally managed lands) that disturb more than 1 acre or remove more than 1,000 cy of material. At the time the borrow sites are identified, a detailed Reclamation Plan would be developed and appropriate financial assurances would be provided to ensure that each borrow area greater than 1 acre would be restored in a timely manner. SMARA permitting for borrow sites would be at the discretion of the State Mining and Geology Board (SMBG), and would require future CEQA documentation, with the SMGB as CEQA Lead Agency.

Any riprap required to protect the closure structures would be imported from a licensed, permitted facility that meets all Federal and State standards and requirements. Concrete material for the sheet pile walls and flood walls would be imported from a licensed, permitted facility or made by the on-site batch plant. The material would be transported along existing roadways and construction access roads.

g. Description of the Proposed Discharge Site

(1) Location

The location of the discharge sites would be at the locations of the closure structures in Fourteenmile Slough and Smith Canal. The structures would be 50-feet wide and constructed of stainless steel attached to a concrete foundation using stainless steel anchor bolts. There would be temporary impacts to landside levee toe drains and irrigation/drainage ditches within the project footprint, however, these drains and ditches would be replaced following construction; therefore there is no permanent impact. Levee improvements could affect waterside wetlands where slope reshaping is required at Mosher Slough, Delta Front, and the Calaveras River. The new Duck Creek levee would result in the removal of 2 acres of wetlands.

(2) Size

Construction activities associated with Alternatives 7a, 8a, and 9a would result in the loss of Waters of the United States, including wetlands (Table 1). The project is located along the levees and waterways surrounding North and Central Stockton. Materials would be placed into Fourteenmile Slough, and Smith Canal. Materials would also be placed into landside levee toe drains and irrigation/drainage ditches within the project footprint. These ditches and drains would be relocated and restored on-site. Due to the size of the project area a jurisdictional wetland delineation was not carried out. For purposes of the planning phase of the study, any wetlands or waterbodies identified from aerial imagery (Google Earth, including historic aerial imagery) were assumed to be jurisdictional under Section 404 of the Clean Water Act. During a site visit in January 2016, team members walked or drove the most of the length of the area included in the RP. Where direct access was not possible, they observed the area from across the river or from upstream or downstream. This visual inspection suggests that the wetlands reported herein and based on aerial imagery overestimates wetlands that are actually present in the project area. In addition, the assumption that up 50% of the vegetation would be allowed to remain on the lower waterside levee slope and within the waterside easement would further reduce effects on wetlands, particularly along Mosher Slough, Delta Front, Calaveras River, and Duck Creek. A wetland delineation will be carried out during the design phase of the study.

Table 1. Impacts to Waters of The United States (Alternatives 7a, 8a, 9a)[1]

Location	Feature	Habitat Type	Total Permanent Impacts	Total Temporary Impacts
Fourteenmile Slough	Closure Structure	Tidally influenced estuary slough	0.5 acres	1 acre
Smith Canal	Closure Structure	Tidally influenced riverine canal	0.5 acres	3 acres
Mosher Slough	Levee Reshaping, Vegetation ETL	Waterside wetlands	3 acres	0
Delta Front	Levee Reshaping, Vegetation ETL	Waterside wetlands	4 acres	0
Calaveras River	Levee Reshaping, Vegetation ETL	Waterside wetlands	1.75 acres	0
Duck Creek	New Levee	Waterside wetlands	2 acres	0
Landside toe drains and ditches	Seepage berms, levee height raises, levee reshaping	Open water, freshwater marsh, and riparian shrub scrub in some locations.	N/A	Up to 40 acres
TOTAL IMPACT			1.0 acre	Up to 44 acres

[1] Toe drains and ditches would be reestablished landward of the levee construction.

Alternatives 7a, 8a, and 9a would encompass the same disposal sites. However, Alternative 9a could generate a larger amount of disposal material due to excavation to construct a flood bypass within Old Mormon Channel.

The No Action Alternative would have no impacts to disposal sites.

(3) Type of Site

The types of disposal sites are two tidally influenced sloughs, one tidally influenced canal, landside toe drains and ditches, and previously disturbed designated dredge disposal sites.

(4) Type of Habitat

The following habitat types were identified at and around the project area. This discussion is broad and focuses on all habitat types, not just those that are potentially jurisdictional. The study area consists of levees plus a 15 foot waterside easement and a 20 foot landside easement. Habitat types recorded in the study area are described in Section 5.9 of the Final FR/EIS/EIR.

The Lower San Joaquin River project area supports Waters of the United States, including rivers, estuarine sloughs, and wetlands. The wetlands and other Waters of the United States in the project area are highly altered as a result of flood risk management projects, reclamation for agriculture and urbanization, and navigation projects. These projects have resulted in general straightening and simplification of river, stream, and slough structure.

The National Wetland Inventory (NWI) indicates several wetlands within and adjacent to the riparian zone of the San Joaquin River and its tributaries. However, NWI maps do not show wetlands as present in the footprint of proposed new levees.

Perennial Drainages

The San Joaquin River, lower Calavaras River, French Camp Slough, Duck Slough, Stockton Deepwater Ship Channel, Stockton Diverting Canal, Tenmile Slough, Fourteenmile Slough, Fivemile Slough, Smith Canal, Burns Cutoff, Mosher Slough/Creek, Paradise Cut, Old River North, Walthall Slough, and Mormon Slough are the perennial drainages in the project area. The San Joaquin River and the lower reaches of its tributaries in the project area, the Stockton Deepwater Chip Channel, and the sloughs around north Stockton are tidally influenced.

Before construction of the Stockton Diverting Canal, Old Mormon Channel was perennial in most years. Today, the channel received local stormwater runoff and intermittently contains water in portions of the channel.

Perennial to Intermittent Drainages

Landside levee toe drains are present throughout the project area. Agricultural canals and ditches are present in agricultural lands outside urban areas. In the project area, most of these agricultural canals and ditches are located on Shima Tract, Wright Tract, and in RD 17. Levee toe drains and agricultural ditches may contain water seasonally or year-round.

Ponds

Small ponds are located east of the San Joaquin River levee in RD17. Manmade ponds exist in North Stockton and in the northern part of RD 17, but are part of residential developments and will not be affected by this project and are, therefore, not treated in this impact analysis.

Emergent Wetland

Narrow bands of emergent marsh are present along some portions of the San Joaquin River, its tributaries, and along the sloughs in the vicinity of north Stockton. Greater expanses are present in areas that have a waterside bench in the canal such as the tip of RD17 that joins French Camp Slough. Some depressions that exist along the lower levees and adjacent to the waterside or landside of the levees contain wetland attributes.

Toe drains, and agricultural and roadside ditches are routinely maintained to preserve flow capacity for flood risk management or agricultural purposes and, therefore, are frequently cleared of vegetation. Nevertheless, wetland vegetation is sporadically and intermittently present in and along these waterways. Toe drains and agricultural ditches are dominated by a mix of native and nonnative aquatic and semi-aquatic plant species such as curly dock, African pricklegrass, floating water primrose, willow weed, annual beard grass, and nutsedge (AECOM 2011).

The Draft EIS/EIR for the RD17 Early Implementation Project (AECOM 2011) documents the presence of freshwater marsh in a depression on the landside of the levee between Howard Road to the north and a dirt farm road on the south. Vegetation in the marsh is reported as being dominated by narrow-leaved cattail with Fremont cottonwood and red willow trees growing on the perimeter. The Draft EIS/EIR also documents a limited amount of freshwater marsh around the edges of a constructed pond that is located on a large private estate and equestrian center located east levee in RD17. A second area of freshwater marsh is located just in RD17, in an area of backwater on the San Joaquin River.

Intertidal Areas

Vegetated rocky intertidal areas are present in Fourteenmile Slough.

Channel Islands

These unique islands are present in the main channels in Fourteenmile Slough and in the Lower Calaveras River. Wetland vegetation is likely present around the edges of these islands.

Riparian Communities

In general, riparian communities are among the richest community types, in terms of structural and biotic diversity, of any plant community found in California. Riparian vegetation

provide important ecological functions, including wildlife habitat, migratory corridor for wildlife, filters out pollutants, and shades waterways, thereby improving water quality. It also provides connectivity between waterways and nearby uplands, has a provision of biomass (nutrients, insects, large woody debris, etc.) to adjacent waterways, and, in some situations, reduces the severity of floods by stabilizing riverbanks. Riparian forests and woodlands, even remnant patches, are important wildlife resources because they continue to be used by a large variety of wildlife species and because of their regional and statewide scarcity.

Shaded Riverine Aquatic (SRA) Habitat

SRA habitat is the nearshore aquatic zone composed of in-stream woody material, providing in-water cover and shoreline trees and shrubs providing overhead canopy cover. Overhanging trees and shrubs provide shade cover important to the survival of many aquatic organisms, including fish. Overhanging vegetation moderates water temperatures, which is an important factor for various life stages of native fish species. The vegetation also provides food and habitat for both terrestrial and aquatic invertebrates, which in turn serve as food for several fish species. Aquatic vegetation, or in-water cover, provides a diversity of microhabitats which allows for high species diversity, abundance, and a food source for in-stream invertebrates, which in turn are eaten by several native fish species. Thus, a broad food base and extensive cover and habitat niches are supported by in-water cover. These values create high fish diversity and abundance (USFWS 1992).

Riparian Woodland

Riparian woodlands in the project area include cottonwood riparian woodland, valley oak riparian woodland, walnut riparian woodland, and riparian scrub. Riparian habitats are considered to be among the most productive wildlife habitats in California, and typically support the most diverse wildlife habitats. In addition to providing important nesting and foraging habitat, riparian habitats function as wildlife movement corridors.

Great Valley Cottonwood Riparian Forest

Larger remnant patches of Great Valley cottonwood riparian forest within the project area are dominated by large Fremont cottonwood trees and Goodding's willow. Most of the otherwise linear or smaller patchy areas of this community lack Fremont cottonwood and are represented by Gooding's willow, red willow, arroyo willow, narrow leaved-willow, scattered valley oak, Oregon ash, and buttonbush. Native ground cover species, mainly found in the larger remnant patches of riparian forest, include California blackberry and wild rose. Common nonnative understory species found in most elements include Himalayan blackberry and tree tobacco. Most of the Great Valley cottonwood riparian forest community could also be characterized as Great Valley riparian scrub, which does not include Fremont cottonwood and is characterized by a shorter canopy and more uniform structure; however, this habitat is part of the Great Valley cottonwood riparian forest that was extensive and connected along this entire reach of the San Joaquin River, and this document therefore describes all riparian habitat as such.

Great Valley Oak Riparian Forest

Great Valley oak riparian forest is also within the project area, occurring only on the landside of the levees. Two significant oak groves of very large, healthy valley oak trees are present on the landside in RD17 and account for the majority of the Great Valley oak riparian forest. However, several groups of smaller valley oak trees and individual valley oak trees scattered along the landside and also contribute to this community. Although not measured, several of the largest trees in these landside oak groves present are close to 100 inches dbh, which is a size that indicates they are possibly several hundred years old (Bartolome 1997, cited in AECOM, 2011).

Herbaceous Community

Nonnative Annual Grasslands

Nonnative annual grassland occurs throughout the project area on levee slopes, along roadsides, and in undeveloped parcels. These areas are dominated by nonnative annual grasses and nonnative ruderal vegetation, and may support stands of noxious species. Ruderal vegetation and grassland generally occurs in disturbed areas, such as levee slopes and edges of agricultural fields and roads. Areas of pasture associated with residences are primarily annual grasses that are grazed by horses and were mapped as nonnative annual grassland. The annual grasslands in the project area contain a relatively large proportion of ruderal species, likely due to substantial disturbance from human activities.

Nonnative annual grassland is dominated by naturalized annual grasses with intermixed perennial and annual forbs. Grasses commonly observed in the project area are foxtail barley, ripgut brome, Italian ryegrass, and soft chess. Other grasses are wild oats, Bermuda grass, and rattail fescue. Forbs commonly observed in annual grasslands in the project area are yellow star-thistle, prickly lettuce, bristly ox-tongue, sweet fennel, Italian thistle, horseweed, black mustard, fireweed, broad-leaf pepper grass, common sunflower, pigweed, cheeseweed, bindweed, and telegraph weed. The annual grasslands in the project area contain a relatively large proportion of ruderal species, likely because due to substantial disturbance from human activities. Elderberry shrubs occur in several areas of nonnative annual grassland.

Ruderal vegetation is characterized by nonnative weedy and sometimes invasive vegetation and nonnative annual grasses. Common weed species include yellow star-thistle, black mustard, shortpod mustard, Italian thistle, milk thistle, and Himalayan blackberry; common grass species include ripgut brome, foxtail barley, Bermuda grass, and Johnsongrass. The levee slopes are dominated by ruderal vegetation. Large open areas in RD 17 are composed primarily of ruderal vegetation as are some smaller open areas that border roads, parking lots, and agricultural land, and Old Mormon Channel.

Agricultural Communities

In the project area, agricultural lands include row and field crops, fallow and disked

agricultural fields, orchards, and vineyards. General farming practices result in monotypic stands of vegetation for the growing season and bare ground in the fall and winter. Irrigation ditches are a part of most of the agricultural fields in the project area.

Cropland occurs in RD17, Shima Tract, Wright Tract, northeast of the Stockton Diverting Canal, and along the upper reaches of the Calaveras River. Ruderal species grow along the edges of fields and irrigation ditches, some of which contain water and associated aquatic plants.

Developed Lands

Developed lands in the project area include areas such as levee roads, railways, roads, buildings, and landscaped areas as well as barren areas that have been disturbed and are not vegetated. Developed areas consist of residential areas; parks, boat launching facilities, boat docks, and ranch houses and related facilities. Vegetation in residential areas and parks consists of turf grasses, landscape trees, and occasional valley oak trees. Ranch lands often contain a variety of landscape trees and shrubs, and occasional native trees including valley oak trees. In north and central Stockton, most of the areas landside levees in the project area are "developed." This is also true of lands in the northern portion of RD17 (Weston Ranch) and in the southern RD17 near Lathrop and Manteca.

(5) Timing and Duration of Discharge

Full project construction would occur over fourteen years. Fill of landside toe drains and ditches would occur at the time that each levee segment is constructed. These toe drains and ditches would be reestablished further landward at the time that each levee segment is constructed. Construction of each closure structure is expected to take two construction seasons.

h. <u>Description of Disposal Method</u>

The descriptions of the disposal methods within the proposed project area are excerpted below from the Final FR/EIS/EIR. Construction of the closure structures would take place from a barge and/or from heavy equipment on the top of the levee. Construction would disturb the aquatic environment, including nearshore marsh habitat, and would require removal of vegetation on and adjacent to the levee. Material removed for the closure structures would be used in construction of other project features (floodwall, levees) where feasible. The remainder of the materials would be hauled off-site and disposed of at a designated disposal site.

Alternatives 7a, 8a, and 9a would utilize similar disposal methods. However, Alternative 9a would also include excavation within the Old Mormon Channel in order to establish a flood bypass. The No Action Alternative would not require the disposal of materials.

II. Factual Determinations

a. Physical Substrate Determinations (Sections 230.11 (a) and 230.20)

(1) Comparison of Existing Substrate and Fill

The description of the current substrate within the proposed project area is taken from Sections 5.1 and 5.3 of the Final FR/EIS/EIR. The existing levee system is located on deposits consisting of Holocene alluvium and Holocene basin deposits, as well as late Pleistocene alluvial fan and terrace deposits of the Modesto and Riverbank Formations. These Quaternary deposits are variably dissected and overlain by younger Quaternary (Historical) deposits consisting of channel, floodplain, and artificial fill (levees and spoils from dredging). Some rocky substrate is present within Fourteenmile Slough, in the vicinity of the proposed closure structure.

Soils in the project area range from highly sandy to dominantly fine, with fine to extremely coarse gradations. Erosion and expansion potentials are low to moderate for the soil series. Severe erosion is not generally a concern due to the relatively level terrain; however, wind can erode exposed and recently disturbed soils. Expansive soils contain a higher content of clay and expand and shrink, depending on water content. Subsidence can occur locally as a result of seasonal changes in soil moisture content. Substantial groundwater-related subsidence has occurred throughout the San Joaquin Valley as drainage of lowlands has resulted in the decomposition of organic components in the soils.

Fill material used to construct levee slope reshaping measures would come from borrow material excavated from within a 25-mile radius of the project area and from existing on-site levee materials removed to make the proposed levee improvements. This material would be placed in waterside wetland habitat and landside toe drains and ditches as a result of the adjustment to the levee slope. Fill that would be impacting waters of the U.S. include the closure structures at Fourteenmile Slough and Smith Canal. The closure structures would be 50-feet wide and constructed of stainless steel attached to a concrete foundation using stainless steel anchor bolts. Riprap used for erosion protection would not fall below OHW.

(2) Changes to Disposal Area Elevation

The description of changes to the disposal sites within the proposed project area are taken from Chapter 4 of the Final FR/EIS/EIR. Alternatives 7a, 8a, and 9a all involve placement of permanent materials into Fourteenmile Slough and Smith Canal in order to construct closure structures. ~~They all also include placement of fill into Fourteenmile Slough and Tenmile Slough to construct an in-water work platform for construction of seismic remediation of adjacent levees.~~

Alternatives 7a, 8a, and 9a primarily call for landside levee fixes that do not change in-channel geometry or characteristics; therefore, the hydraulics of the system would not change. The hydraulic analysis completed for this study considered the impacts of the two closure structures (on Fourteenmile Slough and Smith Canal). Additional work is expected to reduce the area of impact and minimize affect to water surface elevation, except where the objective is to reduce flood risk by operating the closure structure gates when the water surface elevation

reaches 8 feet. With the mitigation measures proposed to avoid and minimize impacts, the impacts of the proposed project on elevation would be minimal. The closure structures would extend from the in-water substrate to several feet above the water surface.

The closure structures were analyzed with a hydraulic model. The closure structures would operate (close) when the water surface elevation of the adjacent waters reach 8 feet in elevation. The purpose of these structures is to reduce hydraulic pressure on levees surrounding the City of Stockton by taking the peak off of flood flows about every three years. Under Alternative 9a, Old Mormon Channel would be excavated in specific locations to assure passage of 1,200 cfs. The No Action Alternative would not modify the substrate elevation or bottom contours.

(3) Migration of Fill

The description of materials and placement are taken from Chapter 4 of the Final FR/EIS/EIR. Levee improvements around North and Central Stockton, including cutoff wall construction, levee height fixes, levee raises, slope reshaping, closure structure implementation, and seismic remediation would require ground disturbing activities that would potentially cause erosion and soil disturbance, subsequently resulting in sediment transport and delivery to aquatic habitats. An increase in sedimentation and turbidity could occur in adjacent water bodies during earth moving activities and could be considered significant. These indirect effects would be reduced to less than significant with the implementation of BMPs discussed in Water Quality (Section 5.5). Fill materials being directly placed into waters of the U.S. for the closure structures at Fourteenmile Slough and Smith Canal would consist of a fixed sheet pile wall, concrete foundation, and stainless steel gates and bolts, and are not expected to migrate.

Alternatives 7a, 8a, and 9a would produce similar impacts on erosion and accretion patterns that would be minimized with the use of BMPs. The No Action Alternative would not result in any change to erosion and accretion patterns.

(4) Duration and Extent of Substrate Change

Alternatives 7a, 8a, and 9a would cause similar impacts to substrate. There would be localized impacts due to ground disturbing activities that would potentially cause erosion and soil disturbance, subsequently resulting in sediment transport and delivery to aquatic habitats within the entire study area during the construction period. However, these impacts are not expected to migrate outside of the study area and would not continue following the completion of construction. Alternative 9a would cause additional impacts due to the construction of the flood bypass through Old Mormon Channel. The materials associated with the closure structures would consist of a permanent change in approximately one acre of material at the each of the sites of the closure structures (Smith Canal and Fourteenmile Slough). The No Action Alternative would not modify the substrate.

(5) Changes to Environmental Quality and Value

There is not expected to be a permanent change to the environmental quality and value of the drainage ditches, as they will be relocated during construction and restored to their pre-project condition. There would be a permanent change to the environmental quality and value of the footprints of the closure structures (approximately 1 acre at Smith Canal and 1 acre at Fourteenmile Slough), as the existing materials will be replaced with concrete and stainless steel structures. There would be a permanent change to the environmental quality and value of the waterside wetlands where slope reshaping is required, and in the footprint of the new Duck Creek levee (approximately 10.75 acres). Additional information regarding environmental quality and value with vegetation, wildlife, and fisheries is found in Chapter 5 of the Final FR/EIS/EIR. Materials excavated from Old Mormon Channel under Alternative 9a would be disposed at approved locations on land. Each of the Alternatives pose significant temporary impacts on environmental quality and value, and permanent effects to wetlands and open water habitat, but implementation of the mitigation measures and purchase of compensatory mitigation bank credits would reduce the impacts to less than significant. The No Action Alternative would not modify the environmental quality and value.

(6) Actions to Minimize Impacts

Construction would have minor, short-term impacts. Constructed features (closure structures) would permanently alter the affected waterways. BMPs, like use of silt fences to reduce unintended soil movement and turbidity, would be implemented to avoid impacts. Potential impacts would be further minimized through design and operational refinements to the extent feasible. Compensatory mitigation would off-set any remaining impacts. Compensation for the loss of waters of the United States would include purchasing credits from an approved mitigation bank for permanent impacts to wetlands and open water habitat. Additional information on mitigation measures, including BMPs is in Sections 5.5 and 5.7 of the Final FR/EIS/EIR.

b. Water Circulation, Fluctuation, and Salinity Determinations

(1) Alteration of Current Patterns and Water Circulation

The operation of the closure structures under Alternatives 7a, 8a, and 9a, and the resultant change in stages in the waterways east of the closure structures, has been analyzed with a hydraulic model to achieve the intended risk reduction for the City of Stockton. The stages and tidal prism west of the closure structures would not change; it is assumed when the closure structures are operating, the stages in the waterways to the east of the structures would remain at a non-damaging stage of 8 feet (NAVD88). The operation of the two closure structures will be further refined during the next project phase.

The No Action Alternative assumes no action would be taken. In this scenario, currents, circulation and drainage patterns of system would remain unchanged.

(2) Interference with Water Level Fluctuation

Because the San Joaquin River system is regulated by upstream dams which allow a specific amount of water to be released into systems, the practicable build alternatives and the No Action Alternative would not change water level fluctuation patterns.

(3) Salinity Gradients Alteration

Salinity gradients would not be affected.

(4) Effects on Water Quality

The description of the current water quality condition of surface waters in the project area is taken from Section 5.5 of the Final FR/EIS/EIR.

The latest version of the Section 303(d) list for California issued by the State Water Resources Control Board (approved October 26, 2006) identifies impaired status for waterways in the eastern Delta, including the upper San Joaquin River. Potential source of pollution for all of the listed constituents in the basin include agriculture, urban runoff/storm sewers, resource extraction, and unknown sources. The eastern Delta, including the upper San Joaquin River, is on the Section 303(d) list for impairment for boron, chlorpyrifos, diazinon, dichlorodiphenyltrichloroethane (DDT), electrical conductivity (EC), unknown toxicity, Group A pesticides, exotic species, and mercury. Downstream of RD17, the Stockton Deepwater Ship Channel is being addressed by a Total Maximum Daily Load (TMDL) for dissolved oxygen and is no longer on the Section 303(d) list. TMDLs have been initiated for organophosphorous pesticides (i.e., diazinon and chlorpyrifos), salinity and boron, and selenium in the upper San Joaquin River watershed and for total dissolved solids (TDS) and mercury in Delta channels. TMDLs for the other listed pollutants are scheduled to be developed at various times over the next 10 years in accordance with the priorities contained in the Section 303(d) list.

(a) Water Chemistry

Project activities involving concrete and concrete wash water have the potential to affect pH, turbidity, and hexavalent chromium in receiving waters. Concrete wash water tends to have relatively high pH (between 10 and 14). Approved BMPs for managing concrete wash water include curing / air drying, off hauling for treatment, and active treatment onsite using carbon dioxide or a stronger acid such as sulfuric or acid.

Hexavalent chromium is present in Portland Cement Concrete (PCC) and PCC grindings. Active treatment systems (ATS) targeting pH and turbidity may not remove hexavalent chromium, unless they are augmented with ferrous sulfate or some other chemical agent to reduce hexavalent chromium to trivalent chromium.

Mitigation measures proposed for pH and turbidity would be development and implementation of an approved Stormwater Pollution Prevention Plan (SWPPP),

including an ATS if needed to attain water quality objectives. To mitigate for hexavalent chromium risks, the ATS plan would include monitoring and treatment measures to attain no significant increase of hexavalent chromium in receiving waters.

(b) Salinity

The project would not change salinity levels.

(c) Clarity

Placement of fill materials would temporarily reduce clarity due to an increase in total suspended solids within the project area. Clarity is not expected to be substantially affected outside the immediate project area. However, the reduction of clarity caused by construction activities would be short in duration and would return to pre-construction levels upon project completion.

(d) Color

Placement of fill materials would temporarily induce a color change due to an increase in turbidity. However, conditions would return to pre-construction levels upon completion of the project.

(e) Odor

The project would not affect odor.

(f) Taste

The project would not affect taste.

(g) Dissolved Gas Levels

The proposed project would not have impacts on dissolved gas levels within the project vicinity. While operation of the closure structures could result in increases in standing water behind the structures, which could increase dissolved gas levels, these structures would only be operated for limited periods of time during high water events. As a result, changes to normal flow patterns would be infrequent and temporary within the study area and are not expected to impact dissolved gas levels.

(h) Temperature

Construction activities have the potential to create substantial turbidity, thus

affecting water temperature. Proposed mitigation measures, specifically conducting work during low flow periods and installing sediment barriers to reduce sediment from entering waterways, would be required to control turbidity and the mobilization of pollutants that may be present in sediments. Removal of trees and shrubs that overhang the waterways could increase water temperature in the immediate vicinity.

(i) Nutrients

Release of suspended sediments from project activities could potentially cause turbidity thresholds to be exceeded. This could concurrently cause thresholds for metals and nutrients to be exceeded. Turbidity would be controlled outside the working area using a combination of BMPs, as appropriate. Development and implementation of an approved SWPPP would also prevent release of excess nutrients.

(j) Eutrophication

The project is not expected to contribute excess nutrients into the stream or promote excessive plant growth due to BMPs and design and operational refinements.

(5) Changes to Environmental Quality and Value

Alternatives 7a, 8a, and 9a could impact the water quality during construction from earth moving operations, storage and handling of construction materials on-site, and the operation and maintenance of construction equipment on-site. Construction and associated materials, including solvents, paints, waste materials, and fuels associated with operation and maintenance of construction equipment present on-site, could introduce hazardous or toxic materials and silt and debris into surrounding waters, resulting in degradation of the water quality. Although there is risk of substantial effects to water quality during project construction, these effects would be short-term and localized within the project area. Effective compliance with BMPs, containment plans, and CVRWQCB water quality thresholds is expected to lower risk of changes to environmental quality and value.

Construction of the Fourteenmile Slough and Smith Canal closure structures could affect water quality in adjacent waterways; however, BMP will be implemented that will avoid and minimize adverse effects on water quality. Construction of the closure structures is described in Section 4.3.9 of the FR/EIS/EIR.

(6) Actions to Minimize Impacts

Construction would be timed with low water levels when possible to minimize impacts. The impacts to water quality due to construction activities would be minimized by compliance

with thresholds of the Section 401 Water Quality Certification, issued by the Central Valley Regional Water Quality Control Board (CVRWQCB).

In addition, proposed mitigation measures would reduce the potential impacts of the proposed project on water quality. These mitigation measures are located in the Water Quality Section (5.5) of the Final FR/EIS/EIR.

The contractor would be required to produce compliance plans and implement the proposed mitigation measures during project construction; therefore, impacts to the water quality from project construction are expected to be minimal.

c. Suspended Particulate/Turbidity Determinations

(1) Alteration of Suspended Particulate Type and Concentration

During construction, risk is present for increased levels of turbidity as soils are exposed during rain events. In addition, the dredging of material and placement of fill materials could result in releases of suspended sediments and increased turbidity into the water. Exposed material could be eroded by wave action or storm runoff. The use of BMPs such as utilizing erosion control devices (silt fencing) within the project area, and side slope stabilization of exposed fills, would minimize increases in suspended sediments or turbidity associated with the proposed project. Additional information on water quality is found in Section 5.5 of the Final FR/EIS/EIR.

The No Action Alternative would result in the project not being completed, which would result in no impacts to suspended sediment and turbidity.

(2) Particulate Plumes Associated with Discharge

Earthwork would be performed during low flow periods to minimize particulate plumes. However, particulate plumes could occur from the placement of fill materials but are expected to be contained. Plumes would dissipate after construction activity is completed.

(3) Changes to Environmental Quality and Value

Particulate plumes resulting from any construction activity under Alternatives 7a, 8a, and 9a would not persist after project completion. Particulates suspended within the disposal area are not expected to differ in type from particulates currently within the project area.

There could also be long term effects to water quality as the closure structures begin to deteriorate over time. Increased turbidity and metal contamination in the water column as iron or other metals in the closure structures corrode would also impact water quality. In addition, maintenance activities would disturb the channel bottom during repairs.

(4) *Actions to Minimize Impacts*

Effects would be minimized by performing work during low water level periods when possible. A SWPPP would be prepared for project construction, which would describe and identify BMPs that would minimize impacts during on-site and off-site construction activities. As a result of contractor compliance with the CVRWQCB certification, consistent water quality monitoring, and mitigation measures listed in Section 5.5 of the Final FR/EIS/EIR, increases in sedimentation and turbidity are expected to be minimized and temporary. Potential BMPs that could be implemented during project construction are listed in the Water Quality Section (Section 5.5) and in the Wetland and Other Waters of the United States Section (Section 5.7) of the Final FR/EIS/EIR. These BMPs will be coordinated with the CVRWQCB during the design phase of the project and could be adjusted based on the Water Quality Certification process under Section 401 of the Clean Water Act.

d. Contaminant Determinations

Construction activities for Alternatives 7a, 8a, and 9a would involve the use of hazardous materials such as fuels and lubricants to operate construction equipment, and vehicles such as excavators, compactors, haul trucks, and loaders. Bentonite (a non-hazardous material) would be transported to sites where slurry cutoff wall construction would occur.

Construction of closure structures in Fourteenmile Slough and Smith Canal could result in the release of different types of contaminants that exist in the soil into the environment, significantly affecting water quality. These contaminants include pesticides, fertilizers, organic litter, and debris containing hazardous substances. In addition, contaminated material could be exposed during excavation of the Fourteenmile Slough and Smith Canal for placement of the closure structures. In order to ensure that there are no contaminants within the proposed borrow or fill material, BMPs listed in the Water Quality Section (Section 5.5) of the Final FR/EIS/EIR would be implemented. With the implementation of these measures during construction, there would be minimal impacts to aquatic resources from contaminants. The No Action Alternative would result in no impacts from potential contaminants.

e. Aquatic Ecosystem and Organism Determinations

(1) Effects on Plankton

Plankton are drifting organisms that inhabit the pelagic zone of oceans, seas, or bodies of fresh water. Construction of the project would be temporary and short-term, and would include temporary displacement due to in-water construction and decreased plankton density due to increased turbidity. With implementation of mitigation measures and BMPs in the Water Quality Section (Section 5.5) and the Wetland and Other Waters of the United States Section (Section 5.7) of the Final FR/EIS/EIR, the effects would be temporary and not significant.

(2) Effects on Benthos

Benthic organisms are found in the benthic zone, which is the ecological region at the lowest level of a body of water, such as an ocean or lake, including the sediment surface and some sub-surface layers. Native benthic species could be affected by the excavation required to construct the closure structures.

(3) Effects on Nekton

Nekton are actively swimming aquatic organisms that range in size and complexity from plankton to marine mammals. Descriptions of fish and other aquatic resources below are from Sections 5.11 and 5.12 of the Final FR/EIS/EIR.

Native fish present in the Lower San Joaquin River study area can be separated into anadromous species and resident species. Native anadromous species include four runs of Chinook salmon, steelhead trout, and green sturgeon. All of these anadromous species are expected to use habitat in parts of the study area. Native resident species include but are not limited to pikeminnow (*Ptychocheilus grandis*), Sacramento splittail (*Pogonichthys macrolepidotus*), Sacramento sucker (*Catostomus occidentalis*), hardhead (*Mylopharodon conocephalus*), San Joaquin roach (*Lavinia symmetricus*), and steelhead/rainbow trout (*O. mykiss*), and can be found throughout the study area in various aquatic habitats. Additional native and nonnative fish species potentially present in the study area can be seen in Table 5-41 of the Final FR/EIS/EIR.

Project construction may disturb soils and the nearshore environment, leading to increases in sediment in the nearshore aquatic habitat. This in turn may increase sedimentation (i.e., deposition of sediment on the substrate), suspended sediments, and turbidity. Increases in suspended solids and turbidity will generally be short-term in nature and not result in a substantial reduction in population abundance, movement, and distribution.

Due to the common footprints of the action alternatives, the impacts to fish and other aquatic organisms would be similar as for the proposed project. The No Action Alternative would result in no losses of habitat for fish and other aquatic organisms.

(4) Effects on Aquatic Food Web

Description of ecological effects is taken from Sections 5.11 and 5.19 of the Final FR/EIS/EIR.

Under Alternatives 7a, 8a, and 9a levee improvements, vibrations from construction equipment would likely disturb the native resident fish by increasing noise, water turbulence, and turbidity, causing them to move away from the area of placement. For some pelagic native juvenile species utilizing the near shore habitat for cover, moving away from cover could put them at increased risk of predation. Some measures for the San Joaquin River levees, including cutoff wall construction, levee height and slope reshaping, would be constructed outside of the natural river channel with no direct significant effects to native fish species.

During non-operational conditions, overwater and in-water structures can alter underwater light conditions and provide potentially favorable holding conditions for adult fish, including species that prey on juvenile fishes. Permanent shading from the installation of piles and other structures could increase the number of predatory fish (e.g., striped bass, largemouth bass) holding in the study area and their ability to prey on resident native fish species.

Implementation of BMPs and other mitigation measures proposed would result in minimal impacts on fish and aquatic wildlife habitat outside the immediate work area. The No Action Alternative would result in no effect to fish and other aquatic organisms.

(5) Effects on Special Aquatic Sites

(a) Sanctuaries and Refuges

No sanctuaries and refuges are within the project area.

(b) Wetlands

Seasonal and permanent wetlands likely occur along portions of all waterways that would be affected by the project. During the next project phase, a qualified biologist will identify and evaluate all wetlands potentially affected by the project.

(c) Mud Flats

No mud flats are within the project area.

(d) Vegetated Shallows

No vegetated shallows are within the project area.

(e) Coral Reefs

No coral reefs are within the project area.

(f) Riffle and Pool Complexes

No riffle and pool complexes are within the project area.

(6) Threatened and Endangered Species

Implementation of Alternatives 7a, 8a, and 9a could result in direct effects to valley elderberry longhorn beetle (VELB) if elderberry shrubs are damaged by construction personnel or equipment. Impacts may also occur if elderberry shrubs need to be transplanted because they

are located in areas that cannot be avoided by construction activities. Potential impacts due to damage or transplantation include direct mortality of beetles and/or disruption of their lifecycle. The RP would directly affect 9 waterside elderberry shrubs and 17 landside elderberries, and could indirectly affect 18 elderberries occurring within 100 feet of the construction footprint for the RP.

The potential to affect giant garter snake and its habitat exists in the Stockton Diverting Canal and along the Calaveras River. Alternative 8a would include levee improvements on the Stockton Diverting Canal. These improvements are not expected to impact Waters of the United States, including wetlands. Construction activities would temporarily affect potential upland habitat. The canal provides low to moderate food, cover, and water values for GGS. The RP would result in temporary impacts on 114 acres of potential upland GGS habitat and 0.5 acres of aquatic GGS habitat, and permanent impacts on 12.5 acres of potential upland GGS habitat and 1 acre of permanent impacts on aquatic GGS habitat.

Special-status birds protected under the Migratory Bird Treaty Act (MBTA) including Swainson's hawk and tricolored blackbird have potential to nest in or adjacent to the study area based on reported occurrences within a one-mile radius.

In the study area, burrowing owls could nest in areas with non-native grasslands intermixed with barren ground and in unvegetated areas at farmland areas having berms or levees nearby. Construction activities, including grading and clearing activities within and adjacent to these lands cover types, could result in nesting failure, death of nestlings, or loss of eggs.

Construction activities such as tree removal and trimming or construction noise could result in significant impacts on roosting hoary, Western red, and pallid bats, including the destruction of active roosts, the loss of individuals, or roost failure and the disruption of the wildlife movement corridor. In addition, nighttime construction activities, if needed, could disturb bats emerging from nearby roosts resulting in the disruption of foraging activities.

Direct and indirect significant effects may occur to Chinook salmon, Central Valley steelhead, green sturgeon, and Delta smelt due to loss of SRA and riparian habitat from construction of project features and clearing to establish the USACE Levee Vegetation ETL vegetation free zones. Long-term effects on fish habitat include loss of aquatic vegetation and SRA cover. Water quality effects, such as impacts from fuel leaks or contaminants, are detailed in Water Quality (Section 5.5).

Alternative 9a has the same project footprint as Alternative 7a, except that it includes construction of a diversion structure in the Stockton Diverting Canal levee, utility relocations, and excavation in Old Mormon Channel in order to divert 1,200 cfs of flood flows into Old Mormon Channel about every two years. This may result in changes to fish migration. Renewed flood flows may also improve wetland habitat and water quality in portions of Old Mormon Channel and in the Stockton Deep Water Ship Channel.

All terms and conditions of Incidental Take Statements accompanying Biological Opinions issued by the USFWS and the National Marine Fisheries Service (NMFS) will be fully implemented. The No Action Alternative would not result in direct impacts to endangered and/or threatened species.

(7) Other Wildlife

Alternatives 7a, 8a, and 9a would have short-term and long-term effects on resident mammals, birds, reptiles, and amphibians. Noise from construction equipment and increased human presence could temporarily displace some wildlife, and temporary alteration of riparian and aquatic habitat would occur. Removal of trees and shrubs would eliminate habitat and interrupt movement corridors.

To ensure that there would be no effect to migratory birds, preconstruction surveys would be conducted, if needed, in and around the project area. If any migratory birds are found, a protective buffer would be delineated, and USFWS and California Department of Fish and Wildlife (CDFW) would be consulted for further actions. Recommendations proposed by the USFWS in their July 25, 2016 Fish and Wildlife Coordination Act Report would be implemented to the extent possible, as identified in Section 6.2.1 of the Final FR/EIS/EIR.

The No Action Alternative would not directly impact endangered and/or threatened species.

(8) Actions to Minimize Impacts

Many mitigation measures to avoid and minimize impacts to the aquatic environment, as well as compensatory mitigation measures in order to compensate for unavoidable impacts, are proposed. Mitigation measures are listed in Sections 5.5, 5.10, 5.11, and 5.12 of the Final FR/EIS/EIR.

f. Proposed Disposal Site Determinations

(1) Mixing Zone Size Determination

Not applicable.

(2) Determination of Compliance with Applicable Water Quality Standards

The fill material would not violate Environmental Protection Agency or State water quality standards, or violate the primary drinking water standards of the Safe Drinking Water Act (42 USC 300f - 300j). Project design, compliance with State water quality thresholds, and standard construction and erosion practices would preclude the introduction of substances into surrounding waters. The proposed project would not affect existing or potential water supplies, nor would the other alternatives, including the No Action Alternative.

(3) Potential Effects on Human Use Characteristics

a) Municipal and Private Water Supplies

The fill material would not violate Environmental Protection Agency or State water quality standards or violate the primary drinking water standards of the Safe Drinking Water Act (42 USC 300f – 300j).

Project design, compliance with State water quality thresholds, and standard construction and erosion practices would preclude the introduction of substances into surrounding waters. Materials removed for disposal off-site would be disposed of in an appropriate landfill or other upland area.

b) Recreation and Commercial Fisheries

The study area is heavily used for recreational fishing. A description of these game fish is provided in the Final FR/EIS/EIR Fisheries, Section 5.11.

Temporary disruption of these activities would occur during construction when the levee crown and adjacent construction and staging areas are closed to public access. Even if the recreation areas themselves are not closed, proximity to construction equipment and activities may degrade recreational experiences. However, this effect is temporary and there are alternative locations for these types of recreation activities in the city.

Alternatives 7a, 8a, and 9a would result in similar impacts to recreational fisheries. The No Action Alternative would result in no impacts to recreational fisheries.

c) Water-related recreation

In addition to recreational fishing, the study area is used for picnicking, walking, and boating.

All action alternatives (Alternatives 7a, 8a, and 9a) are similar in their potential impacts to recreation that could temporarily disrupt recreational boating and personal watercraft use.

The boat launch, just inside Smith Canal, provides a vehicle-accessible boat ramp. Temporary closure of the boat launch facility during construction would affect recreational boaters as well as general passive recreation at Dad's Point. Coordination with the City of Stockton and the facility manager would occur prior to closing the facility to any recreational vehicle and reducing access to recreational boating and other recreational opportunities in the project vicinity. Implementation of the avoidance, minimization, and other mitigation measures would reduce impacts

to less than significant.

The impacts on recreation for Alternative 8a would be the same as those for Alternative 7a, with the addition of impacts associated with the levee improvements along additional portions of Lower Calaveras River and the Stockton Diverting Canal. Impacts on recreation for Alternative 9a would be the same as those for Alternative 7a except that there would be additional impacts associated with construction of the diversion structure on the Stockton Diverting Canal and construction of a flood bypass through Old Mormon Channel. The No Action Alternative would result in no impacts to other water related recreation.

d) Aesthetics

Construction activities under Alternatives 7a, 8a, and 9a would introduce considerable heavy equipment and associated vehicles, including dozers, graders, cranes, scrapers, and trucks into the views of adjacent residents, recreationists, motorists, and businesses. The equipment would be visible throughout the construction season. Presence of the equipment would temporarily degrade the visual quality of the study area. The construction impacts on aesthetics would be temporary, and would primarily affect local residents or recreationists in the immediate vicinity.

Construction has the potential to substantially degrade the existing visual character or quality of the levee reaches and surroundings for viewer groups for two other reasons: 1) a new levee embankment or flood structure (e.g., flood wall, adjacent levee raise, setback levee) would be present, and 2) construction would require the removal of all vegetation the levee surfaces where improvements are to be made and all woody vegetation from the all levee surfaces and fifteen feet water-ward of the levee toe and ten to twenty feet landward of the levee toe. This would degrade the visual character of the area and obstruct views.

The impacts on aesthetics for Alternative 8a would be the same as those for Alternative 7a, with the addition of impacts associated with the levee improvements along additional portions of Lower Calaveras River and the Stockton Diverting Canal. Impacts on aesthetics for Alternative 9a would be the same as those for Alternative 7a except that there would be additional impacts associated with construction of the diversion structure on the Stockton Diverting Canal and construction of a flood bypass through Old Mormon Channel. The No Action Alternative would not alter the aesthetics and therefore would have no impacts.

e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves.

Not applicable.

g. Effects on the Aquatic Ecosystem

Effects of the proposed action include reductions in nearshore aquatic and riparian habitat that is used by aquatic and terrestrial species.

Public and private in-water gates exist throughout the San Francisco Estuary. They are designed to manage water quality and to reduce flood risk.

A number of other commercial and private activities, including recreation, as well as urban and rural development, could potentially affect listed species in the San Joaquin River basin. Levee maintenance activities by State agencies and local reclamation districts are likely to continue, although any effects on listed species will be addressed through Section 10 or Section 7 (in cases where a Federal permit is required) of the Endangered Species Act (ESA). Ongoing non-Federal activities that affect listed salmonids, green sturgeon, Delta smelt, valley elderberry longhorn beetle, giant garter snake and their habitat, will likely continue in the short-term at intensities similar to those of recent years.

Potential cumulative effects on fish may include any continuing or future non-Federal diversions of water that may entrain adult or larval fish or that may incrementally decrease outflows, thus changing the position of habitat for these species. Water diversions through intakes serving numerous small, private agricultural lands and duck clubs in the San Francisco Estuary and upstream of the estuary contribute to these cumulative effects. These diversions also include municipal and industrial uses and power production. The introduction of exotic species may also occur under numerous circumstances. Exotic species can displace native species that provide food for larval fish. Beneficial impacts on fish accrue from the Federal, State, and local efforts to restore fisheries habitat in the upper San Joaquin River watershed, and remove fish passage barriers along the Lower Calaveras River and Mormon Channel. Reintroduction of Spring-run Chinook salmon may restore this fishery to the San Joaquin River system.

Potential cumulative effects on all species discussed above could include: wave action in the channels and sloughs caused by boats that may degrade riparian and wetland habitat and erode banks; dumping of domestic and industrial garbage; land uses that result in increased discharges of pesticides, herbicides, oil, and other contaminants; and conversion of riparian areas for urban development. In addition, routine vegetation clearing and mowing associated with agricultural practices may affect or remove habitat for the valley elderberry longhorn beetle and giant garter snake.

h. Secondary Effects on the Aquatic Ecosystem

During the construction phase, the levees included in the RP would be brought into compliance with the USACE ETL 1110-2-583, either through removal of vegetation or by obtaining a variance. The levees will undergo intensive engineering evaluation during PED to determine their suitability for a variance. This would be required for any of the alternatives. Based upon the information available at this time and using engineering judgment, it is estimated

that up to 50% of the existing vegetation on the lower waterside slope and within the waterside easement may be allowed to remain; almost none of the vegetation on the landside levee slope or within the landside easement would be allowed to remain. At the end of each construction season, disturbed area would be seeded with native herbaceous plants. Compensatory mitigation would be accomplished through a combination of on-site plantings where feasible, mitigation bank credits, and off-site plantings.

Risk exists for the unintentional placement of fill material outside of the proposed project area. Unintentional placement could result in additional adverse impacts to water quality, aquatic and other wildlife habitat, recreation, aesthetics, and air quality. To reduce the risk of such impacts, contract specifications would require the contractor to mark the project boundaries, and that the contractor install erosion control (i.e. silt fencing, silt curtains) where possible within any standing waters.

III. Findings of Compliance or Non-Compliance with the Restrictions on Discharge

(1) No significant adaptations of the guidelines were made relative to this evaluation.

(2) No practicable alternative exists which meets the study objectives that does not involve discharge of fill into Waters of the United States.

(3) The discharges of fill materials would not cause or contribute to, after consideration of disposal site dilution and dispersion, violation of any applicable State water quality standards for waters. The discharge operations would not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.

(4) The placement of fill materials would not result in significant adverse effects on human health and welfare, including municipal and private water supplies; recreational and commercial fishing; fish, shellfish, and wildlife populations and habitat, and special aquatic sites. The life stages of aquatic species and other wildlife would not be adversely affected in the San Joaquin River system. Temporary inhibition of life stages would occur within a localized project area. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values would not occur.

(5) The placement of fill materials in the project area(s) would not jeopardize the continued existence of any species listed as endangered or threatened, or result in the likelihood of destruction or adverse modification of any critical habitat as specified by the Endangered Species Act of 1973.

(6) Appropriate steps to minimize potential adverse effects of the discharge on aquatic systems will be implemented.

(7) On the basis of the guidelines, the proposed disposal site for the discharge of dredged

material is specified as complying with the requirements of the guidelines with the inclusion of appropriate and practicable conditions to minimize pollution or adverse effects to the aquatic ecosystem.

Alternative 7a has been identified as the Least Environmentally Damaging Practicable Alternative, because it is the alternative that has the minimum footprint of impact, while still meeting the purpose of providing levee improvements and reducing flood risk to the Stockton area. Additionally, Alternative 7a results in less overall impacts to aquatic resources as compared to the other alternatives.

ENVIRONMENTAL ADDENDUM E

SPECIAL STATUS SPECIES LISTS

LOWER SAN JOAQUIN FEASIBILITY STUDY

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)
AND Quad IS (Lodi South (3812113) OR Waterloo (3812112) OR Stockton West (3712183) OR Stockton East (3712182) OR Lathrop (3712173) OR Manteca (3712172))

[Print] [Close]

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	429	4	None	None	G2G3	S1S2	null	ABC_WLBCC-Watch List of Birds of Conservation Concern | BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Marsh & swamp | Swamp | Wetland
Ambystoma californiense	California tiger salamander	Amphibians	AAAAA01180	1095	2	Threatened	Threatened	G2G3	S2S3	null	CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Cismontane woodland | Meadow & seep | Riparian woodland | Valley & foothill grassland | Vernal pool | Wetland
Astragalus tener var. tener	alkali milk-vetch	Dicots	PDFAB0F8R1	65	1	None	None	G2T2	S2	1B.2	null	Alkali playa | Valley & foothill grassland | Vernal pool | Wetland
Athene cunicularia	burrowing owl	Birds	ABNSB10010	1858	28	None	None	G4	S3	null	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Coastal prairie | Coastal scrub | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Sonoran desert scrub | Valley & foothill grassland
Atriplex cordulata var. cordulata	heartscale	Dicots	PDCHE040B0	68	1	None	None	G3T2	S2	1B.2	BLM_S-Sensitive	Chenopod scrub | Meadow & seep | Valley & foothill grassland
Atriplex joaquinana	San Joaquin spearscale	Dicots	PDCHE041F3	109	1	None	None	G2	S2	1B.2	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Alkali playa | Chenopod scrub | Meadow & seep | Valley & foothill grassland
Blepharizonia plumosa	big tarplant	Dicots	PDAST1C011	48	1	None	None	G2	S2	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Valley & foothill grassland
		Crustaceans	ICBRA03150	102	2	None	None	G2	S2	null	null	

Branchinecta mesovallensis	midvalley fairy shrimp											Vernal pool | Wetland
Brasenia schreberi	watershield	Dicots	PDCAB01010	33	1	None	None	G5	S2	2B.3	null	Marsh & swamp | Wetland
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2394	154	None	Threatened	G5	S3	null	ABC_WLBCC-Watch List of Birds of Conservation Concern | BLM_S-Sensitive | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Great Basin grassland | Riparian forest | Riparian woodland | Valley & foothill grassland
California macrophylla	round-leaved filaree	Dicots	PDGER01070	155	1	None	None	G2	S2	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Cismontane woodland | Valley & foothill grassland
Chloropyron palmatum	palmate-bracted salty bird's-beak	Dicots	PDSCR0J0J0	26	1	Endangered	Endangered	G1	S1	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Chenopod scrub | Meadow & seep | Valley & foothill grassland | Wetland
Cirsium crassicaule	slough thistle	Dicots	PDAST2E0U0	18	1	None	None	G2	S2	1B.1	BLM_S-Sensitive	Chenopod scrub | Freshwater marsh | Marsh & swamp | Riparian scrub | Wetland
Delphinium recurvatum	recurved larkspur	Dicots	PDRAN0B1J0	96	1	None	None	G3	S3	1B.2	BLM_S-Sensitive	Chenopod scrub | Cismontane woodland | Valley & foothill grassland
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Insects	IICOL48011	204	3	Threatened	None	G3T2	S2	null	null	Riparian scrub
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	158	1	None	None	G5	S3	null	BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern	Cismontane woodland | Marsh & swamp | Riparian woodland | Valley & foothill grassland | Wetland
Eryngium racemosum	Delta button-celery	Dicots	PDAPI0Z0S0	26	1	None	Endangered	G1Q	S1	1B.1	null	Riparian scrub | Wetland
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	Dicots	PDMAL0H0R3	173	1	None	None	G5T2	S2	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Freshwater marsh | Marsh & swamp | Wetland
Hypomesus transpacificus	Delta smelt	Fish	AFCHB01040	27	1	Threatened	Endangered	G1	S1	null	AFS_TH-Threatened | IUCN_EN-Endangered	Aquatic | Estuary
Lathyrus jepsonii var. jepsonii	Delta tule pea	Dicots	PDFAB250D2	131	1	None	None	G5T2	S2	1B.2	SB_BerrySB-Berry Seed Bank | SB_RSABG-Rancho Santa Ana Botanic Garden	Freshwater marsh | Marsh & swamp | Wetland
Lepidurus packardi		Crustaceans	ICBRA10010	272	1	Endangered	None	G3	S2S3	null	IUCN_EN-Endangered	Valley & foothill grassland |

	vernal pool tadpole shrimp											Vernal pool | Wetland
Lilaeopsis masonii	Mason's lilaeopsis	Dicots	PDAPI19030	197	2	None	Rare	G2	S2	1B.1	null	Freshwater marsh | Marsh & swamp | Riparian scrub | Wetland
Linderiella occidentalis	California linderiella	Crustaceans	ICBRA06010	416	1	None	None	G2G3	S2S3	null	IUCN_NT-Near Threatened	Vernal pool
Lytta moesta	moestan blister beetle	Insects	IICOL4C020	12	1	None	None	G2	S2	null	null	Valley & foothill grassland
Melospiza melodia	song sparrow ("Modesto" population)	Birds	ABPBXA3010	92	2	None	None	G5	S3?	null	CDFW_SSC-Species of Special Concern	null
Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	Fish	AFCHA0209K	31	3	Threatened	None	G5T2	S2	null	AFS_TH-Threatened	Aquatic | Sacramento/San Joaquin flowing waters
Sagittaria sanfordii	Sanford's arrowhead	Monocots	PMALI040Q0	93	2	None	None	G3	S3	1B.2	BLM_S-Sensitive	Marsh & swamp | Wetland
Spirinchus thaleichthys	longfin smelt	Fish	AFCHB03010	45	2	Candidate	Threatened	G5	S1	null	CDFW_SSC-Species of Special Concern	Aquatic | Estuary
Sylvilagus bachmani riparius	riparian brush rabbit	Mammals	AMAEB01021	16	11	Endangered	Endangered	G5T1	S1	null	null	Riparian forest
Symphyotrichum lentum	Suisun Marsh aster	Dicots	PDASTE8470	173	2	None	None	G2	S2	1B.2	null	Brackish marsh | Freshwater marsh | Marsh & swamp | Wetland
Thamnophis gigas	giant garter snake	Reptiles	ARADB36150	271	2	Threatened	Threatened	G2	S2	null	IUCN_VU-Vulnerable	Marsh & swamp | Riparian scrub | Wetland
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	Dicots	PDAST9F031	9	1	None	None	G4T3	S1	2B.1	null	Marsh & swamp | Meadow & seep | Riparian forest | Vernal pool | Wetland
Trifolium hydrophilum	saline clover	Dicots	PDFAB400R5	49	1	None	None	G2	S2	1B.2	null	Marsh & swamp | Valley & foothill grassland | Vernal pool | Wetland
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	467	1	Endangered	Endangered	G5T2	S2	null	ABC_WLBCC-Watch List of Birds of Conservation Concern | IUCN_NT-Near Threatened	Riparian forest | Riparian scrub | Riparian woodland
Xanthocephalus xanthocephalus	yellow-headed blackbird	Birds	ABPBXB3010	11	1	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Marsh & swamp | Wetland

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Quad is (Stockton East (3712182) or Stockton West (3712183) or Lodi South (3812113) or Lathrop (3712173) or Waterloo (3812112) or Manteca (3712172))

CNDDB Element Query Results

ScientificName	CommonName	ElementCode	OccCount	GlobalRank	StateRank	FederalListingStatus	StateListingStatus	CNPSList	OtherStatus	Habitat
Agelaius tricolor	tricolored blackbird	ABPBXB0020	429	G2G3	S2	None	None		ABC_WLBCC-Watch List of Birds of Conservation Concern | BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Marsh & swamp | Swamp | Wetland
Ambystoma californiense	California tiger salamander	AAAAA01180	1094	G2G3	S2S3	Threatened	Threatened		CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Cismontane woodland | Meadow & seep | Riparian woodland | Valley & foothill grassland | Vernal pool | Wetland
Astragalus tener var. tener	alkali milk-vetch	PDFAB0F8R1	65	G2T2	S2	None	None	1B.2		Alkali playa | Valley & foothill grassland | Vernal pool | Wetland
Athene cunicularia	burrowing owl	ABNSB10010	1850	G4	S2	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Coastal prairie | Coastal scrub | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Sonoran desert scrub | Valley & foothill grassland
Atriplex cordulata var. cordulata	heartscale	PDCHE040B0	68	G3T2	S2	None	None	1B.2	BLM_S-Sensitive	Chenopod scrub | Meadow & seep | Valley & foothill grassland
Atriplex joaquinana	San Joaquin spearscale	PDCHE041F3	109	G2	S2	None	None	1B.2	BLM_S-Sensitive	Alkali playa | Chenopod scrub | Meadow & seep | Valley & foothill grassland
Blepharizonia plumosa	big tarplant	PDAST1C011	48	G2	S2	None	None	1B.1		Valley & foothill grassland
Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	101	G2	S2	None	None			Vernal pool | Wetland
Brasenia schreberi	watershield	PDCAB01010	33	G5	S2	None	None	2B.3		Marsh & swamp | Wetland
Buteo swainsoni	Swainson's hawk	ABNKC19070	2394	G5	S2	None	Threatened		ABC_WLBCC-Watch List of Birds of Conservation Concern | BLM_S-Sensitive | IUCN_LC-Least Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Great Basin grassland | Riparian forest | Riparian woodland | Valley & foothill grassland
California macrophylla	round-leaved filaree	PDGER01070	155	G2	S2	None	None	1B.1	BLM_S-Sensitive	Cismontane woodland | Valley & foothill grassland

Chloropyron palmatum	palmate-bracted salty bird's-beak	PDSCR0J0J0	26	G1	S1	Endangered	Endangered	1B.1		Chenopod scrub | Meadow & seep | Valley & foothill grassland | Wetland
Cirsium crassicaule	slough thistle	PDAST2E0U0	19	G2	S2	None	None	1B.1	BLM_S-Sensitive	Chenopod scrub | Freshwater marsh | Marsh & swamp | Riparian scrub | Wetland
Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	96	G3	S3	None	None	1B.2	BLM_S-Sensitive	Chenopod scrub | Cismontane woodland | Valley & foothill grassland
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	201	G3T2	S2	Threatened	None			Riparian scrub
Elanus leucurus	white-tailed kite	ABNKC06010	158	G5	S3	None	None		BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern	Cismontane woodland | Marsh & swamp | Riparian woodland | Valley & foothill grassland | Wetland
Eryngium racemosum	Delta button-celery	PDAPI0Z0S0	26	G1Q	S1	None	Endangered	1B.1		Riparian scrub | Wetland
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	173	G5T2	S2	None	None	1B.2		Freshwater marsh | Marsh & swamp | Wetland
Hypomesus transpacificus	Delta smelt	AFCHB01040	27	G1	S1	Threatened	Endangered		AFS_TH-Threatened | IUCN_EN-Endangered	Aquatic | Estuary
Lathyrus jepsonii var. jepsonii	Delta tule pea	PDFAB250D2	130	G5T2	S2.2	None	None	1B.2		Freshwater marsh | Marsh & swamp | Wetland
Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	274	G3	S2S3	Endangered	None		IUCN_EN-Endangered	Valley & foothill grassland | Vernal pool | Wetland
Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	196	G2	S2	None	Rare	1B.1		Freshwater marsh | Marsh & swamp | Riparian scrub | Wetland
Lytta moesta	moestan blister beetle	IICOL4C020	12	G2	S2	None	None			Valley & foothill grassland
Melospiza melodia	song sparrow ("Modesto" population)	ABPBXA3010	92	G5	S3?	None	None		CDFW_SSC-Species of Special Concern	
Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	31	G5T2	S2	Threatened	None		AFS_TH-Threatened	Aquatic | Sacramento/San Joaquin flowing waters
Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	93	G3	S3	None	None	1B.2	BLM_S-Sensitive	Marsh & swamp | Wetland
Spirinchus thaleichthys	longfin smelt	AFCHB03010	45	G5	S1	Candidate	Threatened		CDFW_SSC-Species of Special Concern	Aquatic | Estuary
Sylvilagus bachmani riparius	riparian brush rabbit	AMAEB01021	16	G5T1	S1	Endangered	Endangered			Riparian forest
Symphyotrichum lentum	Suisun Marsh aster	PDASTE8470	172	G2	S2	None	None	1B.2		Brackish marsh | Freshwater marsh | Marsh & swamp | Wetland
Thamnophis gigas	giant garter snake	ARADB36150	271	G2G3	S2S3	Threatened	Threatened		IUCN_VU-Vulnerable	Marsh & swamp | Riparian scrub | Wetland
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	PDAST9F031	9	G4T3	S1	None	None	2B.1		Marsh & swamp | Meadow & seep | Riparian forest | Vernal pool | Wetland
Trifolium hydrophilum	saline clover	PDFAB400R5	49	G2	S2	None	None	1B.2		Marsh & swamp | Valley & foothill grassland | Vernal pool | Wetland

Valley Oak Woodland	Valley Oak Woodland	CTT71130CA	91	G3	S2.1	None	None			Cismontane woodland
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	410	G5T2	S2	Endangered	Endangered		ABC_WLBCC-Watch List of Birds of Conservation Concern | IUCN_NT-Near Threatened	Riparian forest | Riparian scrub | Riparian woodland
Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	11	G5	S3S4	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Marsh & swamp | Wetland

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

June 3, 2014

Document Number: 140603040032

Brad Johnson
U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95630

Subject: Species List for Lower San Joaquin River Feasibility Study

Dear: Interested party

We are sending this official species list in response to your June 3, 2014 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be September 01, 2014.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found http://www.fws.gov/sacramento/es/Branch-Contacts/es_branch-contacts.htm.

Endangered Species Division

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the LODI SOUTH (479D) U.S.G.S. 7 1/2 Minute Quad

Report Date: April 24, 2014

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Plants

Castilleja campestris ssp. succulenta
succulent (=fleshy) owl's-clover (T)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the WATERLOO (478C) U.S.G.S. 7 1/2 Minute Quad

Report Date: April 24, 2014

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas

giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Plants

Castilleja campestris ssp. succulenta
succulent (=fleshy) owl's-clover (T)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the STOCKTON WEST (462A) U.S.G.S. 7 1/2 Minute Quad

Report Date: April 24, 2014

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Plants

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the STOCKTON EAST (461B) U.S.G.S. 7 1/2 Minute Quad

Report Date: April 24, 2014

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the LATHROP (462D) U.S.G.S. 7 1/2 Minute Quad

Report Date: April 24, 2014

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the MANTECA (461C) U.S.G.S. 7 1/2 Minute Quad

Report Date: April 24, 2014

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

September 12, 2014

Document Number: 140912125652

David Colby
US Army Corps of Engineers
1325 J Street
Sacramento, CA 95814

Subject: Species List for Lower San Joaquin

Dear: Mr. Colby

We are sending this official species list in response to your September 12, 2014 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be December 11, 2014.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found http://www.fws.gov/sacramento/es/Branch-Contacts/es_branch-contacts.htm.

Endangered Species Division

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140912122518

Current as of: September 12, 2014

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
- vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
- valley elderberry longhorn beetle (T)

Lepidurus packardi
- vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
- green sturgeon (T) (NMFS)

Hypomesus transpacificus
- Critical habitat, delta smelt (X)
- delta smelt (T)

Oncorhynchus mykiss
- Central Valley steelhead (T) (NMFS)
- Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
- Central Valley spring-run chinook salmon (T) (NMFS)
- winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
- California tiger salamander, central population (T)

Rana draytonii
- California red-legged frog (T)

Reptiles

Thamnophis gigas
- giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
- riparian brush rabbit (E)

Plants

Castilleja campestris ssp. succulenta
- succulent (=fleshy) owl's-clover (T)

Quads Containing Listed, Proposed or Candidate Species:

LODI SOUTH (479D)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140912123306

Current as of: September 12, 2014

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Plants

Castilleja campestris ssp. succulenta
succulent (=fleshy) owl's-clover (T)

Quads Containing Listed, Proposed or Candidate Species:

WATERLOO (478C)

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140912123349

Current as of: September 12, 2014

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Plants

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Quads Containing Listed, Proposed or Candidate Species:

STOCKTON WEST (462A)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

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- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

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For plant surveys, we recommend using the Guidelines for Conducting and Reporting

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140912123422

Current as of: September 12, 2014

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Quads Containing Listed, Proposed or Candidate Species:

STOCKTON EAST (461B)

County Lists

Official Version

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140912123453

Current as of: September 12, 2014

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Quads Containing Listed, Proposed or Candidate Species:

LATHROP (462D)

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140912123525

Current as of: September 12, 2014

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Quads Containing Listed, Proposed or Candidate Species:

MANTECA (461C)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

ENVIRONMENTAL ADDENDUM F

PUBLIC COMMENTS ON DRAFT FR/EIS/EIR

LOWER SAN JOAQUIN FEASIBILITY STUDY

Comment #	Comment	Response
Letter 001		
	The Department of the Interior has received and reviewed the subject document and has no comments to offer.	Thank you for your review.
Letter 002		
2-1	Construction Storm Water General Permit Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtmI.	USACE, SJAFCA, or their contractor would acquire all appropriate permits prior to the initiation of project construction and ensure that project construction complies with the requirements contained in the permits. This includes development and implementation of a SWPPP and obtaining a Section 401 Water Quality Certification, as necessary, for impacts to Waters of the United States.
2-2	Phase I and II Municipal Separate Storm Sewer System CMS4) Permits1 The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process. For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.	See response to Comment 2-1.

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	For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml	
2-3	Industrial Storm Water General Permit Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_perm its/index.shtml.	See response to Comment 2-1.
2-4	Clean Water Act Section 404 Permit If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.	USACE does not issue a permit to itself. However, USACE will ensure that the project complies with the substantive requirements of Section 404 through the preparation of a Section 404(b)(1) analysis, which was included in Appendix B of the Draft Report and is included in Appendix A of the Final Report.
2-5	Clean Water Act Section 401 Permit - Water Quality Certification If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.	See response to Comment 2-1.
2-6	Waste Discharge Requirements If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed	See response to Comment 2-1.

Comment #	Comment	Response
	project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.	
2-7	Regulatory Compliance for Commercially Irrigated Agriculture If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply: 1. Obtain Coverage Under a Coalition Group. Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/ index.shtml; or contact water board staff at (916) 464-4611 or via email at lrrLands@waterboards.ca.gov. 2. Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order RS-2013-0100. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at lrrLands@waterboards.ca.gov.	The project purpose is to reduce flood risk to the Stockton metropolitan area. See also the response to Comment 2-1.
2-8	Low or Limited Threat General NPDES Permit If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will	See response to Comment 2-1.

Comment #	Comment	Response
	require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for Dewatering and Other Low Threat Discharges to Surface Waters (Low Threat General Order) or the General Order for Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits. For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf	
Letter 003		
3-1	Overly Narrow Definition of Federal Interest We are concerned about policy constraints and planning processes that have resulted in the definition of an overly narrow federal interest in the Delta. As stated in the draft FR/EIS/EIR, the California's Central Valley Flood Protection Act of 2008 encourages improving regional flood protection and promotes ecosystem restoration opportunities and multi-benefit projects. Similarly, the Delta Reform Act furthers the State's two co-equal goals for the Delta – providing a more reliable water supply for the Delta and protecting, restoring and enhancing the Delta ecosystem (Public Resources Code section 29702). The objectives inherent in these goals include restoring the Delta ecosystem and reducing risks to people, property and state interests in the Delta (Water Code section 85020). The federal Energy and Water Development Appropriations Act of 2012 (Title II of the Consolidated Appropriations Act of 2012 (PL 112-074)) contains, in pertinent part, the following: The Federal policy for addressing California's water supply and environmental issues related to the Bay-Delta shall be consistent with State law, including the coequal goals of providing a more reliable water supply for the State of California and protecting, restoring, and enhancing the Delta ecosystem.…(Section 205) The Tentatively Selected Plan (TSP), however, was developed based on the U.S. Army Corps of Engineers' (USACE's) single objective of regional flood risk reduction. This is inconsistent with USACE's Civil Works Strategic Plan 2014-2018, which calls for the use of Integrated Water	This feasibility study is being conducted under authorization which allows, but does not require, formulation to address both flood risk management and ecosystem restoration. Early in the study process, the project sponsors narrowed the focus of this study to flood risk management to best concentrate limited time and funding on identifying solutions to this critical problem. Opportunities to incorporate environmentally beneficial elements into the flood risk management plans were considered. Since the Draft Report was published in February 2015, one reach of levee on Fourteenmile Slough has been refined to include more space between the levee

Comment #	Comment	Response
	Resources Management, a holistic approach that considers economic benefits, ecosystem quality, and health and public safety in project formulation. Failure to include multiple objectives in the planning process results in a lost opportunity to implement projects that provide multiple benefits. Including ecosystem quality and health as an objective would provide an opportunity to reconsider several structural measures as part of the TSP. Improvements to the Mormon Channel (Alternatives 4 and 9), for example, would support the multipurpose goals of the Delta Reform Act by potentially providing ecosystem restoration and recreation opportunities, in addition to risk reduction benefits. Additionally, the USACE should evaluate a bypass and floodway on the San Joaquin River, near Paradise Cut, that could, in conjunction with levee improvements, help reduce the flood stage on the main stem of the San Joaquin River adjacent to the urban and urbanizing areas in and adjacent to Stockton, Lathrop, and Manteca. This project could also provide various ecosystem benefits and habitat restoration opportunities. USACE funding for such a study would support the implementation of Delta Plan Recommendation RR R5, which calls on the Legislature to fund the Department of Water Resources and the Central Valley Flood Protection Board to evaluate and implement a bypass and floodway in the Paradise Cut area.	and the water to make space to accomplish some compensatory mitigation on site.
3-2	Clarification of Flood Protection Level for North and Central Stockton The objective of the non-federal sponsors (the State of California and SJAFCA) is to meet the requirements of California Senate Bill (SB) 5 and the Central Valley Flood Protection Act to achieve a 200-year level of protection for the urban and urbanizing areas within the study area. Without this level of flood protection, the non-federal sponsors of the project would not be able to proceed with funding design and construction of levee projects. According to SJAFCA's recently completed 2014 Lower San Joaquin River and Delta South Regional Flood Management Plan (RFMP), "…the City of Stockton is the largest metropolitan area within the Lower San Joaquin River Region and has a population of nearly 300,000 people. The primary hazard for the City of Stockton is potential failure of levees that protect nearly the entire city from flood waters…" The level of flood protection achieved by the TSP in the interim feasibility report should be clarified. SJAFCA, the joint sponsor of the subject study, points out in their comment letter dated April 9, 2015, that it is not clear whether the selected alternative (7a) will help to achieve 200-year protection for Stockton. According to the draft FR/EIS/EIR (Section 8.1.6 Risk and Uncertainty), with the TSP in place, the flood risk to the North Stockton area can be improved from an approximate 15% annual chance of flooding in the highest risk areas to a less than 1% annual chance of flooding (100-year flood event). The flood risk to the Central Stockton area can be improved from a 12% annual chance of flooding in the highest risk areas to an approximate 2% annual chance of flooding (50-year flood event). Clarification	The Lower San Joaquin River Feasibility Study identifies the Federal interest in a flood risk management project, and is neither constrained by, nor seeks to achieve, FEMA levee accreditation standards and local laws such as SB-5. The extent that the recommended plan complies with FEMA and SB-5 is a determination required to be made by the non-Federal sponsor.

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	should be provided regarding current annual chance of flooding and the resulting annual chance of flooding under each alternative and whether the preferred alternative provides 200-year protection. This analysis should be agreed upon by USACE and SJAFCA.	
3-3	Protecting Existing Urban Areas in Reclamation District 17 Regarding Reclamation District 17 (RD 17), which is within the study area, we support the USACE's decision, based on the project screening criteria consistent with Executive Order 11988, to minimize induced development of currently undeveloped land in RD 17 and associated environmental impacts, such as conversion of prime farmland in the floodplain. The Delta Plan designates these lands for agriculture, not urban uses. The applicable city and county general plans also currently designate the lands for agriculture. Although we support the USACE in this decision about non-urban agricultural areas within RD 17, certain developed areas within RD 17 have high population densities, such as downtown Lathrop, and some existing critical infrastructure such as schools, fire and police stations, the county jail, the Sharpe Army Depot and a hospital, as well as major transportation routes including Interstate 5 and Highway 120. In the final FR/EIS/EIR, or future additional studies, USACE should consider and evaluate additional localized flood management structures to protect these existing urban areas. Appendix C of the RFMP, mentioned above, contains various proposed Local Maintaining Agency specific projects which could be considered in the final version of the FR/EIS/EIR or future additional studies to address risk reduction for certain developed areas within RD 17. This balanced approach to addressing the needs within RD 17 is consistent with the Delta Plan's goals of protecting urban and adjacent urbanizing areas consistent with State law, while minimizing new development in flood-prone areas of the Delta and protecting agriculture in the region. Continued coordination between the USACE and SJAFCA is critical in evaluating possible measures to protect existing developed areas within RD 17.	Comment and recommendations noted.
3-4	Biological Resources Our primary concerns related to this section of the draft EIS/EIR are the impacts to riparian vegetation and associate impacts on special status species as a result of the preferred alternative and the USACE's policy on vegetation on levees. Dynamic complexes of riparian woody and scrub habitat along river channels and associated floodplains, particularly in areas where there is connectivity between such habitats, provide a suite of ecosystem benefits to on-site and downstream environments. Riparian vegetation provides habitat for terrestrial species, such as riparian brush rabbit, Swainson's hawk,	NEPA, CEQ and USACE regulations specify that mitigation must first seek to avoid and minimize adverse impacts. Where feasible, compensatory mitigation for loss of channel margin habitat as part of the Recommended Plan would occur on site. However, because of the proximity of the existing

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	white-tailed kite, yellow breasted chat, yellow-billed cuckoo, and valley elderberry longhorn beetle. For aquatic species, including various life stages of Chinook salmon, Central Valley steelhead, splittail, and sturgeon, established woody riparian vegetation provides refuge from currents and predators, and serves as a source of organic carbon in support of the aquatic food web. Riparian areas can reduce non-point source pollution from pesticides, herbicides, and nutrients from fertilizers by serving as transition zones between upland urban/agricultural areas and adjacent waterways. Additional water quality benefits include improved levels of dissolved oxygen and moderation of water temperature. Riparian areas also provide the public with opportunities for active and passive recreation, such as hiking, boating and bird watching. According to the draft FR/EIS/EIR, the proposed project could result in significant and unavoidable impacts to riparian, wetland and shaded riverine aquatic habitat and the special status species that depend on them in the project area. As stated in the draft FR/EIS/EIR, this type of impact is due to the USACE Engineer Technical Letter (ETL) 1110-2-583 Vegetation Free Zone requirements. This impact may result in loss of vegetation on and adjacent to the levees, up to 7.1 miles (37,820 linear feet) of potential shaded riverine aquatic habitat and 142 acres of woody riparian vegetation. This would be one of the largest individual losses of riparian vegetation along a Central Valley river in recent years. The proposed general mitigation measures for these impacts to biological resources include a combination of on-site and off-site plantings and/or purchase of mitigation bank credits, implementation of Best Management Practices (BMPs), and obtaining a vegetation variance from the USACE. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. Given the tremendous investment by state, federal, and local agencies, as well as nonprofit organizations and individuals, to promote recovery of salmonids and other threatened and endangered species that use the San Joaquin River as a migratory corridor, it is essential to make every effort to avoid or minimize these impacts. The benefits to special status species provided by the proposed mitigation measures in the draft FR/EIS/EIR are unclear. We recommend that, to the maximum feasible extent, any impacts to the channel margin habitat along important fish migratory corridors in the Delta should be mitigated on-site. In the event that off-site mitigation is necessary, we also suggest that any off-site mitigation occurs in close proximity and along the same waterway as where the impacts would occur to demonstrate that the mitigation is restoring equivalent, in-kind habitat. In the final FR/EIS/EIR or subsequent environmental evaluation documentation, please identify and include the details of the mitigation measures with or without the USACE vegetation variance in place, and describe how they would address impacts to special status species, such as salmonids.	levees to the water's edge, opportunities to avoid and minimize impacts and to compensate on site are severely constrained. During PED, a detailed engineering and technical evaluation will be conducted to determine which levees may be suitable for a variance to ETL 1110-2-583, such that existing vegetation may be allowed to remain or compensatory mitigation would be allowed to be planted. With regard to Federally listed species, appropriate conservation measures have been determined in consultation with the USFWS and NMFS during formal Section 7, Endangered Species Act consultation. These measures are identified in Chapter 8. Coordination has also taken place with CDFW regarding sensitive species and habitats, general fisheries and wildlife habitat, and measures to minimize and reduce project impacts on natural resources.
Letter 004		
4-1	Risk Reduction Delta Plan Policy RR P1 (23 CCR Section 5012) calls for the prioritization of state investments in Delta flood risk management, including levee operation, maintenance and improvements. This policy includes interim priorities categorized as specific goals to guide budget and funding allocation for levee improvements and to assist the California Department of Water Resources (DWR) in achieving a balance in funding the various goals. The draft FR/EIS/EIR states that the overall purpose of the proposed action under the	See response to Comment 3-2. The local sponsors and communities will be required to demonstrate compliance with SB-5.

Comment #	Comment	Response
	National Environmental Policy Act (NEPA) and CEQA is to reduce flood risk to urban and urbanizing parts of the study area. The objective of the non-Federal Sponsors (the State of California and SJAFCA) is to meet the requirements of California Senate Bill (SB) 5 of 2007, the Central Valley Flood Protection Act, to achieve a 200-year level of protection for the urban and urbanizing areas within the study area. The non-Federal Sponsors' objective, as described in the draft FR/EIS/EIR, is consistent with one of the goals contained in Delta Plan Policy RR P1, to provide 200-year level flood protection to existing urban and adjacent urbanizing areas. However, as noted in your comment letter to USACE, the feasibility report does not clearly state whether the Tentatively Selected Plan (TSP) fully meets the objective of 200-year protection. In order to achieve consistency with the Delta Plan, the State of California's investment in Delta flood risk management (i.e., the State's cost share for the project) must be consistent with RR P1. According to the draft FR/EIS/EIR (Section 8.1.6 Risk and Uncertainty), with the TSP in place, the flood risk to the North Stockton area can be improved from an approximate 15% annual chance of flooding in the highest risk areas to a less than 1% annual chance of flooding (100-year flood event). The flood risk to the Central Stockton area can be improved from a 12% annual chance of flooding in the highest risk areas to an approximate 2% annual chance of flooding (50-year flood event). The outcomes of this project may not be adequate to assist local agencies to meet the State's goal of achieving a minimum 200-year level of protection for urban and urbanizing areas.	
4-2	Riparian Habitats Delta Plan Policy ER P4 (23 CCR Section 5008) states that levee projects must evaluate and where feasible incorporate alternatives, including the use of setbacks levees, to increase floodplains and riparian habitats. Dynamic complexes of riparian woody and scrub habitat along river channels and associated floodplains, particularly in areas where there is connectivity between such habitats, provide a suite of ecosystem benefits to on-site and downstream environments. Riparian vegetation provides habitat for terrestrial species, such as riparian brush rabbit, Swainson's hawk, white-tailed kite, yellow breasted chat, yellow-billed cuckoo, and valley elderberry longhorn beetle. For aquatic species, including various life stages of Chinook salmon, Central Valley steelhead, splittail, and sturgeon, established woody riparian vegetation provides refuge from currents and predators, and serves as a source of organic carbon in support of the aquatic food web. Riparian areas can reduce non-point source pollution from pesticides, herbicides, and nutrients from fertilizers by serving as transition zones between upland urban/agricultural areas and adjacent waterways. Additional water quality benefits include improved levels of dissolved oxygen and moderation of water temperature. Riparian areas also provide the public with opportunities for active and passive recreation, such as hiking, boating and bird watching. The draft FR/EIS/EIR does not appear to have adequately analyzed the feasibility of measures to protect and increase such habitats.	The Lower San Joaquin River Feasibility identifies the Federal interest in a flood risk management project. The standard for selecting the Tentatively Selected Plan and the Recommended Plan is the plan that maximizes National Economic Development (NED) benefits consistent with applicable laws, regulations, and policies. Additional ecosystem restoration and recreation benefits would need to be incidental to the NED plan, or included in a Locally Preferred Plan (LPP). No LPP was identified during this study.

Comment #	Comment	Response
	According to the draft FR/EIS/EIR, the proposed project could result in significant and unavoidable impacts to riparian, wetland and shaded riverine aquatic habitat and the special status species that depend on them in the project area. As stated in the draft FR/EIS/EIR, this type of impact is due to the USACE Engineer Technical Letter (ETL) 1110-2-583 Vegetation Free Zone requirements. This impact may result in loss of vegetation on and adjacent to the levees, up to 37,820 linear feet of potential shaded riverine aquatic habitat and 142 acres of woody riparian vegetation. The proposed general mitigation measures for these impacts to biological resources include a combination of on-site and off-site plantings and/or purchase of mitigation bank credits, implementation of Best Management Practices (BMPs), and obtaining a vegetation variance from the USACE. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. This would be consistent with Delta Plan Recommendation ER R4, which calls on USACE to approve a variance that exempts Delta levees from its vegetation policy where appropriate.	
4-3	Delta Plan EIR Mitigation Measures Delta Plan Policy G P1 (23 CCR Section 5002) also requires that actions not exempt from CEQA and subject to Delta Plan regulations must include applicable feasible mitigation measures consistent with or more effective than those identified in the Delta Plan Environmental Impact Report (EIR). The Delta Plan's Program EIR provides a list of mitigation measures to address including those to address impacts to biological resources. (Mitigation measures can be found in the Delta Plan Mitigation and Monitoring Reporting Program document, http://deltacouncil.ca.gov/sites/default/files/documents/files/Agenda%20Item%206a_attach%202.pdf.) For example, the Delta Plan's EIR Biological Resources Mitigation Measure 4-3 calls for proponents to design projects that avoid impacts that would lead to substantial loss of fish and wildlife habitat. If there will be a loss of habitat for fish and wildlife species from a project, Mitigation Measure 4-3 suggests proponents to replace, restore, or enhance habitats for those species and preserve in-kind habitat. In the final FR/EIS/EIR or subsequent environmental evaluation documentation for any refinements to project elements that occur during the preconstruction engineering and design phase or the construction phase, please identify and include the details of the mitigation measures with or without the USACE vegetation variance in place. As mentioned above, the proposed project could result in significant and unavoidable impacts to habitat areas along the San Joaquin River, an important fish migratory corridor. We recommend that, to the maximum feasible extent, any impacts to the channel margin habitat along important fish migration corridors in the Delta should be mitigated on-site. In	Please see response to 3-4.

Comment #	Comment	Response
	the event that off-site mitigation is necessary, we also suggest that any off-site mitigation occurs in close proximity and along the same waterway as where the impacts would occur to demonstrate that the mitigation is restoring equivalent, in-kind habitat.	
4-4	Best Available Science and Adaptive Management Delta Plan Policy G P1 (23 CCR Section 5002) states that actions subject to Delta Plan regulations must document use of best available science. Additionally, this policy calls for water management and ecosystem restoration projects to include adequate provisions for continued implementation of adaptive management, appropriate to the scope of the action. This requirement can be satisfied through the development of an adaptive management plan that is consistent with the framework described in Appendix 1B of the Delta Plan, along with documentation of adequate resources to implement the proposed adaptive management process. This policy is most applicable to the habitat restoration planned as mitigation for the environmental impacts of the levee projects. Council staff is available to assist you in developing an adaptive management plan as part of early consultation to promote consistency with the Delta Plan. We suggest including documentation of best available science and an adaptive management plan as an appendix to the final FR/EIS/EIR to order to have it available for use in a consistency certification.	The FR/EIS/EIR and the supporting technical appendices are based upon the best available science. The Mitigation, Monitoring, and Adaptive Management Plan is provided in Appendix A-10.
4-5	Inconsistencies with the Delta Plan The final FR/EIS/EIR should discuss any inconsistencies between the proposed plan and the Delta Plan, as required by 15125(d) of the CEQA Guidelines. Please note that the CEQA guidelines' Appendix G states that a project that is inconsistent with any applicable land use plan, policy, or regulations may result in a finding of significant impact on biological resources. Based on our initial review of the project, we have found potential inconsistencies with Delta Plan Policies RR P1 and ER P4, as described above.	The Recommended Plan is consistent with the Delta Plan, including ER P4 and RR P1. ER P4: During refinement of the Recommended Plan, additional effort was expended to consider the feasibility of including setback levees, particularly along the San Joaquin River. Existing urban uses (houses, businesses, industry, etc.) occur immediately adjacent to the levee; no cost effective and acceptable opportunities were identified to readjust the levee alignment. In the northern part of the project area along Fourteenmile Slough, flood risk would be accomplished by constructing a new levee with seismic fix setback a distance from the existing levee. Riparian species would be planted within the offset area as part of required mitigation and conservation to offset project impacts. RR P1: The Recommended Plan would reduce flood risk to the

Comment #	Comment	Response
		densely developed north and central Stockton consistent with the Federal water resource planning objective of maximizing net economic development (NED). Reducing flood risk reduces the likelihood of a catastrophic flood event which would adversely affect water quality. Channel margin habitat that is located on or within 15 feet of the waterside toe of the levee would be brought into compliance with the USACE "Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures" (ETL 1110-2-583). If the project is authorized and funded, USACE will evaluate the suitability of leaving some existing trees and shrubs on the lower waterside slope of the levee and within the 15 feet of the waterside levee toe.
4-6	Early Consultation The Council strongly encourages all agencies who propose to approve, fund, or carry out an action in the Delta, as early in the project's development as possible, to consult with the Council and ensure the project (whether it is a covered action or not) is consistent with the Delta Plan. If SJAFCA staff and the project proponent choose to engage in early consultation, the Council staff will meet with you and offer guidance on determining whether the project meets the definition of a covered action, provided that the ultimate determination in this regard must be made by your agency. Council staff will also work with you and the project proponent to ensure consistency between the project and the Delta Plan's policies and recommendations. We also can help guide you through the certification process. As mentioned above, Delta Plan Policy G P1 requires that water management projects document use of best available science and include an adaptive management plan when filing a certification of consistency with the Delta Plan. We recommend that adaptive management for this project incorporate a monitoring, evaluation and reporting program that evaluates whether the project is successfully achieving the goals and objectives for the project. Council staff, including staff from the Delta Science Program, can provide early consultation to help in your	The San Joaquin Area Flood Control Agency recognizes its obligations under the Delta Reform Act and the Delta Plan regulations, and the importance of the Delta's co-equal goals. The Draft FR/EIS/EIR was provided to the Delta Stewardship Council (DSC). The Final FR/EIS/EIR will also be provided to the DSC. If the project is authorized and funded, the lead agencies intend to initiate additional public involvement and agency coordination prior to project implementation.

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	preparation of documentation of use of best available science and adaptive management.	
Letter 005		
5-1	Strategic levee protection measures, like the proposed project, are absolutely necessary to better protect lives, infrastructure, and water quality in the Central Valley and the Delta. However, the environmental impacts of levee improvements must be assessed in the broader context of the suite of actions needed to address the long-term welfare of the Delta and the state. As recognized in the CALFED Record of Decision (2000), the Bay Delta Conservation Plan (BDCP or Plan) (2006-present), the Delta Reform Act (2009), the Delta Plan (2013), the California Water Action Plan (2014), and the recent passage of Proposition 1, the Water Quality, Supply and infrastructure Improvement Act of 2014 (among a host of other sources), a multifaceted approach is needed to address flood risks, render water supplies more reliable, restore fish habitat for sensitive/protected fish species, invasive species, natural flow patterns, salinity intrusion due to sea level rise while protecting lives, property and infrastructure in the Delta. Strategic levee improvements help to address flood risks in the Delta that could jeopardize water quality for both sensitive native fish and millions of Californians who rely on fresh water flows through the Delta.	Comment noted.
5-2	But the proposed project must avoid or mitigate any potentially significant adverse impacts on water quality, water supply, and environmental resources in the Delta, and it should be consistent with the suite of actions needed to address the multiple stressors and risks facing the Delta.	The Recommended Plan would be implemented consistent with all applicable laws, regulations, and policies. Unless otherwise required by law, compensatory mitigation for adverse impacts will be consistent with USACE regulations. Measures to mitigate project impacts are identified in Chapter 5 of both the Draft and Final Reports. Measures that are incorporated into the Recommended Plan are identified in Chapter 4 and in Chapter 8.
5-3	On page 5-366, (i.e., as a related project: San Francisco Bay to Stockton Deep Water Ship Channel Deepening Project), the Draft EIS/EIR should note that California Department of Water Resources has a major emergency stockpile site adjacent to the Stockton Deep Water Ship Channel near 1-5. This site is	The Delta Flood Emergency Facilities Improvement Project has been added to Section 5.23.3 under "Projects with a Flood Risk Management Emphasis." The Recommended Plan would not effect the Stockton West Weber Avenue stockpile or access to

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	designated for purposes of emergency response and repair to damaged Delta region levees. The proposed project should not impact or affect the site or its waterway routes.	or from this location. The Recommended Plan would reduce flood risk to this facility by improving levees which protect it.
5-4	With respect to the proposed project, temporary, localized construction activities must not result in substantial turbidity plumes in the vicinity of the points of diversion for the SWP or the Central Valley Project (CVP) in the south Delta at the first flush of highly turbid water in late November, December and January. Recent scientific evidence suggests Delta smelt use turbidity as cover from predators and may move with such a plume toward south Delta points of diversion, which can trigger reductions in water supplies to comply with state and federal regulations intended to protect Delta smelt. Because this proposed project would include a variety of bank protection and levee enhancement measures that would generate turbidity plumes from construction activities, a comprehensive evaluation should be performed, i.e., the influence of turbidity plumes on Delta smelt and potentially related impacts on SWP and CVP export operations in the south Delta.	Except for construction of two closure structures (one on Smith Canal and one on Fourteenmile Slough), no in-water work would be required to construct the Recommended Plan. Best management practices have been incorporated into the project construction to avoid and minimize any movement of soil from the project area into the water. The project would be constructed in full compliance with all applicable laws, regulations, and policies.
5-6	Lastly, the fisheries citations and discus*sion are not current. For example, in Section 5.12.1.3 Special Status Fish of the Draft EIS/EIR, many concepts and discussions concerning the Delta smelt are out-of-date including concerns related to entrainment. The BDCP Draft EIR/EIS has a discussion of Delta smelt based on more recent references that can assist in updating this Draft EIS/EIR chapter: http://baydeltaconservationplan.com/Libraries/Dynamic Document Library/Public Draft BDC P EIR-EIS Appendix llA - Covered Fish Species Descriptions.sflb.ashx (BDCP Technical Appendices, Appendix 11A Covered Fish Species Description).	Thank you for your comment. Language in Section 5.12.1.3 of the EIS/EIR has been updated to include current citations and discussions involving Chinook salmon, green sturgeon, and Delta smelt. Further, current concerns related to entrainment of Delta smelt were also addressed in this section.
Letter 006		
6-1	On page 5-276, a reference is made to the *2011 Regional Transportation Plan: The Future of Mobility for San Joaquin County (San Joaquin Council of Governments)*. This document has been superseded by the *2014 Regional Transportation Plan and Sustainable Communities Strategy*, which was adopted by the SJCOG Board of Directors on June 26th, 2014.	The 2011 document has been replaced with the 2014 document in Section 5.15.1, Environmental Setting and in Chapter 12, References.
6-2	On one instance on page 5-277, the document incorrectly states that SACOG is the Congestion Management Agency for San Joaquin County. All other instances in the	SACOG has been corrected to SJCOG.

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	document correctly state that SJCOG is the Congestion Management Agency for San Joaquin County.	
6-3	Pages 5-277 and 5-278 contain references to state-maintained highways that cross San Joaquin County near the study area. However, the document omits references to State Route 120. While the Tentatively Selected Plan (Alternative 7a) would not impact this highway, this highway would be affected by any alternatives that include improvements to areas located in Reclamation District 17. Additionally, State Route 120 and all other highways in San Joaquin County are regionally significant roadways and are included in the Congestion Management Program for San Joaquin County. SJCOG requests that the final document include background discussion for State Route 120 in addition to the existing discussion on highways in the project area (I-5, SR 99, SR 4, SR 88, and SR 26).	Section 5.15.1 has been modified to include a background discussion on SR 120, and recognition that SR 120 and the other highways described are regionally significant roadways.
6-4	On Page 5-279, the document refers to the vehicle bridges that cross the Calaveras River in addition to the footbridge that provides access across the river from the University of the Pacific. However, the document omits references to the second footbridge located east of West Lane just west of the Union Pacific Railroad's Fresno Subdivision.	The second footbridge across the Calaveras River has been added to Section 5.15, under "City and County-Managed Roadways."
6-5	The document also omits references to the bridges that cross Mosher Slough in the project area. Five vehicle bridges cross Mosher Slough: Mariners Drive, Interstate 5, Kelley Drive, Don Avenue, and Thornton Road. A footbridge provides pedestrian access across the slough between Yarmouth Drive and Bainbridge Place.	A new bullet was added to Section 5.15, under "City and County-Managed Roadways," which identifies the five vehicle bridges and the one footbridge that cross Mosher Slough.
6-6	Page 5-280 states, "The Altamont Commuter Express (ACE) provides passenger service between Stockton and San Jose. Service includes three westbound morning trains, three eastbound evening trains, and a fourth train for midday commutes." SJCOG recommends correcting and rephrasing this passage to: "The Altamont Commuter Express (ACE) provides passenger service between Stockton and San Jose. Service currently consists of four westbound morning trains and four eastbound evening trains."	Section 5.15.1 has been revised as recommended.
Letter 007		
7-1	The City of Manteca disagrees with selection of Alternative 7a as the Tentatively Selected Plan (TSP). Alternative 7a will not adequately meet the flood risk reduction objective or the 200-year level of protection objective. We are asking that RD17 Alternatives not be removed from further consideration in the Draft Feasibility Study (7b, Sb, 9b). If not removed from the Feasibility Study, we	Comment noted. See response to Comment 3-2.

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	believe Alternative 7b would become the TSP and would include RD17 improvements.	
7-2	Removal ofRD17 Improvements from LSJRFS Conflicts with Prior Federal Actions The City of Manteca believes the action to remove RD17 alternatives from the Feasibility Study contradicts 165 years of prior action by Congress, 70 years of prior action by the U.S. Army Corps of Engineers (USACE), and 25 years of prior action by FEMA. RD17 levees have previously been endorsed by Congress, the USACE and by FEMA to provide protection for development. We fail to understand why the USACE chose a different analysis methodology to determine that the RD17 levees do not provide 100-year flood protection, when those levees have been certified by FEMA for 25 years.	The analysis conducted on the RD-17 levees was in accordance with current USACE policy and guidance. Results of the analysis show that the existing levees may not meet current design requirements based on an increased understanding of through and under seepage processes in Central Valley levees as a result of the 1997 storm event.
7-3	The USACE Interpretation of EO 11988 Appears Overstated The USACE interpretation of EO 11988 appears overstated when they state the RD17 levees do not provide 100-year flood protection and should not be improved to provide 100-year protection. We would like to understand the impact of this EO 11988 interpretation on proposed large, federally funded projects within RD17. We would also like to understand the impact on Federal facilities in RD17 if levees cannot be improved to provide 200-year flood protection.	Interpretation of Executive Order 11988 is compliant with USACE policy. USACE does not formulate to a specific event or level of protection, but to the identified National Economic Development Plan. Proposed Federal projects within the study area are required to comply with Federal law, policies, and guidance including EO 11988, so it is not possible to forecast affects at this time.
7-4	The USACE can Change the TSP in the Final Feasibility Report We understand the USACE can change the TSP in the Final Feasibility Study. The potential impacts of the entire array of alternatives included 7b, 8b and 9b that all included the RD17 improvements. All potential impacts of RD17 improvements are documented and analyzed in the Draft EIS/EIR, so the USACE can determine in the Final LSRFS that the TSP has changed to Alternative 7b. WE ARE ASKING THE USACE TO MAKE THIS CHANGE.	Comment noted. The Final Report identifies Alternative 7a as the Recommended Plan. This is the alternative that maximizes Net Economic Benefits and is compliant with USACE policy regarding wise use of floodplains.
7-5	If RD17 Improvements are not in the TSP, 43,000 People Remain at Risk The Draft plan states that the current TSP will result in no additional risk reduction for 43,000 people and critical infrastructure in RD17. We understand this to mean that the USACE has determined that the RD17 levees do not provide 100-year protection, and they do not believe they should be improved to provide that protection. The LSJRFS confirms that the USACE does not have land use authority. FEMA continues to certify 100-year protection from RD17 levees. New development in areas of the 200-year floodplain that are less than three feet deep	Noted. There is potential for future flood risk management studies of the RD-17 area to identify potential Federal interest. Such studies would require a non-Federal sponsor and Federal funding to be conducted.

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	would not be stopped from development by SB5. We are concerned that these expanded development areas, along with the 43,000 existing residents, would be precluded from improved levee protection by excluding RD17 from the Feasibility Study.	
7-6	Residual Risk Decreases by $24 Million/Year if RD17 improvements are included as the TSP Table 3-13 from the LSJRFS shows that expected annual damages within RD17 today is $25 million/year. With the recommended ULOP levee improvements, the expected annual damages drop to $1 million/year. This represents an immediate reduction in risk of $24 million/year. If, as the USACE suggests, development were to suddenly double after the levees are improved, this would result in annual damages of $2 million. This still represents an immediate reduction of $23 million per year. As shown on the table below, the reduction in risk of annual damages is monumental. With Project risk never approaches the No Project risk, even with extensive additional development. We interpret this to mean the risk to the public and to the State is greatly reduced if the RD17 levees are improved.	Comment noted. Chapter 3, Section 3.6 contains analysis for compliance with EO 11988 and the determination that planned development of RD-17 is not compliant.
7-7	RD17 and the Cities of Manteca and Lathrop are ready to improve our levees RD17, in conjunction with DWR, completed Phases 1 and 2 of their recent levee improvements. Phase 3 improvements are being reviewed now by the USACE. RD17 is cooperating with the cities of Lathrop and Manteca in preliminary design of ULOP improvements to provide RD17 with 200-year flood protection. Lathrop has applied for an Urban Flood Risk Reduction Grant from the State to share the cost of designing ULOP levee improvements. And finally, the Flood Protection General Plan Amendment has been drafted and delivered to the Flood Protection Board for review, as required by SB5. It is only because there is new development proposed for the Lathrop areas protected by RD17 that this city can afford to pay its share of the levee improvement costs.	Comment noted.
Letter 008		
8-1	The City concurs with the comments prepared by the San Joaquin Area Flood Control Agency (SJAFCA) on the draft documents, and incorporates them herein by reference.	Comment noted. Please see responses to SJAFCA's letters of comment.
8-2	1. Confirm that the Tentatively Selected Plan (TSP) Provides 200-Year Level of Flood Protection SJAFCA's comments on this issue indicate that the document is	The Lower San Joaquin River Feasibility Study identifies the Federal interest in a flood risk

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	not clear whether the TSP will meet the sponsors' objective of complying with Senate Bill 5 requirements (i.e. providing 200-year level protection). As indicated in the comment, "Because this is such an important issue to the sponsors and their constituents, the Draft needs to be more clear and up-front about whether, or to what extent, Alternative ?a (the TSP) will meet 200-year protection requirements." The City concurs that this is a critical issue, and recommends that the Draft Report provide clarification regarding this.	management project, and is not constrained by, nor seeks to achieve, FEMA levee accreditation standards and local laws such as SB-5. The extent that the Recommended Plan complies with FEMA and SB-5 standards is a determination required to be made by the non-Federal sponsor. Clarification of the risk reduction provided by the Recommended Plan is provided in Chapters 3 and 8 of the document.
8-3	2. Removing Reclamation District 17 (RD 17) Area from the Study The City concurs with SJAFCA's position that inclusion of the RD 17 area in the study is policy compliant with Executive Order 11988, and the alternative that includes improvements for the area, specifically Alternative 7b, should be the TSP. If Alternative 7b or another alternative that includes the improvements for the RD 17 area are not ultimately identified as the Selected Plan for the Study, the City supports the position that exclusion is conditioned upon a subsequent feasibility study being initiated for the RD 17 area.	Comment noted. The EO 11988 evaluation for this project is provided in Section 3.6 of the Draft and Final Reports.
8-4	Notwithstanding the position that inclusion of RD 17 is policy compliant, it is important to note that the City of Stockton's present day situation is very different from the height of the real estate boom, when our General Plan was adopted in 2007 amid optimistic forecasts of aggressive growth. The General Plan included lands within its planned Urban Service Boundary/Area of Interest in the RD 17 area based in part on those growth projections and anticipated development. However, the expanded Sphere of Influence boundary was never approved by the San Joaquin Local Agency Formation Commission (LAFCO), and these lands remain outside of the City's adopted Sphere of Influence. Today, the City is influenced by lessons learned through the bankruptcy process about the perils of rapidly expanding service areas. Additionally, the recent adoption of the City's Climate Action Plan will influence the City's appetite for future annexations and growth. As a direct result of both issues, the City is currently in the process of a General Plan amendment intended to produce a land-use blue print that reels in the more aggressive aspects of the current plan which are no longer contiguous with our present situation.	Comment noted.
8-5	City staff is exploring a reduced General Plan service boundary, holding the Sphere of Influence boundary in its current location consistent with the prior LAFCO	Comment noted.

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	decision not to approve the 2007 General Plan Sphere of Influence. While inclusion of RD 17 is already policy compliant as noted above, these more recent considerations also address the policy intent of Executive Order 11988.	
8-6	Regardless, of the future growth it is important to call out the implications of not including RD 17 and the fact that exclusion could deny necessary flood protection for the approximately 43,000 Lathrop, Manteca and Stockton residents in the floodplain. RD 17 includes critical municipal, county and federal infrastructure and provides protection to Interstate 5 which carries 115,000 vehicles per day, along with State Highway 120 and major railroads. The highways are critical to evacuation of the region and response to emergencies in the Delta. Over $80M has been invested in infrastructure to facilitate development of RD 17, and a $325M VA Hospital is scheduled for construction in 2015. These investments were made in full partnership with the Federal government, including the Corps of Engineers.	See response to comment 7-4.
Letter 009		
9-1	The City of Lathrop disagrees with selection of Alternative 7a as the Tentatively Selected Plan (TSP). We do not believe that Alternative 7a will adequately meet the flood risk reduction objective or the 200-year level of protection objective. We are asking that RD17 Alternatives no be removed from further consideration in the Draft Feasibility Study (7b, 8b, 9b). If not remove from the Feasibility Study, we believe Alternative 7b would become the TSP and would include RD17 R58improvements.	Comment noted. The Final Report identifies Alternative 7a as the Recommended Plan.
9-2	Removal of RD17 Improvements from the Feasibility Study Appears to Conflict with Prior Federal Actions The City of Lathrop believes the action to remove RD17 alternatives from the Feasibility Study contradicts 165 years of prior action by Congress, 70 years of prior action by the U.S. Army Corps of Engineers (USACE), and 25 years of prior action by FEMA. Following is a brief history of these Federal actions that, until 2014, encouraged development behind the RD17 levees: To summarize the above history, RD17levees have been endorsed by Congress, the USACE and by FEMA to provide protection for development. We fail to understand why the USACE chose a different analysis methodology to determine that the RD17 levees do not provide 100-year flood protection, when those levees have been accredited by FEMA for 25 years.	See response to comment 7-2.

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9-3	FEMA is Responsible for Determining 100-Year Levee Protection Lathrop understands that FEMA was given the authority and responsibility to determine when to accredit levees as providing 100-year protection. For 25 years (since 1990) RD17 has been determined by FEMA as providing 100-year flood protection. The City of Lathrop is concerned with the recent statements by the USACE that the FEMA accreditation may not be relied upon regarding RD17 levees.	See response to comment 7-2.
9-4	The USACE Interpretation of EO 11988 Could Negatively Impact Federal Facilities. We are concerned this EO 11988 interpretation could negatively impact proposed large, Federal projects within RD17. We are also concerned that existing Federal facilities in RD17 would be negatively impacted if levees cannot be improved to provide 200-year floo+R61d protection.	See response to comment 7-3.
9-5	Balancing Life Safety Against Aversion to Growth Inducement; EO 11988 Policy Compliance Life safety and critical infrastructure pose a significant concern for the basin. The USACE LSJRFS Hydraulic Design Appendix highlights this: For persons with limited-mobility (sick, infirm, incarcerated), this issue is compounded. Many of the dead from Hurricane Katrina were limited mobility persons. The jail and hospital complex off Mathews Road in RD 17 contains a high concentration of particularly vulnerable limited mobility people. But this is not to understate the threat to other critical infrastructure. Law enforcement command and control centers could be rapidly flooded, schools which are used as emergency shelters and evacuation centers, and thousands of ordinary people would be in the breach zone. San Joaquin County Office of Emergency Services (OES) and RD 17 have developed a model emergency response plan. However, it's effectiveness at preventing substantial human tragedy in a geotechnical failure situation is limited. For these reasons, local, state, and Federal interests should all recognize the overriding considerations of life safety in support of further improvements to RD 17's levees.	Noted. There is potential for future flood risk management studies of the RD-17 area to identify potential Federal interest. Such studies would require a non-Federal sponsor and Federal funding to be conducted.
9-6	In light of the significant life safety risks described above, USACE ER 1165-2-26 provides the general guidance and policy for USACE's implementation of EO 11988 for all civil works projects. Paragraph 7 of the regulations states: " ... It is the policy of the Corps of Engineers to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base flood plain and avoid inducing development in the base flood plain unless there is no practicable alternative. The decision on whether a practicable alternative exists will be based on weighing the advantages and disadvantages of flood plain sites and non-flood	Section 3.6 of Chapter 3 of the document fully describes the analysis conducted for EO 11988 compliance and finds that due to planned development, additional Federal investment is not compliant at this time. There is potential for future flood risk management studies of the RD-17 area to identify potential Federal interest. Such studies

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	plain sites. Factors to be taken into consideration include, but are not limited to, the functional need for locating the development in the flood plain...The test of practicability will apply to both the proposed Corps action and to any induced development likely to be caused by the action." This statement says that Federal improvement of a levee could take place if there was no practicable alternative. The implication is that if the need for flood risk management is clear, that need must be fulfilled by an action alternative. Stated another way, the no action alternative can be considered unacceptable if the residual risk is too great. And this means that an action alternative can have flood risk management performance which overrides growth inducement concerns. The LSJRFS acknowledges the lack of a practicable alternative to fix-in-place, but stops short of recommending action. The USACE acknowledges that this is an important policy discussion that needs to happen, but elected to defer this to a later study: "It is understood that RD 17, with funding assistance from the State, is currently pursuing a phased strategy of levee improvements to initially increase the resistance of RD 17's levee system to under seepage and through seepage. Upon completion of that work, RD 17 and the non-Federal sponsors intend to pursue USACE participation in additional studies/improvements necessary to achieve the non-Federal objective of 200-year (0.5 percent ACE) flood risk management in order to meet SB 5 requirements. Consideration of future Federal participation would be subject to demonstration of a Federal interest in such incremental improvements." We believe that USACE's EO 11988 analyses for the LSJRFS should include a weighing of the risks and lack of a practicable alternative against growth inducement concerns, and conclude that policy compliant Federal interest exists in improving the RD 17 levees.	would require a non-Federal sponsor and Federal funding to be conducted.
9-7	The USACE can Change the TSP in the Final Feasibility Report According to the USACE Non-federal Sponsor Meeting Notes dated 8/2104: "Headquarters made it clear during the TSP Conf. that they had yet to make their own determination on the EO11988 issue as it relates to RD17. They will be reviewing the study and relating issues during their reviews of the Draft Report and the Policy Review process which will run concurrently with the Public I Agency Review.	See response to comment 7-4.

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	If HQ returns a decision on the application of EO11988 in favor of including RD17 in the NED/TSP, the NFS would support amending the Draft Report and changing the NED/TSP to Alternative 7b. Alt 7b is the same as Alt 7a but includes the RD17 area." We understand the USACE can change the TSP in the Final Feasibility Study. The potential impacts of the entire array of alternatives included 7b, 8b and 9b that all included the RD17 improvements. All potential impacts of RD17 improvements are documented and analyzed in the Draft EIS/EIR, so the USACE can determine in the Final USRFS hat the TSP has changed to Alternative 7b. We are asking the USACE to make this change.	
9-8	If RD17 Improvements are not in the TSP, 43,000 People Remain at Risk. The Draft plan states that the current TSP will result in no additional risk reduction for 43,000 people and critical infrastructure in RD17. We understand this to mean that the USACE has determined that the RD17levees do not provide 100-year protection, and they do not believe they should be improved to provide that protection. We are concerned that 43,000 existing residents would be precluded from improved levee protection by excluding RD17 from the Feasibility Study.	See response to comment 7-5.
9-9	Residual Risk Decreases by $24 Million/Year if RD17 Improvements are included as the TSP Table 3-13 from the LSJRFS shows that expected annual damages within RD17 today is $25 million/year. With the recommended Alternative 7b levee improvements, the expected annual damages drop to $1 million/year. This represents an immediate reduction in risk of $24 million/year. If, as the USACE suggests, development were to suddenly double after the levees are improved, this would result in annual damages of $2 million. This still represents an immediate reduction of $23 million per year. As shown in the figure below from an Analysis of Development Risk Resulting from Levee Improvements to ULDC Standards by Peterson Brustad, Inc. (Attachment E). With Project risk never approaches the No Project risk, even with extensive additional development. We interpret this to mean the risk to the public and to the State is greatly reduced if the RD17 levees are improved.	See response to comment 7-6.
9-10	RD17 and the City of Lathrop are Ready to Improve Our levees RD17, in conjunction with DWR, completed Phases 1 and 2 of their recent levee improvements. Phase 3 improvements are being reviewed now by the USACE.	Noted.

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	RD17 is cooperating with the cities of Lathrop and Manteca in preliminary design of Urban Level of Flood Protection (ULOP) improvements to provide RD17 with 200-year flood protection. Lathrop has applied for an Urban Flood Risk Reduction Grant from the State to share the cost of designing ULOP levee improvements. And finally, the General Plan Amendment to add new flood management provisions has been drafted and delivered to the Central Valley Flood Protection Board for review, as required by SB5.	
9-11	City of Lathrop's Wise Use of Floodplains. The City incorporated in 1989. Immediately afterwards in 1990, RD17 was removed from the FEMA 100-year floodplain. Based upon this status, Lathrop prepared its first General Plan in 1991, anticipating growth within this 100-year flood protected area. The City has chosen to enact regulations to preserve farmland, provide environmental stewardship, and provide recreational components that highlight the value of the riverine levee system, as indicated below: Farmland Preservation Development within Central Lathrop Specific Plan area requires payment of over $3,000 per acre toward an accredited farmland trust. In Lathrop, this provides over $4 million in revenue to the Central Valley Land Trust (Attachment A) Environmental Stewardship Development within Central Lathrop Specific Plan area requires payment of over $13,000 per acre toward the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (Attachment B). In Lathrop, this provides approximately $10 million in revenue towards habitat preservation, of which $2.6 million has already been paid (Attachment C). Recreational Components and Levee Setbacks Central Lathrop Specific Plan requires a Linear Park!frails and Open Space Corridor along the RD-17 levee (Attachment D). Also, all streets in the Specific Plan area that border the levee are single loaded, eliminating any backup of homes along the levee to avoid any impediment to flood fighting, if it is ever needed.	Noted.

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	A full listing of residual risk management measures being employed in RD 17 is provided (Attachment F).	
9-12	Technical Review by SJAFCA We have not given the document a thorough technical review because the City understands that SJAFCA has performed the detailed technical review and provided comments to USACE. We have reviewed SJAFCA's comments and we are surprised at the significance of many of the comments. It appears that the study has significant technical errors that could significantly change the costs, benefits, and impacts of the alternatives, and if corrected could result in a substantially revised NEDffSP. We feel it is critical that USACE address all of SJAFCA's technical comments in addition to our comments provided herein, and reconsider the NEDffSP recommendation.	Noted.
Letter 010		
10-1	We request that USACE incorporate all comments into the USACE ProjNet database, and that the comments be provided to the USACE Vertical Team, Agency Technical Review (ATR) team, and the Independent Expert Panel Review (IEPR) team for their reference while they are conducting their own reviews of the Draft.	In subsequent discussions among USACE, DWR, and SJAFCA, agreement was reached to follow the standard review and documentation process for the Lower San Joaquin River Feasibility Study as is customarily used on other studies in Sacramento District.
10-2	Issue 1: Confirm that the TSP provides 200-year protection. The sponsors' objective with the study was properly characterized in Section 2.2.2 as ".to identify, develop and construct a plan that will achieve a minimum 200-year urban level of protection for areas within the study, as required by State of California Senate Bill 5". However, it is difficult to discern to what degree this goal will be achieved by Alternative 7a. Section 3.5 states that Alternatives 8a and 8b were "formulated to meet the sponsors' objective of compliance with SB 5". That same section goes on to say that the difference between Alternatives 7a and 8a and Alternatives 7b and 8b are that Alternatives 8a and 8b include additional levee increments upstream of the ?a and ?b limits on the Calaveras/Diverting system. So the implication is that the improvements made under 7a and 7b will also meet SB 5 requirements, but that the sponsors will have to improve the extra upstream increments without Federal participation to fully meet SB 5. However, Figures 5-5 and 5-6 show that Alternatives 8a and 8b would still have 1GO year and 200-year residual floodplains in Central Stockton. And Section 1.6 of the Hydraulic Design	It is not in the Federal Government's interest to provide 200-year level of protection within the study area. There is not economic justification as shown in the analysis conducted to identify the National Economic Development Plan (the TSP/Recommended Plan). The Recommended Plan provides for significant improvements to the levee system, furthering the ability of local entities to meet the requirements of SB-5, which they will have to demonstrate. Clarification of the risk reduction provided by the recommended plan is provided in Chapters 3 and 8 of the document.

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	Appendix states that the alternatives may or may not meet SB 5 requirements. So one part of the document states 8a and 8b meet the sponsors' SB 5 objective, and another says they won't. The sponsors would not proceed to fund design and construction of levee improvements which fall short of 200-year protection requirements. Adding upstream increment is somewhat explainable, but re-doing a freshly rebuilt levee is not.	
10-3	Issue 2: Dropping RD 17 from the study. We do not think that USACE's EO 11988 analysis and conclusions in Section 3.6 of the Draft are appropriate, and as noted above feel that a more balanced evaluation would conclude that all of the final array of Alternatives are EO 11988 policy compliant. While we had hoped that USACE would conclude that Alternative 7b should be the NED Plan and TSP, we accepted a follow-up study to further consider this issue. Attachment 2 presents our interpretation of USACE's study analyses and the EO 11988 policy, and concludes that residual economic risk of no action is not correct. With project risk, even with the most extreme growth projections to full saturation of vacant land in RD 17, is an order of magnitude lower than without project risk.	See response to comment 7-4.
10-4	1. Executive Summary: **ENVIRONMENTAL**	Text changed before release of the Draft Report.
10-5	2. ES-1, first paragraph: ..(SJAFCA). **T**he State of...	Text changed before release of the Draft Report.
10-6	3. ES-2, Figure ES-1. The Central Stockton area on this figure differs from the other figures in the report.	Comment noted.
10-7	4. ES-5, under "Consideration of Alternative Plans", reference to Appendix 8.2 should be Appendix E.	The referenced section has been removed from the main report.
10-8	5. ES-5, "ALTERNATIVES" 2nd paragraph: ...the levees protecting the project area would continue to require **maintenance** to **continue** to meet FEMA's...	Text changed as requested.
10-9	6. ES-8, Table ES-1, Levee extension on Duck Creek- This description should be used consistently throughout the report (see sections 3-6, 3-14, 4-17, 4-20, 4-23, etc).	Instances of "levee extension along Duck Creek" revised throughout document to read "levee extension on Duck Creek" for consistency.
10-10	7. ES-8, under "Affected Environment", there is a statement that says "Each alternative proposes exactly the same improvements in North Stockton." This is not correct. NS B and NS-F, which are the basis for alternatives 7 and 8, respectively, differ	The approach to dividing the study area for the purposes of plan formulation was problematic when considering environmental impacts. Therefore, for

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	in the length of improvement on the right bank Calaveras River. Elsewhere in the document (such as Chapter 4), the right bank Calaveras River improvements are incorrectly grouped with Central Stockton. Not enough detail exists in the document to verify whether costs were properly apportioned between North and Central Stockton, however.	the purposes of the impact assessment in Chapter 5, the Calaveras River, both banks were considered as a whole within Central Stockton. A footnote has been added to Table 4-2 to explain these different approaches. When the right bank of the Calaveras River is considered within Central Stockton, the North Stockton elements of all of the final array of action alternatives are exactly the same.
10-11	8. ES-9, "COMMUNICATION WITH NATIVE AMERICANS", District **10**	Text revised as recommended.
10-12	9. ES-11, under "Areas of Controversy", the Real Estate Plan is in Appendix G, not D.	We will work to ensure all references are consistent and accurate. Thank you.
10-13	10. ES-12, under "Tentatively Selected Plan", the EAD reduction of 84% does not match Table 3-16 (82.8%), but it does match the Economics Appendix number.	We will work to ensure all references are consistent and accurate. Thank you.
10-14	11. ES-12, under 'Tentatively Selected Plan", the sentence describing benefits to critical infrastructure conflicts with Table 3-18, which says that alternative 7a does not reduce the number of critical life safety facilities subject to less than 90% assurance of flooding in the 1% ACE event, and it only reduces the number of other critical infrastructure subject to the same flooding by 11 facilities (474 flooded under no action, 463 flooded under alternative 7a).	The table in Chapter 3 only counts critical structures that achieve 90% assurance at the 1% event once the alternative is in place (*i.e.* structures in areas with <90% assurance under the without project condition and >=90% assurance with the alternative in place.) The text in the Executive Summary counts ALL critical infrastructure that benefits from performance improvements, regardless of whether the 90% assurance threshold is achieved (*i.e.* structures in areas where performance is higher with the alternative in place than under the without-project condition.)
10-15	12. ES-15, Table ES-3, OMRR&R cost still seems low	OMRR&R costs are being updated in the final cost estimate and will be updated as appropriate throughout the final report.
10-16	13. Figure 1-3. The Central Stockton area on this figure differs from the other figures in the report.	Comment noted.
10-17	14. P.1-6, 4th paragraph: add at the end of the 1st sentence "and concerns with undeveloped areas."	Suggested text added.
10-18	15. P. 1-20, 2nd/3rd paragraph: Where is Table 4?	Text changed to reference Table 1-1 as appropriate.

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10-19	16. P. 2-11, last bullet: the number of residences and population increases should be consistent throughout the report.	Comment noted. The bullet cited is the only location those figures are quoted in the document. No consistency issue.
10-20	17. P. 2-11, Section 2.3. The without project condition assumes sponsor completion of the RD 404 cutoff wall and RD 17 Phases 1-3 improvements. However, the final array of alternatives throughout the document shows duplicate measures overlaying these improvements. This results in an overstatement of costs and impacts for the action alternatives.	Comment noted. Analysis presented is for feasibility level design and further design and cost refinements will occur during PED.
10-21	18. P.3-2 Table 3-1: Table 3-1 objectives are not the same as those developed in the charrette, "promote sustainable environmental design" is completely new. And "reduce flood risk" and "reduce flood damages" are so similar that check boxes are identical. These are somewhat similar to 2.2.3 planning objectives, but ignore life safety and 2.2.2 NFS objectives.	Comment noted. Objectives were refined throughout the study and do not have to mirror those discussed at the charette.
10-22	19. P. 3-3, 1st paragraph: "See Section 3.1" doesn't make sense since this is Section 3.1.	Section has been moved to the Plan Formulation appendix and the reference to Section 3.1 is correct.
10-23	20. P. 3-3, Flood Warning System: ...residents and business with**in** the area.	Section now in Plan Formulation appendix. "with" changed to "within" as noted.
10-24	21. P. 3-8, In Table 3-2, ring levees around critical infrastructure was a measure not retained because the facilities would be inaccessible during a flood. However, the TSP leaves these many critical facilities completely vulnerable, which is worse. Suggest this measure be retained or added back in the final array for residual risk management.	Comment noted. Measure will not be restored.
10-25	22. P. 3-17, Section 3.2.5. The RD 17 D, E, and G alternatives list a small setback levee, but because the document later says the existing riverine levee must be maintained, the new feature is actually a secondary levee. This is correctly characterized in Section 3.4. But the terms are not interchangeable, and the entire document should be conformed to the term "secondary levee".	Section 3.2.5 is now in the Plan Formulation appendix. Clarification of "secondary" levee made for appropriate alternatives. Use of "setback" is appropriate for alternative RD-17D.
10-26	23. P. 3-25, In Table 3-6 all of the residual critical infrastructure numbers look too high, especially RD17-E (same issue in Table 3-8). Figure 5-6 (alternative 8b floodplains) shows RD 17 as protected from the 200-year flood, and alternative 8b utilizes RD 17E. So residual critical infrastructure in Table 3-6 and 3-8 should be zero. The last paragraph of Section 3.3 says that the "residual critical infrastructure" number in Table 3-8 reflects number of facilities with reduced flood risk resulting from the alternative, but this is counterintuitive. The columns in the tables imply that the numbers shown are critical infrastructure still exposed to flooding after the	The tables referenced illustrate preliminary plan formulation and are in the Plan Form appendix to demonstrate the process taken to identify the recommended plan. (Updated on 17 March 2016)

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	alternative is implemented. And if the text is true, the zeros for NS-B, NS-F, and CS-0 mean that those alternatives do not improve conditions for critical infrastructure?	
10-27	24. P. 3-28, 151 paragraph, 7th sentence: unclear. The combined number of structures in North and Central Stockton is 67,000.	are
10-28	25. P. 3-28, Alternative 28: What is "the authorized design elevation"?	in the Plan Form appendix to demonstrate the process taken to identify the
10-29	26. P. 3-32, the new/set back levee shown in all drawings differs from the one proposed by RD 17 (Typical, throughout the document).	recommended plan.
10-30	27. P. 3-39, Section 3.5. The 3rd paragraph conflicts with chapter 2 claims that all 4 planning accounts will be considered in designation of the TSP. This paragraph says that USACE policy is to designate the TSP based on only one of the planning accounts, NED, unless an exception is approved by the Assistant Secretary of the Army for Civil Works (ASA(CW)). This should be described in Section 2.2.3.	Comment noted. Paragraph in question discusses identification of NED, not the TSP plan. Section 2.2.3 does not need modification.
10-31	28. P. 3-39, Section 3.5, descriptions for alternatives 7a, 8a, and 9a should include the new Duck Creek levee. "New levee" should be added in the "description" column of Table 3-10.	New Duck Creek levee included in Alt 7a, 8a, and 9a descriptions. Also added to Table 3-6 'description' column.
10-32	29. P. 3-44, Table 3-11 introduces a new set of planning criteria that does not match section 2.2.2 and 2.2.3. If these are valid planning criteria, they should be described in section 2.2.3.	Sections 2.2.2 and 2.2.3 discuss planning objectives, not criteria. No changes made.
10-33	30. P. 3-58, Table 3-13. Alternatives in the table include the prefix "LS-". Elsewhere in the document, alternatives do not have the prefix. The document should be made consistent.	Done, it was Table 3-9
10-34	31. P. 3-58 and 3-70, Tables 3-13, 3-15, and 3-16. Residual damages for Central Stockton are too high, reflecting an incorrect R&U analysis of the right bank French Camp Slough (index point FR1). The "b" alternatives should fully protect against 200- year flooding and reduce residual damages further than what is shown in the table. And the "a" alternatives should be formulated with a sufficient Duck Creek extension levee to eliminate flanking in the 200-year flood. Section 3.5 says that both 8a and 8b were formulated to achieve the SB 5 objective. And because alts 7a, 7b, 9a, 9b are identical to 8a and 8b for this area, they should also prevent 200-year flooding from the south. However, alternatives 7a and 9a will have higher residual damages to Central Stockton because of residual risk along the Diverting Canal and eastern-most reaches of the Lower Calaveras River. In addition, residual damages	R&U analysis will be revised when final cost estimate figures are available. Duck Creek levee extension will not provide for flanking in a 200-year event unless the RD-17 tieback levee is extended. Section 3.5, Alternative 8a and 8b descriptions have been caveated that 200-year protection may or may not be achieved as ULDC criteria may not be met. It is the local communities' responsibility to demonstrate SB-5 compliance to the CVFPB.

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	for North Stockton should be significantly lower for 8a than 7a because 7a is still subject to upstream levee breaks in the 1/50 or 1/100 ACE event. Addressing these issues may result in a switch to alternative 8a as the NED and TSP.	
10-35	32. P. 3-58 and 3-70, Tables 3-13, 3-15, and 3-16. The numbers in these tables conflict with Table 4-21 of the Economics Appendix.	Tables in Chapter 3 will be updated once the Economics Appendix is updated with final costs.
10-36	33. P. 3-59, 151 paragraph, last sentence: Figure 3-**21**...	Done, they meant the figure was numbered wrong.
10-37	34. P. 3-54, Second to the last bullet: Set-back levees: the stated work differs from the one proposed by RD 17.	See response to comment 10-29.
10-38	35. P. 3-65, 1: Most, but not all, of the entire study area delineated in Figure 1-3 is in the 500-year floodplain	Sentence revised to read: "Proposed actions being analyzed by this study are within the critical action floodplain."
10-39	36. P. 3-66, Item 5, last paragraph: ...as shown in Figure 3-2**1**...	Done
10-40	37. P. 3-74, Table 3-18 shows Alt 8a having zero population with <90% assurance for the 1% ACE event in Central Stockton. But figure 5-5 shows a substantial residual 1% floodplain in Central Stockton. We suspect that the critical infrastructure with <90% assurance is also understated and evacuation routes may be overstated. However, if the R&U analysis of index point FR1 is corrected (see comment 24.), the numbers may not change as much.	The table is correct. Alternative 8a leaves zero population with less than 90% assurance for the 1% event. The measures in this alternative do not affect the residual floodplains, they only increase assurance (i.e. reduce the probability of flooding). Figure 5-5 does not show residual floodplain.
10-41	38. P. 4-2, Table 4-1: should seepage berm for 8b be 10 times 7b and 9b?	Table 4-1 has been corrected. The seepage berm lengths for Alternatives 7b, 8b, and 9b are the same; 3.8 miles.
10-42	39. P. 4-2, Table 4-1: Floodwalls were deleted from the project and replaced with conventional fill.	No change made. A floodwall is included in all of the final arrays of action alternatives evaluated in this study.
10-43	40. P. 4-3, Section 4.3.2. We thought the USACE standard for new landside easements is 15 feet.	The comment is correct. Section 4.5.2 of the Final Report clarifies that new levees brought into the Federal system would have a landside easement of 15 feet.
10-44	41. P. 4-9, Item 4.3.7 should be changed to Raise Grade, or delete.	No change made. This comment pertains to the floodwall measure. This measure has been retained and is included in Alternatives 7a,7b, 8a, 8b, 9a, and 9b.

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10-45	42. P. 4-9, Section 4.3.6. This is a general measure description, so the 75,000 cy quantity is confusing. We suggest either deleting the quantity, or specifying the area of placement.	This comment pertains to the description of the erosion protection measure. Section 4.3.6 has been revised to incorporate additional clarifying descriptions about the erosion protection measure.
10-46	43. P. 4-11, 2nd to last paragraph: should the gate be "stainless steel"?	No changes made. The precise specifications for the gate in the closure structure will be developed during preconstruction engineering and design.
10-47	44. P. 4-12, Item 4.3.11, last paragraph: ...Stockton Diverting Canal...	Stockton Diversion Canal has been changed to Stockton Diverting Canal (Section 4.3.11).
10-48	45. P. 4-13, Section 4.4.1. 2nd paragraph says that performance of project levees has decreased since original construction due to identified structural deficiencies. This is not really true. Maintenance deficiencies may produce a temporary reduction in performance. But the levees perform pretty much as designed and constructed. It is fair to say that they are structurally deficient by today's standards. But the way it is worded denotes a decay in performance, rather than changes in construction and maintenance standards.	Second paragraph has been modified to read: "In response to major floods in the early 1950s, USACE constructed several dams, miles of levees, and other features in and near the study area as part of the Lower San Joaquin River and Tributaries project. Since then, the engineering performance and potential reliability of these projects have been reexamined due to greater understanding of operational processes, including through and under seepage, slope stability, overtopping, and erosion. Under No Action, these processes would continue and likely become worse, increasing the risk of future levee failure during high flows."
10-49	46. P. 4-14, Table 4-2. Are all of the segments with levee raising called out as such? Or is levee raising "built in" to some of the measures and not called out? This is important from a visual impact and right of way take standpoint.	Please see Section 4.3.3 for a description of the levee height fix measure in the Final Report.
10-50	47. P. 4-15 & 4-19: Smith Canal floodwall proposed measure should be deleted and replaced with conventional fill.	No changes made. The Smith Canal floodwall is a measure that is included in each of the final array of action alternatives.
10-51	48. P. 4-15, Table 4-2 and text for "North Stockton Area, Levee Improvements" immediately following the table. Right bank Calaveras River improvements should be included in the North Stockton grouping, not Central Stockton.	Text following Table 4-2 was corrected to show the Right Bank of the Calaveras River improvements in North Stockton.
10-52	49. P. 4-15, Table 4-2. In Central Stockton, the first "Smith Canal" entry should replace "Browns Island" with "RD 1614", or "Stockton Golf and Country Club". The second Smith Canal entry should replace "floodwall" with "Levee height fix, sea level rise".	In Table 4-2, Brown's Island has been replaced with "Stockton Golf and Country Club." No change was made to the floodwall at Smith Canal.

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10-53	50. P. 4-17, Section 4.4.2. Under "Central Stockton Area, Levee Improvements", strike reference to north bank Calaveras River. This is part of the North Stockton system.	Improvements to the North Bank of the Calaveras River have been removed from the Central Stockton Area and placed in the North Stockton Area.
10-54	51. P. 4-17, Section 4.4.2. Under "Central Stockton Area, Closure Structure...", replace floodwall with "levee height fix". And the 5-10' height appears excessive. SJAFCA's estimate is 0-5'. We suspect this is due to the issue with Delta stages used by the Corps being too high (see Appendix E comment #5 below).	The description of the levee height fix and floodwall are now consistent with the Smith Canal EIR description of improvements at Dad's Point and Louis Park. The 5-10' description originally came from the proposed 2010 design when a sheetpile floodwall was placed on the waterside slope of Dad's Point.
10-55	52. P. 4-18, Section 4.4.2. Under "RD 17 Area, New Levees on Oxbow Cutoff and Tie Back". Please clarify that the Oxbow levee is a secondary levee, and not a setback levee, and that the existing riverine levee, though not improved, would be maintained in its current condition.	Section 4.4.2, "RD-17 Area, New Levees on Oxbow Cutoff and Tie-Back" has been revised to include the following sentence: "Constructing a new levee across the oxbow negates the need to improve a much longer reach of existing levee around the perimeter of the oxbow; however, the existing levee would remain in place."
10-56	53. P. 4-18, Section 4.4.3 and Table 4-3. Comments above for Table 4.2 and Section 4.4.2 apply to this section as well.	Tables 4-2, 4-3, and 4-4 were incorporated into a revised Table 4-2 to facilitate comparison among the action alternatives.
10-57	54. P. 4-21, Section 4.4.3. The text following Table 4-3 needs to be modified to move the right bank Calaveras River improvements from the Central Stockton to North Stockton system.	Text revised as recommended. A note was added to the Final Report to clarify that for the purposes of the impact assessment in Chapter 5, both banks of the Calaveras River were considered under Central Stockton.
10-58	55. P. 4-21, first sentence: 8a and 8b cannot be the same as 7a and 7b since 7a and 7b do not include the upper reaches of the Calaveras River and Stockton Diverting Canal	Text was added as a footnote to Table 4-2 and elsewhere in Chapter 4 to clarify that for the purposes of the impact assessment in Chapter 5, both banks of the Calaveras River were considered under Central Stockton.
10-59	56. P. 4-21, **New Levee on Duck Creek (Alternative 7a only)**: doesn't make sense since it is describing 8a. Should probably be (**Alternative 8a only**).	The tables describing the six action alternatives have been consolidated into a single table, Table 4-2, to increase clarity and to facilitate comparison among the alternatives.

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10-60	57. P. 4-22, Section 4.4.4 and Table 4-4. Comments above for Table 4.2 and Section 4.4.2 apply to this section as well.	The tables describing the six action alternatives have been consolidated into a single table, Table 4-2, to increase clarity and to facilitate comparison among the alternatives.
10-61	58. P. 4-23, Table 4-4: Duck Creek (9a only): doesn't make sense since it previously said 7a only. Should probably say "7a/8a/9a only"	In the Draft Report, Table 4-4 focused only on Alternatives 9a and 9b. The note "9a only" clarified that the elements following on the table pertained only to Alternative 9a and not to Alternative 9b. In the Final Report, Tables 4-2, 4-3, and 4-4 have been combined and reorganized to increase clarity and to better facilitate comparison among the action alternatives.
10-62	59. P. 4-26, 4.5 Staging Areas, first sentence, "publicly"	"Publically" replaced with "publicly."
10-63	60. P. 4-28 & 4-29, floodwalls: They were deleted from the project.	No changes made. Floodwalls remain a feature of each of the action alternatives in the final array.
10-64	61. P. 4-29, Table 4-7: Are the new levees on French Camp Slough for 7a and 9a not needing easements?	New levee easement figures for the "a" alternatives in Table 4-5 have been revised the reflect the 4 acres required.
10-65	62. P. 5-1, 2nd paragraph:"....For the purposes of NEPA, potential project effects **are** assessed in relation..."	Text corrected as recommended.
10-66	63. P. 5-4, Table 5-1: "Beneficial" in last row seems out of place.	Under NEPA, all effects - both adverse and beneficial - are identified and evaluated.
10-67	64. P. 5-4. **Significant:** "....Those effects that cannot be reduced to ...are identified as significant..."	Text corrected as recommended.
10-68	65. P. 5-5, **Regional and Local**: Add City of Stockton General Plan	City of Stockton General Plan added to Section 5.1.1.
10-69	66. P. 5-7, 2nd paragraph:"...meaning that **their** channels are shaped..."	Text corrected as recommended.
10-70	67. P. 5-8, 3rd paragraph: Old Mormon Slough/Old Mormon Channel/ Mormon Slough/Mormon Channel needs to be consistently used throughout the document.	The three names are not interchangeable. It is difficult to be consistent, as requested in the comment, as these locations are different and the terms have different meanings. The report is amended where possible to more accurately describe the different areas in question. A Glossary is provided in the Main Report.

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10-71	68. P. 5-9, 1st paragraph: "...**Due** to the size and nature of the proposed..."	Text corrected as recommended.
10-72	69. P. 5-9, **Regional and Local**: Add City of Stockton General Plan	Text corrected as recommended.
10-73	70. P. 5-11, 2nd paragraph: Add **Lathrop**	This text could not be located.
10-74	71. P. 5-15, 3rd bullet: Add City of Stockton General Plan	Text corrected as recommended.
10-75	72. P. 5-15, 1st paragraph: "...and deposition of the rock types in and **a**long the San..."	Text corrected as recommended.
10-76	73. P. 5-21, 2nd to last paragraph: "...If a breach were to occur in a Delta..."	Text corrected as recommended.
10-77	74. P. 5-22, 2nd paragraph: Add Calaveras River and Bear Creek	Text added as recommended.
10-78	75. P. 5-23, 2nd paragraph: Where is Plate 10?	Text corrected as recommended.
10-79	76. P. 5-23, 4th paragraph: 4 miles **upstream**?	Text corrected. It should have been from Old River to 4 miles downstream.
10-80	77. P. 5-24 & 25: Where are Plates 11, 12, 13, & 14?	These figures were added to the report.
10-81	78. P. 5-29, Figure 5-2. The western portions of North and Central Stockton are shown in the 50% ACE floodplain under no action. Significant disconnect in the R&U process; likely rooted in over-stated fragility curves and incorrect Delta stage-frequency used (see comments on Civil Engineering Appendix Section 2.6.1d and Hydraulics Design Appendix Section 4.2d).	Stages are supported by hydrodynamic modeling conducted for the 2002 Comprehensive Study. Section added to hydraulic appendix recommending additional hydrodynamic analysis during PED.
10-82	79. P. 5-31, 1st paragraph: Where is Figure 2?	Corrected to Figure 5-2.
10-83	80. P. 5-31, 2nd paragraph: Senate Bill 5 requires 200-year protection but does not say "with 90% assurance".	Removed statement.
10-84	81. P. 5-32, 3rd paragraph: "...from the Sacrament**o**-San Joaquin Delta."	Typo Corrected.
10-85	82. P. 5-40, 4th paragraph: "...would alter the course of..."	Typo Corrected.
10-86	83. P. 5-42, 1st paragraph: Where is Figure 5-8?	Plate has been added.
10-87	84. P. 5-42, 3rd paragraph: "...Alternative 9b would alter the course of..."	Typo Corrected.
10-88	85. P. 5-42, 5th paragraph: Alternate 9b	Typo Corrected.
10-89	86. P. 5-43, 1st paragraph: This says it would reduce the stages to approximately a 30% event, while P. 5-32 says it reduces water surfaces for floods greater than a 30% R142event.	Corrected text as follows: The closure structures would reduce the stages for floods larger than a 30% (1/3) ACE event.

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10-90	87. P. 5-43, **Local**: Add City of Stockton General Plan	Text corrected as recommended.
10-91	88. P. 5-44, 1st paragraph: double check the "small extension into the Primary Zone"	Section 5.5.1 has been revised to read: "The proposed project is entirely located within the secondary zone."
10-92	89. P. 5-45, 2nd paragraph: "...The City **of** Stockton...	Text corrected as recommended.
10-93	90. P. 5-45, 3rd paragraph:"...the result **of** tidal exchange..."	Text corrected as recommended.
10-94	91. P. 5-45, 4th paragraph:"...oxygen concentration regularly fall..."	Text corrected as recommended.
10-95	92. P. 5-46, 1st paragraph: Spelling of Kjeldah(**l**)?	Text corrected to consistently use Kjeldahl.
10-96	93. P. 5-48, 3rd paragraph: "tidally influenced open water..."	Text corrected to delete duplication.
10-97	94. P. 5-48, 4th paragraph: There is no proposed pump station at Smith Canal	Sentence referring to a pump station on Smith Canal has been deleted from the Final Report.
10-98	95. P. 5-49, 1st paragraph: "...that could result in **the release** of..."	Spelling corrected.
10-99	96. P. 5-52, 1st paragraph: "...implementing the LSJR **Project**."	Text corrected as recommended.
10-100	97. P. 5-52, **Local**: Add City of Stockton General Plan	Text corrected as recommended.
10-101	98. P. 5-55, 3rd paragraph, the 3rd to last sentence is unclear.	Could not locate this text.
10-102	99. P. 5-55, last paragraph, per P. 4-17, only Alternative 7a has a new levee section on Duck Creek.	All of the "a" alternatives include a new levee section on Duck Creek. Table 4-2 in Chapter 4 has been revised to better describe the measures included in each alternative.
10-103	100. P. 5-56, **Alternatives 9a/9b**: Old Mormon Slough/ Mormon Channel are used interchangeably throughout the report	See response to comment 10-70.
10-104	101. P. 5-57, **Local**: Add City of Stockton General Plan	Text corrected as recommended.
10-105	102. P. 5-58, 1st sentence: "Waters of the United States" and "Wetlands"..."	Section 5.7.1 revised to delete the redundant are defined. The sentence now reads: "'Waters of the United States and wetland are defined in…."
10-106	103. P. 5-59, 2nd paragraph, last sentence:"...Deepwater **Ship** Channel..."	Text corrected as recommended.
10-107	104. P. 5-59, 4th paragraph: "...Shima Tract, Wright-**Elmwood** Tract..."	Text corrected as recommended.
10-108	105. P. 5-60, 2nd paragraph: "equestrian center located east **of the** levee..."	Text corrected as recommended.

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10-109	106. P. 5-63, Closure Structures, 8th paragraph: ... every three years) and "**will open when the level of receding tides in the Delta is lower than the level behind the gate**."...	Section 5.7.5 has been revised to refer the reader to Chapter 4, Sections 4.3.10 and 4.5.5.
10-110	107. P. 5-64, Borrow Areas, 2nd paragraph, 3rd sentence: The closure structures would **slightly** alter local water circulation...	The sentence has been revised to read: "The closure structures would slightly but permanently alter local water circulation…"
10-111	108. P. 5-68, **Vegetation ETL**: "...United States under Alternative 8b..."	Text in Section 5.7.8 revised as requested.
10-112	109. P. 5-70, **Vegetation ETL**: "...as those identified for Alternative**??...**"	Text revised to read: "Under Alternative 9a, impacts associated with…."
10-113	110. P. 5-72, **Vegetation ETL**: "...vegetation clearing to establish..."	Text in Section 5.7.10 modified to delete "in" so that the sentence reads "…vegetation clearing to establish…."
10-114	111. P. 5-90, 1st paragraph: Where is Section 4.3.1..4?	Section 5.8.2 revised to read: "As discussed in Section 5.8.1…."
10-115	112. P. 5-90, Alternative 7a. Table 8-6 Project schedule shows construction ending in 2030. This should apply to all alternatives throughout the chapter.	Table 8-6 is now Table 8-10. Based on cost estimate and cost-schedule risk analysis, current estimated date for construction completion is 2031. Changed throughout the document for consistency.
10-116	113. P. 5-136, 2nd paragraph: "...In these circumstances, the CEQ**A** encourages..."	No change made. The reference is to the Council on Environmental Quality (CEQ). To reduce confusion, reference to CEQA has been added.
10-117	114. P. 5-140, last sentence: "…**I**n the event that..."	Correction made prior to release of the Draft Report.
10-118	115. P. 5-141, last paragraph: "...From Shima Trac**t** to..."	Shima Track corrected to Shima Tract.
10-119	116. P. 5-144, 1st paragraph: What is "design elevation"?	There is no design elevation. Wording changed to "design height."
10-120	117. P. 5-172, 5th paragraph: "...Mammals such as desert cottontail..." is not a sentence	Sentence revised to read: "Ground-nesting birds such as spotted towhee may forage among the vegetation and leaf litter."
10-121	118. P. 5-189, Central Stockton, 2nd paragraph, 4th sentence: ...gates would be closed...	Section 5.11.4 revised as requested.
10-122	119. P. 5-189, Central Stockton, 3rd paragraph, 3rd sentence: why should not this also apply to Fourteen Mile Slough?	It is not clear what changes are being requested. No changes made to the document.

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10-123	120. P. 5-201, last paragraph: Should clarify that "Phase 3" is the RD17 EIP project.	The text in Section 5.23.3 has been revised to read: "...of the RD-17 Levee Stability Program, Phase 3 Project Area…."
10-124	121. P. 5-207, **RD 17 Area**: What is "Developable Lands"?	The text in Section 5.12.1.1 (Burrowing Owl) has been revised to read: "Five burrowing owl occurrences are present in the northern portion of RD-17 in the Weston Ranch residential development of the Taft Mosswood area. The closest occurrence to the RD-17 levee on the San Joaquin river is about 0.2 miles to the east. The closest occurrence to the French Camp Slough levee in RD-17 is about 1.5 miles to the south of the levee."
10-125	122. P. 5-208, **RD 17 Area**: What is "Developable Lands" and River Miles X and Y?	Text in section 5.12.1.1 (Swainson's Hawk) has been revised read: "Eight occurrences have been documented within the RD-17 Area. Two occurrences are within the proposed project footprint along the San Joaquin River and additional three occurrences are documented for the west bank of the San Joaquin River immediately opposite the project area. The remaining three occurrences are east of the project area, within the interior of RD-17."
10-126	123. P. 5-212, 1st paragraph: Where is Table 5.12-1?	Section 5.12.1 has been corrected to read "Table 5-43."
10-127	124. P. 5-227, last paragraph: Where is Table 5.12-2?	Section 5.12.10.2 as been corrected to read "Table 5-43."
10-128	125. P. 5-230 and 5-231: Where is **Section 5.12.4 below**?	References to Section 5.12.4 that are associated with avoidance and minimization measures have been changed to Section 5.12.10.1 and Section 5.12.10.2, as appropriate.
10-129	126. P. 5-231: Section 5.2.1.1.1 is incorrect.	Text corrected prior to release of the Draft Report.
10-130	127. P. 5-232, 1st paragraph: It refers to Section 5.12.4, but this is in that Section	Text modified prior to release of Draft Report.
10-131	128. P. 5-236, last paragraph: It states that the closure structure needs to be operational twice a day. This is based on outdated information which is incorrect. If the analysis of the gate operation is based on operation criteria as stated and not	Section 5.12.4.3 states: "When the closure structure on Fourteenmile Slough needs to be operated twice a

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	controlled by expected flood tides then the environmental and water quality impacts will be over conservative.	day….." Chapter 4, Section 4.5.5, describes the gate operations.
10-132	129. P. 5-237, 3rd paragraph: The duration and timing of both gate closures are the same. See P. 5-305, 3rd paragraph.	Section 5.12.4.3 (Central Stockton) corrected to state: "Construction effects for the Smith Canal closure structure would be the same as those described for the Fourteenmile Slough closure structure."
10-133	130. P. 5-237, 3rd paragraph: ...gates would be closed during high...	The language in the text has been modified to state that the gates will be closed as opposed to the gates raised, as was originally stated.
10-134	131. P. 5-241, **Valley Elderberry Longhorn Beetle**: No Section 5.12.4 below.	Text corrected to reference Section 5.12.10.1.
10-135	132. P. 5-261, 2nd paragraph: "...currently in agriculture and open space..."	"opens space" corrected to "open space" in Section 5.13.5.
10-136	133. P. 5-272, 3rd paragraph: Alternative 7**b**?	Text in section 5.14.5 corrected from "Alternative 7" to "Alternative 7b."
10-137	134. P. 5-273, 3rd paragraph: Alternative 8**a**?	Text in section 5.14.6 corrected from "Alternative 8b" to "Alternative 8a."
10-138	135. P. 5-277, Section 5.2.1.1.2?	Text corrected prior to release of the Draft Report.
10-139	136. P. 5-287, 4th paragraph: "...In addition to the impacts described in Alternative **7a**, the channel improvements proposed in Alternative 9**a**..."	Text in Section 5.15.8 changed from "Alternative 8" to "Alternative 8a."
10-140	137. P. 5-288, Section 5.15.9: "...implementation of Alternative 9**b**..."	Text in Section 5.15.9 corrected to "Alternative 9b."
10-141	138. P. 5-290/5-291/5-292: Who is "the project proponent"?	Section 5.15.10 has been revised to clarify that "project proponents" means "USACE, DWR, and SJAFCA."
10-142	139. P. 5-291, 2nd to last paragraph: "...described above for Alternative**s**. 7a and **7b**..."	Section 5.15.10 revised to add reference to Alternative 7b, as requested.
10-143	140. P. 5-291, last paragraph, Which bridges are to be replaced?	Bridges that would require replacement will be identified during PED.
10-144	141. P. 5-292, 1st paragraph: "...(outlined in Alternatives 7a **and 7b**)..."	Section 5.15.10, Mitigation, revised to add "and 7b."
10-145	142. P. 5-293, 2nd paragraph: Add Stockton's Delta Water Supply project.	Section 5.16.1, Existing Conditions, now reads: "Stockton's potable water is provided by a combination of treated surface water from the Delta

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		Water Supply Project and SEWD, and pumped groundwater."
10-146	143. P. 5-296, 2nd paragraph: "...into French Camp Canal, which **flows** into...". Also, Stockton provides stormwater service in RD 17.	Section 5.16.1, Stormwater corrected from "floes" to "flows."
10-147	144. P. 5-297, last paragraph: RD 17 is also served by the Stockton Fire Department.	Text revised to clarify that the Stockton Fire Department also serves RD-17
10-148	145. P. 5-298, **Police Services**: ..."the County Sheriff Department..."	Text revised as recommended.
10-149	146. P. 5-301, last paragraph: The box culvert begins just upstream of Wilson Way and the storm drains connect into it downstream.	Section 5.16.8 has been modified to read: "In addition to the impacts described for Alternative 7a, a buried in-channel concrete box culvert constructed from Commerce Street to just upstream of Wilson Way collects much of the local drainage, including flows from 25 storm drains in this area."
10-150	147. P. 5-303, last paragraph: Oakmore golf course is closed.	The text in Section 5.17.1 has been annotated to clarify that the Oakmore Golf Course is closed.
10-151	148. P. 5-311, notes restrictions on public access and lower population density in the area and refers to Figure 5-9. Unfortunately, Figure 5-9 is a view at Louis Park toward Smith Canal where there are no restrictions on public access and population density in the area is not lower.	No change made. The photograph is of Old Mormon Slough just downstream of the Stockton Diverting Canal.
10-152	149. P. 5-313, 1st paragraph: Stockton General Plan (200**7**).	Text revised as recommended.
10-153	150. P. 5-314, Alternative 9a: This alternative does not extend upstream somewhat on the Lower Calaveras River and on the Stockton Diverting Canal. Alternative 9a is Alternative 7a plus Mormon Channel.	Section 5.18.8, Alternative 9a, has been corrected to read: "Visual impacts under Alternative 9a would be the same as those described for Alternative 7a except that the visual landscape will change on Old Mormon Channel as a result of concerting it into a flood bypass."
10-154	151. P. 5-314, last sentence: "...for Alternative **9**b..."	Section 5.18.9, corrected to be "Alternative 9b" instead of "Alternative b."
10-155	152. P. 5-329, last sentence: Who is the "local sponsor"?	"SJAFCA" has been added in parentheses to bullet 10 of Section 5.19.10 to clarify the identity of the "local sponsor."
10-156	153. P. 5-330, 1st bullet: Who is the "project proponent"?	The second to the last bullet in Section 5.19.10 has been modified to identify "USACE, CVFPB, and/or SJAFCA" as the "project proponent."

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10-157	154. P. 5-331, **Local**: Add City of Stockton General Plan	Text revised as recommended.
10-158	155. P. 5-335/5-336/5-337/5-338/5-339/5-340: Identify the number and location of all known HTRW sites and what is meant by "in proximity"? Is the cost included in the estimates? We understand that it is the Local Sponsors responsibility to acquire LERRO's and the use of the words proximity and vicinity are ambiguous.	Engineer Regulation (ER) 1165-2-132 and ER 1110-2-1150 address treatment of HTRW in USACE civil works projects. For this feasibility study, an HTRW Summary Report was completed in 2014 for all areas included in the six action alternatives evaluated in Chapter 5. A Phase I Environmental Site Assessment of Old Mormon Channel was completed in 2013. If the project is authorized and funded, additional HTRW investigations would be required during PED. The HTRW Summary Report is included in Appendix A-11 of the final FS/EIS/EIR. Costs for potential remediation for HTRW sites is not included in construction costs. Clean dirt is assumed. The design and construction of remediation measures for contaminants will be the responsibility of the non-Federal project sponsor and the cost will not be considered a project cost nor will the sponsor receive credit for any HTRW response costs. Investigations for the purpose of identifying the existence and extent of any HTRW performed during PED will be performed by the Federal Government, and these costs are cost shared and included in the total project costs (as part of the PED costs, Civil Works Work Breakdown Structure, WBS No. 30 PLANNING, ENGINEERING AND DESIGN, Planning & Environmental Compliance).
10-159	156. P. 5-353, 1st paragraph: Stockton does not have a landfill.	Reference to a landfill in the City of Stockton has been removed from Section 5.21 Cultural Resources.

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10-160	157. P. 5-354, 2nd paragraph: District **10**	Section 5.21.1, Native American Consultation, changed from "Caltrans District 6 in Stockton" to "Caltrans District 10 in Stockton."
10-161	158. P. 5-358, 9th bullet: Why DWR?	Section 5.21.10, bullet 9 has been changed to read as follows: "If human remains are discovered during any activities associated with bank protection measures, the USACE, CVFPB, and SJAFCA and their contractors will comply with State and Federal laws relating to the discovery and identification of human remains. In the case of Native American human remains found on non-Federal land, USACE, DWR, and SJAFCA will consult with the most likely tribe."
10-162	159. P. 5-363, 1st paragraph: Where is Table ES-5?	Text has been added to section 5/23/2 to clarify that Table ES-5 is in the Executive Summary.
10-163	160. P. 5-366, 1st paragraph: "...P**L** 84-99..."	"PK 84-99" corrected to "PL 84-99."
10-164	161. P. 5-366, last paragraph: Annual maintenance dredging is not described "above".	In Section 5.23.3, Navigation Projects, text was revised to simply state that, "Annual maintenance dredging is performed to maintain the DWSC to authorized depths."
10-165	162. P. 5-367, 3rd paragraph: Where is "this list (above)"?	Text has been rewritten as follows: "Thus, the flood risk management and navigation projects described above in this section (5.23.3) could also adversely affect the same species of fish or wildlife that would be affected by vegetation removal under the project."
10-166	163. P. 5-367, 2nd bullet: "...related to hydrology..."	Section 5.23.3, CALFED Ecosystem Restoration Program, bullet 2, corrected from "related" to "related."
10-167	164. P. 5-369, 1st paragraph: "...At that **time**, and integrated BiOp..."	Text revised as recommended.
10-168	165. P. 5-372, "City **of** Lathrop"	Table 5-54 corrected to read "City of Lathrop" instead of "City off Lathrop."
10-169	166. P. 5-381, 2nd paragraph: "...vegetation on the lower one half of the levee..."	Text changed as recommended.

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10-170	167. P. 5-382, 2nd paragraph: "…**V**oidance and minimization..."	Correction made prior to release of the Draft Report.
10-171	168. P. 6-1, last paragraph: **Two** public workshops?	Section 6.1.2 was corrected to state that one public workshop was held during the review period for the Draft Report.
10-172	169. P. 6-5, 1st paragraph: District **10**	Change made to Section 6.3.
10-173	170. P. 7-12, 3th paragraph: refers to air quality district outside San Joaquin County (i.e., Sacramento, Yolo, and Bay Area).	Text modified prior to release of Draft Report.
10-174	171. P. 8.1, Item 8.1.1, 1st sentence: **Tenmile** Slough	Ten Mile Slough changed to Tenmile Slough.
10-175	172. P. 8-1, Sections 8.1 and 8.1.5. TSP economics don't match Appendix C (Economics), which reports net benefits of $254M, BCR of 6.64, and EAD reduction of 84%.	Cited sections will be updated as necessary once economic analysis has been updated with final costs and benefits.
10-176	173. P. 8-1, Section 8.1. the sentence describing benefits to critical infrastructure conflicts with Table 3-18, which says that alternative 7a does not reduce the number of critical life safety facilities subject to less than 90% assurance of flooding in the 1% ACE event, and it only reduces the number of other critical infrastructure subject to the same flooding by 11 facilities (74 flooded under no action, 463 flooded under alternative 7a).	Cited section will be updated and checked for consistency with Chapter 3 once economic analysis has been updated with final costs and benefits.
10-177	174. P. 8-5, Item 8.1.3 3rd sentence: delete second part of the sentence after "...estimated to be $275,000"	Change not made. HQUSACE will want to know the increase in OMRR&R costs over existing costs.
10-178	175. P. 8-9, Item 8.1.7: add at the end of the paragraph; "and flooding from the Calaveras River and Diverting Canal, which were not improved."	Recommended text added.
10-179	176. P. 8-9, Section 8.1.7. Residual damages for Central Stockton are too high, reflecting an incorrect R&U analysis of the right bank French Camp Slough (index point FR1). We understand that this index point was modeled as a hybrid of a failure point and a flanking point, and it should have been modeled as two separate index points. The "b" alternatives should fully protect against 200-year flooding and reduce residual damages further than what is shown in the table. And the "a" alternatives should be formulated with a sufficient Duck Creek extension levee to eliminate flanking in the 200-year flood. Section 3.5 of the report says that alternative 8a was formulated to achieve the SB 5 objective. And because alt ?a is identical to 8a for the French Camp Slough area, it should also prevent 200-year flooding from the south. Correcting this error will reduce residual damages.	See response to comment 10-34.

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10-180	177. P. 8-11, Item 10: ...in stakeholder meeting throughout the process...	No apparent comment.
10-181	178. P. 8-12, Item 8.2.4: ...sign by SJAFCA **and CVFPB** as the non-Federal...	Recommended change made to Section 8.2.4.
10-182	179. P. 8-13, Section 8.3. Table 8-6 should reflect 2028 construction completion to be consistent with other chapters of the report.	Noted. Construction completion date will be updated based upon construction schedule in final cost estimate.
10-183	180. P. 9-1, Item a.3: ...a **cash** contribution of funds...	Recommended change made.
10-184	Appendix A- Environmental No comments	Comment noted.
10-185	**Appendix B - Civil Engineering** 1. Section 2.4.4. Conform the statement "The geographical area of RD-17 conflicts with Corp policy EO 11988 which is being coordinated with the sponsor" to the language in main report 3.6.2.	Section 2.4.4 has been modified to reflect what has been provided in the main report.
10-186	2. Section 2.6.1d. Low ACE event stages in Tables L-N are quite a bit higher than R260SJAFCA's studies. SJAFCA's 2010 stage frequency analysis, which was based on 57 years of record, show 200-yr stage at 9.4' for current conditions at both Rindge Pump and Burns Cutoff, and 10.5' for 2080 conditions at both gages (intermediate SLC estimate). USAGE is estimating elevations of about 12.0 and 13.7 for Rindge Pump and Burns Cutoff, respectively in tables L-N, based on adding hydraulic losses to the stage frequency curve data. But the stage-frequency data analysis for these gages already intrinsically considers hydraulic losses. In addition, the two tide gages are located in the Delta Pool, which is characterized by very low velocities, even during peak stage conditions. This is reinforced by the stage-frequency curves being nearly identical. Despite the caveat in the note to each table L-N, we remain concerned that the stages at Burns Cutoff and Rindge Pump are too high. If civil design is raising the delta front levees to accommodate these heights, costs may be too high and environmental impacts may be unreasonable. Also, USAGE reports tend to become reference documents in the future, and subtleties of caveat notes get overlooked. We would prefer that these tables be corrected.	The values used are within an acceptable range of uncertainty given the limitations of existing data and model limitations. The SJAFCA stage frequency analysis was based on graphical extrapolation of the stage frequency curve to events more rare than plotting positions of the 57 year historical data. However, rare events (not in the record) may not follow the same trend due to the transition of upstream reservoir regulation to less regulated conditions during spillway releases. The stage-frequency curve used in this analysis was based on extrapolation using hydrodynamic modeling done for the 2002 Sacramento-San Joaquin Comprehensive Study which accounts for this transition in the flood flows to more unregulated conditions during large floods. Text was added to the hydraulic appendix that recommends further analysis during PED. Based on an assessment of cost and benefits, it is unlikely a lower value would affect the comparison of alternatives.

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10-187	3. Section 2.7.1d. The Hydraulic Design Appendix Tables 41, 55 show hydraulic impacts (induced flooding) for the "b" alternatives. But the study does not conclude that the impacts are less than significant, or include mitigations. Please clarify that the quantified impacts are less than significant or add mitigation.	For each alternative, text was added to the potential adverse effects section of hydraulic design appendix that describe finding. All of the final alternatives were found to have insignificant impacts and require no mitigation.
10-188	4. Section 2.9. Very little detail is provided on improvement measures, such as depth of cutoff walls, levee raise amounts, geometry adjustments with attendant right of way takes, and vegetation removal zones. It is impossible for the reader to understand the impacts contemplated. The alternative maps and cost estimate tables in the appendix are all roll-ups, and do not help clarify.	An additional table has been added to the engineering summary just prior to the figures which address this concern. Engineering also believed this table would assist those who will evaluate during PED.
10-189	5. Section 2.9.5.3. We thought the USAGE standard for new landside easements was 15 feet.	You're correct, and 15 ft is what is stated in 2.9.5.3. "For levees that are not part of the Federal system, 15 feet landward of the toe is standard." "For new constructed levees the design will include a 15 foot right-of-way…measured from the levee toe for both water side and land side." Ten feet land side is acceptable for existing levees when the toe remains fixed.
10-190	6. Section 2.10.3.10, and 3.1. The text says that civil design and cost engineering refinement of the TSP will be forthcoming after this Draft.	In 2.10.3.1 the 1st sentence has been deleted ("…see Ch. 3 for draft project 1st costs.."), and in 3.2 the sentence has been modified to read, "A more refined estimate of the Recommended Plan is provided as part of the cost engineering summary."
10-191	7. Section 3.1. The text says the Duck Creek extension "*functions to keep high flows from flanking the existing levee system into central Stocktop*". The Hydraulic Design Appendix and main report however, show flanking in the 100-year and 200-year floods.	The reference in the engineering summary to the Duck Creek tie-back levee is incorrect and has been removed from 3.1 in the summary.
10-192	8. Section 3.4. Text says alt LS-7a is the "*recommended plan*". We believe that this should be "tentatively selected plan".	Section 3 has been modified to reference the Recommended Plan versus the TSP since our ADM held on October 5, 2015 certified our TSP as the Recommended Plan.
10-193	9. Section 2.10.3.8, 3.3, 3.4. Table T shows a construction duration of 11 years, and the text in 2.10.3.8 and 3.4 says it's 12 years.	The reference to 2 years states that it's the time required for PED. The construction duration of 12 years is a different time frame than that needed for PED.

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10-194	Appendix C- Economics 1. Table 3-3, 3-5, 3-8. Hydraulics Appendix Plate 43 shows without project flooding from index point CR2 spreading over all 3 North Stockton damage areas in the 1/50 ACE and larger floods, so it does not make sense that Economics Appendix Table 3-3 shows no damages for floods less than the 1/250 ACE flood, and Tables 3-5 and 3-8 show no damages less than the 1/100 ACE flood. Did economics analysis use the correct set of floodplains in HEC-FDA analyses?	These ACE events were missing from the water surface profiles in the FDA models. This has been corrected.
10-195	2. Table 3-9. Hydraulics Appendix Plate 43 shows without project flooding from index point CL2 spreading over all 3 Central Stockton damage areas in the 1/100 ACE and larger floods, so it does not make sense that Economics Appendix Table 3-9 shows no damages for floods less than the 1/250 ACE flood.	These ACE events were missing from the water surface profiles in the FDA models. This has been corrected.
10-196	3. Section 4.1.2. NS-B and NS-F do not include Mosher Slough closures.	The latest version of the economics appendix includes Mosher Slough closures for these alternatives.
10-197	4. Table 4-2. Residual damages for Central Stockton are too high, reflecting an incorrect R&U analysis of the right bank French Camp Slough (index point FR1). We understand that this index point was modeled as a hybrid of a failure point and a flanking point, and it should have been modeled as two separate index points. The "b" alternatives should fully protect against 200-year flooding and reduce residual damages further than what is shown in the table. And the "a" alternatives should be formulated with a sufficient Duck Creek extension levee to eliminate flanking in the 200-year flood. Section 3.5 of the main report says that both 8a and 8b were formulated o achieve the SB 5 objective. And because alts 7a, 7b, 9a, 9b are identical to 8a and 8b for the French Camp Slough area, they should also prevent 200-year flooding from the south. However, alternatives 7a and 9a will have higher residual damages to Central Stockton because of residual risk along the Diverting Canal and eastern-most reaches of the Lower Calaveras River. Correcting this error may result in a switch to alternative 8a as the NED and TSP.	Analysis was revised to include two different index points. The Duck Creek extension was designed to reduce the chance that San Joaquin River flood flows could flank the existing Duck Creek levee system into Central Stockton. The UPRR rail lines provide an economic limit to this extension and the resulting project is only able to provide 74% and 24% assurance of passing a 1% and 0.5% flood respectively under the existing conditions. Should the RD17 levee tie back be constructed in the future, this assurance would be improved.
10-198	5. Table 4-3 through 4-6. Alt 7a assurances to CS-01 and CS-02 are too high. See preceding comment.	The latest version of the economics appendix includes Mosher Slough closures for these alternatives.
10-199	6. Table 4-3 through 4-8. Why is performance for Alt 8a worse for North Stockton damage areas than Alts 7a or 9a? Alts 7a and 9a do not fix index point CR2 but alt 8a does.	This was an error and has been corrected.

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	Hydraulics Appendix Plate 43 shows flooding in 1/50 ACE events and higher for index point CR2, so Alt 8 should outperform 7a and 9a in North Stockton.	
10-200	7. Table 4-3 through 4-14. These tables raise a number of questions. Why do the "a" alts outperform "b" alts in North Stockton? They should have identical performance. Why does 7a outperform 7b in all damage areas except CS-01 and CS-02? Why does 8a outperform 8b in CS-01 and CS-02? Why does 9a outperform 9b in most of the consequence areas? Why does 9a outperform alternative 8a in CS-01 and CS-02? Why does 7b outperform 8b in CS-01 and CS-02? These are all counterintuitive. Tables 4-3 through 4-14 have numerous entries that differ from the raw results in Economics Appendix Attachment 6.	There were errors in these tables that have been corrected.
10-201	8. Table 4-21. This table does not match table 3-13, 3-15, and 3-16 of the main report. Residual damages in North Stockton should be much greater for alternative 7a than alternative 8a due to not fixing index point CR2 under alt 7a, exposing North Stockton to residual damages in all floods of 1/50 ACE and higher. On figure 3-22 of the main report, index point D3 used for North Stockton 02 for residual damages for all alternatives, has 0.03% AEP, but Attachment 6 says this should be 0.2%. Are residual damages also in error?	Water surface profile errors for CR2 caused residual damages to appear closer than they should have. This has been corrected.
10-202	9. Attachment 6. For index point FR1, why do the "a" alternatives outperform the "b" alternatives? And why is with-project performance so poor at this index point?	As reviewed, the analysis for FR1 was performed using a single hybrid index point in which the "a" alternatives included a tie-in to natural high ground that essentially raised the levee by 2.6 feet. This index point has since been split to better reflect conditions at this breach location. The "b" alternatives outperform the "a" alternatives but are still limited by the absence of the tie in, which leaves the natural ground vulnerable to overtopping between the 2% and 1% events.
10-203	Appendix D- Geotechnical 1. Section 3.5.4. Because judgment is an important and sometimes dominant fragility in many of the combined fragility curves, this is a key topic. The approach refers to an Expert Elicitation (Enclosure E6) which was conducted for the American River Common Features project. Notwithstanding the fact that American River conditions discussed in the expert elicitation are substantially different from	Cutoff walls were not recommended in areas where seepage and stability was not an issue. However, some cutoff walls were left to be continuous and all measures will be evaluated and refined in PED.

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	the urban levees of Stockton, the text notes that the judgment fragility does not translate well to failure probability. But the judgment failure probabilities on the fragility curves developed for the LSJRFS are high. In some cases. seepage and stability fragility is nearly zero, but judgment leads to a conclusion that a continuous slurry wall is warranted. This likely overstates costs and construction impacts, but may also overstate damages.	
10-204	Appendix E- Hydraulic Design 1. Section 1.6. The caveat at the end of this section conflicts with Section 3.5 in the main report which says that Alts 8a and 8b were formulated to meet the requirements of SB-5, and that Alts 7a, 7b, 9a, and 9b alternatives were identical to 8a and 8b where the project limits overlap.	Alternative descriptions 8a and 8b in Section 3.5 have the following sentence added at the end for clarification. However, Urban Level of Protection (ULOP) is not a USACE planning objective and further analysis could show that the NED plan may or may not meet those criteria.
10-205	2. Section 2.4c, Plate 28A. Paragraph "c" should also describe the genesis of the right bank levee of Lower Calaveras. Under sub-bullet 1 and on plate 28A, please clarify the upstream terminus of the Federal levee.	Added the following text to Section 2.4 C. The Federal Levee along the right bank of the Calaveras River extends from the Diverting Canal downstream to the San Joaquin River. Revised Plates 26 and 27 to indicate the upstream and downstream end of right bank levee.
10-206	3. Section 2.4c. The last paragraph in "c" should be attributed to SJAFCA, and the modified design capacity from that work should be reflected in Table 4.	Text revised as recommended.
10-207	4. Section 4.2d and Plate 20. Low ACE event stages in Tables 17 and 18 are quite a bit higher than SJAFCA's studies. SJAFCA's 2010 stage frequency analysis, which was based on 57 years of record, show 200-yr stage at 9.4' for current conditions at both Rindge Pump and Burns Cutoff, and 10.5' for 2080 conditions at both gages (intermediate SLC estimate). USACE is estimating elevations of about 12.0 and 13.7, respectively in tables 17 and 18. Despite the caveat in the note to each table, we remain concerned that the stages at Burns Cutoff and Rindge Pump are too high. If civil design is raising the delta front levees to accommodate these heights, costs may be too high and environmental impacts may be unreasonable. Also, USACE reports tend to become reference documents in the future, and subtleties of caveat notes get overlooked. We would prefer that these tables be corrected.	The values used are within an acceptable range of uncertainty given the limitations of existing data and model limitations. The SJAFCA stage frequency analysis was based on graphical extrapolation of the stage frequency curve to events more rare than plotting positions of the 57 year historical data. However, rare events (not in the record) may not follow the same trend due to the transition of upstream reservoir regulation to less regulated conditions during spillway releases. The stage-frequency curve used in this analysis was based on extrapolation using hydrodynamic modeling done for the 2002 Sacramento-San Joaquin Comprehensive Study which accounts for this transition in the flood flows to more unregulated conditions during large

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		floods. Text was added to the hydraulic appendix that recommends further analysis during PED. Based on an assessment of cost and benefits, it is unlikely a lower value would affect the comparison of alternatives.
10-208	5. Section 5.6, 5.8, 5.9, 6.8, 7.8, 8.8, 10.8. Tables 32, 35, 49, 42, 49, 56, 72. Why do FR1 and D3 perform so poorly if they are part of the improvement plan? Were improvements sized appropriately?	The issue was partially improved by revising to include two index points at FR1. FR1-1 reflects the levee. FR1-2 reflects the natural ground. The Duck Creek extension was designed to reduce the chance that San Joaquin River flood flows could flank the existing Duck Creek levee system into Central Stockton. The UPRR rail lines provide an economic limit to this extension and the resulting project is only able to provide 74% and 24% assurance of passing a 1% and 0.5% flood respectively under the existing conditions. Should the RD17 levee tie back be constructed in the future, this assurance would be improved.
10-209	6. Section 6.7 and 8.7. Table 41, 55. Are the negatives in the table for LR2, LR3, LR4 and Paradise Cut represent significant hydraulic impacts of the action? Do they require mitigation, and if so, what features were added to Alts 7b, 8b and 9b?	They are not considered significant and text was included in the section to describe this.
10-210	7. Plate 43 shows flooding in the 1/50 ACE event and higher for index point CR2, but plate 52 shows no flooding from CR2 under Alt ?a. But ?a does not fix CR2 or alter the hydrology. The floodplains should be identical.	Plate has been revised.
10-211	8. Section 7.7, 9.7. In tables 48 and 63 what caused the increase to long term risk (50 yr) on Paradise Cut?	The B alternatives include extension of the RD17 tieback levee. For events equal or more rare than 0.5% ACE, this forces more water down the Paradise Cut and Old River.
10-212	9. Plate 75. If right bank French Camp Slough flanks the extended levee, why isn't there floodplain around the end of the levee?	This was not explicitly modeled and the breach inundation maps were considered adequate to describe the flood risk.

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10-213	10. Plate 75, 76, 84, 85. Why is central Stockton flooded in the 1% and 2% flood for 8b? Main report section 3.5 says alternatives 8a and 8b provide 200-yr protection.	The FR1 index point has now been revised to FR1-1 and FR1-2. However, the performance of French Camp Slough reach is limited in the A alternatives because they do not include the RD17 tieback extension and UPRR railroad limits the extension of the French Camp levee. However, this would show improved performance should the RD17 tieback levee be extended in the future.
10-214	Appendix F - Hydrology No comments	Comment noted.
10-215	Appendix G - Real Estate 1. The appendix provides precise numbers of acres of take and numbers of relocations, but the figures and text do not reveal where these impacts occur. It is difficult for a landowner, stakeholder, or agency to understand whether their interest will be impacted by the project. The appendix notes that following the draft, additional work will be done before the final report to conform to the requirements of Chapter 12 (ER 405-1-12).	No real property has been definitely identified for acquisition at this time. In the preconstruction engineering and design phase of the project following Congressional authorization, site-specific analysis would be conducted prior to construction to determine specific impacts to include parcels impacted, acres to be acquired, and number of relocations.
Letter 011		
11-1	I am writing at the close of the public comment period to officially state for the record that SJAFCA supports the issuance of the draft Lower San Joaquin River Feasibility Study and the Tentatively Selected Plan (TSP) within that draft Study.	Thank you for your continued participation in, and support for the Feasibility Study and the Tentatively Selected Plan.
11-2	I am pleased that we will have continued opportunities to work through the few remaining issues with the draft Study as the draft works its way through USACE-HQ, IEPR, and ATR review prior to USACE taking a final agency action. Of course, one of the issues we have been discussing is the inclusion or non-inclusion of Reclamation District 17 (RD17) within the Study. While SJAFCA believes that excluding RD17 is the wrong solution and has submitted additional analysis that it thinks explains why Executive Order 11988 does not require its exclusion, SJAFCA has publicly stated that it will support the Study going forward without RD17 at this time. Instead, SJAFCA will seek a further study to analyze this discrete issue and basin. SJAFCA has shared this position with staff at USACE-HQ and the office of the Assistant Secretary of the Army during our most recent visit to Washington DC. SJAFCA also looks forward to working with your staff to address the concern we	Noted.

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	raised in our public comment letter about whether the draft Study clearly explains the level of protection provided that was previously explained at the TSP conference.	
Letter 012		
12-1	The Setback or Secondary Levee Imposed on RD 17 Alternatives Is Not the RD 17 Preferred Alternative and The Reanalysis of RD 17 Alternatives Should Consider Alterations Without Such Setback or Secondary Levee at the Confluence of the San Joaquin and Old River. The alternatives for RD 17, 7b, 8b, and 9b, each have such a setback or secondary levee at the confluence of the San Joaquin and Old Rivers. This confluence is critical to maintain the flow split between the San Joaquin River flow downstream past Stockton and the flow that goes west into Old River and hence the Bay. At page 4-18 the Draft EIS/EIR provides: "Constructing a new levee across the oxbow negates the need to improve a much longer reach of existing levee around the perimeter of the oxbow." This statement is in error and is unsupported by any hydraulic analysis. If the levee around the perimeter of the oxbow fails it will cause more flood water to flow downstream in the San Joaquin River thereby adding increased risk to the downstream areas including the City of Stockton and the Stockton Port. There is no justification for providing a lower degree of protection for the perimeter levee than for the secondary levee or other levees protecting the downstream areas. The secondary levee will add significantly to the cost and adversely impact the agricultural and environmental values in the increased levee footprint.	Noted. Final Recommended Plan does not include actions in RD-17.
12-2	Increasing Flood Protection for Areas Downstream From RD 17 Without Similarly Increasing Flood Protection for RD 17 Will Increase the Risk of Flooding To The Residents and Property Within RD 17. During a flood when flows are at their peak a levee failure will provide relief to surrounding areas. River stages will drop while the area suffering the failure is filling with water. This acts as a flood retention basin. Much of the RD 17 levee system particularly on the lower portion of the river will be adversely impacted because it does not provide the same level of protection as the other levees especially in the Delta Pool which are being improved	Analysis of transfer of risk has been conducted in accordance with EC 1165-2-216. The analysis is presented in Section 4.8 of the Hydraulic Appendix. The analysis results in no change to the Recommended Plan.

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	by the projects in The Feasibility Study. These impacts need to be analyzed and addressed.	
12-3	With or Without Further Urbanization of the Area Within RD 17 The Determination that there is No Federal Interest in Flood Protection for RD 17 Within RD 17 is Unconscionable. Totally absent from the USACE consideration is the economic and social impact to the highly disadvantaged and minority residents within RD 17. The stigma associated with the USACE determination which we believe is the result of failure to comply with law will adversely affect property values and present and future public and private investments in the area. This will substantially damage the financial ability of the residents who are already distressed to retain their homes. The stigma will greatly inhibit the ability to raise funds for flood protection and other necessary services. Failure to recommend funding for a project that is far off in the future is not good for the community but to do so in a manner which will be directly harmful is unconscionable. Neither the desire to restore land to flood plain nor the desire to restrict urbanization is a proper justification for abandoning 43,600 residents to a fate of economic disaster and increased threat to life and safety. The USACE has failed to properly conform to policy and law as there is no practical alternative to the improvements of the RD 17levees. Relocation of the residents and public and private improvements at USACE expense was not even considered. The callous abandonment of 43,600 people is particularly egregious in that much of the justification put forth by the USACE is the result of their failures to design and construct project levees to meet their own requirements,	Noted. Study analysis has been conducted in compliance with law, policy, and USACE guidance.
Letter 013		
13-1	Denial of Improved Flood Protection to 43,600 Residents and Billions of Dollars of Public and Private Investment is Unjust and Unlawful and will Increase the Risk of Loss of Human Life and Personal Health and Safety. Your determination that there is no federal interest iti providing needed flood protection for the 43,600 residents, two major highways, two major railroads, County hospital, County. sheriff and jail complex, children center, multiple schools, police and fire facilities, City Hall and other public and private improvements, etc. is unjust and unlawful. Your analysis does not comply with your own guidelines	See response to comment 12-3.

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	and is predecisional in the NEPA process. (See DEISIEIR pages 3-64 to 3-67 which are attached).	
13-2	Your actions interfere with the contractual relations as to operational maintenance of the project levees and the Corps responsibility to correct deficiencies in the design and construction related thereto.	Noted.
13-3	Your actions have wrongfully created a stigma on the communities within RD 17 and create a physical division in our community between those areas which will be provided with increased flood protection and those which will not.	Noted.
13-4	The prejudice and risk created by your discriminatory treatment of the areas within RD 17 will diminish the value of the homes of 43,600 residents and the other public and private investments. Future public and private investments and the economic survival of the area will be jeopardized.	Noted.
13-5	Two of the highest disadvantaged census tracts in the State of California are located within RD 17 and will be unjustly impacted by your action (Attached are Disadvantaged Community Maps. and information for census tracts 6077003803 and 6077005119).	Noted. Study is in compliance with Executive Order 12898, Environmental Justice.
13-6	The Area protected by the RD 17 Levees is not Flood Plain. The Area was Fully Reclaimed from the Natural Flood Plain Prior to 1863. The area although at some level of risk of flooding has levees which have been substantially and continually improved. The USACE completed the project levee improvements in about 1963 and additional privately funded improvements were completed by 1990 to meet FEMA standards. The flood protection has since 1990 met the FEMA requirements for urban development.	Section 3.6 of the document describes the application of "floodplain" to the study. The analysis considers the areas which would be inundated in the event of a levee failure.
13-7	In1850 Congress adopted the Arkansas Act of 1850 sometimes referred to as the Swamp Land Act of 1850 to aid the States in reclaiming swamp and overflowed lands. By way of such Act, such lands were conveyed to the State of California in consideration of the duty of the State to make and maintain the necessary improvements for such reclamation. In the case of Kimball v. Reclamation Fund Commissioners (1873) 45 Ca/.344, 360 the California Supreme Court found: "The object of the Federal Government in making this munificent donation to the several States was to promote the speedy reclamation of the lands and thus invite to them population and settlement, thereby opening new fields for industry and increasing the general prosperity." (Emphasis added.)	Noted. The intent and purpose of the Swampland Act of 1850 was reversed by the Wetland Protection Act of 1972 and subsequent laws. These subsequent laws provide for increased scrutiny on development within floodplains and wetlands, and place limits on Federal involvement in those areas.

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13-8	The area along the river for which the USACE seeks to treat as an unreclaimed flood plain consists of swamp and overflowed land conveyed in 1850 to the State for reclamation and development. Reclamation and development certainly commenced shortly after 1850. Reclamation District No. 17, one of the oldest reclamation districts in California was formed in1863 and the levees along the San Joaquin River have been in place for more than 100 years. The land along the river is not undeveloped but consists of highly developed farmland, multiple residences and some commercial structures dating back to the 1800's.	Comment noted.
13-9	The Lower San Joaquin River and Tributaries Project, of which the Lower San Joaquin River Levee Project is a unit, was authorized by the Flood Control Act of22 December 1944, Public Law 534, 78th Congress, 2nd Session, Section 10. Included in the Project were the RD 17 levees along the left bank of French Camp Slough, those along the right bank of the San Joaquin River and those along the right bank of Walthall Slough. Commencing in 1944, work on various portions of the RD 17 levees was carried out by the U.S. Army Corps of Engineers. The Standard Operation and Maintenance Manual for the Lower San Joaquin River Levees Project(prepared by the Sacramento District Corps of Engineers, U.S. Army, Sacramento, California, dated April, 1959) provides that the project includes construction or reconstruction of levees, channel improvement and the provision for bank protection along the Lower San Joaquin River from the mouth of the Merced River to the Delta, terminating at the Stockton Deep Water Ship Channel. "1.04. Protection Provided. The Lower San Joaquin River and Tributaries Project, including the levee and channel work of the Lower San Joaquin River Levees Project, when completed, will provide protection from all floods of record to about 120,000 acres of fertile agricultural lands; to a suburban area south of the City of Stockton and about four small communities; to other areas developed for residential and industrial purposes; to two transcontinental highways and other State and County highways. It will make possible the reclamation of areas that can be developed to a higher degree when protection against flood hazard is assured." (Emphasis added.)	Comment noted.
13-10	In May 1963, the U. S. Army Corps of Engineers issued "Supplement to Standard Operation and Maintenance Manual Lower San Joaquin River and Tributaries Project Unit No. 2 Right Bank Levee of San Joaquin River and Left Bank of French	Comment noted.

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	Camp Slough Within Reclamation District No. 17." "1.03. Protection Provided. Levees along the left bank of French Camp Slough and right bank of San Joaquin River, as described in this unit, provide direct protection to about 12,000 acres of agricultural, industrial and residential lands within Reclamation District No. 17. Along French Camp Slough the grade of the adopted flood plane profile is level at elevation 11.0 from the San Joaquin River to the French Camp Turnpike. Along the right bank of the San Joaquin River, the grade of the adopted flood plane profile varies from elevation 11.0 at French Camp Slough to elevation 23.5 at Walthall Slough. All elevations are referred to mean seal level datum (1929) adjustment. Levee grades within this unit provide for a freeboard of at least 3 feet above the adopted flood plane profile. Within this unit, the project design flood for French Camp Slough is 3,000 cubic feet per second and for the San Joaquin River about 18,000 cubic feet per second from French Camp Slough to Old River and 37,000 cubic feet per second from Old River to Walthall. The flow in French Camp slough coincidental with the San Joaquin River design flood would be about 2,000 cubic feet per second." (Emphasis added.) The supplement references work on the RD 17 levees commencing in January of 1944 and extending through January 1963.	
13-11	On January 3, 1963, The Reclamation Board of the State of California accepted for Operation and Maintenance bank protection, levee enlargement, and access and patrol road construction, right and left banks, San Joaquin River from Head Old River to Stockton Deep Water Channel and other work.	Comment noted.
13-12	The USACE actions to undo the reclamation of the RD 17 lands along the river is directly contrary to the clear intent and purpose of the Swampland Act of 1850 and the authorization and construction of the Lower San Joaquin River and Tributaries Project Unit No. 1 and Unit No. 2 which was to foster the very reclamation and development which the USACE is trying to reverse and obstruct.	The intent and purpose of the Swampland Act of 1850 was reversed by the Wetland Protection Act of 1972 and subsequent laws. These subsequent laws provide for increased scrutiny on development within floodplains and wetlands and place limits on Federal involvement in those areas.
13-13	Executive orders cannot change federal law. Congress has not changed the objectives of the Swampland Act of 1850 or the objectives of the Lower San Joaquin River and Tributaries Project	Executive Orders provide guidance on implementation of Federal Law. Application of Executive Orders to the analysis for identification of the Recommended Plan is in accordance with USACE policy, guidance, and Federal law.

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13-14	Public and private investments have been made and thousands of people have located in RD 17 due to and in furtherance of the intent of Congress.	Noted.
13-15	THE USACE CURRENT ACTIONS ARE INCONSISTENT WITH ITS PREVIOUS INTERPRETATION OF E.O. 11988 RELATING TO DEVELOPMENT IN RD 17 ***(See letter 14 for complete text)***	As described in Section 3.6 of the document, application of Executive Order 11988 is in compliance with current guidance and policy related to development of floodplains.
13-16	No objection based on E.O. 11988 was raised by the USACE until the present. E.O. I11988 does not appear to have been changed by the President and it is the USACE that is unilaterally changing the interpretation of the Executive Order so as to conflict with federal law. Such action would appear to be both arbitrary and contrary to law.	See response to comment 13-15.
13-17	The current feasibility study alternatives for D 17 would not be a new project such that natural or undeveloped flood plain would be impacted but in reality would simply be an improvement of the 1944 Lower San Joaquin River and Tributaries Project which was intended to protect against the highest flood of record and foster development.	Section 3.6 of the document analyzes the RD-17 alternatives for compliance with Executive Order 11988 and finds them not compliant. This does not preclude future study of the RD-17 area.
13-18	THE USACE'S FAILURE TO DESIGN AND CONSTRUCT THE RD 17 LEVEES TOCONFORM TO ITS OWN SEEPAGE REQUIREMENTS IS THE BASIS FOR THE·CORPS DETERMINATION THAT RD 17 IS IN THE BASE FLOOD PLAIN AND THE REJECTION OF FEDERAL ASSISTANCE FOR IMPROVEMENT OF RD 17 LEVEES ***(See letter 14 for complete text)***	There are no design deficiencies related to the construction of the existing levee system. The levees were constructed to conform to design criteria in place at the time of construction or improvement. Due to flooding events in 1997, there has been an increase in understanding of the important role of through and under seepage as mechanisms of levee failure in the Central Valley.
13-19	THE STATE AGREEMENT TO SERVE AS THE NON-FEDERAL SPONSOR OF AND THE RD 17 AGREEMENT WITH THE STATE TO OPERATE AND MAINTAIN THE PROJECT LEVEES WERE BASED UPON THE CLEAR INTENT AND PURPOSE AS EXPRESSED IN THE SWAMPLAND ACT OF 1850 AND THE LOWER SAN JOAQUIN RIVER AND TRIBUTARIES PROJECT TO PERPETUALLY OPERATE AND MAINTAIN THE PROJECT LEVEES TO FOSTER DEVELOPI\1ENT AND THE ECONOMY. The actions of the USACE constitute a unilateral interference with the contracts and intentions of the State, RD 17 and the United States. The safety of thousands of people, their livelihoods and homes and billions of dollars of *R274public and	See response to Comment 13-7.

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	private investment are being jeopardized by the arbitrary, capricious and unlawful actions of the Corps.	
13-20	THE USACE ACTIONS ARE AN UNFAIR AFTER-THE-FACT ATTEMPT TO CHANGE LAND USE PLANS WIDCH WERE BASED ON FEMA CCREDITATION AND CO+R314RPS APPROVAL IN 1990. The General Plans of the land use agencies have been in place for a number of years and are not being induced by reason of the feasibility study projects. Even the State SB-5 requirements to provide a 200-year level of protection for residential and some other types of developments do not require the reversal of the reclamation of the RD 17 lands. Changes in engineering analysis and creation of loosely defined rules of risk and uncertainty should not be used as a basis for total disruption and probable destruction of major communities by after-the-fact determinations.	Certification of levee systems by USACE expires after 10 years, and the maintaining agencies were notified via letter of that fact. This does not affect FEMA accreditation within the study area. The planned development noted in the existing General Plans (required to be updated by SB-5), is included in the Executive Order 11988 analysis of Section 3.6 of the document. Determination that additional Federal investment in the RD-17 is currently not policy compliant, does not preclude potential future studies of the area.
13-21	We request that the RD17 alternatives without the setback along the San Joaquin River be R315included for complete analysis in the current feasibility study and that reanalysis be conducted impartially and in compliance with law.	The Recommended Plan has been formulated in compliance with law, policy, and USACE guidance. The RD-17 alternatives will not be a component of the Recommended Plan. This does not preclude future flood risk management studies in the RD-17 area.
Letter 014		
14-1	See Comment # 13-1	See response to Comment 13-1.
14-2	See Comment # 13-2	See response to Comment 13-2.
14-3	See Comment # 13-3	See response to Comment 13-3.
14-4	See Comment # 13-4	See response to Comment 13-4.
14-5	See Comment # 13-5	See response to Comment 13-5.
14-6	See Comment # 13-6	See response to Comment 13-6.
14-7	See Comment # 13-7	See response to Comment 13-7.
14-8	See Comment # 13-8	See response to Comment 13-8.
14-9	See Comment # 13-9	See response to Comment 13-9.
14-10	See Comment # 13-10	See response to Comment 13-10.

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14-11	See Comment # 13-11	See response to Comment 13-11.
14-12	See Comment # 13-12	See response to Comment 13-12.
14-13	See Comment # 13-13	See response to Comment 13-13.
14-14	See Comment # 13-14	See response to Comment 13-14.
14-15	See Comment # 13-15	See response to Comment 13-15.
14-16	See Comment # 13-16	See response to Comment 13-16.
14-17	See Comment # 13-17	See response to Comment 13-17.
14-18	See Comment # 13-18	See response to Comment 13-18.
14-19	See Comment # 13-19	See response to Comment 13-19.
14-20	See Comment # 13-20	See response to Comment 13-20.
14-21	See Comment # 13-21	See response to Comment 13-21.
Letter 015		
15-1	On numerous occasions during the plan formulation process, we advised the San Joaquin Area Flood Control Agency (SJAFCA) and the U.S. Army Corps of Engineers (USACE) of our concerns regarding the USACE's proposal to exclude the RD 17levees from the USACE's Lower San Joaquin River Basin flood control project. (See Exhibit 1 SJAFCA 215115 Letter). Our concerns fell on deaf ears.	The analysis for Executive Order 11988 as outlined in Section 3.6 of the document was conducted in accordance with USACE policy and guidance. The result of the analysis was that, given the understood planned development within RD-17, it was not policy compliant to pursue further Federal investment in the area under this study. This does not preclude future flood risk management studies in the RD-17 area.
15-2	We reviewed the Draft FRJEIS/EIR with a specific focus on the plan formulation process and the alternatives that the USACE and SJAFCA evaluated for flood management in the Lower San Joaquin River study area. As a major participant in the Local Sponsor Group, and a sponsor of significant funding for the Draft FR/EIS/EIR, RD 17 objects to the USACE's premature and unlawful decision to remove from consideration flood risk reduction alternatives for RD 17 in the Draft FRJEIS/EIR. Our review suggests that the draft documents provide clear and convincing evidence that the USACE already made up its mind to reject the RD 17 levees from consideration before the USACE and SJAFCA completed the	See response to comment 15-1. For CEQA purposes, SJAFCA did not reject any RD-17 alternatives from the Feasibility Study or Environmental Analysis, please see SJAFCA's comment letter (Comment # 10-3 in this Appendix). In addition, the RD-17 area was analyzed for flood-risk reduction measures during plan formulation for this project. However, this area was removed from the study by USACE (due to EO 11988) in late 2013.

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	Feasibility Report and the environmental review process under the National Environmental Policy Act (42 U.S.C. 4321 et seq.) ("NEPA") and the California Environmental Quality Act (Pub. Res. Code 21000 et seq.) ("CEQA"), and long before the public had an opportunity to offer its comments on the alternatives under consideration.	
15-3	As stated on Draft FR/EIS/EIR page ES-12, the USACE selected Alternative 7a-North and Central Stockton alternatives excluding RD 17 as the Tentatively Selected Plan (the "TSP"). The USACE's arbitrary and unlawful process for selecting Alternative 7a as the TSP for the Lower San Joaquin River Basin flood management plan as set forth in the FR/EIS/EIR is pre decisional and deprived the public of a meaningful opportunity to review and comment on the practicable alternatives for flood management in the Lower San Joaquin River Basin. Yes, the USACE advised the public that it could comment on the draft documents, but unfortunately, it is too late; the USACE already recommended Alternative 7a as the TSP. To remedy the defects reflected in the FR/EIS/EIR, RD 17 requests that the USACE (1) analyze and consider the RD 17 alternatives (Alternatives 7b, 8b, and 9b) in this Feasibility Report at a level of detail commensurate with the level of analysis the USACE afforded Alternative 7a (the "Tentatively Selected Plan"), and add an analysis of the RD 17 preferred plan which consists of improvements to the RD 17 levees without the secondary levee along the San Joaquin River ("RD 17 Preferred Plan").	Plan formulation and analysis conducted to identify and select the National Economic Development (NED) Plan are fully disclosed in Chapter 3 of the document. The non-Federal sponsors, the Central Valley Flood Protection Board and San Joaquin Area Flood Control Agency, were actively involved in the development and analysis. RD-17 alternatives were analyzed at the same level of detail as the other alternatives, but were found to not meet policy requirements for inclusion in the Recommended Plan.
15-4	Overview of Reclamation District 17 and the Federal Interest Reclamation District 17 was founded in 1863, and operates and maintains approximately 19 miles of levees within the Lower San Joaquin River Basin. The Lower San Joaquin River study area is located along the lower (northern) portion of the San Joaquin River system in the Central Valley of California. RD 17 is located just south of the confluence of French Camp Slough and the San Joaquin River, in the lower third of the Lower San Joaquin River Delta. RD 17 is defined by the levees extending along the right bank of the San Joaquin River, the left bank of French Camp Slough and the right bank of Walthal Slough. A dry-land levee is situated at the upstream end of the reclamation district (see Draft FR/EIS/EIR Economic Appendix, Appendix C- November 2014, page 13). Of the 19 miles of levees, 16.18 miles are Federal project levees for which the USACE completed construction in 1963 - over 50 years ago. RD 17 is charged with the management and operation of existing Federal project levees which protect the Cities of Lathrop and Manteca and a portion of Stockton. As explained on page 1-20 of the Draft FR/EIS/EIR, improving the lower reaches of the San Joaquin River and Tributaries was authorized by the Flood Control Act of 1944 (Public Law 532, December 22, 1944, 78th Congress, 2nd Session), as	Noted.

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	modified by Public Law 327, 84th Congress, 1st Session (see also, Appendix C, Economic Appendix-November, 2014 at p. lxxiv). The San Joaquin River and Tributaries Project provided for the Federal Government to improve the levee system on the San Joaquin River from the Delta upstream to the Merced River, by raising and strengthening existing levees and revetment of river banks where required. The local interest plan of improvement was coordinated with the Federal Government's plan to provide for the maintenance and operation of the levees. After the Federal Government completed its project, the levees were turned over to the State and the reclamation districts for maintenance and operation in accordance with the Secretary of the Army's requirements (see FR/EIS/EIR at p. 1-20). Thus, since 1963, the USACE's Federal project system has protected the Lower San Joaquin River Basin, and specifically, the RD 17 geographic area, and the Federal Government has retained a Federal interest in the Federal Project system. RD 17 has maintained and operated the Federal Project levees in accordance with the Secretary of the Army's Operations and Maintenance Manual and Supplemental Manual for over 50 years. Further, since 1990, RD 17 has undertaken repairs to the levees to continue to maintain 100-year flood protection. At no time has the Federal Government informed RD 17 that Congress has de-authorized the Federal Project levees protecting RD 17, or otherwise revoked i decision to flood protect the area. Thus, the Federal interest in RD 17 has already been made, and the USACE cannot change its mind 50 years later and refuse to acknowledge the Federal investment made in the area.	
15-5	The FRIEIS/EIR Fails to Adequately Analyze and Consider the RD 17 Alternatives, including the RD 17 Preferred Plan, and the FR/EIS/EIR Must be Revised. The USACE and its non-Federal sponsors, SJAFCA, and the State of California Central Valley Flood Protection Board, propose to improve flood risk management in the Lower San Joaquin River Basin. The USACE and its non-Federal sponsors prepared the FR/EIS/EIR and purported to follow the Federal planning process for the development of water resource projects in order to identify the TSP to recommend to Congress for authorization (see e.g., FR/EIS/ EIR, Chapter 8). The overall purpose of the proposed flood management project is to reduce flood risk to urban and urbanizing parts of the Study Area as explained in Chapter 3 of the FRI EIS/EIR. The USACE, however, selected an agency preferred alternative that only protects part of the Study Area and completely excludes RD 17. During the Feasibility Report process, the USACE identified its preferred alternative (Alternative 7a) which was limited by the USACE's decision to remove from consideration the RD 17 Alternatives (Alternatives 7b, 8b, and 9b). Alternative 7a is the National Economic Development (NED) Plan, and it serves to set the level of Federal participation in a project resulting from the Feasibility Report. In the interest of time, the USACE proceeded with Alternative 7a as the TSP and removed from further consideration any improvements to RD 17 on the basis that the USACE must avoid the unwise use of floodplains and flood-prone areas (see Draft FR/EIS/EIR, p. 3-64). Consequently, the USACE decided it had no choice but to select Alternative 7a as the TSP. Even though the Federal investment has been made for a flood risk project to protect RD 17 since 1958, the USACE decided now in 2015 that it was "unwise" for the local communities to have ever made land use decisions based on that Federal investment (see Draft FR/EIS/EIR, p. 3-64).	See response to comment 15-3

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	The USACE's decision to remove from consideration any improvements to the RD 17 levees conflicts with Congress' prior authorizations to flood protect the area. While Alternative 7a provides flood risk management for North and Central Stockton, Alternative 7a does not meet the non-Federal sponsor's objectives of flood risk management and SB 5 compliance for RD 17 and the Cities of Lathrop and Manteca and a portion of Stockton as required as a matter of State law because Alternative 7a excludes any flood control improvements and flood management for RD 17 and the Cities of Lathrop and Manteca and a portion of Stockton. The Draft FRIEIS/EIR evaluates the RD 17 Alternatives at a very general level of analysis, and, despite requests from RD 17 and SJAFCA, the document did not include any information and analysis for the RD 17 Preferred Plan. Because the RD 17 Preferred Plan meets the project objectives, is practicable and flood protects 43,600 residents who would otherwise be exposed to exacerbated flooding conditions associated with the TSP, the USACE must revise the FRIEIS/EIR to include a robust analysis of the RD 17 Preferred Plan and incorporate this information throughout the entire document.	
15-6	The USACE's Decision to Reject from Further Consideration RD 17 Levee Alternatives is Pre-Decisional and Deprived the Public of a Meaningful Opportunity to Review and Comment on the USACE's Proposal and Alternatives. The USACE's decision to omit the RD 17 Preferred Plan and its refusal to consider a more detailed level of analysis of the RD 17 Alternatives (Alternatives 7b, 8b, and 9b) in the FR/EIS/EIR was pre-decisional and violated Federal limitations on actions during the NEPA process. Specifically, until the USACE issues a record of decision (ROD) as provided in Title 40 of the Code of Federal Regulations section 1506.2, Section 1506.1 prohibits the USACE from undertaking any action which would limit the choice of reasonable alternatives (see USACE ER 200-2-2). Predetermination occurs when an agency irreversibly and irretrievably commits itself to a plan of action that is dependent upon the NEPA [and CEQA] analysis before that analysis has been completed (see e.g., Cedar-Riverside Environmental Defense Fund v. Hills, 422 F. Supp. 294 (D. Minn 1976), judgment vacated, 560 F. 2d 377 (8th Cir. 1977) (bias found when agency prematurely focused on project alternatives). Here, the USACE prematurely selected and committed to the TSP, and then rejected from further review any alternatives involving the RD 17 levees before releasing the Draft FRIEIS/EIR for public review and comment because the USACE claims now that flood protection in RD17 conflicts with Executive Order 11988 on Floodplain Management (see page 3-64). Such a decision conflicts with the decades of flood	See response to comment 15-3.

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	protection the USACE previously provided to the area. Since RD 17 was informed by SJAFCA before the release of the Draft FRIEIS/EIR that the USACE intended to remove from consideration the RD 17 levee alternatives, we requested that SJAFCA identify for CEQA purposes the local sponsors' alternatives to reduce flood risk in RD17 (see attached Exhibit A). Although SJAFCA requested that the USACE consider this information in the Draft FRIEIS/EIR document, the USACE refused to include the RD 17Preferred Plan and instead released the document and pre-determined the outcome of theplanning process.	
15-7	The USACE's Process is Arbitrary and Capricious in Violation of the APA. The USACE's decision-making process concerning the selection of Alternative 7a as the TSP violates the Administrative Procedures Act (Pub.L. 79-404, 60 Stat. 237). The USACE decided to remove from consideration the RD 17 Alternatives from detailed review in the FR/ EIS/EIR on the basis that the alternatives do not comply with Executive Order 11988 before it even considered the public's comments on the Feasibility Report and before completing the NEPA process. Further, the basis for selecting Alternative 7a as the TSP is without support, and the USACE's decision was arbitrary and capricious and an abuse of discretion under the Administrative Procedure Act, 5 U.S.C. § 706 (1980) ("APA"). In applying the "arbitrary and capricious" standard of the Administrative Procedure Act, a court will consider the administrative record already in existence. (See e.g., Camp v. Pitts, 411 U.S. 138, 93 S. Ct. 1241, 36 L.Ed.2d 106 (1973); Avoyelles Sportsmen's League, Inc. v. Marsh, 715 F.2d 897 (5th Cir.1983)). As the administrative record shows, the Draft FR/EIS/EIR documents the USACE's decision to proceed with Alternative 7a as the TSP and the preferred project before completing the NEPA process and before informing the public that it already made up its mind that it would exclude improvements to the RD 17levees. The USACE's actions are arbitrary and capricious because the USACE attempted to justify its decision to remove the RD 17 Alternatives from further consideration by (1) claiming that Executive Order (EO) 11988 prohibits the USACE from making a Federal investment in RD 17 when it does not, and (2) failing to disclose to the public that the Draft FRIEIS/EIR not only removes from consideration RD 17 Alternatives, but the USACE has actually selected an alternative, Alternative 7a as the TSP which exacerbates flood hazards to the 43,600 residents. (See e.g., Greater Yellowstone Coalition v. Lewis, 628 F.3d 1143, 1148 (9th Cir. 2010) (as amended) (relying on The Lands Council v. McNair, 537 F.3d 981, 987 (9th Cir. 2008) (en bane), overruled on other grounds by	See response to comment 15-3.

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	Winter v. Natural Res. Def Council, 555 U.S. 7 (2008)); Envtl. Def Ctr., 344 F.3d at 858 n.36; Brower, 257 F.3d at 1065). For these reasons, the USACE's actions violate the APA.	
15-8	The USACE Failed to Comply with its own SMART Planning Procedures. The USACE claims to follow the guidance contained in the Planning Bulletin No. PB 2013-03-Reissue (14 March 2014) regarding the SMART Planning Milestones, but it did not. Specifically, the USACE did not consider and disclose the effects of a reasonable range of alternatives that met its planning objectives for the LSJRFS. First, under the SMART planning procedures, the TSP Milestone marks "vertical team concurrence on a single plan the PDT will carry forward in the feasibility study...." (PB 2013-03-Reissue, page 1, Item 4). The Planning Bulleting indicates that the identification of the TSP, however, does not preclude the PDT from also presenting another plan (PB 2013-03-Reissue, page 1, Item 4). The USACE did not do that. Instead, the USACE indicated that the single plan it will carry forward is Alternative 7a which excludes any improvements to the RD 17 levees. While the USACE noted that Alternative 7a did not address the objectives of the local sponsors, it removed from further consideration all of the RD 17 Alternatives, and it did not identify the RD 17 Preferred Plan which would have addressed the objectives of the local sponsors. In so doing, it also prejudiced the local sponsors' ability to seek future Federal investment in a locallysupported plan for flood control improvements to the RD 17 levees.	See response to comment 15-3.
15-9	As an example of the USACE's efforts to pre-determine the outcome of the TSP process before it even started the process (and before the public could even comment on the process), the February 2015 LSFJS Engineering Summary (page 6) expressly states that: "Just prior to a TSP decision on which alternative to formulate for, USACE is recommending that only North and Central Stockton geographically defined areas be considered for TSP inclusion." The Engineering Summary further claims that, "The geographical area of RD-17 conflicts with USACE policy EO 11988 which is being coordinated with the sponsor" (see page 6). 1 With that, the USACE removed the RD 17 alternatives from further consideration in the Draft FRIEIS/EIR and identified the TSP, before the document was even circulated to Headquarters for review. Then, because the TSP excluded the alternatives with the RD 17 levees, the USACE rejected the RD 17 alternatives outright from further detailed consideration in the FRIEIS/EIR claiming that the RD 17 Alternatives could not be considered because they were not identified in the TSP.	See response to comment 15-3.

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15-10	To add to the confusion, the USACE stated in the FRIEIS/EIR that, "A full array of alternatives will be considered and evaluated. However, feasibility level design work will focus on the agency recommended plan and a Locally Preferred Plan (LPP) if appropriate" (see FRIEIS/EIR at p. 1-2). The SMART Guidance, however, does not limit the USACE to considering only the agency recommended plan or a Locally Preferred Plan. In fact, the guidance indicates that the USACE may consider other plans as explained in the Planning Bulletin- PB 2013-03-Reissue. It was misleading for the USACE to advise the public that it was limited in the alternatives that could be considered, particularly in this case where another plan, the RD 17 Preferred Plan, meets the planning objectives of the LSJRFS, protects existing residents, and is policy compliant.	The study sponsors, the Central Valley Flood Protection Board and the San Joaquin Area Flood Control Agency, never proposed a Locally Preferred Plan including RD-17 for analysis.
15-11	Secondly, the agency's preferred plan, the TSP, does not meet the USACE's own planning objectives for the area. For example, the first 2 planning objectives in Section 2.3.3 Planning Objectives (page 2-11) state that, "the planning objectives are as follows: • Reduce risk to property and infrastructure due to flooding in Stockton; Lathrop and Manteca (NED Account); • Reduce flood risk to public health, safety and life in Stockton, Lathrop, and Manteca (OSE Account)." The USACE's TSP fails to meet its own planning objectives for half of the Study Area. Alternative 7a (which is the USACE's recommended TSP) only reduces flood risk to a portion of Stockton. RD 17 and SJAFCA informed the USACE on numerous occasions that the RD 17 referred Plan is either Alternative 7b or 9b (with the elimination of the secondary levee at the confluence of Old River and the San Joaquin River), with the expectation that the RD 17 referred Plan would be evaluated in the Draft FRIEIS/EIR. The USACE, apparently decided without any basis that evaluation and feasibility level design work was "not appropriate" and screened out all of the RD 17 Alternatives (including the RD 17 Preferred Plan) from any further design work and detailed analysis, as indicated on pages 1-6 and 3-64 of the Draft FRIEIS/EIR. Thus, the FRIEIS/EIR does not meet the USACE and local sponsors' planning objectives for the Study Area.	Comment noted. It is not required of a USACE study to meet all study objectives. Often, the results of the investigation makes it clear that it is not in the Federal interest (net benefits exceeding costs) for a given objective to be met. In this case, a policy-compliant means of meeting the objectives in the Cities of Lathrop and Manteca were not identified. Compliance with Federal laws and policies outweigh meeting study objectives.

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15-12	The FRIEIS/EIR does not comply with the USACE's December 2012 procedures entitled, "Environmental Evaluation and Compliance within the SMART Planning Framework" (the "SMART Environmental Framework"). According to page 4 of the SMART Environmental Framework: "Prior to this phase [preparation of the feasibility level analysis phase], and before making the tentatively selected plan [emphasis added] the agency recommended plan, there will be an Agency Decision Milestone that takes into consideration concurrent public/agency comments and technical, policy and legal review comments on the draft integrated feasibility report/NEPA document. At this stage, the agency has considered all impacts from the proposed plan and compared alternatives before making the final recommendation and documentation." In this case, the USACE already screened out from further review the RD 17 Alternatives and never considered the RD 17 Preferred Plan as an alternative which should have been evaluated at a level of detail commensurate with the TSP. While the USACE informed the public in the Draft FRIEIS/EIR of its reasons for screening out alternatives (i.e., that "RD 17 has planned development which makes it difficult to comply with the EO 11988 guidance," see page 3-22), the basis upon which the USACE relies is unfounded because the water resource policies that the USACE claimed prohibited the USACE from considering the RD 17 Alternatives do not actually prohibit approval of the RD 17 Alternatives because there is planned development. Moreover, the TSP exacerbates flooding impacts to the existing 43,600 residents in RD 17, particularly in the lower sections of RD 17, because of the USACE's decision to improve flood protection north of RD 17 and exclude RD 17 from 100-year flood protection. Creating greater flood-related hazards to an existing population would hardly seem to comply with USACE water resources policies designed to minimize flood risk. The USACE, however chose not to disclose this information to the public.	Comment noted. This comment assumes that an RD-17 Preferred Plan was presented and requested by the non-Federal sponsor. That assumption is in error. Given that there was no Local Preferred Plan identified upon identification of the TSP, the study is in full compliance with its procedures.
15-13	For these reasons, the USACE must revise the FRIEIS/EIR to include the RD 17 Preferred Plan and provide a more robust analysis of the RD 17 Alternatives. The RD 17 Preferred Plan and the RD 17 Alternatives should be considered in the FRIEIS/EIR and Chapters 3, 4 and 5 must be revised accordingly. For example, the USACE should add a discussion of the RD 17 Preferred Plan on pages 3-6 and Section 3.2.5, pages 3-17 to 3-19 and Section 3.3, pages 3-22 to 3-27, and Section 3.4, pages 3-27 to 3-67 in the project description, as well as Section 4.4 Alternatives on pages 4-13 through 4-30.2 The RD 17 Preferred Plan must be identified in the	Comment noted. See responses to comments 15-8 and 15-12. The report will not be revised to include the RD-17 Alternatives beyond what was included prior to the E.O. 11988 evaluation and their screening from the array of alternatives.

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	FRIEISIEIR as the only practicable solution for reducing flood risk for RD 17 and the Study Area pursuant to the Feasibility Report's own planning objectives. If the USACE decides not to identify the RD 17 Alternatives in the Final FRIEISIEIR, then the USACE must revise the FRI EISIEIR to inform the public that the USACE's decision to eliminate the RD 17 alternatives will preclude the USACE's ability to provide improved FRM to the 43,000 residents and critical infrastructure located within RD 17 (see FRIEISIEIR, page 3-56).	
15-14	Removal of RD 17 Alternatives From Consideration Violates EO 11988. Issued by the President of the United States on May 24, 1977 and recently amended by President Obama on January 30, 2015, Executive Order (EO) 11988, entitled "Flood Plain Management," seeks to minimize actions by Federal agencies which may adversely affect floodplains. EO 11988 and its implementing regulations direct Federal agencies to evaluate the effects of the proposed action on floodplains and to avoid taking action which would affect such areas unless there are no practicable alternatives (see 44 Fed. Reg. 28524, et seq, now published at 33 C.F.R. part 240). The USACE's decisions related to Executive Order 11988 are subject to judicial review under the Administrative Procedures Act (see e.g., City of Carmel by the Sea v. U.S. Department of Transportation, 123 F.3d 1142 (9th Cir. 1997). The USACE follows an 8-step process to evaluate the effects of a Federal project on the floodplain as described in the Draft FRIEISIEIR on pages 2-52 - 3-58). If an action is located within the floodplain, the USACE must advise the public about the action and then identify the beneficial and adverse impacts of the action and any expected losses of natural beneficial floodplain values. If the action is likely to induce development in the base floodplain, then the USACE must determine "whether a practicable non-floodplain alternative for the development is available" and if one is not, then the USACE must advise the public regarding its findings. Over the years, RD 17 has continued to fulfill its obligations to maintain and operate the Federal project levees and to repair the levees, as necessary, to restore the functioning of the system and protect people within the RD 17 boundaries from 100-year events. In 2010, however, the USACE changed the methodology for assessing levee integrity and applicable levee seepage standards that govern whether an area is within the 100-year floodplain (even though this determination has been historically made by the Federal Emergency Management Agency) (FEMA). After	Comment noted. The methodology used by USACE to assess the existing levees within RD-17 and the resulting findings do not have any immediate affect on the regulatory standing of RD-17 under FEMA regulations. However, USACE is not bound by FEMA methodologies to ascertain flood risk to a given area. The draft document is the vehicle by which USACE advises the public of its findings and has done so.

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	changing the levee standards, the USACE concluded that the RD 17 Federal project levees which (the USACE built) do not meet the USACE's new standards, and so now the USACE found that the Federal project levees no longer provide 100-year flood protection. But then, rather than plan to fix the levees through this Feasibility Report, the USACE concluded that it is unable to fix the levees because EO 11988 prohibits the USACE from fixing the Federal levees to comply with the USACE's new standards.	
15-15	Page 1-21, however, which lists all of the projects and programs affecting the San Joaquin River levee system does not describe any improvements to the Federal Project levees in RD 17 since FEMA accreditation of discrete levee segments in RD 17 in 1990. For the past 25 years, however, the USACE has undertaken repairs and improvements to the RD 17 levees and RD 17 has obtained approval for and completed construction of two phases of the San Joaquin River Levee Stability Program. None of these projects are reflected in the existing or future baseline conditions, even though, the USACE changed its mind in the Draft FRJEIS/EIR and indicated that the analysis of alternative plans for flood control was based upon existing and future hydrologic and hydraulic conditions (see page 5-30). What happened to the 25 years of flood protection improvements to RD 17 levees that resulted in prior determinations that this area is not located within the 100 year floodplain?	Comment noted. The list of projects included in Chapter 1 is intended to be a summary and not an exhaustive list of every action relating to the levee system. The current flood risk identified in Chapter 2 of the document is based on increased understanding of through and under seepage, and not based on a design deficiency or lack of maintenance. The without project condition does include the existing levees, including any modifications done within the past 25 years.
15-16	The USACE decided to ignore the 25 years of existing flood control-related projects, and instead treat these past and present efforts to repair the existing levees and take the area out of the 100 year floodplain as future projects (see Draft FRJEIS/EIR pages 5-364 and 365). Then, because the USACE found that the RD 17 area is in the 100-year floodplain (which it is not), the USACE concluded it could not approve any RD 17 Alternatives to protect the existing 43,600 residents because that would be "unwise." The USACE claims that it is "unwise" to fix the RD 17 levees to reduce flood risk to Lathrop, Manteca, and portions of Stockton (which are urban and urbanizing parts of the Study Area) on the basis that the Cities' existing land use planning efforts (which relied on Congress' direction to reclaim the land under the Swamp Lands Act and the Federal investment made since 1958 to take the area out of the 100-year floodplain) could further induce development in an area that was already meant to be urbanized. That, according to the USACE, is not allowed. The very agency who built or accepted the levees in the first place has now decided it is prohibited from fixing the levees to continue protecting 43,600	Comment noted. Please see response to Comment 15-15

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	existing residents, because Lathrop and Manteca planned for future development in this area in reliance on the 100-year flood protection the USACE provided under the Lower San Joaquin River and Tributaries Project. Rather than disclose the full range of impacts to the existing communities in accordance with EO 11988, the USACE, instead, chose to violate Congress' directives under the Swamp Lands Act and ignore the years of flood protection efforts implemented as part of the Lower San Joaquin River and Tributaries Project.	
15-17	RD 17 is not in the 100-year floodplain as determined by FEMA. As even the Draft FR/EISIEIR indicates (see pages 5-364 and 5-365), RD 17 has implemented Phases 1 and 2 of the seepage and repair project to fix seepage issues based on the USACE's new criteria, that the USACE is now using as the reason it has decided RD 17 is in the 100-year floodplain. Since the area is not in the 100-year floodplain as determined by FEMA, EO 11988limitations on approving projects which may be growth-inducing should not even apply. If, however, the USACE continues to assume the RD 17 area is in the 100-year floodplain, then the USACE must revise its EO 11988 analysis to reflect the true existing and baseline conditions, and disclose the human and environmental impacts that the USACE's decisions concerning the TSP will have on the local communities. We request that the following information be incorporated into the FRIEISIEIR discussion on pages 3-51 through 3-58 and pages 5-358 through 5-360, and all other applicable sections for consistency purposes.	Comment noted. For clarity, the 100-year floodplain (1% chance event) referenced by USACE is not the FEMA regulatory floodplain. These are arrived at by different methodologies for different purposes. The base floodplain identified for the E.O. 11988 evaluation is by definition the 1% base flood plain, not the regulatory floodway identified under the National Flood Insurance Program.
15-18	• The RD 17 area is not in a natural floodplain. The area is already developed with a mix of urban residential, commercial, industrial, public/quasi-public uses, and commercial agriculture in reliance upon the existing Federal Project levee system.	Comment noted. "Natural floodplain" is not a term used by the evaluation under E.O. 11988.
15-19	• The RD 17 Preferred Plan (i.e., improvement of the existing RD 17 levees with the dry land I tie-back) is the only practicable alternative to reduce the flood risk to the 43,600 residents and billions of dollars of public and private investment including in particular Interstate 5, Highway 120, the San Joaquin County Hospital, the San Joaquin County Jail and correctional facilities, numerous schools, health care facilities, the City of Lathrop Civic Center, fire stations and police facilities. Interstate 5 and State Route 120 are critical evacuation routes.	Comment noted.
15-20	• As flood risks increase due to climate change or re-evaluation of potential flood flows, the area dependent upon protection from the RD 17 levees will extend to the north and east encompassing the Sharpe Army Depot, critical rail facilities and major portions of the City of Stockton including the Port and the Regional	Comment noted. Climate change was accounted for in the Hydrology and Hydraulic analysis, of both the without and with project scenarios.

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	Wastewater Treatment Facilities. Failure to increase the flood protection for RD 17 also increases the risk of flood damage to the environment and human health and safety. Loss of life, injury and disease for approximately 43,600 humans, as well as, pets and terrestrial species, stranding and predation of fish species including those with special status, loss of riparian habitat along the levee breaks and those areas eroded by the high velocity flows in the vicinity of the levee break, contamination of flood waters both within the flooded areas and the areas to which the flood waters will be discharged and severe vandalism and looting are all significant impacts that flow from the failure to provide adequate flood protection for RD 17.	
15-21	• Even if the RD 17 levees are considered to be within the 100-year floodplain (which is not the case when the USACE considers the effectiveness of RD 17's levee seepage repair projects), the RD 17 Preferred Plan would take the area out of the 100-year floodplain. Assuming that the RD 17 area would be located outside of the 100-year floodplain, whether or not additional development would actually occur in RD 17 would not impact the USACE's obligation to disclose indirect impacts or any measures to minimize the alternative's effects. Contrary to the statements made in the FRJ EISIEIR (see e.g., pages 3-54 through 3-67), Executive Order 11988 and the implementing guidance do not prohibit the USACE from considering a project which is designed to protect existing residents and land uses because future development or growth may occur. In fact, EO 11988 requires only that the USACE disclose to the public that the proposed alternative is the "only practicable3 alternative," and design a plan in which steps are taken to minimize potential damage to the floodplain (see e.g., City of Carmel by the Sea v. U.S. Department of Transportation, 123 F.3d 1142 (9th Cir. 1997)).	Comment noted.
15-22	Removing RD 17 Alternatives From Further Consideration Violates EO 12898 on Environmental Justice. The Draft FR/EIS/EIR includes a cursory discussion regarding the effects on low income and minority populations due to the proposed TSP. The Draft FR/EIS/EIR relies upon the Lower San Joaquin River Feasibility Report Other Social Effects Regional Economic Development report dated February 15, 2015 ("Social Effects Report") to support its conclusions. The assessment, however, is based only upon social characteristics of Stockton and California (see Table 2, page 7). Other than population density information, no data was provided regarding the minority and low-income status of residents within Lathrop, Manteca and Southern San Joaquin County. The exhibits included in the Social Effects Report further confirm that Alternative 7A results in no improvement whatsoever in flood protection for RD 17. The Draft FRIEISIEIR states on page 7-5: "No disproportionately high or adverse human health or environmental effects on minority or	Table 5-54 has been revised to show demographic information for the City of Lathrop, the City of Manteca, and San Joaquin County, in addition to the City of Stockton and the State of California. The Draft and Final Reports clearly disclose that: (1) implementation of any of the "a" alternatives, including Alternatives 7a (Recommended Plan) would not disproportionately affect minority or low-income communities, and (2) Implementation of any of the "a" alternatives, including the Recommended

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	low-income communities have been identified." Page 5-260 of the Draft FR/EIS/EIR, however, reaches a contrary conclusion finding that Alternatives 7a, 8a, and 9a would not address flood risk in RD 17 which would impact an area that is "more than 50 percent populated by minorities." The USACE failed to inform the public that 43,600 residents in RD 17, many of whom would meet the definitions of minority and low-income for purposes of an environmental justice analysis, would be adversely impacted by the USACE's decision to proceed without flood risk management for RD 17. We understand that the City of Lathrop has submitted additional demographic data regarding the residents in the Lathrop portion of RD 17 to further illustrate the disproportionate impact on local residents. Accordingly, the analysis must be revised.	Plan would not address flood risk management concerns in RD-17.
15-23	The Draft EIS is Inadequate and Fails to Comply with NEPA and CEQA. We understand that the local communities of Lathrop, Manteca and Stockton are submitting comments on the Draft FR/EISIEIR. RD 17 hereby, incorporates by reference into RD 17's comments any comments submitted by the local municipalities. We further understand that SJAFCA recently submitted comments on the Draft FR/EISIEIR. RD 17 incorporates by reference SJAFCA's April9, 2015 critical comments on the Draft FRJEISIEIR. We also offer the following specific comments concerning the Draft FRJEISIEIR's failure to adequately evaluate the RD 17 Alternatives and to properly disclose the impacts of Alternative 7a, the TSP plan, as the USACE's referred alternative.	Comment noted.
15-24	• The Notice of Intent to Prepare a Joint EISIEIR for the Lower San Joaquin River Feasibility Study indicated that the USACE will "evaluate alternatives, including a locally preferred plan or other plan, for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River System" (see 75 Fed. Reg. 2517). The USACE did not do that. Instead, the Draft FR/EIS/EIR evaluates in detail alternative 7a, but it fails to evaluate in any detail the RD 17 Preferred Plan, and rejects from consideration any of the RD 17 Alternatives so there is little, if any, detailed analysis to accompany the EIS/EIR impact discussions. Consequently, the RD 17 Preferred Plan must be added to Chapter 3 in the FR and included in the evaluation of impacts and mitigation measures for RD 17 Preferred Plan throughout Chapters 5 through Chapter 9.	During plan formulation, the USACE, DWR, and SJAFCA team considered flood risk reduction measures and alternatives developed by others, including those developed by RD-17 for their Phase 3 project. The 'b" alternatives include many of the measures that are also included in the RD-17 Phase 3 project; however, the feasibility study "b" plans differ in some ways from the Phase 3 project because specific measures dropped out during the plan formulation process (please see Chapter 3 of the draft and final FS/EIS/EIR). A formal Locally Preferred Plan was not proposed by the non-Federal project sponsors. Note that the RD-17 Phase 3 project is a

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		separate effort from the Lower San Joaquin River Feasibility Study.
15-25	• Chapter 5.4, the discussion of Alternative 7a on page 5-32 states that Alternative 7a would have a significant beneficial impact by reducing the exposure of people to a significant risk of loss, injury or death due to flooding, and that this alternative would not substantially alter drainage patterns. The Draft FR/EIS/EIR, however fails to disclose that the residents in RD 17 who would not receive a reduction in flood risk, would actually be exposed to a greater risk of flood hazards. This information should be added to Chapter 5.4.	Implementation of Alternative 7a (Recommended Plan) would not affect RD-17 or cause an increase in flood risk to that area. The No Action Alternative describes the potential effects of not implementing a flood risk management project.
15-26	• Chapter 5.8 (see e.g., Pages 5-98, 5-104, 5-109 and 5-114) states that "levee repairs and improvements would provide future flood-risk protection, as well as carbon sequestration (due to restoration of riparian habitat associated with levee repair and improvement)." While this may be true for the North and Central Stockton areas, it is not the case for RD 17. This discussion should be revised, accordingly, and a discussion of the RD 17 Preferred Plan should be added to Chapter 5.8.	The Draft Report identified Alternative 7a as the Tentatively Selected Plan. The Final Report now identifies Alternative 7a as the Recommended Plan. Alternative 7a does not include RD-17. No changes were made to the Final Report.
15-27	• Chapter 5.9 (see e.g., Pages 5-139, 5-159, and 5-160) describes impacts to SRA habitat associated with Alternative 7b. Please explain what portion of this impact (if any) would be due to the secondary levee (which RD 17 does not support as a practicable alternative).	Alternatives 7b, 8b, and 9b include a back-up levee on a bend on the San Joaquin River. The back-up levee would be constructed through land that is currently in agriculture and would not affect SRA habitat occurring waterward (west) of the back-up levee.
15-28	• Chapter 5.14, Pages 5-270 to the third full paragraph on page 5-271 states that the changes in land use from the implementation of Alternative 7a do not conflict with land use plans, policies, or regulations. This statement does not accurately describe the impacts that would occur to the existing land uses, residents, businesses, and major public facilities and infrastructure within RD 17 that would be exposed to existing and increased risk of flood hazards due to the selection of Alternative 7a as the TSP, as well as the conflicts with the adopted general plans and policies for the cities of Lathrop, Manteca and Stockton.	The approach taken in the Draft and Final Reports is the customary approach used under NEPA and CEQA in evaluating potential impacts on land use. The No Action Alternative describes the impacts that could result from taking no action to reduce flood risk in the project area.
15-29	• Chapter 5.23, Cumulative Impacts- The Draft FR/EIS/EIR fails to accurately disclose the cumulative impacts associated with Alternative 7a and the significant and unavoidable environmental impacts on RD 17 associated with implementation of Alternative 7a. For example, assuming RD 17 is in the 100-year floodplain (which it is not), no analysis is provided of the hydrology and flood impacts	Section 5.23, Cumulative Effects, and Section 5.23.3, Past, Present, and Reasonably Foreseeable Future Projects, have been revised to more clearly define that the cumulative effects analysis includes past, present, and future projects, including RD 17 Phases

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	resulting from Alternative 7a's failure to flood protect RD 17 as further discussed above (see FR/EIS/EIR, pp. 5-386-387). Additionally, the Draft FR/EIS/EIR is silent on the fact that Alternative 7a would exacerbate flooding impacts to RD 17 and to the 43,600 residents that will experience greater flood risk. Further, the Draft FR/EIS/EIR analysis of cumulative impacts incorrectly treats all three phases of the RD 17 seepage repair project as if they are future projects. In fact, Phases I and II exist today and are part of existing conditions. Thus, the USACE must revise the FR/EIS/EIR to accurately reflect the baseline conditions for purposes of measuring the project's impacts and cumulative impacts under NEPA (40 C.P.R.§ 1508.7) and in accordance with CEQA Guidelines Section 15130. Consequently, the USACE must revise the cumulative impact analysis and incorporate this analysis into the Final FR/EIS/EIR in order to accurately reflect cumulative impacts to RD 17.	1 through III. Note that for the purposes of plan formulation (see Chapter 3) and the Chapter 5 resource-specific impact assessment, the RD-17, Phase 3 project was not considered to be in place. The impact of not implementing a flood risk management project is described in the No Action Alternative under each resource category in Chapter 5. Unavoidable, significant environmental effects are described in Section 5.24. Implementing Alternative 7a would not affect flood risk in RD-17.
15-30	The Draft EIR suffers from the same defects as the EIS, and thus, should be revised as set forth above to comply with CEQA for the same reasons.	Comment noted.
15-31	The USACE failed to comply with the Section 404(b)(l) Guidelines. The Section 404(b)(1) Evaluation included as an appendix to the Draft FR/EIS/EIR states that the overall purpose of the project is to reduce flood risk to urban and urbanizing parts of the study area, including the City of Stockton (Appendix A-4, page 5). The Section 404(b)(l) Evaluation fails to acknowledge that the original purpose was to reduce flood risk for the entire Lower San Joaquin River Basin. Moreover, the only alternatives evaluated in the Section 404(b)(1) Evaluation, other than the No Project Alternative, are Alternative 7a, 8a and 9a. The USACE removed from consideration the RD 17 Alternatives on the basis that they were impracticable because the USACE claimed that these alternatives do not comply with USACE water resources policies. The USACE's decision is puzzling at best. Now the USACE has found that an alternative which would require that the USACE maintain the Federal project levee system it was responsible for in the first place, is no longer practicable because that same Federal agency decided the same Federal project levee system is not consistent with that Federal agency's water resources policies. As a result, the Section 404(b)(l) Evaluation did not, but should have, evaluated the RD 17 Preferred Plan because this alternative is a practicable alternative in terms of costs, logistics, and technological considerations. Consequently, the Section 404(b)(1) Evaluation must, at a minimum, be revised to include the RD 17 Plan as a practicable alternative.	Six action alternatives were evaluated in Chapter 5 of the draft and final FR/EIS/EIR. The 404(b)(1) analysis focused only on the "a" alternatives because these are the only alternatives that are policy compliant. All of the "b" alternative have greater environmental impacts than the "a" alternatives, mainly because of the larger physical extent of the "b" alternatives. The RD-17 Phase 3 project is a distinct project from the Lower San Joaquin River Feasibility Study. The 404(b)(1) analysis has been updated to reflect revisions to the descriptions of the "a" alternatives. The "b" alternatives have not been added to the detailed evaluation.

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Letter 016		
16-1	The San Joaquin County Flood Control and Water Conservation District (District) concurs with the comments provided by the San Joaquin Area Flood Control Agency (SJAFCA) on the subject documents and hereby incorporates those comments by this reference.	Comment noted.
16-2	1. Confirm that the Tentatively Selected Plan (TSP) Provides a 200-Year Level of Flood Protection SJAFCA's comment on this issue explains that the document is not clear whether the TSP will meet the sponsors' objective of complying with Senate Bill 5 requirements (i.e. providing 200-year level protection). As indicated in SJAFCA's comment, "Because this is such an important issue to the sponsors and their constituents, the Draft needs to be more clear and up-front about whether, or to what extent, Alternative 7a (the TSP) will meet 200-year protection requirements." The District concurs that this is a critical issue for which the Draft Report should provide clarification.	It is not a Federal objective to provide a specific level of risk reduction ("protection"). There is not economic justification for providing SB-5 level of risk reduction as shown in the analysis conducted to identify the National Economic Development Plan (the TSP/Recommended Plan). The Recommended Plan provides for significant improvements to the levee system, furthering the ability of local entities to meet the requirements of SB-5, which they will have to demonstrate. Clarification of performance of the Recommended Plan has been added to Chapters 3 and 8.
16-3	2. Removing the Reclamation District 17 (RD 17) Area from the Study The District concurs with SJAFCA's position that inclusion of the RD 17 area in the study is policy compliant with Executive Order 11988, and that the alternative including improvements for this area is appropriate. If alternative 7b, or another alternative that includes the improvements for the RD 17 area, is not ultimately identified as the Selected Plan for the Study, the District supports a subsequent feasibility study being initiated for the RD 17 area as soon as practicable.	The analysis for Executive Order 11988 as outlined in Section 3.6 of the document was conducted in accordance with USACE policy and guidance. The result of the analysis was that given the understood planned development within RD-17, it was not policy compliant to pursue further Federal investment in the area under this study. This does not preclude future flood risk management studies in the RD-17 area.
Letter 017		
17-1	…encourage the USACE to include the RD 17 levee improvements (without the secondary levee at the confluence of the San Joaquin and Old River) in the environmental documents and the NED for the current feasibility study. The trailing study concept is a path to nowhere. It is critical to keep our community working together to protect all our residents and investments and not leave huge holes in our flood protection.	Alternatives including RD-17 are analyzed in Chapter 3 and found to not comply with Executive Order 11988 as noted in Section 3.6. This determination does not preclude future flood risk management studies in the RD-17 area.
17-2	If the USACE doesn't correct its' wrongdoing I suspect we are faced with potentially an extended confrontation. The stigma of USACE misapplication will	Comment noted.

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	harm our community for a long time and particularly those who are most disadvantaged.	
Letter 018		
18-1	My name is Michael Fonseca, President and co-owner of Fonseca Farms Inc. situated in the southern area of San Joaquin County at 22695 S. Airport Way, Manteca, CA 95337. We have been farming within the proximity of the levee improvements and extension since 1948. We have not only witnessed, but lived through and R380survived the constant evolution of Mother Nature, climate, natural resources, including droughts, and major floods that had directly impacted our lives in 1950, 1986, and 1997. My concerns with the San Joaquin River Basin Draft Reports will focus specifically but not limited to the RD-17 levee improvements and levee extension in Manteca. The segmentation and the taking of our land will be a catastrophic event that our farming operation may not be able to withstand. Our family farm is the sole provider of three separate households and families as well as provides employment opportunities for other local residents. Our primary crop in this area is Almonds, and our land is the necessity of producing a marketable crop R380in order to generate sufficient cash flow to sustain our quality of life. The current alignment of the levee imposes the threat of reducing our annual income, or forcing us to obtain higher operating costs to relocate and replenish the lost acreage. The consideration that needs to be addressed is, our land needed for levee improvements is not a recreational space, or a decorative landscape, but for us it's what puts a roof over head and what feeds our families.	The Recommended Plan does not include actions in the RD-17 and Manteca area. Should future flood risk management studies identify potential actions related to the tie-back levee, land owners will be coordinated with to minimize impacts to private property.
18-2	The footprint of the levee improvements and extension to construct seepage stability berms and or cut-off walls with the current alignment imposes significant adverse impacts and threatens the quality and integrity of the adjacent properties and infrastructure. Not only will the impacts affect me personally as I have three separate parcels that the levee is currently adjacent to or is proposed to extend through, but as well as all the nearby residents. My personal residence is adjacent to the water-side of the levee leaving concern for encroachment issues with my current infrastructure such as the foundation of my home and domestic well less than 100	Comment noted. See response to comment 18-1.

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	feet away, with septic tank and leach field even closer. I have other infrastructure such as, buildings, producing farm land and a large irrigation well that will be impacted. Situated on the property is a second home being approximately 25 feet away from the water-side of the levee. I also own property on the landside of the extension in which my brother occupies as his primary residence with his domestic well and septic tank approximately 50 feet away from the levee.	
18-3	The construction of seepage stability berms up to 300 feet wide are not a practical solution for this area. With the current alignment of the levee, in one case there is only 75 feet between the foundations of two homes. There is not adequate open land available for the construction of such berms, improvements to the existing levee which include raising the height, or for any O&M easements to be established without the removal of one of the homes.	See response to comment 18-1.
18-4	Impacts of the water-side of the levee due to construction of a cut off wall will increase the elevation of an already shallow water table that is currently about 7 feet in this area. Any increase in elevation can have a significant impact to septic tanks and leach fields causing inadequate draining and possible sewage backup into the homes. Impacts on the land-side of the levee will restrict the movement of and deplete ground water resulting in lowering the elevation of the water table decreasing pumping efficiency and the water quality. The close proximity of the construction of the cut off walls to the existing wells will contaminate the wells and may be deemed not adequate for consumptive use.	Comment noted. See response to comment 18-1.
18-5	In the report, Table 3-11, Planning Criteria Analysis for Final Alternatives states, "Table 3-11 demonstrates the effectiveness of alternatives in meeting the planning criteria." One of the four criteria indicated in the table is Efficiency, which states, "Efficiency is the extent to which an alternative plan is the most cost-effective means..." What this statement fails to mention is the most cost effective means is to the benefit of only the agencies leading this project and has not took into consideration the impacts of the individuals with adjacent properties to the improvements or extension of the levee. The report indicates cost effective means for the project is to continue the extension of the levee in a straight line that currently aligns with an impractical modified alignment that was constructed during the 1997 flood. This alignment may be viewed as cost effective to the lead agencies, however not to the public it impacts. It creates property segmentation that adversely impacts the current use of the property remaining. A true cost effective solution may mean that the project cost may increase due to mitigation measures to property	See response to comment 18-1.

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	owners or the cost of construction to realign the levee in a path that follows property lines to reduce property segmentation and to avoid encroaching on private infrastructure, such as homes, buildings, wells, septic tanks, and producing farm land.	
18-6	A second criterion of Table 3-11indicates acceptability which states, "Acceptability is the workability and viability of the alternative plan with respect to acceptance by State and local entities and the public and compatibility with existing laws, regulations, and public policies". The alignment clearly violates local public policies as The San Joaquin General Plan of 2007, policies concerning its governance of land use within the county states in part, "To promote and protect agriculture as the primary industry of the county, minimize conflict between various land uses resulting from urban expansion, and deny all uses that intrude into or are located adjacent to an agricultural area if they are detrimental to continued agricultural usage of the surrounding area".	See response to comment 18-1.
18-7	Two of the four criteria indicated in the report have not been satisfied. The only cost effective measures implemented are for the lead agencies and not for the local residents that suffer from the adverse impacts. Local public policies are being violated and there is lack of public acceptance resulting from no public outreach and involvement with the RD-17 portions of the levee improvements R387and extension.	See response to comment 18-1.
18-8	There are other practical alternatives to the alignment with levee improvements and extension that needs to be considered. I have attempted to work with local authorities such as the City of Manteca and RD-17; however a practical compromise is unachievable due to the constraints, restrictions, and regulations that are imposed on them by higher authorities such as U.S. Army Corps of Engineers and San Joaquin Area Flood Control Agency. The common response to my concerns is the cost associated with implementing other alternatives or the possibility of inducing future development. The priority needs to shift to public outreach and involvement to the local residents, rather than the cost effective measures strictly to the benefit of the lead agencies. An alternative to truly accomplish the goals of flood protection with the least amount R388of adverse impact to the local residents and land owners needs to be considered.	See response to comment 18-1.
Letter 019		

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19-1	The increased flood protection afforded by levee projects such as this is clearly a public benefit. However, the levees and associated construction also can adversely affect immediately adjacent property. The primary adverse effect that I am referring in the specific case of the almond orchards on the extreme south end of the levee project are changes in the groundwater table. Groundwater in that area is historically known to be shallow and the almond trees are susceptible to damage if the root zone is flooded. Typically, the levees will impound water but can have seepage going under the levee driven by the impounded head of water. That seepage can adversely affect the structural stability of the levees so there typically is a seepage control mechanism incorporated under the levee. The seepage control mechanisms are typically some combination of cutoff walls and/or drainage trenches.	USACE no longer has an interest in constructing or fixing any levees along the far southern portion of the study area of RD-17. Most of what is planned involves a cut-off wall which would eliminate the saturation of soils beyond the levee. If a cut-off wall is not planned in the area of concern (i.e. Delta front area), the crops are not being protected by the floodwall and so seepage beyond the floodwall isn't a concern.
19-2	*[Note: Author suggests specific locations for this text to appear. See specific locations on letter.]* The issue of cut-off walls is discussed in numerous places in the document. Attached are portions of the document where the same comment is inserted on multiple locations. My comment is as follows: THIS DISCUSSION SECTION APPEARS INCOMPLETE BECAUSE IT DOES NOT CONSIDER THE USE OF DRAINS AS OPPOSED TO, OR IN CONJUNCTION WITH, CUT-OFF WALLS TO ENHANCE STRUCTURAL PERFORMANCE DURING HIGH WATER IMPOUNDMENT PERIODS. THE CUT-OFF WALL WOULD TYPICALLY BE MORE COST-EFFECTIVE FROM THE STANDPOINT OF BUILDING AND MAINTAINING THE LEVEES BUT THE CROPS, PARTICULARLY ALMOND TREES, CAN BE FLOODED OUT IN THE ROOT ZONE IN ANY TIME OF HIGH GROUNDWATER BECAUSE THE NATURAL SUBSURFACE DRAINAGE IS LITERALLY CUT-OFF BY A CUT-OFF WALL. THIS ROOT ZONE FLOODING CAN HAPPEN EVEN IF NO ABOVE-GROUND FLOODING OCCURS. BY INSTALLING ONLY A CUTOFF WALL BARRIER UNDER THE PROPOSED LEVEES, THE CURRENT DESIGN EFFECTIVELY GUARANTEES THAT THERE WILL BE MORE PROBLEMS WITH SHALLOW ROOT ZONE FLOODING AND TREE ROOT DROWNING EVEN IF NO FLOODING WOULD HAVE OCCURRED. THIS IS BECAUSE THE MINIMAL NATURAL DRAINAGE WHICH PERIODICALLY	USACE no longer has an interest in constructing or fixing any levees along the far southern portion of the study area of RD-17 which is where almonds are grown. USACE is not fixing or constructing anything new in RD-17. Please advise if almonds are being grown outside of this area.

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	RESULTS IN TREE KILLS WILL BE SUBSTANTIALLY WORSENED BY THE CUTOFF BARRIER. A DRAIN SYSTEM IN COMBINATION WITH THE CUTOFF WALL IS ABSOLUTELY ESSENTIAL TO LONG TERM TREE GROWTH BEHIND THE LEVEES. MY RECOMMENDATION IS TO INSTALL A SUBDRAIN SYSTEM ON THE INSIDE TOE OF THE LEVEE WHICH WOULD MAINTAIN THE GROUNDWATER LEVEL AT LEAST 5 FEET BELOW THE BOTTOM OF THE ROOT ZONE OF THE ALMOND TREES. THE SYSTEM WOULD INCLUDE A GRAVEL INTERCEPTOR TRENCH TO WITHIN NOMINALLY 3 FEET OF THE ORIGINAL GROUND SURFACE WITH THE GRAVEL ENCAPSULATED IN FILTER FABRIC AND A PERFORATED COLLECTOR PIPE IN THE BASE OF THE GRAVEL. A DEDICATED PUMP WOULD LIFT THE COLLECTED WATER FOR DISPOSAL ELSEWHERE. THE PUMP WOULD ACTIVATE AUTOMATICALLY BY FLOAT CONTROL. THE WATER SO COLLECTED WOULD REQUIRE DISCHARGE OFF-SITE. BECAUSE THE SHALLOW GROUNDWATER SO COLLECTED IS MORE THAN LIKELY TO CONTAIN CONSTITUENT LEVELS HIGHER THAN THE LARGE FLOOD WATERS, A WAIVER TO ALLOW AUTOMATIC DISCHARGE OF THE COLLECTED GROUNDWATER WOULD NEED TO BE OBTAINED.	
Letter 020		
20-1	Richland disagrees with selection of Alternative 7a as the Tentatively Selected Plan (TSP). We do not believe that Alternative 7a will adequately meet the flood risk reduction objective or the 200-year level of protection objective. We are asking that RD17 Alternatives not be removed from further consideration in the Draft Feasibility Study (7b. 8b, 9b). If not removed from the Feasibility Study, we believe Alternative 7b would become the TSP and would include RD17 improvements. We understand the USACE can change the TSP in the Final Feasibility Study. The potential impacts of the entire array of alternatives included 7b, 8b and 9b that all included the RD17 improvements. All potential impacts of RD17 improvements are documented and analyzed in the Draft EIS/EIR, so the USACE can determine in the Final LSJRFS that the TSP has changed to Alternative 7b. We are asking that the USACE to make this change. If RD17 Improvements are not in the TSP, 43,000 existing people remain at risk as well as millions of dollars of critical infrastructure that has already been spent.	Comment noted. Please see response to Comment 7-1.

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20-2	As a major property owner in the Cities of Lathrop and Manteca, we have invested tens of millions of dollars and have worked hand-in-hand with the Cities, RD 17 and other agencies to ensure the viability of our assets and that good and responsible planning has occurred. We control the remaining assets within the Crossroads Commerce Center (an industrial park in the City of Lathrop that is 75% built out); 315-acres currently being entitled for industrial in South Lathrop; and residential zoned land within phase II of the Central Lathrop Specific Plan. To deny the area the ability to meet the 200-year level of protection objective will have an adverse economic impact on not only Richland, but the region as a whole. The requirements of SB5 have already weakened any serious interest in available properties. All interested parties want to see more progress in meeting SB5 and when you add to it the unknowns related to Executive Order (EO) 11988, there is no interest in doing business in these markets. Richland, along with other developers may be forced to abandon their projects, some fully entitled, which will adversely impact the Cities of Lathrop and Manteca if 200-year flood protection improvements are not permitted.	Comment noted. Please see response to Comment 3-2.
20-3	Historically, RD17 levees have been endorsed by Congress, the USAGE and by FEMA to provide protection for development. We fail to understand why the USAGE chose a different analysis methodology to determine that the RD17 levees do not provide 100- year flood protection, when those levees have been certified by FEMA for 25 years. Richland is concerned with the recent statements by the USAGE that the FEMA certification may not be relied upon regarding RD17 levees. The USAGE interpretation of EO 11988 appears overstated when they state the RD17 levees do not provide 100- year flood protection and should not be improved to provide 100-year protection. We would like to understand the impact of this EO 11988 interpretation on proposed large, federally funded projects within RD17. We would also like to understand the impact on Federal facilities in RD17 if levees cannot be improved to prov1de 200-year flood protection.	Comment noted. Please see response to Comments 7-3 and 15-14.
20-4	After decades of responsible development; growth in both housing and job sectors; and both federal and state investments in the region (roadways and federal facilities), it appears the USAGE is saying "no" to 200-year flood protection. If this is the direction, there needs to be a serious conversation regarding the "taking" of property. Both non-residential and residential projects already entitled will not be built and areas both partially and fully entitled will be abandoned.	Comment noted. Please see response to Comment 3-2.

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20-5	The post-economic impact of the decisions related to the TSP and EO 11988 will have their own environmental impacts to the region that, in our opinion, have not been adequately addressed and warrant discussion (i.e., increased flood hazard risk; blight caused by socio-economic changes resulting from the failure of major developments being finished; air quality and climate change impacts related to increases vehicle miles traveled as people seeking jobs and housing in the RD17 area must commute further distances to find those opportunities, etc...).	Comment noted.
20-6	In summary, Lathrop's and Manteca's land within the limits of RD 17 have already been flood protected, approved for development, annexed, and has urban infrastructure in place to serve existing and planned growth. We believe that inclusion of this land within the Lower San Joaquin River Feasibility Study should not conflict with EO 11988. If you	Comment noted.
Letter 021		
21-1	I object to RD 17 being excluded as an alternative due to concerns over executive Order 11988 and the unwise development in the floodplain. The Corps should reconsider their conclusion and study alternatives 7b or 8b as the preferred alternative	Comment noted.
21-2	1. I would like a complete answer as to why RD 17 is considered to be in the floodplain. Comments by both RD 17 and SJAFCA make compelling arguments as to why RD 17 should not be ' considered in the floodplain and as a result,not subject to EO 11988. Please explain the basis for including RD 17 in this analysis.	Comment noted. The base floodplain used in the E.O. 11988 evaluation is defined as the 1% chance flood plain and not the regulatory floodway used by FEMA.
21-3	2. RD 17 is and has been developed with the cooperation of the USACE and the Federal Government for over 150 years. Why abandon the 43,000 people and the billions in infrastructure invested now?	Comment noted. Please see response to Comment 12-3.
21-4	3. How did the federal government make the decision to invest 325 million in a new VA hospital in Rd 17 yet, the Army Corps has concluded there is no Federal interest in spending money to protect RD 17 or even studying alternatives that include RD 17.	Comment noted. USACE is working with the VA to design a project that independently complies with EO 11988 and is cost effective. This response has been coordinated with the USACE VA Team.
21-5	4. What is the exact criteria used to determine that RD 17 should be subject to EO 11988 and that in fact, this is an unwise use of the floodplain? Was that same criteria used in North and Central Stockton? Natomas?	Comment noted. In Chapter 3, a detailed evaluation of the criteria under E.O. 11988 was presented. Both North and Central Stockton were also subjected to the same criteria. As for the Natomas project, it too was subjected to the same analysis.

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21-6	5, There are several references made to the fact that there is 12,000 acres of undeveloped land that can be urbanized. Is there a difference between commercial and industrial development i the eyes of the Corps when they evaluate EO 11988 compliance? Is there any kind of ratios or real statistical guidelines that can be used by local governments to avoid the conclusion of an unwise use of floodplains.	Comment noted. Based on the criteria used for the analysis for E.O. 11988, commercial and industrial development have roughly the same potential flood risk and same potential for adversely affecting beneficial floodplain values (open space, agriculture, fish and wildlife). There are currently no statistical guidelines used in the analysis.
21-7	6. The City of Stockton is reviewing their current General plan. They have over 3000 acres in RD 17 that is pre zoned for residential. If they removed that designation from residential to agriculture, would that change the Corps conclusion that this is the unwise use of the floodplain? What if it was changed to industrial? Would that change the conclusion or require a new analysis?	Comment noted. Any change to a General Plan, once approved, has the potential to change the results of the analysis. It would likely require a new analysis.
21-8	7. There are several references that state" based on existing land use planning further inducing development in RD 17 in the deepest parts of the flood plain, the decision was made to remove RD 17 alternatives from further consideration". Specifically, what land use planning are you referring to? Stockton General Plan? Lathrop general Plan? What exact area within RD 17 are you referring to when you say the deepest parts of the floodplain? If these area were removed from development or changed to industrial zoning, would this change the corps conclusion? Please be as specific as possible because local agencies should be entitled to know the thinking and exact criteria that goes into making these conclusions.	Comment noted. General Plans for Stockton, Manteca, and Lathrop were used to inform the existing land use planning. As noted in the response to Comment 21-7, any change to those plans has the potential to change the outcome of the E.O. 11988 evaluation.
21-9	8. Has the Corps ever denied a 408 permit based on EO 11988? Can you state in the last 10 years how many 408 permits had an E0 11988 analysis and how many, if any, were rejected as a result of EO 11988?	RD-17 proposed alterations that require 408 permission and the Feasibility Study are separate actions. EO 11988 is evaluated as part of both. While considered, EO 11988 evaluations conducted as part of a 408 permission may not be directly applicable to studies.
Letter 022		
22-1	1. Water Displacement and the Potential for Increased Base Flood Elevations: NU draws your attention to page 4.13-60 of the Draft Programmatic Environmental Impact Report Regional Transportation Plan & Sustainable Communities Strategy for San Joaquin County dated March 2014', which states: "A portion of the transportation projects included in the proposed 2014 RTPISCS could	Comment noted.

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	occur within the 100-year flood hazard area, thus increasing the potential to obstruct or exacerbate floodwaters. The construction of projects involving support structures in the floodway could obstruct floodwaters at some locations. Placement of structures within a floodplain can displace floodwaters and alter the base flood elevations in the surrounding areas. Structure can form a backwater effect, resulting in an increase in the flood elevation level upstream and in neighboring areas. Likewise, floodwaters can cause scour effects, resulting in erosion and sedimentation problems downstream from structures. Drainage areas could be altered by highway corridors, in which floodwater could be detained by medians and along the roadside. Proposed bridge supports could block debris in waterways, creating obstructions and further elevating upstream flood levels. The Plan could alter existing drainage patterns or substantially increase the rate or amount of surface runoff in a manner that would result in flooding or produce or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems." In addition, the San Joaquin River Basin Lower San Joaquin River Feasibility Report describes an eastern levee extension route detailed on pages 3-35 and 3-57. (See Exhibits "1" and "2") Further, the San Joaquin County Office of Emergency Services distributed a Flood Contingency Map dated April 2011 which clearly shows the specific areas affected by prior flooding. (See Exhibit "3") With this in mind. NU's comment is to request that a priority emphasis be placed on identifying an ultimate eastern Reclamation District No.17 ("RD17") levee extension footprint route that follows higher ground elevations as the levee moves to the east so as to minimize the potential impacts due to the displacement of flood waters affecting residents and property owners located in the flood hazard area.	
22-2	2. Seepage Control Mechanisms and the Potential to Affect Changes in Elevation to the Groundwater Table The documents reviewed further indicate that the proposed levee seepage repairs and improvements may involve levee seepage control mechanisms installed under the levee in the form of cut off walls reaching depths of up to 80 feet deep that may cause changes in elevation to the groundwater table. Several almond orchards and other farms are located along the southern edge of the existing RD171evee as well as other farming operations in areas located to the east that are under consideration as sites for a future levee. Like many properties located in close proximity to the San Joaquin River. groundwater in the area around southwest Manteca is very shallow which makes	Comment noted.

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	the root system of almond trees vulnerable to damage if flooded due to higher groundwater elevations. Further, the FEIR Phase 3-RD17 Levee Seepage Repair Project specifies on page ES-8 that no cut off walls are being considered on RD171evee element areas VIII. IX. X or XI. (See Exhibit "4") With this in mind. NU's comment is to request that the entire RD171evee extension be constructed without any levee seepage control mechanisms involving cut off walls or any other control mechanism that could cause localized change to surface groundwater levels. (See Exhibit "5")	
22-3	3. Protecting Agricultural Resources: The documents reviewed identify certain protections for farmland under the Farmland Protection Policy Act (7 U.S.C. 4201, et. seq.) as detailed in the San Joaquin River Basin Lower San Joaquin River Feasibility Report on pages 7-6 and 7-7. (See Exhibit "6") Further. the FEIR Phase 3-RD17 Levee Seepage Repair Project provides extensive farm protection related information on pages 3.2-1 and continuing through 3.2-20 of the report. With this in mind. NU's comment is to request that to the greatest extent possible. every effort is made to comply with the City of Manteca policies specified on pages 3.2-4 and 3.2-9 of the FEIR Phase 3-RD17 Levee Seepage Repair Project (See Exhibit "7") and further listed below: City of Manteca General Plan The City of Manteca General Plan 2023 Policy Document (City of Manteca 2003), Resource Conservation Element, Goal RC-9, promotes the continuation of agricultural uses in the Manteca area and discourages the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca. Policies relevant to the proposed project include the following: Policy RC-P-19: The City shall support the continuation of agricultural uses on land designated for urban use, until urban development is imminent.	Comment noted.

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	Policy RC-P-20: The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure. Policy RC-P-21:In approving urban development near existing agricultural lands, the City shall take actions so that such development will not unnecessarily constrain agricultural practices or adversely affect the viability of nearby agricultural operations. Policy RC-P-23: Protect designated agricultural lands, without placing an undue burden on agricultural landowners. Policy RC-P-24: Provide buffers at the interface of urban development and farmland in order to minimize conflicts between these uses. Policy RC-P-26: The City shall restrict the fragmentation of agricultural land parcels into small rural residential parcels except in areas designated for estate type development in the General Plan Land Use Diagram. Policy RC-P-27: The City shall discourage the cancellation of Williamson Act contracts outside the Primary Urban Service Boundary line.	
22-4	In particular, NU requests that the buffers described in Policy RC -P-24 include the construction and installation of protective fencing as provided for in Chapter 8, Section 8.8.2 under the City of Manteca General Plan Resource Conservation Policy RC-1-30 (See Exhibit "8") and that the provisions specified by the City of Manteca in Policy RC-P-26 restricting the fragmentation of agricultural lands allow for the routing of any RD171evee extension in south Manteca to take into consideration farm impacts relating to the division of farm properties into smaller parcels that may result in those properties becoming impractical to farm.	Comment noted.
22-5	Most important. NU requests that in association with the provisions stated on page 3.2-16 of the FEIR Phase 3-RD17 Levee Seepage Repair Project relating to the disturbance or removal of agricultural infrastructure, such as wells, pipelines and drainage canals. NU requests that all infrastructure affected during the project be restored as soon as possible to guard against any damage to the crop or farm property. (See Exhibit "9")	The Lower San Joaquin River Feasibility Study is a separate effort from the RD-17, Phase 3 project. Infrastructure affected by the project would be restored as soon as feasible to reduce disruption to urban and agricultural services and use.

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22-6	4. Minimizing Flood Risks in the Flood Hazard Areas South of the Current RD17 Levee System: The documents reviewed.further indicate that the proposed RD17 levee seepage repairs may involve improvements to the area in and around the Weatherbee Lake/Turtle Beach Resort area. This area is further identified in the FEIR Phase 3-RD17 Levee Seepage Repair Project as being part of a Flood Hazard Area located adjacent to and south of RD171evee element locations Vile and Vllg. (See Exhibit "10") This is significant, because historically. for levee breaks south of Manteca, flood water runoff severe enough to impact the Walthall Slough Reclamation District No. 2094 area generally returns to the San Joaquin River in the area where Walthall Slough and the San Joaquin River converge. (See Exhibit "11") This point of convergence is further identified as being situated in and around the Weatherbee Lake/Turtle Beach Resort area which is protected in part by Reclamation District No. 2096. In addition, it is widely understood that in past floods a relief cut has been made to the levees south of the turtle Beach Resort to allow rising flood waters accumulating against the land side of the levee to drain back into the San Joaquin River. Further, the 2011 San Joaquin County Office of Emergency Services Flood Contingency Map (See Exhibit "3") clearly demonstrates the extent that south Manteca was impacted by flood waters in 1997. The map includes a contour line indicating the extent that 1997 flood waters reached with the understanding that flood water impact was limited in its extent due to a relief cut being made to levee in the area south of the Turtle Beach Resort area. It is important to add that the portion of levee that received the relief cut has been repaired at considerable cost which would need to be re-performed each and every time a future flood requires a relief cut to be made to that same portion of levee. With this in mind, NU's comment ids to request that consideration be made to construct gate opening/closure structures to be put in place at the turtle Beach relief cut levee location area as detailed on pages 4-11 and 4-13 of the San Joaquin River Basin Lower San Joaquin River Feasibility Report. (See Exhibit "12"). In this way, flood waters can be efficiently drained as necessary to prevent those land side flood waters from reaching elevations that exceed those of the San Joaquin River. This will result in protections being put in place that can ensure that future impacts due to flooding can be limited by the best means possible.	Comment noted. Since RD-17 is no longer part of the Tentatively Selected Plan, these concerns are not relevant to the current recommendation.
Letter 023		
23-1	We live on the section between Yarmouth Street and Don Avenue, where there are approximately 40 homes, most built around 1975. We purchased our home because	Comment noted.

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	of old valley oaks along the slough behind our house so Mosher Slough is our backyard. I walk daily on the slough and am an avid birder having listed almost 100 species along the levee; we have seen salmon in the slough.	
23-2	To widen the levee as the Corps intends would completely destroy this valuable habitat, lower our property values, and ultimately, force us to move. Some properties would be removed; these changes would contribute to loss of property taxes for the city.	Comment noted.
23-3	Mosher Slough levee was raised in the late 1990s to address the "new" flood zone. Construction at that time preserved the character of the slough and did not require removing vegetation. The slough has never been in danger of overtopping the levee in 25 years of observation.	Comment noted.
23-4	"Climate change" and resultant rising sea levels are unproven and controversial propositions that rest on scientific speculation and computer modeling. The amount of destruction required by this project and the financial drag to the economy cannot possibly justify it on the basis of speculative science.	Comment noted.
23-5	It is also unlikely that the proposed flood protection will provide any additional mitigation from flooding.	Comment noted.
23-6	So we are asking that the Corps please reconsider its options and try to find a less destructive method.	Comment noted.
23-7	To protect our investment and quality of life we will actively participate and contribute financially to any lawsuits that are aimed at stopping this project.	Comment noted.
Letter 024		
24-1	On Figure ES-2 The Tentatively Selected Plan it shows a blue line on the north side of Mosher Slough. Will both sides of the levee be raised or just the north side?	Comment noted. Only the north levee would be raised. A cut-off wall would be constructed on the south levee.
24-2	Since Stockton already has a 200 Year Flood Plan, why spend millions to go to a 500 Year Plan for an almost negligible increase in safety?	Comment noted.
24-3	What is the timeline for construction?	Comment noted. The final document, along with a Chief of Engineers Report, will be forwarded to Congress for their action authorizing the project. In a separate action, Congress must then appropriate funding for the project. A design phase would be initiated roughly 1 year after completion of the

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		Chief's Report, with the potential initiation of construction beginning in 2019 and completed in 2030, assuming optimum funding.
24-4	Most of our neighbors did not get a letter from the Corps of Engineers, for something this important (possibility of losing our homes), why were letters not sent to property owners by registered mail?	Notification of the availability of the draft EIS/EIR for public review was published in the Stockton Record and provided by direct mail to land owners and occupants adjacent to the project footprint.
Letter 025		
25-1	It's no wonder Stockton has such a hard time getting people to move there, between the bankruptcy, high crime rate, and low school ratings and now Stockton wants to add this to the list. Here is the new PSA for Stockton..."Move to Stockton, but don't buy a house near the sloughs because soon we are going to destroy them" Doesn't that sound appealing to you?	Comment noted.
25-2	I have done my research and houses that back to the sloughs, typically, but not always, have higher home values, because of larger property sizes; which means that people that own them, potentially has a decent paying job, pay income taxes and don't utilize government resources to live on. Now you are going to punish the homeowner by decreasing their property values and or completely taking their property away from them. Sounds like a great idea to me...NOT!!	Comment noted.
Letter 026		
26-1	I don't understand how a project like this can continue, when such poor public notification has occurred.	Please see response to comment 30-1.
26-2	As a new homeowner in the area, it is heartbreaking, to think that part of my property, that I worked so hard on to achieve and pay the mortgage on a month to month basis, and the property taxes, may now be partially taken away. Is this plan going to pay for the relocation of my pool that this will destroy? Is this plan going to buy me a new shed that will also be destroyed if this plan goes through? When the construction is being done, will I be able to live in my home or will I need to	Comment noted.

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	relocate? Is the plan going to pay for my temporary housing? If the plan is approved, "fair market value" is not a fair assessment for purchasing part of my property and the inconvenience it will cause myself and my children and my animals.	
26-3	Property values in the area are hurting enough. Do you really think this is going to help? Stockton wants people to be attracted to Stockton: wants them to relocate to Stockton. This is not how a city attracts new homeowners/city dwellers.	Comment noted.
Letter 027		
27-1	1 When will I be hearing from you in response to my questions?	All public comments and responses are published in conjunction with the public release of the Final Report.
27-2	There are major decisions coming soon for me regarding my property and retirement – this levee plan severely impacts the flexibility I had regarding the sell or not to sell considerations. If my house is in the way, I am sure it will be taken. If it takes another 10 years for the Plan to be finalized and funded, how will I be able to sell my home when my husband and I finalize our retirement plans??!!! Who will buy a home slated for demolition to make way for a levee project????? So – will I be able to have the "non-Federal sponsor" purchase my home from me when I need to leave, regardless of how far along the implementation of the Plan has proceeded? If nothing happens at all with the Plan – but all this is there when someone does a title search before purchasing the property in , say, 15 years – my property value is still diminished.	Following Congressional authorization, site-specific analysis would be conducted prior to construction to determine specific impacts to include parcels impacted, acres to be acquired, and number of relocations. If your property, or a portion of it, needs to be acquired, you, the property owner, will be notified as soon as possible of (1) the agency's interest in acquiring your property, (2) the agency's obligation to secure any necessary appraisals, (3) any other useful information.
27-3	2 When will I know if this plan has been funded/approved? How will you contact me?	A Chief's Report to Congress will be completed with potential Congressional approval following the Chief's Report. If you have provided contact info in this process, you will be notified.
27-4	3 I have spoken to 32 neighbors living along Mosher Slough on Monticello, Mason, Hamilton, Yarmouth and West Creek Drives, and of those 32 only 4 confirmed that they had received a letter from the Department of the Army. Were letters not sent to each resident on Mosher Slough? Please, MAY THE DEADLINE FOR COMMENTS/QUESTIONS BE EXTENDED so those who were unaware of the USACE proposals regarding the levees might have time to submit their concerns??	Letters providing notice of the availability of the Draft Report for a 45-day review were mailed to all property owners adjacent to the project. Notice was further provided in the Stockton Record (March 10, 2010) and in the Federal Register (February 27, 2015). The lead agencies decided not to extend the deadline for receipt of comments; however,

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		comments received affect the official close date have been considered in preparing the Final Report.
27-5	4 Would the trees bordering the Slough (riparian area) be removed before the Plan was finalized/funded?? It would be awful to have demolished a beautiful and richly diverse riparian area and then find out the Plan had not been funded, or may not be funded for another 10 or 12 years. What a waste!!! Of course, I am deeply concerned about losing the trees around my property; they provide invaluable shade/coolness and protection from drying westerly winds.	No construction, including tree removal that is part of the Recommended Plan, would occur until the Record of Decision is signed and Congress authorizes and funds the project. If this occurs, the project would move into the Pre-construction Engineering and Design (PED) phase during which additional engineering and environmental evaluations would occur. Project construction would begin after PED is complete.
27-6	I am sure the property value of this home will diminish if it stands next to a broiling open wasteland. Does this mean I would be paid less for it if/when it is acquired to make way for the Plan?? Is this part of the plan….? To diminish the value of the property before acquiring it???!!	Please see response to comment 27-2.
27-7	Another concern regarding the trees/vegetation- In the copy of the study done by ACE, I read one short paragraph and saw one table which addressed the loss of habitat for all the wildlife this riparian area supports - - pretty short shrift. It in no way really describes the number of bird species which live here (and those who are here each year during migration periods) nor does it describe the wide range of other animals here – river otters, beavers, many varieties of fish, etc., etc. In balance, the questionable necessity of doing levee work here does not make a good argument for the destruction of such an area in Stockton.	Comment noted.
27-8	5 What are mitigation banks credits (mentioned 3.7.3 Impact Analysis…)? I assume this means in any case, no planting of any kind would take place on the levee.	A mitigation bank is a conservation land that has been restored, established, enhanced, or preserved for the purpose of providing compensation for unavoidable impacts to resources. The banks are managed and maintained in perpetuity. The value of a bank is defined in "compensatory mitigation credits." These credits are available for purchase by agencies, organizations, or individuals seeking to

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		compensate for unavoidable impacts to specific habitats or species. Your assumption is correct with regard to trees and shrubs, which would not be planted on the levees. Native grasses and forbs would be seeded on the earthen levee slopes once construction on each levee segment is complete.
27-9	6 The "levee height fix" mentioned in Table 4-2 (7a/b Measures by Area and Waterway) –according to the Plan, how much higher than the current height does the levee have to be? How much added? (in feet)	Comment noted. As noted in Chapter 4, levee height raises were estimated between 1.5 feet to 3 feet for the most part with 5 feet being the highest.
27-10	7 I have invested much time, effort and MONEY into my home – it represents much of my retirement fund. Given my home's position relative to the current levee, I believe my home would be one of the "294 permanent relocations" mentioned in 8.1.4 Real Estate. How would I be recompensed for the loss of my home? "Fair market value" is a figure which may be determined in many ways –how would this value be figured in this case? Who determines fair market value? When would I be notified if my parcel is one which would be acquired by the "non-Federal sponsor"? What kind of lead time would I have to find another home?	Please see response to comment 27-2.
27-11	8 If I have no choice regarding the acquisition of my home by the "non-Federal sponsor" would there be any mitigation of State or Federal taxes on monies paid to me for the house? (if I had no new home in which to invest the "earnings" from the "sale" of my property)	Please see response to comment 27-2.

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27-12	What is the timeline for all of this? I have read/heard three different things.	Comment noted. Refer to Chapter 8, Recommended Plan for tentative schedule.
27-13	10 A I looked at records of past floods in Stockton. In none of the information available did I find any record of neighborhoods adjacent to Mosher Slough flooding. There were no reports of seepages, "boils", breaks that I could find. On the map (figure 2.2 1/500 ACE floodplain) showing depth of flooding in this 500 year event, the big red dots indicate places on the levee system which "fail R&U criteria". None of them are on Mosher Slough. Does this mean that there is less likelihood of a breach occurring on this levee? If the flood water on the map comes from a breach in one of the "red dot" locations (as I was told by one of the people I spoke to last Wednesday evening at the Q&A at Civic Auditorium), why not fix the "red dot" location and leave the rest? Work was done on this levee about five years ago. If there were other real problems, would they not have been addressed (or least would we not have had some indication/notification) then?	Comment noted.
27-14	10 B: I am unconvinced that rising sea levels will impact this Mosher Slough levee for some time – if ever. A breach right now in a levee to the east of us would have little impact on this neighborhood – there is not enough water in those channels to water my azaleas for a week. So the main concern for flooding here comes from large amounts of drainage from upstream due to high levels of precipitation sometime in the future. I understand that sometimes one must prepare for the worst, and hope for the best….but I have been reading A LOT of literature regarding climate change and DROUGHT conditions/diminishing rainfall in California in the coming decades. "The odds" are that we will not be receiving enough precipitation any time soon to overfill the reservoirs, overburden all the transitory water storage areas upstream, and lead to a breach/seepage in the banks of the levee in my back yard. It didn't happen in 1983, 1986, 1995, nor in 1997 (nor before that, that I can find reported anywhere) – high precipitation (flood) years which had been preceded by some years of normal precipitation levels, so there was still water in reservoirs and less "storage space" available for excess water…..still, no flooding here. Do I care about flooding elsewhere in Stockton? Yes. So fix the "weak spots" which have led to flooding in those areas. HOWEVER - There is no historical basis to support building up the levee on Mosher Slough.	Comment noted.
27-15	11 I assume the reason that the USACE used figures for a 500 year event (rather than the 200 year event figures required by California state regulations) is because of the use of Federal funds to implement this Plan. Yes? No?	Comment noted. USACE uses multiple events for analysis. Of significance are the 100 and 500 year events for compliance with Executive Order 11988,

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		and determination of potential impacts to critical infrastructure. Determination of Federal interest is not predicated on compliance with State regulations.
27-16	12 When I read about the "benefits" of the plan, these are dollar figures. These amounts represent how much money would NOT be paid out by agencies such as FEMA etc., because flooding would be limited/eliminated by implementing the Plan – is that correct? That's the benefit of the plan? Is this a "net" figure? Does is take into consideration the cost of this entire project???	Comment noted. As stated in Chapter 3 and 4 of the document and the Economic Appendix, benefits are the damages prevented to structures and contents. Additional benefit categories do include savings from no longer having to contribute to the National Flood Insurance Program. The costs do take into account the entire project. See Table 8-5 in Chapter 8 to see the costs. The "net benefits" is the amount of benefits accrued above costs. Where there is no net benefits, there is no Federal interest in the project.
27-17	13 If there was this much concern about flooding in this area, why did the city/county management allow continued development here? (Yes, I will be asking the city and county about this) You may ask if I looked at a map indicating flood plains before purchasing my home. Yes I did. I have two friends who have spoken to me about that map – one a hydrologist, and the other a geologist. There are VERY few places in California's Central Valley which are not technically in a flood plain. That's why I have flood insurance. So, with the implementation of Plan 7a, or one like it, should I drop my flood insurance???	Comment noted.
27-18	14 If "runoff from the area upstream of Thornton Ave is less than 800cfs for a 10% event and does not meet the minimum flow required to establish Federal Flood Control Authority" this is yet another reason to maintain the Mosher Levee as it is rather than spend a great deal of tax payer dollars on unnecessary levee improvements .	Comment noted.
27-19	I'm out of time. It's midnight. So other concerns will just have to wait for other opportunities to be aired. In case I have not been clear, I AM NOT IN FAVOR OF IMPROVEMENTS ON MOSHER SLOUGH LEVEE, and will be talking about this to any congress person who will listen – even a little.	Comment noted.
Letter 028		
28-1	1. Why was this process not advertised in local newspaper(s). A meeting was held on 4/8/15, from 1800-2000 hours; however, we observed no notice of such in the Stockton Record.	Notice of the release of the Draft Report for public review and the public workshop on April 8, 2015 was in the Stockton Record on March 10, 2015.

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28-2	2. When will plans be finalized?	Comment noted. It is assumed that the design phase of the project will take place between 2017 and 2019, provided Congress authorizes the project and provides appropriations.
28-3	3. How will real estate values be determined if encroachment on existing yards is necessary?	Please see response to comment 27-2.
28-4	4. What impact will this activity have on home values?	Please see response to comment 27-2.
28-5	5. How will we be able to sell our homes if this activity is found during a title search?	Please see response to comment 27-2.
28-6	6. How far in advance of actual construction will home owners be notified?	Please see response to comment 27-2.

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28-7	7. Will vegetation removal be one of the first activities? Does this include Valley Oaks?	If the project is authorized and funded, construction would be conducted over several years, with construction of a specific portion of levee generally beginning and ending prior to beginning construction on another portion of levee. In other words, all improvements will be made to a levee in one area before undertaking improvements to levees in another area. For a levee scheduled for construction, one of the first steps that would be undertaken would be to remove all vegetation from the levee crown and slopes and within the waterside and landside O&M easements, except where advanced engineering analyses determine that some waterside trees and shrubs may remain on the lower levee slope and/or within the easement area.
28-8	8. After today, who and how can we contact someone with concerns?	Please contact the Public Affairs Office of the Sacramento District, U.S. Army Corps of Engineers at (916) 557-5100 or spk-pao@usace.army.mil.
Letter 029		
29-1	I am opposed to the implementation of Plan 7a.	Comment noted.
29-2	I request that another public meeting be held, with more notice provided to the homeowners.	The study sponsors considered this request and determined that one public meeting following release of the Draft Report was sufficient.
Letter 030		
30-1	I'd like to start by saying, thank goodness for my neighbors. I, along with about 90% of Monticello Dr. had no idea of the proposed plans for work on Mosher Slough. It seems about 1/5 homes received a letter in the mail with a notice of the proposed plans. Seems pretty shady that there are plans as significant as this being pushed through the citizen/public comment phase. I never received a letter.	Diligent effort was made to mail a notice of availability to each property owner adjacent to the project area. Notification of the release of the Draft Report for public review were published in the Federal Register (February 27, 2015), the Stockton Record (March 10, 2015), and Dredging Today (March 2, 2015).

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30-2	I couldn't help but notice that the odds of having the 500 year flood are a dismal 0.2%. If I were a gambling kind of guy, I wouldn't be investing my money in the plans you guys have proposed. Updating levees and waterways in targeted portions doesn't seem like a great way to save the residents of Stockton from a flood. If levees will not flood in my backyard due to new improvement, but will flood a half mile down the road which will reach me in the case of a 500 year flood anyways, I don't see the benefit. I'm not an engineer, nor did I major in risk management, but It seems to me that improvements to just the south side of the levee doesn't do much for the citizens on the north side. Levee maintenance is a must, but I've seen the Mosher Slough stretch from Pershing Ave to Kelley Dr. improved and strengthened over the last few years with riprap, which did not involve impingement into people's property.	Comment noted.
30-3	The diagrams presented in the plans shows what the levee raising is. The Mosher Slough Levee already runs right up to the back of all the properties on Monticello Dr. and surrounding courts. A larger levee would decrease our yard size considerably. Also, there is mention of needing an easement access at the foot of the levee for an additional 10-15 feet. This would effectively reduce my back yard by around 50%, leaving my property near worthless. While the total cost of 800 million dollars dwarfs what my property is worth, it is still my hard earned property. Stockton home values are finally on the rebound and a project like this that would reduce my property size by about 25% would literally make my house value fall to less than what I owe on it, leaving me underwater. No pun intended. This home value hit would not only effect me, but every resident on Mosher Slough. the neighborhood is a working class neighborhood. The economic impact of the devaluation of everyone's property would be larger than I believe estimated. You're kicking the horse while it's trying to get back on its feet so to speak. There are several families whose house falls within the intended levee easement zone. I'm sure you personally would not want your house taken from you in an event like this.	Comment noted.
30-4	I'm also not a biologist, but one of the greatest parts of the Mosher Slough is the established wildlife. There are red ear slider turtles that breed every year in the slough. Their babies are seen sun bathing on the banks and on logs. Numerous species of ducks and waterfowl nest in the slough. They raise their young and then migrate when winter comes. Every fall, I have seen groups of salmon migrating up the slough on their annual spawning run.	Comment noted.

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	With the proposed vegetation stripping to prepare for the levee work, the entire ecosystem will be destroyed. The large oak trees that provide shade for my family in the hot summer will be cut or bulldozed over due to the increased size of the levee and vegetation clearing.	
30-5	There's not much else for me to say. Most of my concerns have been voiced here. Should these proposals be approved, and our property bought from us, it is never a fair market value, so it's not even R452worth me asking questions about how or who will provide the property valuation.	Comment noted.
30-6	It's an 800 million dollar investment with the hope of saving citizens life and property. With today's technology, the legitimate threat to life from the 0.2% 500 year flood is even smaller than the chance of the flood itself. So now the main goal is the protection of property? I'm sure insurance agencies are all hands on deck in support of a plan like this. I personally pay for flood insurance because of the minuscule chance of the 500 year flood, I don't also need my local and federal tax dollars spent on additional 500 year flood protection and my house value decreased all in one fell swoop.	Comment noted.
30-7	I'm sure insurance agencies are all hands on deck in support of a plan like this. I personally pay for flood insurance because of the minuscule chance of the 500 year flood, I don't also need my local and federal tax dollars spent on additional 500 year flood protection and my house value decreased all in one fell swoop.	Comment noted.
30-8	I appreciate the ILL advertised chance to voice my opinion about the plans, and also realize that there is a lot to do before these plans fall into place or are even ever approved. There are years between today and when these plans are dated to take place, but I believe that there are better options than R471Plan 7A.	Comment noted.
Letter 031		
31-1	I am a very concerned resident in the Northwestern Stockton neighborhood being considered for plans in "levee improvement". Please understand my (and OUR, since there are many of us being incredibly negatively affected) genuine and heartfelt concern over this pending decision. If this plan were to be put into affect, families would be forced to relocate from one of the last (of not absolute only) favorable locations in the Stockton area. My mother and father just purchased their beautiful home here less than two years ago and love where they live. I love where they live. This "plan" is outrageous and to put it mildly-- UNFAIR. There have to be	Comment noted.

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	solutions that don't include uprooting families. Please take our pleas into consideration. It would be appreciated so much.	
Letter 032		
32-1	As a resident whose property backs up to this beautiful oasis, I am completely against the proposed "levee improvements". My home in particular would be one of the properties that would fall within the 10 to 15 foot easement. The beautiful, statuesque oak trees would be removed displacing an assortment of wildlife. This area in particular makes one feel like we are not in Stockton. Many people enjoy exercising & nature watching etc. along this stretch. It is truly beautiful. I would hate to see my home demolished and if that were the case, how would the real estate value be determined? If I decided to sell my home now this would be a part of the title search! This is heartbreaking news for everyone living along this levee. It seems an extremely dramatic and drastic change. The water level here is very low year round. I hope the concerns of we as human beings and residents who wish to live here forever will be more than considered. As I write this from my back patio, I am admiring the true beauty that is Mosier Slough.	The commenter highlights the natural beauty of Mosher Slough and the role it plays in the lives of local residents. The commenter also expresses concern about the impact of project implementation on property values. Flood risk in the project area is described in Chapter 2, and in Chapter 5, Section 5.4.
Letter 033		
33-1	In reading your February 2015 report, I have concerns about the lasting and irreversible out-come to the loss of our rich farm-land and water supply. The end result being, city and county residents, will be affected by this irreversible loss.	Comment noted.
33-2	The city of Manteca is proposing a massive expansion of the existing RD17 levee beyond the scope of what is needed. Perhaps the City should not have allowed the building of homes in the flood plain to begin with. I understand how it may have become necessary for the city to protect these existing homes but not to the extent the city of Manteca is proposing. It seems as though the City is taking advantage of an opportunity to expand its' borders. Perhaps, the City of Manteca should consider placing a hold on building in those areas known to be in the flood plain. We are in the middle of a terrible drought.	Comment noted.
33-3	Our concerns are for the effects slurry walls, which will certainly be put in place to protect the levee from seepage, will do to our environment. 1. Wells (**pages 5-53, 5-54, 5-55); 2. Ground water depth (**5-54, 5-55); 3. Ruin crops due to the likelihood of higher ground water compacting roots; 4. Dairy and Pig Farms - affects due to higher flood water contacting those facilities; 5. No aquifer recharge (**pages 5-53, 5-54); 6. Dry aquifer ultimately leads to subsidence (**5-17); 7.	Comment noted. Potential future study of the RD 17 area would undertake appropriate analysis of potential impacts due to implementation of any project proposed.

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	Flood waters will rise in areas where it was a borderline incident in the past due to water displacement in areas due to levee construction in areas previously flooded	
33-4	I would like to urge you to oppose this massive expansion of the City of Manteca's proposed levee extension.	Comment noted.
Letter 034		
34-1	Same as 33-1.	See response to comment 33-1 above.
34-2	Same as 33-2.	See response to comment 33-2 above.
34-3	Same as 33-3.	See response to comment 33-3 above.
34-4	Same as 33-4	See response to comment 33-4 above
Letter 035		
35-1	Same as 33-1.	See response to comment 33-1 above.
35-2	Same as 33-2.	See response to comment 33-2 above.
35-3	Same as 33-3.	See response to comment 33-3 above.
35-4	Same as 33-4.	See response to comment 33-4 above.
Letter 036		
36-1	Same as 33-1.	See response to comment 33-1 above.
36-2	Same as 33-2.	See response to comment 33-2 above.
36-3	Same as 33-3.	See response to comment 33-3 above.
36-4	Same as 33-4.	See response to comment 33-4 above.
Letter 036		
Letter 037		
37-1	Same as 33-1.	See response to comment 33-1 above.
37-2	Same as 33-2.	See response to comment 33-2 above.
37-3	Same as 33-3.	See response to comment 33-3 above.
37-4	Same as 33-4.	See response to comment 33-4 above.

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Letter 038		
38-1	Same as 33-1.	See response to comment 33-1 above.
38-2	Same as 33-2.	See response to comment 33-2 above.
38-3	Same as 33-3.	See response to comment 33-3 above.
38-4	Same as 33-4.	See response to comment 33-4 above.
Letter 039		
39-1	Same as 33-1.	See response to comment 33-1 above.
39-2	Same as 33-2.	See response to comment 33-2 above.
39-3	Same as 33-3.	See response to comment 33-3 above.
39-4	Same as 33-4.	See response to comment 33-4 above.
Letter 040		
40-1	Same as 33-1.	See response to comment 33-1 above.
40-2	Same as 33-2.	See response to comment 33-2 above.
40-3	Same as 33-3.	See response to comment 33-3 above.
40-4	Same as 33-4.	See response to comment 33-4 above.
Letter 041		
41-1	Same as 33-1.	See response to comment 33-1 above.
41-2	Same as 33-2.	See response to comment 33-2 above.
41-3	Same as 33-3.	See response to comment 33-3 above.
41-4	Same as 33-4.	See response to comment 33-4 above.
Letter 042		
42-1	Same as 33-1.	See response to comment 33-1 above.
42-2	Same as 33-2.	See response to comment 33-2 above.
42-3	Same as 33-3.	See response to comment 33-3 above.

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42-4	Same as 33-4.	See response to comment 33-4 W500 W480 above.
Letter 043		
43-1	Same as 33-1.	See response to comment 33-1 above.
43-2	Same as 33-2.	See response to comment 33-2 above.
43-3	Same as 33-3.	See response to comment 33-3 above.
43-4	Same as 33-4.	See response to comment 33-4 above.
Letter 044		
44-1	Same as 33-1.	See response to comment 33-1 above.
44-2	Same as 33-2.	See response to comment 33-2 above.
44-3	Same as 33-3.	See response to comment 33-3 above.
44-4	Same as 33-4.	See response to comment 33-4 W526 above.
Letter 045		
45-1	Same as 33-1.	See response to comment 33-1 above.
45-2	Same as 33-2.	See response to comment 33-2 above.
45-3	Same as 33-3.	See response to comment 33-3 above.
45-4	Same as 33-4.	See response to comment 33-4 above.
Letter 046		
46-1	Same as 33-1.	See response to comment 33-1 above.
46-2	Same as 33-2.	See response to comment 33-2 above.
46-3	Same as 33-3.	See response to comment 33-3 above.
46-4	Same as 33-4.	See response to comment 33-4 above.
Letter 047 through Letter 056		
47-1	Same as 33-1.	See response to comment 33-1 above.
47-2	Same as 33-2.	See response to comment 33-2 above.

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47-3	Same as 33-3.	See response to comment 33-3 above.
47-4	Same as 33-4.	See response to comment 33-4 above.
Letter 057		
57-1	Same as 33-1.	See response to comment 33-1 above.
57-2	Same as 33-2.	See response to comment 33-2 above.
57-3	Same as 33-3.	See response to comment 33-3 above.
57-4	Same as 33-4.	See response to comment 33-4 above.
Letter 058		
58-1	Same as 33-1.	See response to comment 33-1 above.
58-2	Same as 33-2.	See response to comment 33-2 above.
58-3	Same as 33-3.	See response to comment 33-3 above.
58-4	Same as 33-4.	See response to comment 33-4 above.
Letter 059		
59-1	Same as 33-1.	See response to comment 33-1 above.
59-2	Same as 33-2.	See response to comment 33-2 above.
59-3	Same as 33-3.	See response to comment 33-3 above.
59-4	Same as 33-4.	See response to comment 33-4 above.
Letter 060		
60-1	Same as 33-1.	See response to comment 33-1 above.
60-2	Same as 33-2.	See response to comment 33-2 above.
60-3	Same as 33-3.	See response to comment 33-3 above.
60-4	Same as 33-4.	See response to comment 33-4 above.
Letter 048		

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	I own property at 21164, 21450, 21217 S Airport Way, Manteca CA 95337. I am concerned with the alignment and design of RD 17 levee extension segmenting my property and the adverse impacts I twill have to my farming operation. I farm property on both sides of the existing levee and the future proposed extension. I want to be informed on the process and time frame within each event or study that is projected to be completed. I have concerns with any irrigation water, wells, and other water sources that will be impacted with the proximity of the levee. I want to be added to all the 408 and all mailing lists that pertain to the RD-17 levee. VERBAL Comment at public workshop: Will the new levees have cutoff walls? If so, how will this affect domestic and agricultural wells in the vicinity, particularly those that fall within the new levee easement? Has heard different numbers on the easement. What is the easement distance? What if my well falls within the easement or within 30 or 50 feet of the easement? Will my well be too close to the levee? What if existing infrastructure that falls within the new levee easement. The proposed extension is 20 feet from my bedroom window and 35 feet from my brother's door. Have domestic and agricultura1 wells. If move levee 900 feet south that would avoid all of the infrastructure. This would be his southern border. There is no other infrastructure on either side of that property line. Could more the alignment north, but that would have increased density of homes there. Segmenting property. Has 3 different wells. What are my personal impacts and the impacts on the community? Septic tank would be within 10 feet of the levee. Does not feel in the loop despite efforts to stay informed and participate in relevant meetings. Manteca Bulletin is not widely distributed.	Comment noted.
Letter 049		
	Levee in District 17, is proposed to be placed between Peach Ave and Fig Ave in the middle of 3 of my vineyards. These vineyards have been producing since 1965 and or 50+ years. Why should this levee disrupt my operation of 50 years? Why can't this be placed on the property line not to disrupt my operation?	Comment noted.
Letter 050		
50-1	The "7a" proposal would be of great value to our neighborhood (the "Country Club" neighborhood). We support this proposal, and hope Congress will fund it right away. Thank you.	Comment noted.
Letter 051		

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051-1	I would like to protest the current levee proposal that will split my property in half. How can I farm my land when it is cut in half? Please check into dredging the river. Also please look into running the existing levee which ends on west side or airport down parallel with Airport Way. There are many families whose land will flood if you continue on present course. Take the course that will protect the most families.	Comment noted.
51-2	Please check into dredging the river.	During the plan formulation process, many types of measures, including dredging the river, were considered. Dredging as a flood risk management measure was eliminated from detailed consideration because it is very costly to implement in relation to the benefits that would be realized.
51-3	Also please look into running the existing levee which ends on west side or airport down parallel with Airport Way.	Comment noted.
51-4	There are many families whose land will flood if you continue on present course. Take the course that will protect the most families.	Comment noted.
Letter 052		
52-1	I want to know why the Army Corps of Engineers don't dredge out the S.J. River. My family has owned & resided on Oleander Road in Manteca (in between Fig and Peach Ave) for 95 years. We have never flooded! If you drive out there you will find us on a natural hill. We are 17 ft higher than the City of Manteca. I believe you need to dredge the river out making the waterway deeper & wider & re-enforce the existing levees. Why put new levees into prime farmland and destroy someone's home which contains so much for our family.	Please see the response to Comment 51-2 above. The majority of the work proposed in the TSP, which is now the Recommended Plan, focuses on strengthening existing levees. In some limited areas, new or repositioned levees are proposed to better address flood risk concerns or to better address both flood risk and natural resource concerns.
Letter 053		
53-1	1. Construction – Fugitive dust emissions The Road Construction Emission Model (RCEM) results were not included within the Draft FR/EIS/EIR. These RCEM results used to estimate the construction and fugitive dust emissions should be submitted to the District to allow the District to assess the project's potential impact on air quality. The Draft FR/EIS/EIR states that the emissions shown in the tables (Alternative Annual Construction Emissions) already accounted for fugitive dust reductions required by District Regulation VIII. The District notes that although compliance with Regulation VIII substantially reduces project specific fugitive dust emissions, it may not be sufficient to reduce project specific emissions to less than significant	The RCEM results summaries for each alternative have been included in Appendix A-11 of the Final FR/EIS/EIR.

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	levels. Referral documents should include the Road Construction Emission Model results that were used to estimate the construction and fugitive dust emissions and emissions reduced through compliance with Regulation VIII.	
53-2	2. Construction - NOx Emissions The District recommends that Draft FR/EIS/EIR include a description clarifying how the mitigation measures for reducing construction exhaust emissions will implemented and enforced, i.e. through permit conditions, agreements, or other legally binding instruments as required by CEQA Guidelines §15126.4, subdivision(a)(2). The Draft FR/EIS/EIR identifies the listed alternatives: 7a, 7b, 8a, 8b, 9a, 9b. It concluded that construction NOx emissions for these alternatives would have a potentially significant impact on air quality but with mitigation the impact would be reduced to a less than significant impact. The mitigation measures identified in the Draft FR/EIS/EIR would focus on reducing NOx emissions by requiring either Tier 3 equipment for all off-road vehicles, or enter into a Voluntary Emission Reduction Agreement (VERA) with the District. Per the Draft FR/EIS/EIR, the VERA would require payment of a fee to the District that would be used by District to purchase NOx emission reductions that would be used to offset all NOx emissions during years when the Project's unmitigated NOx emissions exceed ten tons per year. The District notes that in order to conclude that the construction exhaust emissions would be less than significant, mitigation measures reducing construction exhaust emissions must be fully enforceable through permit conditions, agreements, or other legally binding instruments (CEQA Guidelines §15126.4, subdivision(a)(2)).	The commenter states: "to conclude construction emissions would be less than significant, mitigation measures would be fully enforceable through permit conditions, agreements, or other legally binding instruments". The mitigation measure requires the use of Tier 3 engines for all off-road construction equipment or entering into a Voluntary Emission Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District. Entering into a VERA would constitute a legally binding instrument. The mitigation measure requiring Tier 3 engines has been revised for Alternatives 7a, 7b, 8a, 8b, 9a, and 9b to ensure that it is legally enforceable.
53-3	3. Voluntary Emission Reduction Agreement (VERA) The District recommends the following phrasing for the Voluntary Emission Reduction Agreement: "Six months prior to the commencement of construction, the project proponent shall enter into a Voluntary Emissions Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to mitigate construction and operational project emissions for criteria pollutants to less than significant levels." The District appreciates that a VERA is listed as a potential mitigation measure for reducing project NOx emissions. A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects,	The commenter (SJVAPCD) explains how VERAs are implemented to mitigate emissions. The comment is noted.

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	with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate project specific emissions by providing funds for the District's Incentives Programs.	
53-4	4. Reporting and Monitoring Program Prior to certifying the FR/EIS/EIR document, it should be revised to include the reporting and/or monitoring program for the proposed mitigation measures (i.e., TIER III or VERA) and be made available for public review. The Draft FR/EIS/EIR states that "Upon certifying the document, the CEQA lead agencies would adopt a reporting or monitoring program for the changes made to the project or the conditions of project approval to mitigate or avoid significant effects on the environment. Full compliance would be achieved when the Final FR/EIS/EIR and Notice of Determination (Statement of Overriding Consideration) is submitted to the Office of Planning and Research." It is unclear how the lead agencies would pursue and enforce the mitigation options (i.e., Tier III or VERA), and it is unclear whether an opportunity to review the reporting and/or monitoring program will be provided.	As explained in the response to comment 53-2, the mitigation measures designed to reduce NOx emissions have been modified to ensure that they are enforceable. Those changes also explain how a reporting and monitoring program can be reviewed by the public.
53-5	5. Greenhouse Gas (GHG) Emissions On page 5-82 of the Draft FR/EIS/EIR, "SJVAPCD has developed screening levels for GHG emissions for projects for which it is lead agency. However, SJVAPCD's GHG thresholds do not apply to projects for which it is not the lead agency (Willis, J. pers. comm.)" should be removed as it is incorrect. District Policy Addressing GHG Emission Impacts for Stationary Source Projects under CEQA When Serving as the Lead Agency and District Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA can be used by lead agencies to assess the significance of GHG impact. On December 17, 2009, the District's Governing Board adopted the District Policy: Addressing GHG Emission Impacts for Stationary Source Projects under CEQA When Serving as the Lead Agency. In addition, the District's Governing Board also approved the guidance document: Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. This guidance is intended to assist Valley land-use agencies in addressing the impacts of greenhouse gases (GHG) in their role as lead agency for California Environmental Quality Act (CEQA) purposes. This guidance	The final FR/EIS/EIR text has been modified to address this comment regarding SJVAPCD GHG guidance.

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	establishes a streamlined process that can be used to evaluate the significance of project specific GHG emission impacts on global climate change, based on the use of Best Performance Standards to reduce project specific GHG emissions. In support of the policy and guidance document, District staff prepared a staff report: Addressing Greenhouse Gas Emissions under the California Environmental Quality Act. These documents adopted in December of 2009 continue to be the relevant policies to address GHG emissions under CEQA. District Policy and Guidance do not preclude a lead agency from developing and establishing its own GHG guidance and thresholds of significance.	
Letter 054		
54-1	TR Land Company disagrees with selection of Alternative 7a as the Tentatively Selected Plan (TSP). We do not believe that Alternative 7a will adequately meet the flood risk reduction objective or the 200-year level of protection objective. We are asking that RD17 Alternatives not be removed from further consideration in the Draft Feasibility Study (7b, 8b, 9b). If not removed from the Feasibility Study, we believe Alternative 7b would become the TSP and would include RD17 improvements.	USACE planning regulations require that USACE identify the policy compliant plan that maximized National Economic Development (NED) Plan unless a Locally Preferred Plan (LPP) is identified and supported by the non-Federal sponsor/s. Because the "b" alternatives were not compliant with EO 11988 and wise use of floodplains, they are not eligible for selection as the Tentatively Selected Plan or the Recommended Plan.
54-2	1. Removal of RD17 Improvements from the Feasibility Study Appears to Conflict with Prior Federal Actions. For over 165 years, RD17 levees have been endorsed by Congress, the USACE and by FEMA to provide protection for development. We fail to understand why the USACE chose a different analysis methodology to determine that the RD17 levees do not provide IOO-year flood protection, when those levees have been certified by FEMA for 25 years.	Increased scrutiny on continued Federal investment in floodplains planned for development is what led to removal of RD-17. The analysis of the levees followed accepted USACE policy and guidance. This does not affect current FEMA accreditation.
54-3	2. FEMA is Responsible for Certifying 100-Year Levee Protection, yet we are concerned with the recent statements by the USACE that the FEMA certification may not be relied upon regarding RD17 levees.	Comment noted.
54-4	3. The USACE interpretation of EO 11988 appears overstated when it states the RD17 levees do not provide 100-year flood protection and should not be improved to provide 100-year protection. We would like to understand the impact of this EO 11988 interpretation on proposed large, federally funded projects within RD17. We would also like to understand the impact on Federal facilities in RD17 if levees cannot be improved to provide 200-year flood protection.	Interpretation of Executive Order 11988 is compliant with USACE policy. USACE does not formulate to a specific event or level of protection, but to the identified National Economic Development Plan. Proposed Federal projects within the study area are required to comply with Federal law, policies, and

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		guidance including EO 11988, so it is not possible to forecast affects at this time.
54-5	4. The USACE can Change the TSP in the Final Feasibility Report. All potential impacts of RD17 improvements are documented and analyzed in the Draft EIS/EIR, so the USACE can determine in the Final LSRFS that the TSP has changed to Alternative 7b. We are asking the USACE to make this change.	Comment acknowledged. The Recommended Plan is Alternative 7a. No new information, regulations, or policies have been identified that would support recommendation of any other alternative.
54-6	5. If RD17 Improvements are not in the TSP, 43,000 People Remain at Risk. The Draft plan states that the current TSP will result in no additional risk reduction for 43,000 people and critical infrastructure in RD17. We understand this to mean that the USACE has determined that the RD17 levees do not provide 100-year protection, and they do not believe they should be improved to provide that protection. The LSJRFS confirms that the USACE does not have land use authority. FEMA continues to certify 100-year protection from RD17levees. New development in areas of the 200-year floodplain that are less than three feet deep would not be stopped from development by SB5. We are concerned that these expanded development areas, along with the 43,000 existing residents, would be precluded from improved levee protection by excluding RD17 from the Feasibility Study.	As presented in Section 3.6 of the document, further Federal investment in RD-17 is not compliant with Executive Order 11988 at this time. This does not preclude future flood risk management studies in the future. Compliance with SB-5 is a responsibility of the local communities and unlikely to be justifiable when analyzed for identification of a National Economic Development plan for the area.
54-7	6. The current TSP recommends approval of a $1 billion levee improvement project located in the City of Stockton. This project will require hundreds of millions of dollars in local funding. The local match would be very difficult for any city to fund from a mostly developed area, as there is no mandate for this additional protection for an already developed area. Also, construction of levees that increase protection beyond 100-year will not result in any reduction in flood insurance rates if FEMA already certifies 100-year flood protection. We are concerned about how the improvements can actually be built if the local share cannot be funded.	The non-Federal sponsors, the San Joaquin Area Flood Control Agency and the Central Valley Flood Protection Board, have indicated their support and willingness to participate in construction of the Recommended Plan. Prior to construction, the non-Federal partners will have to self-certify financial ability to participate in the project. Should that not be possible, there will be no project.
54-8	7. RD17 and local municipalities are ready to improve our levees. RD17, in conjunction with DWR, completed Phases 1 and 2 of their recent levee improvements. Phase 3 improvements are being reviewed now by the USACE. RD17 is cooperating with the cities of Lathrop and Manteca in preliminary design of ULOP improvements to provide RD17 with 200-year flood protection. Lathrop has applied for an Urban Flood Risk Reduction Grant from the State to share the cost of designing ULOP levee improvements. And finally, the Flood Protection General Plan Amendment has been drafted and delivered to the Flood Protection Board for review, as required by SB5. It is only because there is new development proposed	Noted.

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	for these areas protected by RD17 that each municipality and jurisdiction can afford to pay its share of the levee improvement costs.	
54-9	In summary, land within the limits of RD 17 has already been flood protected, approved or development, annexed, and has urban infrastructure in place. We believe that inclusion of this land within the Lower San Joaquin River Feasibility Study should not conflict with EO 11988. If you have any questions regarding this letter, please feel free to call me at the number above or email me at eddie@atlaspropertiesinc.com.	Noted. As presented in Section 3.6 of the document, further Federal investment in RD-17 is not compliant with Executive Order 11988 at this time. This does not preclude future flood risk management studies in the future.
Letter 055		
55-1	EPA supports the Army Corps of Engineers goal of a durable flood protection system for populations and property in the Lower San Joaquin River study area, and also encourages a broader approach to flood protection and restoration. The Notice of lntent for the project published on January 15, 2010 indicated dual goals of flood damage reduction and ecosystem restoration. We note, however, that this feasibility study has since been limited to analysis of flood risk reduction measures and does not include measures and alternatives for ecosystem and floodplain restoration. The DEIS states that this Feasibility Study is to be called an "Interim Feasibility Report", indicating that additional studies under the Sacramento- San Joaquin Basin Streams, California Comprehensive Study authority can be authorized at a future date (page 1-4). In those future studies, EPA recommends an evaluation of the river and basin for the entire extent of the study area that would identify space and suitable conditions for a range of river flows and functions, including reestablishment of floodplains, establishing flood control basins, and conveying water to wetlands. While the DEIS identifies the primaly risk of flooding in the study area to be geotechnical failure of existing levees, EPA encourages future evaluation of increased flood carrying capacity to further reduce flood risk for the entire study area.	Noted.
55-2	Based on our review of the DEIS, we have rated the preferred alternative- Alternative 7a- and the document as Environmental Concerns- Insufficient Information (EC-2). Please see the enclosed "Summary of EPA Rating Definitions." We recommend that the Final Environmental Impact Statement include additional information regarding the impacts to water quality and measures that will minimize those impacts. We also recommend committing to additional measures to mitigate for air quality impacts and applying for a variance to the standard USACE	The response to comment 55-6 addresses commenter's request for additional air quality mitigation. W591

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	vegetation policies. Finally, we recommend that the FEIS provide additional information about waters of the United States, impacts from climate change, and implications of the President's January 30, 2015 Executive Order 13690 on flood risk management. Please see the enclosed detailed comments for additional concerns and recommendations.	
55-3	Recommendations: Update the discussion of the 303(d) impaired waters to describe impairments in all water bodies in the study area. Specifically identify which listed impairments would be degraded by the proposed project. In advance of the FEIS, coordinate with the Regional Water Quality Control Board, National Marine Fisheries Service, and California Department of Fish and Wildlife to identify the design and operating criteria that will minimize water quality impacts and commit to those measures in the FEIS and Record of Decision.	A table identifying impaired waters, and their impairments in the project area is included in the final FR/EIS/EIR in Appendix A-4. The table covers Mosher Slough, Tenmile Slough, Fourteenmile Slough, Stockton Ship Channel, Smith Canal, Lower Calaveras River, Old Mormon Slough, San Joaquin River, French Camp Slough, and Duck Creek (Walker Slough). Section 5.5.4 has been revised to clarify which impairments could be degraded by the closure structures. USACE has consulting with USFWS under the Endangered Species Act (ES) and the Fish and Wildlife Coordination Act, and with the National Marine Fisheries Service under the ESA and the Magnuson-Stevens Fishery Conservation and Management Act. The requirements and recommendations of these agencies has been considered and incorporated into the FEIS, as appropriate. The Regional Water Quality Control Board and the California Department of Fish and Wildlife each received a copy of the Draft FR/EIS/EIR. Both agencies provided comments on the document, which are included, together with our responses in Appendix A-6. USACE has further coordinated with the Board during preparation of the FEIS. Water Quality Certification will be sought during PED if this project is authorized and funded by Congress. Avoidance and minimization measures are identified in Section 5.5.10.
55-4	Recommendations: EPA recommends completing a jurisdictional delineation prior to publication of the FEIS and including updated quantity and locations of	Chapter 5, Section 5.7.11 of both the draft and final FS/EIS/EIR state that prior to construction, formal

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	anticipated impacts to waters of the United States in the FEIS. Identify the least environmentally damaging practicable alterative and commit to compensatory mitigation located as close to the project site as possible to preserve local habitat function.	wetland delineations would be completed. Language has also been added to clarify how significant changes in acreages, should they occur, be addressed. The least environmentally damaging practicable alternative is identified in Chapter 4 (Section 4.2.1) also in 404(b)(1) analysis included in Appendix A-4. Chapter 8, Section 8.1.2 documents that compensatory mitigation will be located as close to the project as feasible and consistent with other laws, regulations, and policies.
55-5	Recommendations: In the FEIS, indicate the status of the vegetation variance application. Include mitigation for temporal loss of vegetation and commit to implementing off-site mitigation or purchasing mitigation credits prior to the removal of vegetation.	Chapter 4 has been revised to include Section 4.7 to highlight information on ETL 1110-2-583 and how this project is addressing compliance with the ETL. The suitability of the levees included in the proposed project will be determined after detailed engineering and technical analysis. This analysis will be conducted during preconstruction engineering and design if the project is authorized and funded. Justified compensatory mitigation, including mitigation for temporal losses, will be accomplished prior to removal of vegetation, where feasible. Mitigation commitments will be documented in Chapter 8 of the Final Report and in the Mitigation, Monitoring, and Adaptive Management Plan included as Appendix A-10 of the Final Report.
55-6	Recommendations: If applicable, include a copy of an adopted and signed VERA in the FEIS and ROD. In addition to the measures required to meet applicable local, state, and federal requirements, EPA recommends committing to additional on-site mitigation measures, such as the following, to reduce NOx emissions before determining the need to fund off-site mitigation: Mobile and Stationary Source Controls: • Minimize use, trips, and unnecessary idling of heavy equipment. • Maintain and tune engines per manufacturer's specifications to perform at EPA certification levels, where applicable, and to perform at verified standards applicable	The commenter requests several measures to control NOx emissions. As described in the EIR/EIS, the project includes mitigation that would reduce NOx emissions below both the SJVAPCD's CEQA significance threshold and the Federal conformity threshold of 10 tons per year. The commenter includes several recommended measures to reduce NOx emissions before determining the need to fund off-site mitigation, such as minimizing use, trips, and unnecessary idling of heavy equipment. However, it

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	to retrofit technologies. • Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. The California Air Resources Board has a number of mobile source anti-idling requirements which should be employed (http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm). • Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations. • In general, commit to the best available emissions control technologies for project equipment: On-Highway Vehicles - On-highway vehicles should meet or exceed the US EPA exhaust emissions standards for model year 2010 and newer heavy-duty on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, etc.). 2o Nonroad Vehicles & Equipment - *Nonroad vehicles & equipment should meet or exceed the US EPA Tier 4 exhaust emissions standards for heavy-duty nonroad compression ignition engines (e.g., construction equipment, nonroad trucks, etc.).3	is extremely difficult to enforce and/or estimate the emission benefits of such measures. In addition, the commenter recommends the use of Tier 4 equipment. However, the analysis included in the EIR/EIS shows that Tier 3 or better equipment can be used to minimize NOx emissions to less than significant levels. Consequently, no changes have been made to the NOx mitigation measure as a result of this comment.
55-6 cont	Continued: o Low Emission Equipment Exemptions - The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease R591ew equipment, but the funds are not yet available. Administrative controls: • Prepare an inventory of all equipment prior to construction. • Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow. • Identify where implementation of mitigation measures is rejected based on economic infeasibility.	
55-7	Recommendations: In the FEIS, update the Regulatory Framework section of the Air Quality and Climate Change section to reflect the new CEQ draft guidance. Indicate whether and, if so, how sea level change was incorporated into the analysis of environmental impacts. Add a discussion of how climate change would contribute to the cumulative effects of the proposed project.	Section 5.8 has been renamed, "Air Quality and Green House Gas Emissions." Section 5.8.1, the Regulatory Framework has been revised to describe the CEQ draft guidance. Section 5.8.1, Environmental Setting. Cumulative effects are addressed in Section 5.23.5 (Climate Change). Section 5.4.1, Assessment Method (Hydrology and

Comment #	Comment	Response
		Hydraulics), was revised to explicitly state that the analyses conducted for the Hydrology and Hydraulics section are consistent with ER 1100-2-8162, Incorporating Sea Level Changes in Civil Works Programs. Climate change is also discussed in Section 5.12, Special Status Species. Section 5.23.5, Cumulative Impact Analysis, includes a discussion of GHG emissions.
55-8	Recommendation: Address EO 13690 in the FEIS, and discuss its potential implications over the twelve year design and implementation horizon for the project, including how project costs and benefit-cost analyses could be affected.	EO 13690 revises EO 11988. EO establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder.
55-9	Recommendations: In the FEIS, evaluate the suitability of existing USACE dredged material stockpiles for construction of the project. Commit to maximize the use of already stockpiled dredged material.	Previously-dredged material is typically not suitable for levee construction. If the project is authorized and funded, during the PED phase existing stockpiled material, including dredged material, will be evaluated to determine its suitability for use in project construction.
55-10	Recommendation: Explore additional alternative methods of erosion control in the FEIS, including bio-engineering, hydro-seeding, controlled planting, and construction of engineered logjams. Include a discussion of which alternative methods are compatible with USACE vegetation policy and meet project needs.	The bank protection design established in the project description of the Draft and Final Report uses rip rap because this allows consideration of the largest potential environmental impact that would be associated with erosion management. During the preconstruction engineering and design phase, USACE would refine these designs on a site-specific basis based on the best available technical data. Other methods, including geotextile biotechnical measures, would be evaluated for erosion protection as part of this refinement.
55-11	Recommendation: In the FEIS, discuss the status of consultation with tribes affected by the project and the impacts and mitigation measures identified through that consultation. Include the tribes in the distribution list of the FEIS and Record of Decision.	Chapter 6, Section 6.3 has be updated to reflect the current status of consultation with tribes. The Programmatic Agreement (PA) in Appendix A-3 of the Draft Report includes stipulations Stipulation III - "The HPMP [which provides the framework which remaining identification, evaluation of eligibility,

Comment #	Comment	Response
		findings of effect, and resolution of adverse effect efforts] shall be developed after execution of the Agreement, but before construction commences." Stipulation IV - "The Corps shall complete any identification and evaluation, as necessary, any evaluation of effects to cultural resources as construction details become available." Additionally, the PA outlines many potential treatment options for adverse effects to historic properties, not limited to data recovery. These potential treatment options would be developed in consultation with the SHPO and Native American Tribes. The Draft Integrated Report was provided to, and the Final Integrated Report will be provided to, the following Tribes: Wilson Rancheria, Nototomne/Northern Valley Yokuts, Californian Valley Miwok Tribe, Ione Band of Miwok Indians, and Buena Vista Rancheria Me-Wuk Indians.
Letter 056		
56	Transmitted comments from the CVRWQCB (addressed to SJAFCA). This comment information is already included in our spreadsheet.	No response needed.

Introduction

This appendix provides responses to public and agency comments on the Lower San Joaquin River Feasibility Study (LSJR FS) Draft Feasibility Report (FR)/Environmental Impact Statement (EIS)/Environmental Impact Report (EIR), as received during the public comment period.

Public Comment Summary

The draft FR/EIS/EIR was circulated for public review beginning on February 27, 2015. The notice of availability (NOA) was published in the Federal Register on February 27, 2015. The draft FR/EIS/EIR was made available both on the Sacramento District, Corps of Engineers website as well as the website for the Central Valley Flood Protection Board. Hard copies of the draft FR/EIS/EIR were provided to area libraries. Letters and/or DVD copies of the FR/EIS/EIR were sent to interested parties, local residents, and to the agencies and elected officials listed in Section 6.4 of the FR/EIS/EIR. Public workshops were held during the review period to provide additional opportunities for comments on the draft documents. All comments received during the public review period were considered and incorporated into the final FR/EIS/EIR as appropriate. The meeting location, date and time was as follows:

- April 8, 2015, Stockton Civil Auditorium- 525 North Center Street, Stockton (6-8 PM)

At the meeting, comments were solicited through the use of forms provided. Additionally, comments could be submitted through mail or electronic mail. Oral and written comments were made throughout the series of meetings by local, State, and Federal agencies, community organizations, and individuals.

During the Draft EIS public review period, a total of 60 comments were received from the public in the following manner:

- 55 different parties commented, including 2 Federal agencies, 3 State of California agencies, 10 local agencies and organizations, and 40 private citizens.
- 5 left hand-written comment cards at the meetings.

A summary of the major issues from the public comments are included below. Original letters, e-mails, and the transcripts of the public hearings follow. Responses to the public comments are included in the table that follows.

Responses to Primary Comments

Public comments on the draft documents focused in part on:

- The proposed removal of the RD 17 Alternatives from the Feasibility Study.
- Whether the project will provide adequate 200 year flood protection.
- The effects of the project on adjacent private property.
- The effects of the project on the environment including air, water, fish, and wildlife during and after construction.

Matrix of Comments and Responses

Change scoping meeting to public workshop

The following pages include the posters from the public scoping meeting. Following the posters are all public comments received and a matrix of the Corps' responses to those comments. The responses are annotated to refer back to the corresponding letters and comments that precede them.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA, 95814-2922

REPLY TO
ATTENTION OF

Environmental Resources Branch

FEB 23 2015

TO ALL INTERESTED PARTIES:

The draft integrated interim Feasibility Report and joint Environmental Impact Statement/Environmental Impact Report (FR/EIS/EIR) for the Lower San Joaquin River Feasibility Study, California, is enclosed for your review. The U.S. Army Corps of Engineers (Corps) is conducting this interim study to address flood risk management in a specific area of the Sacramento-San Joaquin Basin Streams, California, investigation authorized by the Flood Control Acts of 1936 and 1938. The Corps is the Federal lead agency; the Central Valley Flood Protection Board, represented by the California Department of Water Resources (State), and San Joaquin Area Flood Control Agency (SJAFCA) are the non-Federal sponsors for the study.

The draft FR/EIS/EIR presents the draft findings of the Feasibility Study, which formulates and evaluates the benefits, costs, and environmental effects of alternative plans to improve flood risk management in and near the cities of Stockton, Manteca, and Lathrop in the San Joaquin Valley. Based on the evaluation, the Corps has identified a Federal interest in at least one alternative plan to reduce the risk of flooding in the study analysis area, while minimizing adverse environmental effects to the extent possible.

This draft FR/EIS/EIR integrates plan formulation with documentation of environmental effects of the alternative plans and meets both the requirements of the National Environmental Policy Act of 1969, as amended (P.L. 91-190), and the California Environmental Quality Act (Pub. Res. Code §21000 et seq.). These requirements include making the document available for public and agency information, review, and comment. The draft FR/EIS/EIR is now available on Sacramento District's website at http://www.spk.usace.army.mil/Media/USACEProjectPublicNotices.aspx and is also available for review at the libraries listed below:

- Cesar Chavez Central Library, 605 N. El Dorado Street, Stockton, California 95202
- Manteca Public Library, 320 W. Center Street, Manteca, California 95336
- Lathrop Branch Library, 15461 Seventh Street, Lathrop, California 95330

The public review period for the draft FR/EIS/EIR extends from February 27, 2015 to April 13, 2015. During that time, the Corps, the State, and SJAFCA will host a

public meeting to discuss the status of the study, present the draft results of the FR/EIS/EIR, and encourage questions and comments. The location and time for the meeting is provided below:

Stockton Civic Auditorium, South Hall
525 North Center Street
Stockton, California 95202
April 8, 2015
6:00 p.m. – 8:00 p.m.

All comments received by April 13, 2015, will be considered and incorporated into the final FR/EIS/EIR, as appropriate. Specific responses will also be included in a comments and responses appendix to the final document. Please send any questions and comments to: U.S. Army Corps of Engineers, Sacramento District, Attn: Mr. Tyler Stalker, Public Affairs Specialist, 1325 J Street, Sacramento, California 95814, or email: Tyler.M.Stalker@usace.army.mil. Thank you for your interest in this study.

Sincerely,

Alicia E. Kirchner
Chief, Planning Division

Enclosure

number: (202) 564–1404; email address: *lintner.colby@epa.gov.*

Additional information on this activity can be obtained from: Scott M. Sherlock, Attorney Advisor, Office of Pollution Prevention and Toxics (OPPT), Office of Chemical Safety, Pesticides and Prevention (OCSPP), Environmental Protection Agency, 1200 Pennsylvania Ave., Washington, DC 20460–0001; telephone number (202) 564–8257; email address: *sherlock.scott*@epa.gov.

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554–1404; email address: *TSCA-Hotline@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

This action is directed to the public in general. This action may, however, be of interest to all who manufacture, process, or distribute industrial chemicals. Since other entities may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

B. How can I get copies of this document and other related information?

The docket for this action, identified by docket identification (ID) number EPA–HQ–OPPT–2003–0004, is available at *http://www.regulations.gov* or at the Office of Pollution Prevention and Toxics Docket (OPPT Docket), Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the OPPT Docket is (202) 566–0280. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

II. What action is the Agency taking?

In the Spring of 2014, consistent with 40 CFR 2.209, the FDA requested access to information substances that may be present in foods (including animal food and feed), animal drugs, and cosmetics which is collected under the authority of the TSCA and FIFRA. This action gives notice that FDA will be given access to materials collected through the authority of TSCA and FIFRA, including information claimed as CBI. The access to this material is contemplated in a memorandum of understanding between the two agencies. The expectation is that the two agencies will share, on a reciprocal and as-needed basis, information, including non-public information, which may facilitate implementation of the agencies' respective programs. This activity is intended to maximize the utility of data collected under those statutes, and enhance the efficiency of the participants' regulatory processes and facilitate better risk management activities.

EPA is issuing this notice to inform all submitters of information under all sections of TSCA and FIFRA, that EPA may provide FDA access to these CBI materials on a need-to-know basis only. All access to TSCA and FIFRA CBI under this agreement will take place at FDA Headquarters located at 4300 River Road, College Park, MD.

Clearances for access to TSCA and FIFRA CBI under this arrangement may continue until terminated by either party.

FDA personnel will be briefed on appropriate security procedures before they are permitted access to the CBI.

Authority: 15 U.S.C. 2601 *et seq.*

Dated: February 23, 2015.

Mario Caraballo,

Acting Director, Information Management Division, Office of Pollution Prevention and Toxics.

[FR Doc. 2015–04149 Filed 2–26–15; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–9019–7]

Environmental Impacts Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–1399 or *http://www.epa.gov/compliance/nepa/*

Weekly receipt of Environmental Impact Statements

Filed 02/16/2015 Through 02/20/2015 Pursuant to 40 CFR 1506.9.

Notice

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *http://www.epa.gov/compliance/nepa/eisdata.html.*

EIS No. 20150041, Draft EIS, NPS, CA, Alcatraz Ferry Embarkation, Comment Period Ends: 05/20/2015, Contact: Samantha Pollak (415) 561–4700.

EIS No. 20150042, Final EIS, NPS, NV, Jimbilnan, Pinto Valley, Black Canyon, Eldorado, Ireteba Peaks, Nellis Wash, Spirit Mountain, and Bridge Canyon Wilderness Areas, Lake Mead Wilderness Management Plan, Review Period Ends: 04/03/2015, Contact: Greg Jarvis (303) 969–2263.

EIS No. 20150043, Final EIS, FERC, PR, Aguirre Offshore GasPort Project, Review Period Ends: 03/30/2015, Contact: Gertrude Johnson (202) 502–6692.

EIS No. 20150044, Draft EIS, USACE, CA, San Joaquin River Basin Project, Comment Period Ends: 04/13/2015, Contact: Tanis Toland (916) 557–6717.

EIS No. 20150045, Final Supplement, USDA, BLM, UT, Leasing and Underground Mining of the Greens Hollow Federal Coal Lease Tract UTU–102, Review Period Ends: 04/17/2015, Contact: Thomas Lloyd (USDA) (435) 636–3596 and Steve Rigby (BLM) (435) 636–3604.

The U.S. Department of the Interior's Bureau of Land Management and the U.S. Department of Agriculture's Forest Service are joint lead agencies for above project.

EIS No. 20150046, Final EIS, USFS, MT, East Deer Lodge Valley Landscape Restoration Management Project, Review Period Ends: 03/30/2015, Contact: Alex Dunn (406) 683–3864.

Amended Notices

EIS No. 20140300, Draft EIS, BLM, NV, Las Vegas and Pahrump Field Offices Draft Resource Management Plan, Comment Period Ends: 03/09/2015, Contact: Lee Kirk (702) 515–5026. Revision to FR Notice Published 10/10/2014; Extending Comment Period from 02/06/2015 to 03/09/2015.

Dated: February 24, 2015.

Cliff Rader,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2015–04139 Filed 2–26–15; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

[DA 15–184]

Federal Advisory Committee Act; Technological Advisory Council

AGENCY: Federal Communications Commission.

ACTION: Notice.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2010012027

Project Title: Lower San Joaquin River Feasibility Study

Lead Agency: San Joaquin County Area Flood Control Agency
Contact Person: Tyler Stalker
Mailing Address: U.S. Army Corps of Engineers, Sacramento District, 1325 J Street
Phone: (916) 557-5100
City: Sacramento Zip: 95814
County: San Joaquin

Project Location: County: San Joaquin
City/Nearest Community: Stockton, Manteca, Lathrop
Cross Streets:
Zip Code:
Lat. / Long. (degrees, minutes, and seconds): ____° ____′ ____″ N/ ____° ____′ ____″ W
Total Acres:
Assessor's Parcel No.:
Section: Twp.: Range: Base:
Within 2 Miles: State Hwy #: 99, I-5
Waterways: San Joaquin River
Airports:
Railways:
Schools:

Document Type:

CEQA:
- ☐ NOP
- ☐ Early Cons
- ☐ Neg Dec
- ☐ Mit Neg Dec
- ☐ Draft EIR
- ☐ Supplement/Subsequent EIR (Prior SCH No.)
- Other

NEPA:
- ☐ NOI
- ☐ EA
- ☐ Draft EIS
- ☐ FONSI

Other:
- ☒ Joint Document
- ☐ Final Document
- ☐ Other

RECEIVED
FEB 26 2015
STATE CLEARING HOUSE

Local Action Type:

- ☐ General Plan Update
- ☐ General Plan Amendment
- ☐ General Plan Element
- ☐ Community Plan
- ☐ Specific Plan
- ☐ Master Plan
- ☐ Planned Unit Development
- ☐ Site Plan
- ☐ Rezone
- ☐ Prezone
- ☐ Use Permit
- ☐ Land Division (Subdivision, etc.)
- ☐ Annexation
- ☐ Redevelopment
- ☐ Coastal Permit
- ☐ Other

Development Type:

- ☐ Residential: Units Acres
- ☐ Office: Sq.ft. Acres Employees
- ☐ Commercial: Sq.ft. Acres Employees
- ☐ Industrial: Sq.ft. Acres Employees
- ☐ Educational
- ☐ Recreational
- ☐ Water Facilities: Type MGD
- ☐ Transportation: Type
- ☐ Mining: Mineral
- ☐ Power: Type MW
- ☐ Waste Treatment: Type MGD
- ☐ Hazardous Waste: Type
- ☒ Other: Flood Risk Management

Project Issues Discussed in Document:

- ☒ Aesthetic/Visual
- ☒ Agricultural Land
- ☒ Air Quality
- ☒ Archeological/Historical
- ☒ Biological Resources
- ☐ Coastal Zone
- ☒ Drainage/Absorption
- ☒ Economic/Jobs
- ☐ Fiscal
- ☒ Flood Plain/Flooding
- ☐ Forest Land/Fire Hazard
- ☒ Geologic/Seismic
- ☒ Minerals
- ☒ Noise
- ☒ Population/Housing Balance
- ☒ Public Services/Facilities
- ☒ Recreation/Parks
- ☒ Schools/Universities
- ☐ Septic Systems
- ☐ Sewer Capacity
- ☒ Soil Erosion/Compaction/Grading
- ☒ Solid Waste
- ☒ Toxic/Hazardous
- ☒ Traffic/Circulation
- ☒ Vegetation
- ☒ Water Quality
- ☒ Water Supply/Groundwater
- ☒ Wetland/Riparian
- ☒ Growth Inducement
- ☒ Land Use
- ☒ Cumulative Effects
- ☒ Other: Fisheries
- ☒ Other Special-status species, wetland and other waters of the U.S.

Present Land Use/Zoning/General Plan Designation:

Project Description: *(please use a separate page if necessary)*

The Corps and its non-Federal sponsors propose to improve flood risk management to North and Central Stockton by repairing and enhancing the levees that surround the city, and by constructing and operating closure structures on Fourteenmile Slough and Smith Canal. The overall study area as defined in the study authorization includes the mainstem of the San Joaquin River from the Mariposa Bypass downstream to the city of Stockton. The study area also includes the distributary channels of the San Joaquin River in the southernmost reaches of the Delta: Paradise Cut and Old River as far north as Tracy Boulevard and Middle River as far north as Victoria Canal. Based on availability of potential non-Federal sponsors, the refined study area focused on approximately 305 square miles encompassing incorporated areas of Stockton, Lathrop, and Manteca as well as unincorporated portions of San Joaquin County. The draft FR/EIS/EIS presents the draft findings of the Feasibility Study, which formulates and evaluates the benefits, costs, and environmental effects of alternative plans to improve flood risk management in and near the cities of Stockton, Manteca, and Lathrop in San Joaquin Valley.

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

____	Air Resources Board	X	Office of Historic Preservation
____	Boating & Waterways, Department of	____	Office of Public School Construction
____	California Emergency Management Agency	X	Parks & Recreation, Department of
____	California Highway Patrol	____	Pesticide Regulation, Department of
____	Caltrans District # ____	____	Public Utilities Commission
____	Caltrans Division of Aeronautics	X	Regional WQCB # ____
____	Caltrans Planning	X	Resources Agency
X	Central Valley Flood Protection Board	____	Resources Recycling and Recovery, Department of
____	Coachella Valley Mountains Conservancy	____	S.F. Bay Conservation & Development Commission
____	Coastal Commission	____	San Gabriel & Lower L.A. Rivers and Mtns Conservancy
____	Colorado River Board	X	San Joaquin River Conservancy
____	Conservation, Department of	____	Santa Monica Mountains Conservancy
____	Corrections, Department of	X	State Lands Commission
X	Delta Protection Commission	____	SWRCB: Clean Water Grants
____	Education, Department of	____	SWRCB: Water Quality
____	Energy Commission	____	SWRCB: Water Rights
X	Fish & Wildlife Region # ____	____	Tahoe Regional Planning Agency
____	Food & Agriculture, Department of	____	Toxic Substances Control, Department of
____	Forestry and Fire Protection, Department of	X	Water Resources, Department of
____	General Services, Department of		
____	Health Services, Department of	____	Other _____
____	Housing & Community Development	____	Other _____
____	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date February 27, 2015 Ending Date April 13, 2015

Lead Agency (Complete if applicable):

Consulting Firm: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: _____

Applicant: _____
Address: _____
City/State/Zip: _____
Phone: _____

Signature of Lead Agency Representative: _____ **Date:** 2/27/15

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Recordnet.com
News worth sharing online

Print Page

By Alex Breitler
Record Staff Writer

March 10. 2015 12:01AM

Feds propose levee plan to protect Stockton

An egret looks for a tasty bite to eat Monday in Mosher Slough near Don Avenue in Stockton. CLIFFORD OTO/THE RECORD

The federal government has released a long-awaited $800 million plan to protect Stockton from future floods, but the plan is not as ambitious as local officials would have liked.

Engineers propose improving 23 miles of levees from Mosher Slough in the north to French Camp Slough in the south, creating a "western front" that would fortify portions of the city against possible Delta flooding.

The much-discussed gate on Smith Canal is also included in the proposal, which could help efforts to secure state funding and rescue Country Club residents from mandatory flood insurance. A similar gate is proposed on Fourteen Mile Slough in north Stockton, along with levee improvements on both banks of the Calaveras River.

"We see a lot of value in this plan," said Tyler Stalker, a spokesman for the U.S. Army Corps of Engineers in Sacramento.

But there's a gaping hole, local officials say: The Corps eliminated from consideration any improvements to the San Joaquin River levee that protects Reclamation District 17, a vast area stretching from Weston Ranch to Lathrop.

The government's justification is a Carter-era executive order that forbids levee improvements that might encourage development in floodplains.

If the improvements went forward, the population living behind the RD 17 levee could increase by 100,000 people or more, the Corps reports. While the Federal Emergency Management Agency does not consider RD 17 to be in a high-risk flood plain, the Corps does — and that's the problem.

"We can't responsibly invest limited funds in levee improvements in areas that would induce or facilitate growth within an area highly prone to deep flooding," said Stacy Samuelson, a water resources planner with the Corps.

On the flip side, tens of thousands of people already live in RD 17, and the area is home to San Joaquin General Hospital, the county jail, Interstate 5 and other important infrastructure. All the more reason to provide better protection, advocates say.

"We're not happy, and we're going to fight it," said Dante Nomellini, a Stockton attorney representing the reclamation district. "The problem is there's no (added) protection for the 43,000 residents and all the investments that are out there now. That's the craziness of it."

Leaving out RD 17 may also have consequences for future development. No later than July 2016, state law will require cities to demonstrate they are making progress toward a higher level of flood protection before builders can develop in certain areas — a requirement that has resulted in considerable uncertainty in the building community, according to observers.

Some background on the flood plan:

The Lower San Joaquin River Feasibility Study, as it is formally known, was launched in 2009. Only now is the first public draft coming out.

The significance of the plan, if ultimately authorized by Congress, is that it could result in hundreds of millions of dollars in federal assistance to significantly reduce Stockton's flood risk.

In theory, the feds would pay 65 percent, with the state and local agencies required to pick up the rest of the tab. But it's too soon to predict the extent to which that money will actually be available.

In fact, an additional $1.2 million is needed just to finish the draft study, with existing money soon to run dry.

If the project does eventually lurch forward, it will likely be disruptive for those who live along local levees or use them for recreation.

While the levees won't necessarily be built higher in most areas, some will be cut open and filled with material forming an internal "wall" of sorts to prevent water from seeping through.

Permanent easements may be required on private property for access, Samuelson said. Trees and shrubs across more than 100 acres could be razed. Even some homes might have to be removed, according to the draft plan itself.

These issues are exactly what the Corps hopes to hear about from the general public during the comment period, Samuelson said.

"We have to acknowledge that to get the benefits and provide the protection necessary to protect the majority of the area, there may be some people that get impacted. But we definitely work to minimize those impacts," he said.

As for RD 17, there may be potential for a future study to focus only on that reclamation district, the Corps says.

To include the area now might have meant no project at all, and no benefits for 162,000 Stockton residents, officials said.

"One of the reasons we are still saying this is a very valuable report is because it's doing a lot more for other parts of Stockton," said Judy Soutiere, an engineer from the Corps' Sacramento office. "We didn't want to lose everything because of RD 17. We wanted to make sure we could get something for all the other citizens in Stockton."

The RD 17 issue isn't the only criticism local officials have of the plan.

The alternative selected by the Corps is the least ambitious of three options. On the Calaveras River, the Corps declined to include areas east of El Dorado Street as well as the Stockton Diverting Canal, saying that work would add to the cost of the project while only marginally increasing the benefits for central Stockton residents.

The Corps also did not include a proposal to restore Mormon Slough as a flood channel through south Stockton.

All in all? Roger Churchwell, assistant director of the San Joaquin Area Flood Control Agency, which is partnering with the Corps on the study, called the draft plan "necessary" but suggested it was far from perfect.

"There's a lot of things to be worked out here," Churchwell said.

Contact reporter Alex Breitler at (209) 546-8295 or abreitler@recordnet.com. Follow him at recordnet.com/breitlerblog and on Twitter @alexbreitler.

If you go

A public meeting about the Lower San Joaquin River Feasibility Study is scheduled for April 8.The meeting will take place from 6 p.m. to 8 p.m. at the Stockton Memorial Civic Auditorium, 525 N. Center St.Written comments can be sent to Tyler Stalker, with the U.S. Army Corps of Engineers, at Tyler.M.Stalker@usace.army.mil.

Draft Released for Stockton Levee Improvements

The U.S. Army Corps of Engineers Sacramento District has released its proposed plan to improve approximately 23 miles of levee to help reduce flood risk for North and Central Stockton.

The plan would implement a variety of levee improvements including installing cutoff walls, building new levees and adding erosion protection. It would also add closure structures at Fourteenmile Slough and the Smith Canal to decrease riverine and tidal flows during high water events.

The proposed plan is published in a draft integrated feasibility report that assesses potential environmental impacts associated with the project proposed by the Corps. California's Central Valley Flood Protection Board and the San Joaquin Area Flood Control Agency are local partners for the study.

The draft document, the Lower San Joaquin River Draft Feasiblity Report, is published on the Sacramento District's website, and will also be made available for review at Cesar Chavez Central Library in Stockton; Manteca Public Library; and Lathrop Branch Library.

Posted on March 2, 2015 with tags erosion protection, flood risk, Levees, News, Sacramento, Stockton, USACE.

Events

Jobs

Welcome

The Lower San Joaquin River Feasibility Study began in 2009. It is being conducted by the U.S. Army Corps of Engineers, California's Central Valley Flood Protection Board and the San Joaquin Area Flood Control Agency to:

- Identify flood risk within the study area
- Develop and evaluate solutions to reduce identified flood risks
- Determine if there is a federal interest in a flood risk management project

The purpose of tonight's public meeting is:

- To provide information about the Lower San Joaquin River Feasibility Study, including our tentatively selected plan
- To accept comments about our draft feasibility report & environmental documents
- To answer questions about the study process, tentatively selected plan or others aspects related to our study

We want to hear from you!

There are three ways you can provide comments:

1. Complete and submit a comment card during tonight's meeting

2. Write and submit through post mail to:
   U.S. Army Corps of Engineers, Sacramento
   Attn: Tyler Stalker (CESPK-PA)
   1325 J St., Room 1513
   Sacramento, CA 95814

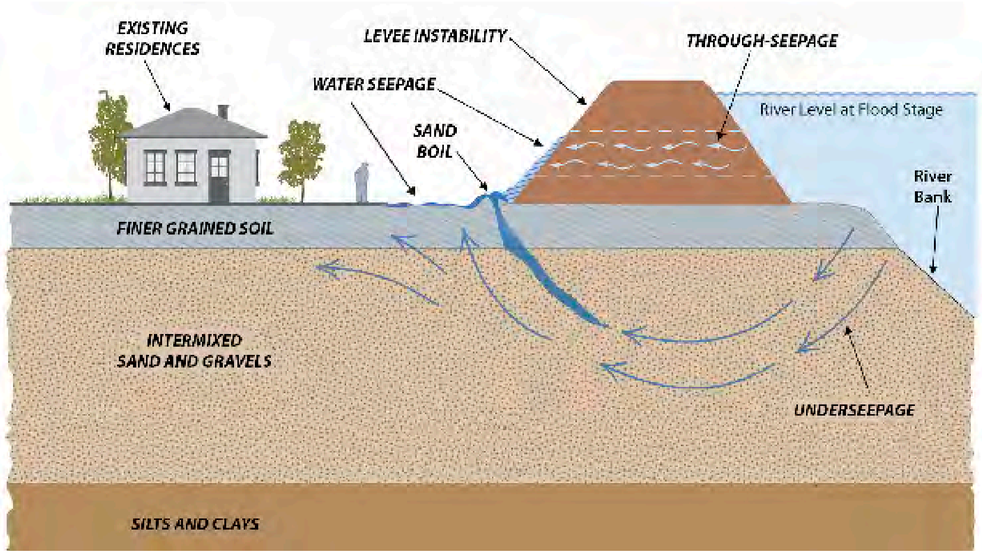
3. Write and submit through e-mail to:
   spk-pao@usace.army.mil

Comment Period Ends April 13, 2015

US Army Corps of Engineers

SJAFCA San Joaquin Area FLOOD CONTROL Agency

Typical Levee Issues



Levee Instability:

Saturated soil and sand layers may cause levee slopes to slump, or levee foundation to settle risking levee failure at flood stage.

Levee Through-Seepage:

When the river is approaching flood stage, high water pressure at some locations can cause seepage through the levee.

Levee Underseepage:

High river levels may lead to seepage through sandy and gravelly soils. High water pressure beneath the surface can cause water to emerge on the landside of the levee.

Seepage and stability problems

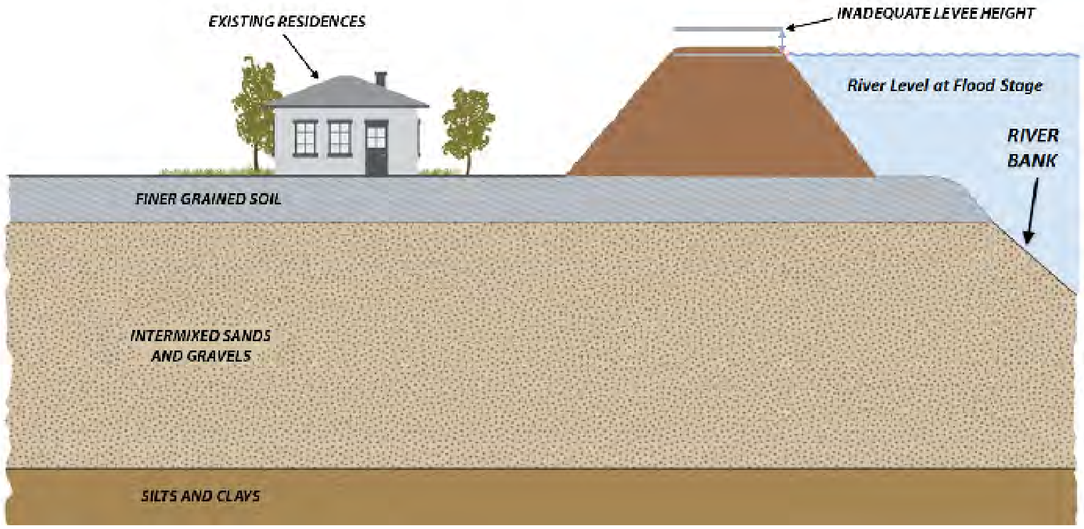
Seepage problems

Levee slumping

Levee slumping

Levee Height Problems:

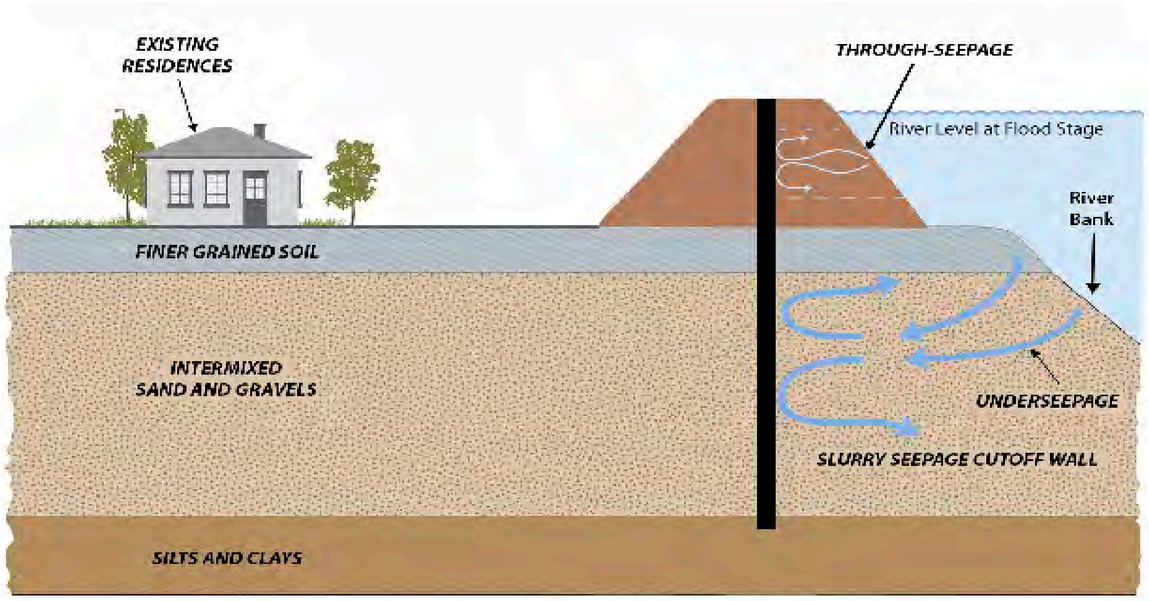
Levee height may be too low to contain high river flows as a result of slumping, wind-wave run-up, and/or projected sea level change.



US Army Corps of Engineers

SJAFCA San Joaquin Area FLOOD CONTROL Agen

Typical Levee Fixes



Levee Seepage:

Primarily addressed by constructing a seepage cutoff wall. Water pressure is greatly reduced as it passes through the wall so that seepage and boils on the landside toe are either eliminated or greatly reduced.

Levee Instability:

Stability problems are typically addressed by construction of a seepage cutoff wall, with either soil reinforcement or levee slope flattening improvements constructed. In areas needing slope flattening, new soil material may be added to the levee slope and compacted.

Cutoff wall construction

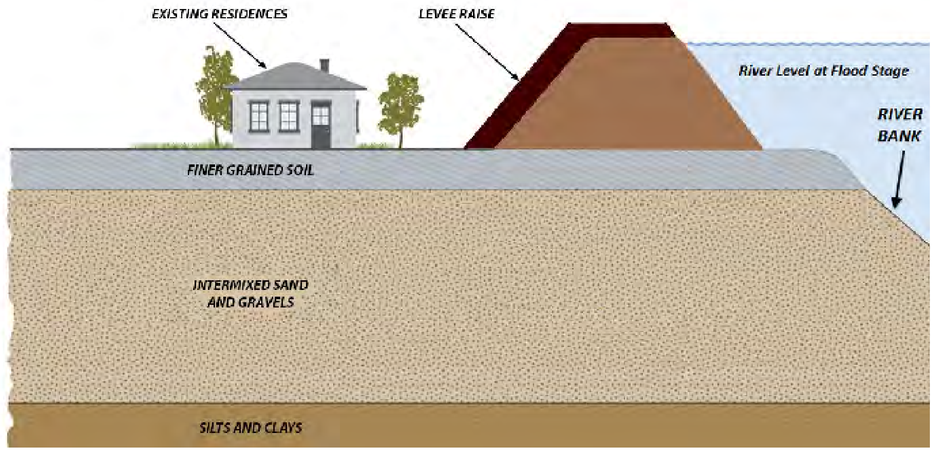
Completed levee with cutoff wall

Slump repair

Raised levee

Levee Height:

Primarily addressed by raising levee with soil or constructing a floodwall on top of levee. In some cases, height addressed by diverting flow away from river.



US Army Corps of Engineers

SJAFCA San Joaquin Area FLOOD CONTROL Agen

Environmental Process

The purpose of the National Environmental Policy Act (NEPA) is to include environmental consideration in Federal agency planning and action. It also ensures that a proposed activity's potential effects on both natural and built environments are analyzed and disclosed to the public in an environmental impact statement (EIS).

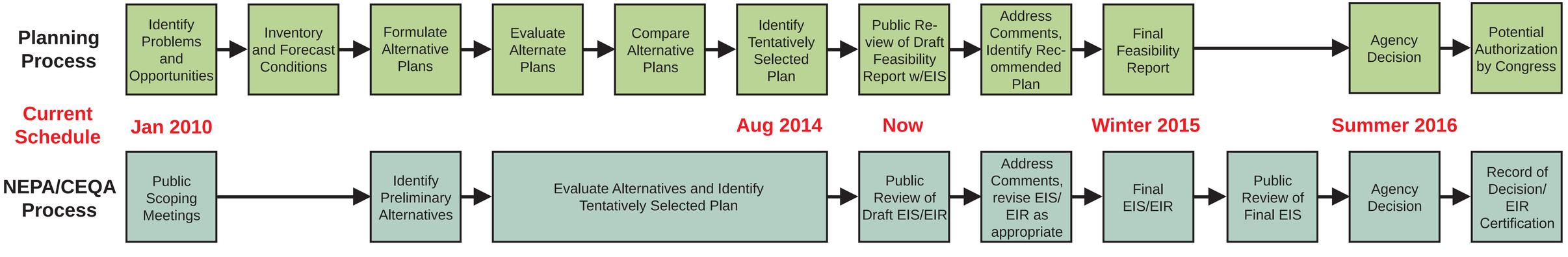
Similarly, the California Environmental Quality Act (CEQA) requires the preparation of an environmental impact report (EIR) for non-exempt projects where there is substantial evidence that the project may cause a significant environmental impact. EIRs disclose the effects of the project to aencies and the public, and serve as a decision-making aid for governing bodies.

A joint EIS/EIR is often prepared when there is both federal and state agency interest in an activity. These reports may be integrated into other types of reports, as is the case with the Lower San Joaquin River Draft Integrated Interim Feasibility Report and Joint Environmental Impact Statement/Environmental Impact Report.

Potential Environmental Effects

Implementation of the Lower San Joaquin River project would affect both the natural and built environments. The draft EIS/EIR analyzes the project's potential environmental effects and proposes mitigation measures that may reduce those effects. Implementation of the project alternatives, including the tentatively selected plan, may result in significant impacts to:

- **Water Quality**
- **Air Quality**
- **Vegetation**
- **Fish & Aquatic Resources**
- **Wildlife**
- **Wetlands & other Waters of the U.S.**
- **Cultural Resources**
- **Land Use**
- **Transportation**
- **Socioeconomics**
- **Visual Resources**
- **Utilities & Public Services**
- **Noise**
- **Recreation**
- **Aesthetics**



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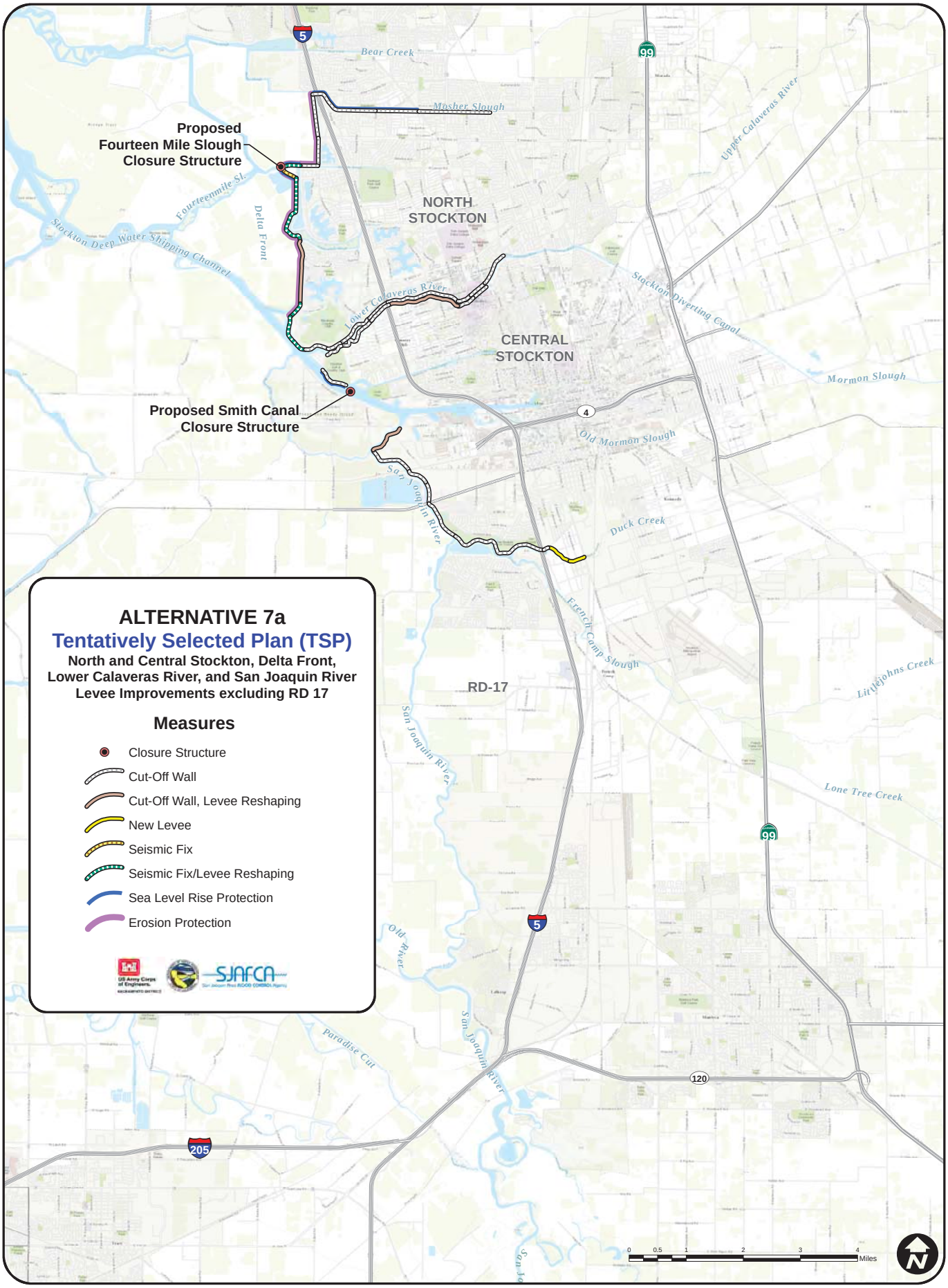
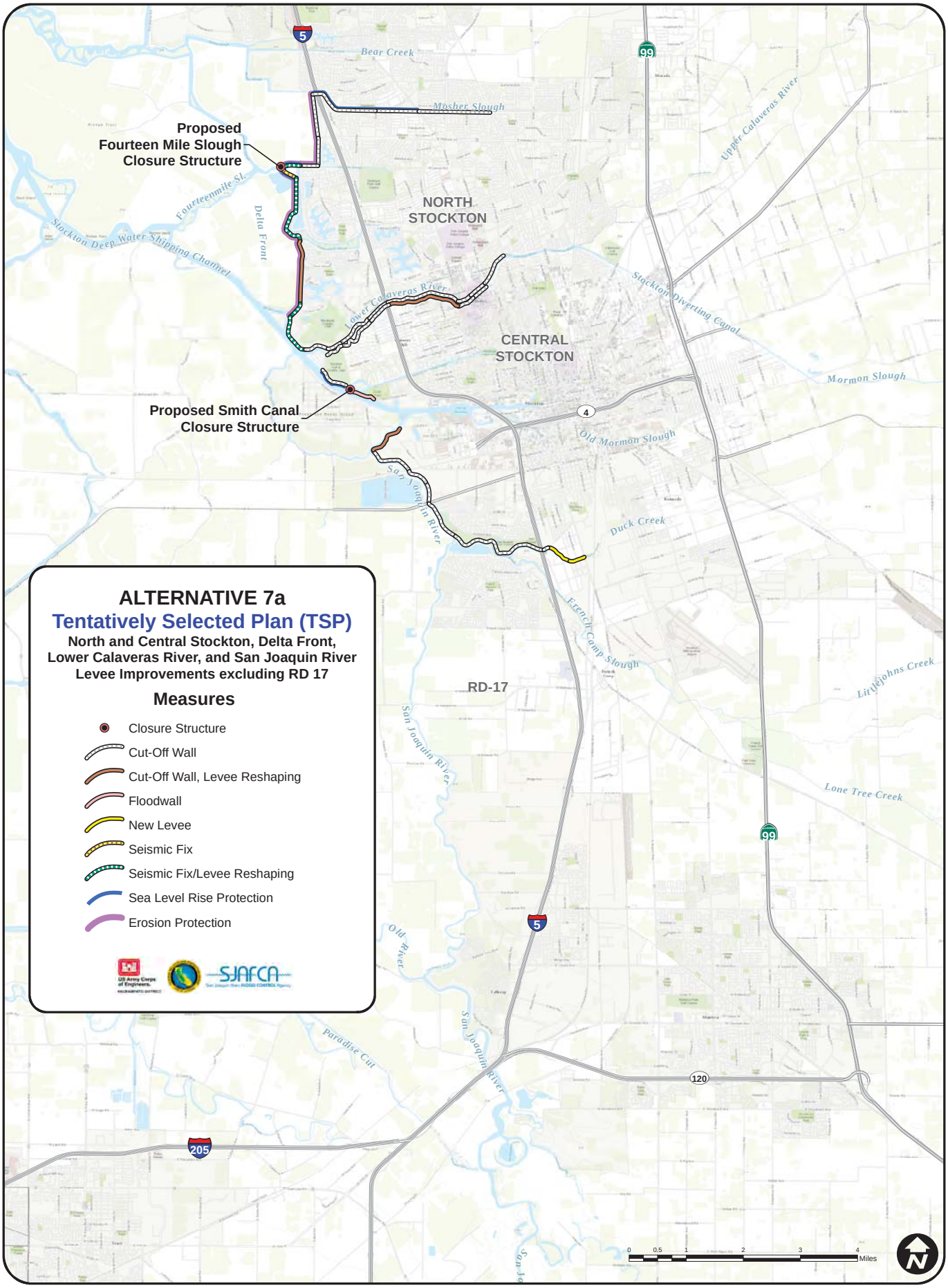


SAN JOAQUIN RIVER BASIN

LOWER SAN JOAQUIN RIVER, CA

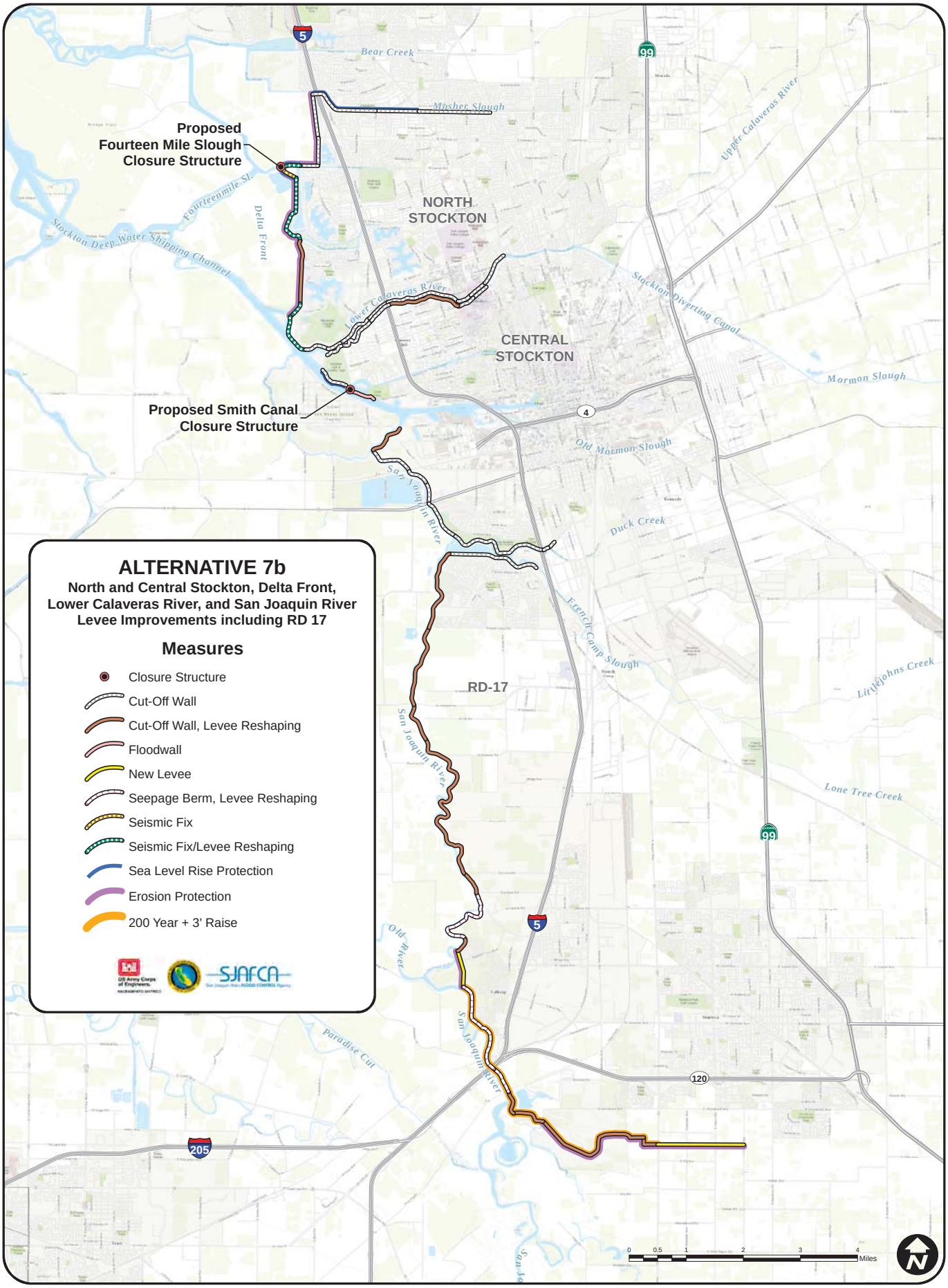
INTERIM FEASIBILITY STUDY



SAN JOAQUIN RIVER BASIN

LOWER SAN JOAQUIN RIVER, CA

INTERIM FEASIBILITY STUDY

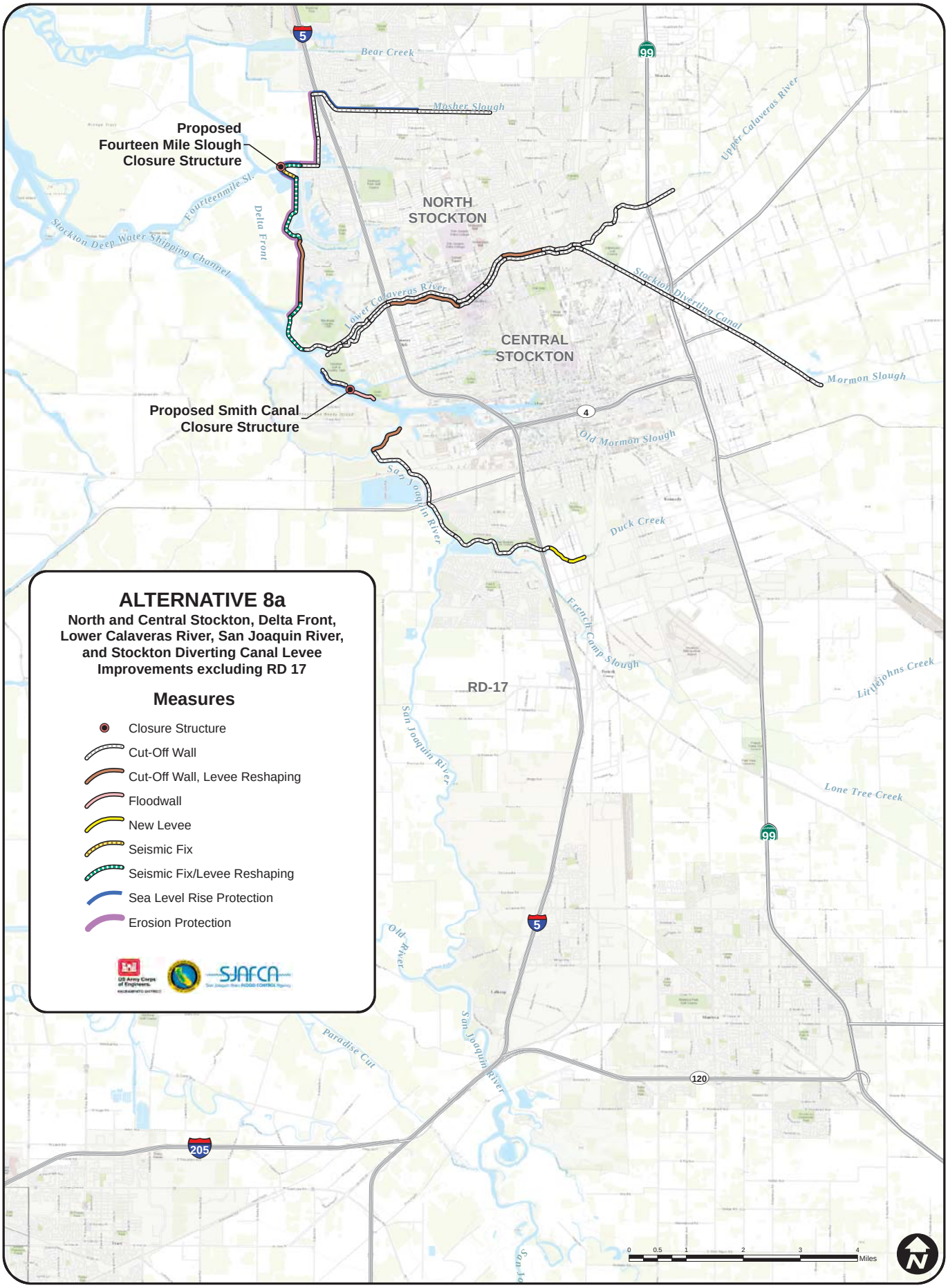


SAN JOAQUIN RIVER BASIN

LOWER SAN JOAQUIN RIVER, CA

Official Version

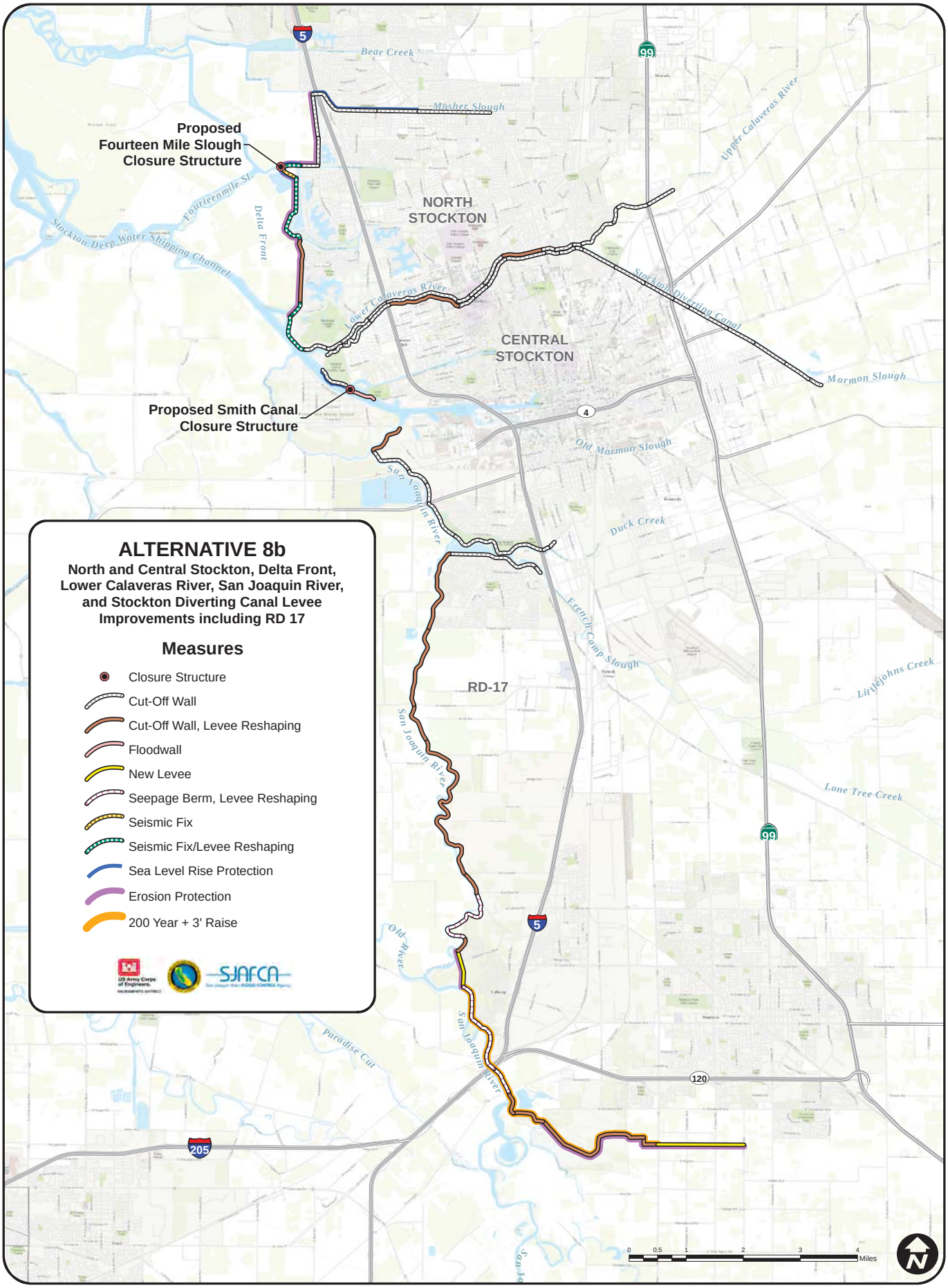
INTERIM FEASIBILITY STUDY



SAN JOAQUIN RIVER BASIN

LOWER SAN JOAQUIN RIVER, CA

INTERIM FEASIBILITY STUDY

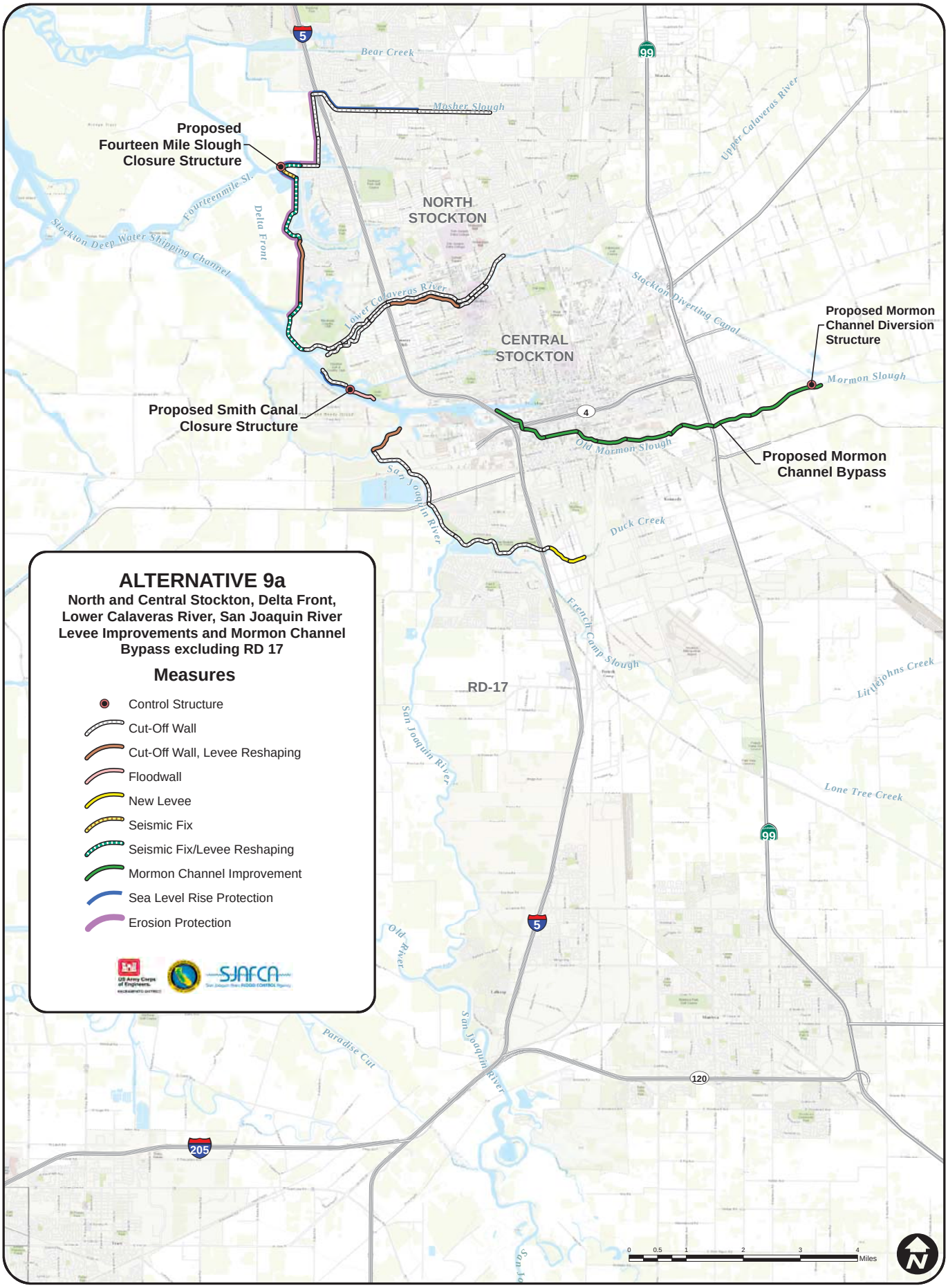


SAN JOAQUIN RIVER BASIN

LOWER SAN JOAQUIN RIVER, CA

Official Version

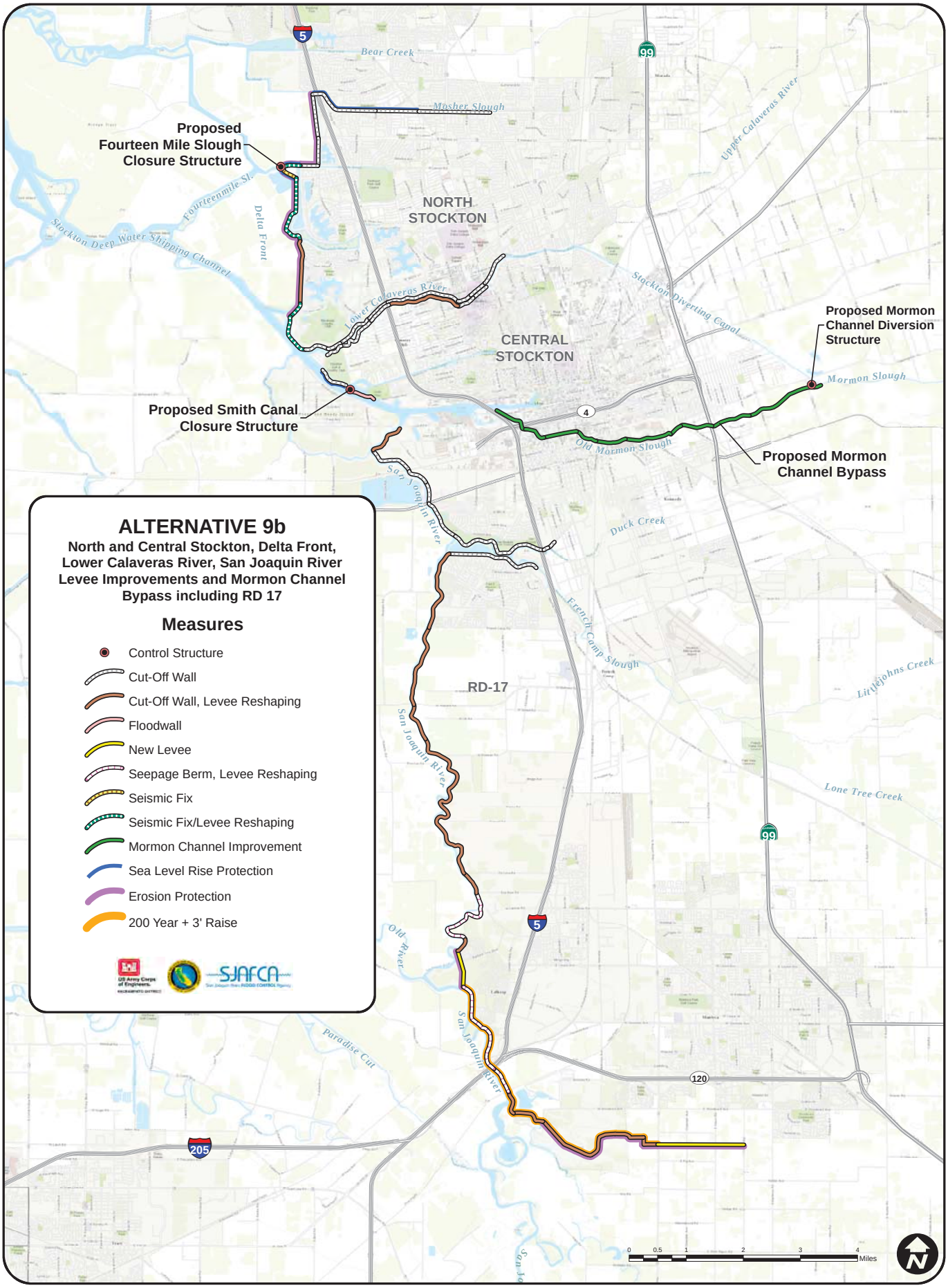
INTERIM FEASIBILITY STUDY



SAN JOAQUIN RIVER BASIN

LOWER SAN JOAQUIN RIVER, CA

INTERIM FEASIBILITY STUDY



SAN JOAQUIN RIVER BASIN

LOWER SAN JOAQUIN RIVER, CA

INTERIM FEASIBILITY STUDY

Public Comments Received on the LSJR FS

001	Letter from the US Dept. of Interior, Office of Environmental Policy & Compliance
002	Letter from the Central Valley Regional Water Quality Control Board
003	Letter from the Delta Stewardship Council
004	Letter from the Delta Stewardship Council
005	Letter from the Metropolitan Water District of Southern California
006	Letter from the San Joaquin Council of Governments
007	Letter from the City of Manteca
008	Letter from the City of Stockton
009	Letter from the City of Lathrop
010	Letter from the San Joaquin Area Flood Control Agency
011	Letter from the San Joaquin Area Flood Control Agency
012	Letter from Reclamation District 17
013	Letter from Reclamation District 17
014	Letter from Reclamation District 17
015	Letter from BuchalterNemer
016	Letter from the San Joaquin County Flood & Water Conservation District
017	Email from Nomellini
018	Letter from Fonseca Farms
019	Letter from John Minney, Civil Engineer
020	Letter from Richland Communities
021	Letter from Anthony Barkett
022	Letter from Neighbors United
023-024	Letters from Judith Kane
025-032	Emails from Individuals
033-047	Forms from RD 17 Residents
048-052	Public Meeting Comment Cards
053	Email from the San Joaquin Valley Unified Air Pollution Control District

054	Letter from the TR Land Company
055	Letter from the US Environmental Protection Agency
056	Letter from the California State Clearinghouse & Planning Unit
057-060	Forms from Additional RD 17 Residents

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

IN REPLY REFER TO:
(ER 15/0126)

Filed Electronically

13 April 2015

Attn: Ms. Tanis Toland
U.S. Army Corps of Engineers,
Sacramento District
1325 J Street,
Sacramento, CA 95814 4-2922

Subject: Review of the Draft Integrated Interim Feasibility Report/Environmental Impact Statement/ Environmental Impact Report, U.S. Army Corps of Engineers, Sacramento District (USACE,) Lower San Joaquin River Project, CA

Dear Ms. Toland:

The Department of the Interior has received and reviewed the subject document and has no comments to offer.

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc:
OEPC Staff Contact: Loretta B. Sutton, (202) 208-7565; Loretta_Sutton@ios.doi.gov

California Water Boards

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for
Environmental Protection

Central Valley Regional Water Quality Control Board

1 April 2015

Juan Neira
San Joaquin County Area Flood Control Agency
22 East Weber Avenue, Suite 301
Stockton, CA 95202

CERTIFIED MAIL
7014 2120 0001 3978 4887

COMMENTS TO REQUEST FOR REVIEW FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY PROJECT, SCH# 2010012027, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse's 27 February 2015 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Draft Environment Impact Report* for the Lower San Joaquin River Feasibility Project, located in San Joaquin County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

2-1

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

2-2

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

2-3

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

2-4

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 401 Permit – Water Quality Certification

2-5 If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements

2-6 If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program.
There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2-7 2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100**. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory

Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits. 2-8

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.

Trevor Cleak
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

DELTA STEWARDSHIP COUNCIL
A California State Agency

980 NINTH STREET, SUITE 1500
SACRAMENTO, CALIFORNIA 95814
HTTP://DELTACOUNCIL.CA.GOV
(916) 445-5511

April 13, 2015

U.S. Army Corps of Engineers, Sacramento District
Attn: Ms. Tanis Toland
1325 J Street
Sacramento, California 95814-2922
Tanis.J.Toland@usace.army.mil

RE: Draft Lower San Joaquin River Project Integrated Interim Feasibility Report/Environmental Impact Statement/Environmental Impact Report

Dear Ms. Toland:

Thank you for the opportunity to comment on the Draft Lower San Joaquin River Project Integrated Interim Feasibility Report/Environmental Impact Statement/Environmental Impact Report (FR/EIS/EIR). The Delta Stewardship Council's (Council) primary mission is to further the achievement of the coequal goals of water supply reliability for California and protecting and restoring the Delta ecosystem while protecting and enhancing the Delta as an evolving place (Water Code section 85054).

As mentioned in the draft FR/EIS/EIR, the Council has a legally enforceable management framework for the Delta and Suisun Marsh called the Delta Plan. The Delta Plan applies a common sense approach based on the best available science to restore habitat, increase the diversity and efficiency of California's water supplies, enhance floodplains, improve the Delta's levee system, and preserve the Delta's agricultural values. In many cases, the Delta Plan calls for balancing competing needs in the Delta, e.g., protecting habitat while reducing flood risk. In addition, the Delta Reform Act requires the Council to develop an investment strategy for project and non-project levees in the Delta to protect people, property and the State's interests (Water Code sections 85305(a) and 85306). The Delta Plan contains an interim set of priorities for levee investments in the Delta and the Council is currently updating this investment strategy to better define the State's interests. The updated strategy should incorporate information on proposed projects such as the one described in this draft document. Since the proposed Lower San Joaquin River Project activities lie within the Legal Delta and play an important role in maintaining the integrity of the Delta levee system, it is essential that our agencies continue to coordinate closely on these types of efforts.

Comments on the Interim Feasibility Report/EIS/EIR

Comments in this letter are focused primarily on our concerns with the overly narrow definition of the federal interest in the area, uncertainty regarding achieving a 200-year level of flood protection for Stockton, the need for protection of existing urban areas in Reclamation District 17, and the mitigation of impacts to biological resources. In a separate but related letter to the San Joaquin Area Flood Control Agency (SJAFCA) on this draft document, we provide comments specifically on the consistency of this project with the Delta Plan and its 14 regulatory policies. A copy of this letter will be provided to your agency as well.

Overly Narrow Definition of Federal Interest

We are concerned about policy constraints and planning processes that have resulted in the definition of an overly narrow federal interest in the Delta. As stated in the draft FR/EIS/EIR, the California's Central Valley Flood Protection Act of 2008 encourages improving regional flood protection and promotes ecosystem restoration opportunities and multi-benefit projects. Similarly, the Delta Reform Act furthers the State's two co-equal goals for the Delta – providing a more reliable water supply for the Delta and protecting, restoring and enhancing the Delta ecosystem (Public Resources Code section 29702). The objectives inherent in these goals include restoring the Delta ecosystem and reducing risks to people, property and state interests in the Delta (Water Code section 85020). The federal Energy and Water Development Appropriations Act of 2012 (Title II of the Consolidated Appropriations Act of 2012 (PL 112-074)) contains, in pertinent part, the following:

> The Federal policy for addressing California's water supply and environmental issues related to the Bay-Delta shall be consistent with State law, including the coequal goals of providing a more reliable water supply for the State of California and protecting, restoring, and enhancing the Delta ecosystem….(Section 205)

3-1

The Tentatively Selected Plan (TSP), however, was developed based on the U.S. Army Corps of Engineers' (USACE's) single objective of regional flood risk reduction. This is inconsistent with USACE's *Civil Works Strategic Plan 2014-2018*, which calls for the use of Integrated Water Resources Management, a holistic approach that considers economic benefits, ecosystem quality, and health and public safety in project formulation. Failure to include multiple objectives in the planning process results in a lost opportunity to implement projects that provide multiple benefits.

Including ecosystem quality and health as an objective would provide an opportunity to reconsider several structural measures as part of the TSP. Improvements to the Mormon Channel (Alternatives 4 and 9), for example, would support the multipurpose goals of the Delta Reform Act by potentially providing ecosystem restoration and recreation opportunities, in addition to risk reduction benefits. Additionally, the USACE should evaluate a bypass and floodway on the San Joaquin River, near Paradise Cut, that could, in conjunction with levee improvements, help reduce the flood stage on the main stem of the San Joaquin River adjacent to the urban and urbanizing areas in and adjacent to Stockton, Lathrop, and Manteca.

This project could also provide various ecosystem benefits and habitat restoration opportunities. USACE funding for such a study would support the implementation of Delta Plan Recommendation **RR R5**, which calls on the Legislature to fund the Department of Water Resources and the Central Valley Flood Protection Board to evaluate and implement a bypass and floodway in the Paradise Cut area.

Clarification of Flood Protection Level for North and Central Stockton

The objective of the non-federal sponsors (the State of California and SJAFCA) is to meet the requirements of California Senate Bill (SB) 5 and the Central Valley Flood Protection Act to achieve a 200-year level of protection for the urban and urbanizing areas within the study area. Without this level of flood protection, the non-federal sponsors of the project would not be able to proceed with funding design and construction of levee projects.

According to SJAFCA's recently completed *2014 Lower San Joaquin River and Delta South Regional Flood Management Plan* (RFMP), "…the City of Stockton is the largest metropolitan area within the Lower San Joaquin River Region and has a population of nearly 300,000 people. The primary hazard for the City of Stockton is potential failure of levees that protect nearly the entire city from flood waters…".

3-2

The level of flood protection achieved by the TSP in the interim feasibility report should be clarified. SJAFCA, the joint sponsor of the subject study, points out in their comment letter dated April 9, 2015, that it is not clear whether the selected alternative (7a) will help to achieve 200-year protection for Stockton. According to the draft FR/EIS/EIR (Section 8.1.6 Risk and Uncertainty), with the TSP in place, the flood risk to the North Stockton area can be improved from an approximate 15% annual chance of flooding in the highest risk areas to a less than 1% annual chance of flooding (100-year flood event). The flood risk to the Central Stockton area can be improved from a 12% annual chance of flooding in the highest risk areas to an approximate 2% annual chance of flooding (50-year flood event). Clarification should be provided regarding current annual chance of flooding and the resulting annual chance of flooding under each alternative and whether the preferred alternative provides 200-year protection. This analysis should be agreed upon by USACE and SJAFCA.

Protecting Existing Urban Areas in Reclamation District 17

Regarding Reclamation District 17 (RD 17), which is within the study area, we support the USACE's decision, based on the project screening criteria consistent with Executive Order 11988, to minimize induced development of currently undeveloped land in RD 17 and associated environmental impacts, such as conversion of prime farmland in the floodplain. The Delta Plan designates these lands for agriculture, not urban uses. The applicable city and county general plans also currently designate the lands for agriculture.

3-3

Although we support the USACE in this decision about non-urban agricultural areas within RD 17, certain developed areas within RD 17 have high population densities, such as downtown Lathrop, and some existing critical infrastructure such as schools, fire and police stations, the

county jail, the Sharpe Army Depot and a hospital, as well as major transportation routes including Interstate 5 and Highway 120. In the final FR/EIS/EIR, or future additional studies, USACE should consider and evaluate additional localized flood management structures to protect these existing urban areas. Appendix C of the RFMP, mentioned above, contains various proposed Local Maintaining Agency specific projects which could be considered in the final version of the FR/EIS/EIR or future additional studies to address risk reduction for certain developed areas within RD 17.

This balanced approach to addressing the needs within RD 17 is consistent with the Delta Plan's goals of protecting urban and adjacent urbanizing areas consistent with State law, while minimizing new development in flood-prone areas of the Delta and protecting agriculture in the region. Continued coordination between the USACE and SJAFCA is critical in evaluating possible measures to protect existing developed areas within RD 17.

Biological Resources

Our primary concerns related to this section of the draft EIS/EIR are the impacts to riparian vegetation and associate impacts on special status species as a result of the preferred alternative and the USACE's policy on vegetation on levees. Dynamic complexes of riparian woody and scrub habitat along river channels and associated floodplains, particularly in areas where there is connectivity between such habitats, provide a suite of ecosystem benefits to on-site and downstream environments. Riparian vegetation provides habitat for terrestrial species, such as riparian brush rabbit, Swainson's hawk, white-tailed kite, yellow breasted chat, yellow-billed cuckoo, and valley elderberry longhorn beetle. For aquatic species, including various life stages of Chinook salmon, Central Valley steelhead, splittail, and sturgeon, established woody riparian vegetation provides refuge from currents and predators, and serves as a source of organic carbon in support of the aquatic food web. Riparian areas can reduce non-point source pollution from pesticides, herbicides, and nutrients from fertilizers by serving as transition zones between upland urban/agricultural areas and adjacent waterways. Additional water quality benefits include improved levels of dissolved oxygen and moderation of water temperature. Riparian areas also provide the public with opportunities for active and passive recreation, such as hiking, boating and bird watching.

3-4

According to the draft FR/EIS/EIR, the proposed project could result in significant and unavoidable impacts to riparian, wetland and shaded riverine aquatic habitat and the special status species that depend on them in the project area. As stated in the draft FR/EIS/EIR, this type of impact is due to the USACE Engineer Technical Letter (ETL) 1110-2-583 Vegetation Free Zone requirements. This impact may result in loss of vegetation on and adjacent to the levees, up to 7.1 miles (37,820 linear feet) of potential shaded riverine aquatic habitat and 142 acres of woody riparian vegetation. This would be one of the largest individual losses of riparian vegetation along a Central Valley river in recent years. The proposed general mitigation measures for these impacts to biological resources include a combination of on-site and off-site plantings and/or purchase of mitigation bank credits, implementation of Best Management Practices (BMPs), and obtaining a vegetation variance from the USACE. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside

levee slope and adjacent easement. All disturbed lands would be reseeded following construction.

Given the tremendous investment by state, federal, and local agencies, as well as nonprofit organizations and individuals, to promote recovery of salmonids and other threatened and endangered species that use the San Joaquin River as a migratory corridor, it is essential to make every effort to avoid or minimize these impacts. The benefits to special status species provided by the proposed mitigation measures in the draft FR/EIS/EIR are unclear. We recommend that, to the maximum feasible extent, any impacts to the channel margin habitat along important fish migratory corridors in the Delta should be mitigated on-site. In the event that off-site mitigation is necessary, we also suggest that any off-site mitigation occurs in close proximity and along the same waterway as where the impacts would occur to demonstrate that the mitigation is restoring equivalent, in-kind habitat. In the final FR/EIS/EIR or subsequent environmental evaluation documentation, please identify and include the details of the mitigation measures with or without the USACE vegetation variance in place, and describe how they would address impacts to special status species, such as salmonids.

Next Steps

We look forward to continuing to work with your agency on this project. I encourage you to contact You Chen (Tim) Chao at YouChen.Chao@deltacouncil.ca.gov or (916) 445-0143 with your questions, comments, or concerns. We look forward to working with you to ensure consistency of the Lower San Joaquin River Project with the Delta Plan while also avoiding, minimizing, or mitigating potential environmental impacts. We also look forward to continued discussions with the USACE and with SJAFCA regarding this proposed project and how it can be incorporated into the updated Delta levees investment strategy.

Sincerely,

Cindy Messer
Deputy Executive Officer
Delta Stewardship Council

CC: Mr. Juan Neira, San Joaquin Area Flood Control Agency

DELTA STEWARDSHIP COUNCIL
A California State Agency

980 NINTH STREET, SUITE 1500
SACRAMENTO, CALIFORNIA 95814
HTTP://DELTACOUNCIL.CA.GOV
(916) 445-5511

April 13, 2015

Mr. Juan Neira
San Joaquin Area Flood Control Agency
22 East Weber Avenue, Suite 301
Stockton, California 95202
Juan.Neira@stocktongov.com

RE: Draft Lower San Joaquin River Project Integrated Interim Feasibility Report/Environmental Impact Statement/Environmental Impact Report

Dear Mr. Neira:

Thank you for the opportunity to comment on the Draft Lower San Joaquin River Project Integrated Interim Feasibility Report/Environmental Impact Statement/Environmental Impact Report (FR/EIS/EIR), prepared by the U.S. Army Corps of Engineers (USACE). In addition, we appreciate your assistance in helping us to gain a better understanding of the scope of this project, background information, and project-related regional planning activities. Thank you for sharing your letter of April 9, 2015 commenting to USACE on the draft FR/EIS/EIR. We are submitting a separate letter to USACE with detailed comments on the FR/EIS/EIR for their consideration, and will provide a copy of the letter to you as well.

As mentioned in the draft FR/EIS/EIR, the Delta Stewardship Council (Council) has a legally enforceable management framework for the Delta and Suisun Marsh called the Delta Plan. The Delta Plan applies a common sense approach based on the best available science to restore habitat, increase the diversity and efficiency of California's water supplies, enhance floodplains, improve the Delta's levee system, and preserve the Delta's agricultural values. In many cases, the Delta Plan calls for balancing competing needs in the Delta, e.g., protecting and restoring habitat while reducing flood risk. Since the proposed Lower San Joaquin River Project activities lie within the Legal Delta and play an important role in maintaining the integrity of the levee system in the Delta, it is essential that our agencies coordinate closely on these types of efforts.

Delta Plan Covered Actions and Certification of Consistency

Through the Delta Reform Act, the Council was granted specific regulatory and appellate authority over certain actions that take place in whole or in part in the Delta and Suisun Marsh. The Council exercises that authority through development and implementation of the Delta Plan. State and local agencies are required to comply with the set of 14 regulatory policies contained within the Delta Plan.

According to the Delta Reform Act, it is the state or local agency approving, funding, or carrying out the project that must determine if a project is a "covered action" subject to regulations of the Delta Plan, and if so, certify consistency of the project with Delta Plan policies (Water Code Section 85225). Generally the California Environmental Quality Act (CEQA) lead agency, the San Joaquin Area Flood Control Agency (SJAFCA), in the case of the Lower San Joaquin River Project, makes the determination if a project is a covered action. If the project is determined to be a covered action, SJAFCA will need to complete a certification of consistency that demonstrates that the project is consistent with the regulatory policies of the Delta Plan. (Please refer to our website at http://deltacouncil.ca.gov/covered-actions for more information about the covered action process.) Information and analysis needed to support a consistency certification could be taken directly from the FR/EIS/EIR.

Council staff has reviewed the draft FR/EIS/EIR and has found that several of the proposed Lower San Joaquin River risk reduction measures are within the Legal Delta and this proposed project may be a "covered action", and therefore subject to Delta Plan regulations, although that determination ultimately resides with the SJAFCA. Consequently, we have identified below issues that we believe you should consider, for the purposes of compliance with both the Delta Reform Act and CEQA.

Comments on the Draft FR/EIS/EIR

For this letter, our comments are organized by subject area. Within each subject area we have included information on Delta Plan policy (or policies) possibly implicated by this project and the requirements of these policies, as well as specific comments on the draft FR/EIS/EIR, its alternatives and mitigation measures. Where appropriate, we have also provided information on mitigation measures from the Delta Plan's EIR that should be considered for this project if it is deemed a covered action.

Risk Reduction

4-1

Delta Plan Policy **RR P1** (23 CCR Section 5012) calls for the prioritization of state investments in Delta flood risk management, including levee operation, maintenance and improvements. This policy includes interim priorities categorized as specific goals to guide budget and funding allocation for levee improvements and to assist the California Department of Water Resources (DWR) in achieving a balance in funding the various goals.

The draft FR/EIS/EIR states that the overall purpose of the proposed action under the National Environmental Policy Act (NEPA) and CEQA is to reduce flood risk to urban and urbanizing parts of the study area. The objective of the non-Federal Sponsors (the State of California and SJAFCA) is to meet the requirements of California Senate Bill (SB) 5 of 2007, the Central Valley Flood Protection Act, to achieve a 200-year level of protection for the urban and urbanizing areas within the study area. The non-Federal Sponsors' objective, as described in the draft FR/EIS/EIR, is consistent with one of the goals contained in Delta Plan Policy RR P1, to provide 200-year level flood protection to existing urban and adjacent urbanizing areas. However, as noted in your comment letter to USACE, the feasibility report does not clearly state whether the Tentatively Selected Plan (TSP) fully meets the objective of 200-year protection. In order to achieve consistency with the Delta Plan, the State of California's investment in Delta flood risk management (i.e., the State's cost share for the project) must be consistent with RR P1.

According to the draft FR/EIS/EIR (Section 8.1.6 Risk and Uncertainty), with the TSP in place, the flood risk to the North Stockton area can be improved from an approximate 15% annual chance of flooding in the highest risk areas to a less than 1% annual chance of flooding (100-year flood event). The flood risk to the Central Stockton area can be improved from a 12% annual chance of flooding in the highest risk areas to an approximate 2% annual chance of flooding (50-year flood event). The outcomes of this project may not be adequate to assist local agencies to meet the State's goal of achieving a minimum 200-year level of protection for urban and urbanizing areas.

Riparian Habitats

Delta Plan Policy **ER P4** (23 CCR Section 5008) states that levee projects must evaluate and where feasible incorporate alternatives, including the use of setbacks levees, to increase floodplains and riparian habitats. Dynamic complexes of riparian woody and scrub habitat along river channels and associated floodplains, particularly in areas where there is connectivity between such habitats, provide a suite of ecosystem benefits to on-site and downstream environments. Riparian vegetation provides habitat for terrestrial species, such as riparian brush rabbit, Swainson's hawk, white-tailed kite, yellow breasted chat, yellow-billed cuckoo, and valley elderberry longhorn beetle. For aquatic species, including various life stages of Chinook salmon, Central Valley steelhead, splittail, and sturgeon, established woody riparian vegetation provides refuge from currents and predators, and serves as a source of organic carbon in support of the aquatic food web. Riparian areas can reduce non-point source pollution from pesticides, herbicides, and nutrients from fertilizers by serving as transition zones between upland urban/agricultural areas and adjacent waterways. Additional water quality benefits include improved levels of dissolved oxygen and moderation of water temperature. Riparian areas also provide the public with opportunities for active and passive recreation, such as hiking, boating and bird watching. The draft FR/EIS/EIR does not appear to have adequately analyzed the feasibility of measures to protect and increase such habitats.

4-2

According to the draft FR/EIS/EIR, the proposed project could result in significant and unavoidable impacts to riparian, wetland and shaded riverine aquatic habitat and the special status species that depend on them in the project area. As stated in the draft FR/EIS/EIR, this type of impact is due to the USACE Engineer Technical Letter (ETL) 1110-2-583 Vegetation Free Zone requirements. This impact may result in loss of vegetation on and adjacent to the levees, up to 37,820 linear feet of potential shaded riverine

aquatic habitat and 142 acres of woody riparian vegetation. The proposed general mitigation measures for these impacts to biological resources include a combination of on-site and off-site plantings and/or purchase of mitigation bank credits, implementation of Best Management Practices (BMPs), and obtaining a vegetation variance from the USACE. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. This would be consistent with Delta Plan Recommendation **ER R4**, which calls on USACE to approve a variance that exempts Delta levees from its vegetation policy where appropriate.

Delta Plan EIR Mitigation Measures

Delta Plan Policy **G P1** (23 CCR Section 5002) also requires that actions not exempt from CEQA and subject to Delta Plan regulations must include applicable feasible mitigation measures consistent with or more effective than those identified in the Delta Plan Environmental Impact Report (EIR). The Delta Plan's Program EIR provides a list of mitigation measures to address including those to address impacts to biological resources. (Mitigation measures can be found in the Delta Plan Mitigation and Monitoring Reporting Program document, http://deltacouncil.ca.gov/sites/default/files/documents/files/Agenda%20Item%206a_attach%202.pdf.)

For example, the Delta Plan's EIR Biological Resources Mitigation Measure 4-3 calls for proponents to design projects that avoid impacts that would lead to substantial loss of fish and wildlife habitat. If there will be a loss of habitat for fish and wildlife species from a project, Mitigation Measure 4-3 suggests proponents to replace, restore, or enhance habitats for those species and preserve in-kind habitat. In the final FR/EIS/EIR or subsequent environmental evaluation documentation for any refinements to project elements that occur during the preconstruction engineering and design phase or the construction phase, please identify and include the details of the mitigation measures with or without the USACE vegetation variance in place.

4-3

As mentioned above, the proposed project could result in significant and unavoidable impacts to habitat areas along the San Joaquin River, an important fish migratory corridor. We recommend that, to the maximum feasible extent, any impacts to the channel margin habitat along important fish migration corridors in the Delta should be mitigated on-site. In the event that off-site mitigation is necessary, we also suggest that any off-site mitigation occurs in close

proximity and along the same waterway as where the impacts would occur to demonstrate that the mitigation is restoring equivalent, in-kind habitat.

Best Available Science and Adaptive Management

Delta Plan Policy **G P1** (23 CCR Section 5002) states that actions subject to Delta Plan regulations must document use of best available science. Additionally, this policy calls for water management and ecosystem restoration projects to include adequate provisions for continued implementation of adaptive management, appropriate to the scope of the action. This requirement can be satisfied through the development of an adaptive management plan that is consistent with the framework described in Appendix 1B of the Delta Plan, along with documentation of adequate resources to implement the proposed adaptive management process. This policy is most applicable to the habitat restoration planned as mitigation for the environmental impacts of the levee projects. Council staff is available to assist you in developing an adaptive management plan as part of early consultation to promote consistency with the Delta Plan. We suggest including documentation of best available science and an adaptive management plan as an appendix to the final FR/EIS/EIR to order to have it available for use in a consistency certification.

4-4

Inconsistencies with the Delta Plan

The final FR/EIS/EIR should discuss any inconsistencies between the proposed plan and the Delta Plan, as required by 15125(d) of the CEQA Guidelines. Please note that the CEQA guidelines' Appendix G states that a project that is inconsistent with any applicable land use plan, policy, or regulations may result in a finding of significant impact on biological resources. Based on our initial review of the project, we have found potential inconsistencies with Delta Plan Policies **RR P1** and **ER P4**, as described above.

4-5

Early Consultation

The Council strongly encourages all agencies who propose to approve, fund, or carry out an action in the Delta, as early in the project's development as possible, to consult with the Council and ensure the project (whether it is a covered action or not) is consistent with the Delta Plan. If SJAFCA staff and the project proponent choose to engage in early consultation, the Council staff will meet with you and offer guidance on determining whether the project meets the definition of a covered action, provided that the ultimate determination in this regard must be made by your agency. Council staff will also work with you and the project proponent to ensure consistency between the project and the Delta Plan's policies and recommendations. We also can help guide you through the certification process.

4-6

As mentioned above, Delta Plan Policy **G P1** requires that water management projects document use of best available science and include an adaptive management plan when filing a certification of consistency with the Delta Plan. We recommend that adaptive management for this project incorporate a monitoring, evaluation and reporting program that evaluates

whether the project is successfully achieving the goals and objectives for the project. Council staff, including staff from the Delta Science Program, can provide early consultation to help in your preparation of documentation of use of best available science and adaptive management.

Next Steps

We look forward to continuing to work with your agency and other local, state, and federal agencies on this project. I encourage you to contact You Chen (Tim) Chao at YouChen.Chao@deltacouncil.ca.gov or (916) 445-0143 with your questions, comments, or concerns. We look forward to working with you to ensure consistency of the Lower San Joaquin River Project with the Delta Plan while also avoiding, minimizing, or mitigating potential environmental impacts.

Sincerely,

Cindy Messer
Deputy Executive Officer
Delta Stewardship Council

CC: Ms. Tanis Toland, U.S. Army Corps of Engineers Sacramento District

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

April 13, 2015 **VIA EMAIL AND U.S. MAIL**

U.S. Army Corps of Engineers, Sacramento District
Attn: Ms. Tanis Toland
1325 J Street
Sacramento, CA 95814-2922
Tanis.J.Toland@usace.army.mil

Dear Ms. Toland:

Comments on the Draft Environmental Impact Statement/Environmental Impact Report and Integrated Interim Feasibility Report: Lower San Joaquin River Project Interim Report

The Metropolitan Water District of Southern California (Metropolitan) has reviewed the subject Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) prepared by the two lead agencies, U.S. Army Corps of Engineers and San Joaquin Area Flood Control Agency, to comply with the National Environmental Policy Act and the California Environmental Quality Act, respectively.

As proposed, the Lower San Joaquin River Project (proposed project) would be designed to reduce the risk of flooding in the cities of Stockton, Lathrop, Manteca and surrounding urbanizing areas. In particular, the proposed project would involve levee improvements consisting of various combinations of cut-off walls, levee height fixes for sea-level rise, erosion protection, seismic fixes, slope reshaping, floodwalls and new levees in the Stockton area on Mosher Slough, Shima Tract, Fivemile Slough, Fourteenmile Slough, Tenmile Slough, Calaveras River, San Joaquin River, French Camp Slough, and Duck Creek. It would also include closure structures at the mouths of Smith Canal and Fourteenmile Slough, thereby controlling back-flooding from the San Joaquin River and Delta during high water events — typically between November 1 and April 30. Such actions would limit the level and duration of water saturation on the existing levees and reduce risk of damage to or failure of these important flood control facilities.

This letter contains Metropolitan's comments on the Draft EIS/EIR as a stakeholder in the State Water Project (SWP) and the Sacramento-San Joaquin Delta (Delta). Southern California has an important stake in the Delta region and its existing infrastructure. As a SWP contractor, Metropolitan has invested and will continue to invest significantly in the SWP efforts to restore sensitive fish populations in the Delta watershed, and scientific research into the causes of decline in fish native to the Delta. Even with the diversification of

its supply sources and water use efficiency and conservation efforts, the SWP will remain a critical source of water supply for Metropolitan's service area. Given the importance of the Delta to Metropolitan and other SWP contractors, Metropolitan is engaged in key studies, deliberations, and decision-making regarding Delta policy.

5-1 Strategic levee protection measures, like the proposed project, are absolutely necessary to better protect lives, infrastructure, and water quality in the Central Valley and the Delta. However, the environmental impacts of levee improvements must be assessed in the broader context of the suite of actions needed to address the long-term welfare of the Delta and the state. As recognized in the CALFED Record of Decision (2000), the Bay Delta Conservation Plan (BDCP or Plan) (2006-present), the Delta Reform Act (2009), the Delta Plan (2013), the California Water Action Plan (2014), and the recent passage of Proposition 1, the Water Quality, Supply and Infrastructure Improvement Act of 2014 (among a host of other sources), a multifaceted approach is needed to address flood risks, render water supplies more reliable, restore fish habitat for sensitive/protected fish species, invasive species, natural flow patterns, salinity intrusion due to sea level rise while protecting lives, property and infrastructure in the Delta. Strategic levee improvements help to address flood risks in the Delta that could jeopardize water quality for both sensitive native fish and millions of Californians who rely on fresh water flows through the Delta. But the proposed project must avoid or mitigate any

5-2 potentially significant adverse impacts on water quality, water supply, and environmental resources in the Delta, and it should be consistent with the suite of actions needed to address the multiple stressors and risks facing the Delta.

5-3 On page 5-366, (i.e., as a related project: San Francisco Bay to Stockton Deep Water Ship Channel Deepening Project), the Draft EIS/EIR should note that California Department of Water Resources has a major emergency stockpile site adjacent to the Stockton Deep Water Ship Channel near I-5. This site is designated for purposes of emergency response and repair to damaged Delta region levees. The proposed project should not impact or affect the site or its waterway routes.

5-4 With respect to the proposed project, temporary, localized construction activities must not result in substantial turbidity plumes in the vicinity of the points of diversion for the SWP or the Central Valley Project (CVP) in the south Delta at the first flush of highly turbid water in late November, December and January. Recent scientific evidence suggests Delta smelt use turbidity as cover from predators and may move with such a plume toward south Delta points of diversion, which can trigger reductions in water supplies to comply with state and federal regulations intended to protect Delta smelt. Because this proposed project would include a variety of bank protection and levee enhancement measures that would generate turbidity plumes from construction activities, a comprehensive evaluation should be performed, i.e., the influence

of turbidity plumes on Delta smelt and potentially related impacts on SWP and CVP export operations in the south Delta.

On page 4-30 of the Draft EIS/EIR, it is stated:

> "A separate analysis in cooperation with the US Fish and Wildlife Service (USFWS) is currently being conducted to evaluate potential habitat impacts and mitigation requirements resulting from implementation of the proposed action alternatives, and to prepare a cost-effective fish and wildlife mitigation plan. This plan will be completed in time to be included with the final FR/EIS/EIR for the LSJRFS project, anticipated by fall of 2015."

5-5 When available, please send me a copy of this USFWS analysis. Although the Draft EIS/EIR states on page 5-368 that "[a]t this time, no conveyance options are proposed within the LSJR project area," it is important that the levee improvement actions under the proposed project be evaluated by the lead agencies for consistency with BDCP environmental enhancement and restoration actions in the Final EIS/EIR. For example, the proposed project would include the French Camp Slough, which is northeast of and bordering the BDCP South Delta Resource Opportunity Area (ROA). The ROAs encompass those locations and elevations in the BDCP's Plan Area considered most appropriate for the restoration of tidal marsh habitats and within which restoration goals for tidal and associated upland natural communities will be achieved. The intent of the South Delta ROA will be to benefit sensitive native species in the Delta.

5-6 Lastly, the fisheries citations and discussion are not current. For example, in Section 5.12.1.3 Special Status Fish of the Draft EIS/EIR, many concepts and discussions concerning the Delta smelt are out-of-date including concerns related to entrainment. The BDCP Draft EIR/EIS has a discussion of Delta smelt based on more recent references that can assist in updating this Draft EIS/EIR chapter: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_EIR-EIS_Appendix_11A_-_Covered_Fish_Species_Descriptions.sflb.ashx (BDCP Technical Appendices, Appendix 11A Covered Fish Species Description).

We appreciate the opportunity to provide input to your planning process, and we look forward to receiving future information concerning this proposed project. If we can be of further assistance, or if you would like to discuss Metropolitan's comments, please contact me at sarakawa@mwdh2o.com or Mr. Randall Neudeck at rneudeck@mwdh2o.com.

Very Truly Yours,

Stephen Arakawa
Manager, Bay-Delta Initiatives

DWS:rrw

cc: San Joaquin Area Flood Control Agency
Attn: Mr. Juan Neira
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Stockton, California 95202-2317
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April 13, 2015

Ms. Tanis Toland
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Re: CMA Review - Notice of Availability of Draft Feasibility Report and Joint Environmental Statement/Environmental Impact Report for the Lower San Joaquin River Feasibility Study

Dear Ms. Toland,

Thank you for the opportunity to comment on this important document. As San Joaquin County's designated Congestion Management Agency (CMA), Metropolitan Planning Organization (MPO), and Regional Transportation Planning Agency (RTPA), the San Joaquin Council of Governments (SJCOG) has reviewed the above-referenced document and has the following comments:

6-1 On page 5-276, a reference is made to the *2011 Regional Transportation Plan: The Future of Mobility for San Joaquin County (San Joaquin Council of Governments)*. This document has been superseded by the *2014 Regional Transportation Plan and Sustainable Communities Strategy*, which was adopted by the SJCOG Board of Directors on June 26th, 2014.

6-2 On one instance on page 5-277, the document incorrectly states that SACOG is the Congestion Management Agency for San Joaquin County. All other instances in the document correctly state that SJCOG is the Congestion Management Agency for San Joaquin County.

6-3 Pages 5-277 and 5-278 contain references to state-maintained highways that cross San Joaquin County near the study area. However, the document omits references to State Route 120. While the Tentatively Selected Plan (Alternative 7a) would not impact this highway, this highway would be affected by any alternatives that include improvements to areas located in Reclamation District 17. Additionally, State Route 120 and all other highways in San Joaquin County are regionally significant roadways and are included in the Congestion Management Program for San Joaquin County. SJCOG requests that the final document include background discussion for State Route 120 in addition to the existing discussion on highways in the project area (I-5, SR 99, SR 4, SR 88, and SR 26).

6-4 On Page 5-279, the document refers to the vehicle bridges that cross the Calaveras River in addition to the footbridge that provides access across the river from the University of the Pacific. However, the document omits references to the second footbridge located east of West Lane just west of the Union Pacific Railroad's Fresno Subdivision.

6-5 The document also omits references to the bridges that cross Mosher Slough in the project area. Five vehicle bridges cross Mosher Slough: Mariners Drive, Interstate 5, Kelley Drive, Don Avenue, and Thornton Road. A footbridge provides pedestrian access across the slough between Yarmouth Drive and Bainbridge Place.

6-6 Page 5-280 states, *"The Altamont Commuter Express (ACE) provides passenger service between Stockton and San Jose. Service includes three westbound morning trains, three eastbound evening trains, and a fourth train for midday commutes."* SJCOG recommends correcting and rephrasing this passage to:

> *"The Altamont Commuter Express (ACE) provides passenger service between Stockton and San Jose. Service currently consists of four westbound morning trains and four eastbound evening trains."*

Thank you again for the opportunity to comment. If you have any questions pertaining to the RCMP program please call David Ripperda at (209) 235-0450 or Kim Anderson at (209) 235-0565.

Sincerely,

David Ripperda
SJCOG Regional Planner

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

April 13, 2015

Via Email: Tanis.j.toldan@usace.army.mil
Tyler.M.Stalker@usace.army.mil

Ms. Tanis Toland and Tyler Stalker
U.S. Army Corps of Engineers
1325 J Street, Room 1513
Sacramento, CA 95814

Subject: Lower San Joaquin River Draft Feasibility Study;
Applicability of EO 11988 to Reclamation District 17

Dear USACE:

I am responding to the Lower San Joaquin River Draft Feasibility Study released by the U.S. Army Corps of Engineers (USACE). Please accept this letter as formal comments from the City of Manteca regarding this draft document to be considered by USACE Headquarters.

The identified overall purpose of the Lower San Joaquin River Feasibility Study (LSJRFS) is to "reduce flood risk to urban and urbanizing parts of the study area. The Non-Federal Sponsors' objective is to meet the requirements of California Senate Bill (SB) 5 of 2007, the Central Valley Flood Improvement Act, to achieve a 200-year level of protection for the urban and urbanizing areas within the Study Area."

7-1 The City of Manteca disagrees with selection of Alternative 7a as the Tentatively Selected Plan (TSP). Alternative 7a will not adequately meet the flood risk reduction objective or the 200-year level of protection objective. **We are asking that RD17 Alternatives <u>not</u> be removed from further consideration in the Draft Feasibility Study (7b, 8b, 9b).** If not removed from the Feasibility Study, we believe Alternative 7b would become the TSP and would include RD17 improvements.

Removal of RD17 Improvements from LSJRFS Conflicts with Prior Federal Actions

7-2 The City of Manteca believes the action to remove RD17 alternatives from the Feasibility Study contradicts 165 years of prior action by Congress, 70 years of prior action by the U.S. Army Corps of Engineers (USACE), and 25 years of prior action by FEMA. RD17 levees have previously been endorsed by Congress, the USACE and by FEMA to provide protection for development. We fail to understand why the USACE chose a different analysis methodology to

determine that the RD17 levees do not provide 100-year flood protection, when those levees have been certified by FEMA for 25 years.

The USACE Interpretation of EO 11988 Appears Overstated

7-3 The USACE interpretation of EO 11988 appears overstated when they state the RD17 levees do not provide 100-year flood protection and should not be improved to provide 100-year protection. We would like to understand the impact of this EO 11988 interpretation on proposed large, federally funded projects within RD17. We would also like to understand the impact on Federal facilities in RD17 if levees cannot be improved to provide 200-year flood protection.

The USACE can Change the TSP in the Final Feasibility Report

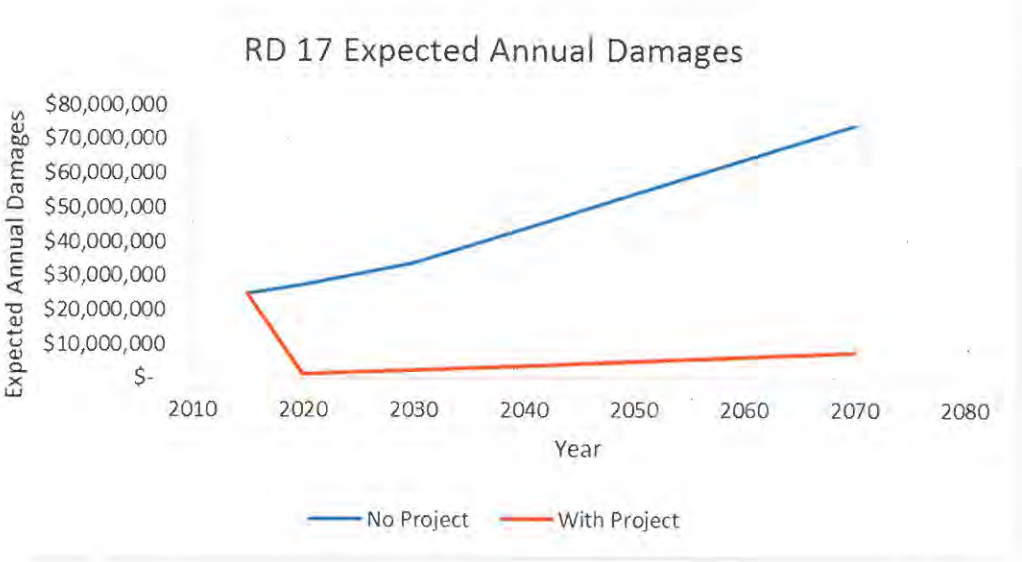
7-4 We understand the USACE can change the TSP in the Final Feasibility Study. The potential impacts of the entire array of alternatives included 7b, 8b and 9b that all included the RD17 improvements. All potential impacts of RD17 improvements are documented and analyzed in the Draft EIS/EIR, so the USACE can determine in the Final LSRFS that the TSP has changed to Alternative 7b. **WE ARE ASKING THE USACE TO MAKE THIS CHANGE.**

If RD17 Improvements are not in the TSP, 43,000 People Remain at Risk

7-5 The Draft plan states that the current TSP will result in no additional risk reduction for 43,000 people and critical infrastructure in RD17. We understand this to mean that the USACE has determined that the RD17 levees do not provide 100-year protection, and they do not believe they should be improved to provide that protection. The LSJRFS confirms that the USACE does not have land use authority. FEMA continues to certify 100-year protection from RD17 levees. New development in areas of the 200-year floodplain that are less than three feet deep would not be stopped from development by SB5. We are concerned that these expanded development areas, along with the 43,000 existing residents, would be precluded from improved levee protection by excluding RD17 from the Feasibility Study.

Residual Risk Decreases by $24 Million/Year if RD17 Improvements are included as the TSP

7-6 Table 3-13 from the LSJRFS shows that expected annual damages within RD17 today is $25 million/year. With the recommended ULOP levee improvements, the expected annual damages drop to $1 million/year. This represents an immediate reduction in risk of $24 million/year. If, as the USACE suggests, development were to suddenly double after the levees are improved, this would result in annual damages of $2 million. This still represents an immediate reduction of $23 million per year. As shown on the table below, the reduction in risk of annual damages is monumental. With Project risk never approaches the No Project risk, even with extensive additional development. We interpret this to mean the risk to the public and to the State is greatly reduced if the RD17 levees are improved.



RD17 and the Cities of Manteca and Lathrop are ready to improve our levees

7 - 7

RD17, in conjunction with DWR, completed Phases 1 and 2 of their recent levee improvements. Phase 3 improvements are being reviewed now by the USACE. RD17 is cooperating with the cities of Lathrop and Manteca in preliminary design of ULOP improvements to provide RD17 with 200-year flood protection. Lathrop has applied for an Urban Flood Risk Reduction Grant from the State to share the cost of designing ULOP levee improvements. And finally, the Flood Protection General Plan Amendment has been drafted and delivered to the Flood Protection Board for review, as required by SB5. It is only because there is new development proposed for the Lathrop areas protected by RD17 that this city can afford to pay its share of the levee improvement costs..

In summary, Manteca's land within the limits of RD 17 has already been flood protected, approved for development, annexed, and has some infrastructure in place. We believe that inclusion of this land within the Lower San Joaquin River Feasibility Study would not conflict with EO 11988. If you have any questions regarding this letter, please feel free to call me at the number above or email me at MHoughton@ci.Manteca.ca.us.

Sincerely,

Mark Houghton, Director of Public Works

Cc Karen McLaughlin, City Manager
Stephen Salvatore, City of Lathrop
Dante Nomellini, RD17

City of Lathrop
City Engineer
(209) 941-7292
(209) 941-7339 facsimile

April 13, 2015

Ms. Tanis Toland
U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95814

Subject: Comments on Draft Lower San Joaquin River Draft Feasibility Study/DEIS/DEIR

Dear Ms. Toland:

I am responding to the Lower San Joaquin River Draft Feasibility Study released by the U.S. Army Corps of Engineers (USACE). Please accept this letter as formal comments from the City of Lathrop regarding this draft document to be considered by USACE.

The identified overall purpose of the Lower San Joaquin River Feasibility Study (LSJRFS) is to "reduce flood risk to urban and urbanizing parts of the study area. The Non-Federal Sponsors' objective is to meet the requirements of California Senate Bill (SB) 5 of 2007, the Central Valley Flood Improvement Act, to achieve a 200-year level of protection for the urban and urbanizing areas within the Study Area."

The City of Lathrop disagrees with selection of Alternative 7a as the Tentatively Selected Plan (TSP). We do not believe that Alternative 7a will adequately meet the flood risk reduction objective or the 200-year level of protection objective. We are asking that RD17 Alternatives not be removed from further consideration in the Draft Feasibility Study (7b, 8b, 9b). If not removed from the Feasibility Study, we believe Alternative 7b would become the TSP and would include RD17 improvements.

Removal of RD17 Improvements from the Feasibility Study Appears to Conflict with Prior Federal Actions

The City of Lathrop believes the action to remove RD17 alternatives from the Feasibility Study contradicts 165 years of prior action by Congress, 70 years of prior action by the U.S. Army Corps of Engineers (USACE), and 25 years of prior action by FEMA. Following is a brief history of these Federal actions that, until 2014, encouraged development behind the RD17 levees:

1850	**Congress adopts Arkansas Act of 1850 (aka Swamp Land Act). California Supreme Court determined: Objective of the Federal Government in making this munificent donation to the severed States was to promote the speedy reclamation of the lands and invite to them population and settlement."**
1863	**Reclamation District 17 (RD17) was formed**

1863 – 1944	**local farmers build levees to protect their land**
1944	**Federal Flood Control Act authorized the Lower San Joaquin River and Tributaries project, which included RD17 levees.**
1944 – 1963	**USACE designs and constructs improvements to RD17 levees, without using Risk and Uncertainty analysis.**
1963	**USACE issues "Supplement to Standard Operations and Maintenance Manual Lower San Joaquin River and Tributaries Project Unit No. 2", including the following:** **"1.03. Protection Provided. Levees along the left bank of French Camp Sough and right bank of San Joaquin River, as described in this unit, provide direct protection to about 12,000 acres of agricultural, industrial and residential lands within Reclamation District No. 17."**
1989 – 1990	**USACE reviews and approves design of RD17 levee improvements intended to provide 100-year protection, to be certified by FEMA. The EIR that reviewed the impacts of establishing 100-year protection receives no comments from USACE.**
1990	**FEMA issues 100-year accreditation for RD17 levees.**
1991	**City of Lathrop issues first General Plan/EIR, including development behind RD17 levees. Lathrop receives no comments on the EIR from USACE.**
1997	**+/- 89-year flood impacts RD17 levees, but levees do not fail. USACE, DWR and RD17 perform flood fight for RD17 levees.**
2000	**RD17 establishes assessment district to fund their share of levee improvements recommended by USACE. Improvements are specifically designed to retain 100-year FEMA accreditation after damage from 1997 flood.**
2001	**USACE designs and constructs improvements to RD17 levees (partially funded by RD17) to reduce seepage and boils. USACE does not use Risk and Uncertainty analysis.**
2003	**California State Reclamation Board accepts (for maintenance) improvements constructed by USACE.**
2011	**FEMA re-accredits RD17 levees as providing 100-year protection.**
2014	**USACE prepares Lower San Joaquin River Feasibility Study and decides the levees they designed and built to allow development do not provide flood protection adequate to allow development.**

To summarize the above history, RD17 levees have been endorsed by Congress, the USACE and by FEMA to provide protection for development. We fail to understand why the USACE chose a different analysis methodology to determine that the RD17 levees do not provide 100-year flood protection, when those levees have been accredited by FEMA for 25 years.

FEMA is Responsible for Determining 100-Year Levee Protection

Lathrop understands that FEMA was given the authority and responsibility to determine when to accredit levees as providing 100-year protection. For 25 years (since 1990) RD17 has been

determined by FEMA as providing 100-year flood protection. The City of Lathrop is concerned with the recent statements by the USACE that the FEMA accreditation may not be relied upon regarding RD17 levees.

The USACE Interpretation of EO 11988 Could Negatively Impact Federal Facilities

We are concerned this EO 11988 interpretation could negatively impact proposed large, Federal projects within RD17. We are also concerned that existing Federal facilities in RD17 would be negatively impacted if levees cannot be improved to provide 200-year flood protection.

Balancing Life Safety Against Aversion to Growth Inducement; EO 11988 Policy Compliance

Life safety and critical infrastructure pose a significant concern for the basin. The USACE LSJRFS Hydraulic Design Appendix highlights this:

> *"The flood warning time varies throughout the area and is dependent on the source and type of flood event. The principal sources of flood warnings are advisories by the National Weather Service (NWS) and river stage forecasts by the California Nevada River Forecast Center (CNRFC). The flood warning time would likely be greater for an overtopping related breach than a geotechnical failure type breach. It is estimated that flooding from a geotechnical type levee breach would have little to no advance warning (less than 1 hour) and the flood wave would rapidly inundate the immediately adjacent areas. Whereas, flooding from an overtopping related breach would likely have 24 to 48 hours of advance warning, due to forecasted reservoir operations. Therefore to answer whether the time would be sufficient to avoid loss of life and injury in critical infrastructures depends on the type and sources of flood event in the floodplain. It is highly unlikely that effective evacuation could occur if an unforeseen levee breach were to occur along the San Joaquin River or Delta Front."*

> *"Levee breach scenarios. Inundation maps were developed for fifteen levee breach locations within the study area. These breach locations were spatially distributed throughout the study area to reflect the floodplain characteristics. All breach scenarios assume levees were overtopped without failure at all locations other than the breach location. Breaches were simulated for 50% (1/2) ACE, 10% (1/10) ACE, 4% (1/25) ACE, 2% (1/50) ACE, 1% (1/100) ACE, 0.5% (1/200) ACE, and 0.2% (1/500) ACE events. The resulting inundation maps are hypothetical simulations of levee failures and do not represent the probability of occurrence (Appendix B.2, Hydraulic Design). For evaluation of life loss consequence the study area can be divided into a breach zone, zone with rapidly rising water, and a remaining zone (Jonkman, 2008). Simulations of levee breaches at the peak stage of a 1% ACE event were used to evaluate characteristics of each zone. Breach characteristics for other event magnitudes would be similar.*

> *Breach zone. The breach zone is characterized by destruction of buildings and the highest life safety consequence. Yonkman describes this area as having velocities greater than 6 fps and the product of depth and velocity greater than 22 ft^2 per second. For the Lower San Joaquin Feasibility study, the limit of this zone is estimated to range from 250 feet to 7,600 feet from the breach location. The results indicate a breach zone of approximately 250 feet for the Calaveras River, Mormon Slough, and upper reaches of French Camp slough. The breach zone for Lower San Joaquin River, Delta, and Lower French Camp Slough could be as much as 7600 feet. This was based on the evaluation of the maximum velocity and maximum depths in breach simulations."*

For persons with limited-mobility (sick, infirm, incarcerated), this issue is compounded. Many of the dead from Hurricane Katrina were limited mobility persons. The jail and hospital complex off Mathews Road in RD 17 contains a high concentration of particularly vulnerable limited mobility people.

But this is not to understate the threat to other critical infrastructure. Law enforcement command and control centers could be rapidly flooded, schools which are used as emergency shelters and evacuation centers, and thousands of ordinary people would be in the breach zone.

San Joaquin County Office of Emergency Services (OES) and RD 17 have developed a model emergency response plan. However, it's effectiveness at preventing substantial human tragedy in a geotechnical failure situation is limited.

For these reasons, local, state, and Federal interests should all recognize the overriding considerations of life safety in support of further improvements to RD 17's levees.

In light of the significant life safety risks described above, USACE ER 1165-2-26 provides the general guidance and policy for USACE's implementation of EO 11988 for all civil works projects. Paragraph 7 of the regulations states:

> *" ... It is the policy of the Corps of Engineers to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base flood plain and avoid inducing development in the base flood plain unless there is no practicable alternative. The decision on whether a practicable alternative exists will be based on weighing the advantages and disadvantages of flood plain sites and non-flood plain sites. Factors to be taken into consideration include, but are not limited to, the functional need for locating the development in the flood plain...The test of practicability will apply to both the proposed Corps action and to any induced development likely to be caused by the action."*

This statement says that Federal improvement of a levee could take place if there was no practicable alternative. The implication is that if the need for flood risk management is clear, that

need must be fulfilled by an action alternative. Stated another way, the no action alternative can be considered unacceptable if the residual risk is too great. And this means that an action alternative can have flood risk management performance which overrides growth inducement concerns. The LSJRFS acknowledges the lack of a practicable alternative to fix-in-place, but stops short of recommending action. The USACE acknowledges that this is an important policy discussion that needs to happen, but elected to defer this to a later study:

> *"It is understood that RD 17, with funding assistance from the State, is currently pursuing a phased strategy of levee improvements to initially increase the resistance of RD 17's levee system to under seepage and through seepage. Upon completion of that work, RD 17 and the non-Federal sponsors intend to pursue USACE participation in additional studies/improvements necessary to achieve the non-Federal objective of 200-year (0.5 percent ACE) flood risk management in order to meet SB 5 requirements. Consideration of future Federal participation would be subject to demonstration of a Federal interest in such incremental improvements."*

We believe that USACE's EO 11988 analyses for the LSJRFS should include a weighing of the risks and lack of a practicable alternative against growth inducement concerns, and conclude that policy compliant Federal interest exists in improving the RD 17 levees.

The USACE can Change the TSP in the Final Feasibility Report
According to the USACE Non-federal Sponsor Meeting Notes dated 8/21/14:

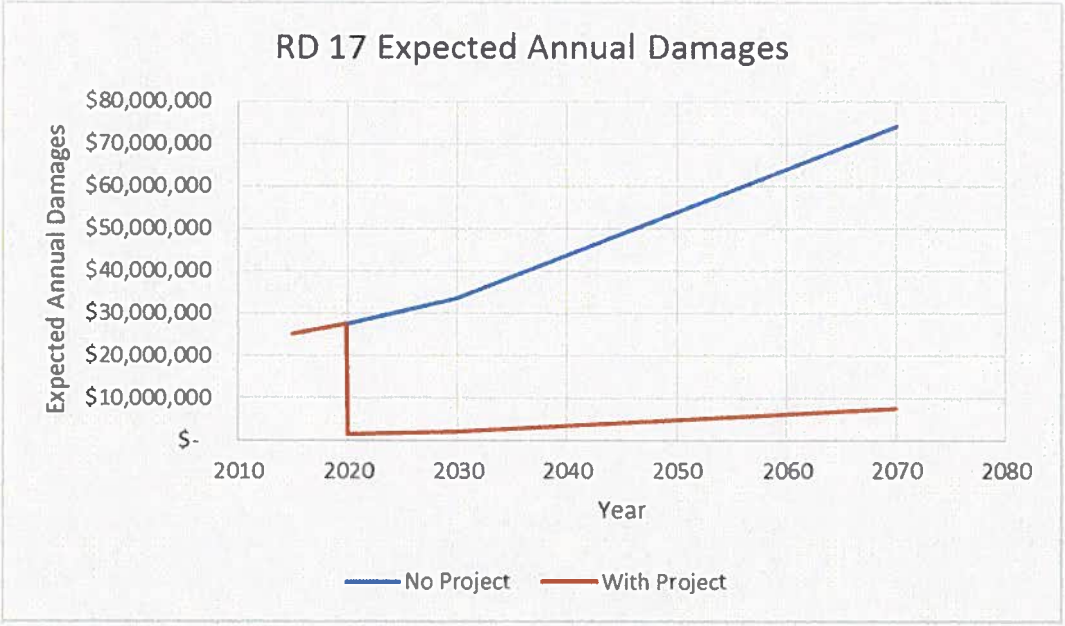
> "Headquarters made it clear during the TSP Conf. that they had yet to make their own determination on the EO11988 issue as it relates to RD17. They will be reviewing the study and relating issues during their reviews of the Draft Report and the Policy Review process which will run concurrently with the Public / Agency Review.
>
> If HQ returns a decision on the application of EO11988 in favor of including RD17 in the NED/TSP, the NFS would support amending the Draft Report and changing the NED/TSP to Alternative 7b. Alt 7b is the same as Alt 7a but includes the RD17 area."

We understand the USACE can change the TSP in the Final Feasibility Study. The potential impacts of the entire array of alternatives included 7b, 8b and 9b that all included the RD17 improvements. All potential impacts of RD17 improvements are documented and analyzed in the Draft EIS/EIR, so the USACE can determine in the Final LJSRFS that the TSP has changed to Alternative 7b. We are asking the USACE to make this change.

If RD17 Improvements are not in the TSP, 43,000 People Remain at Risk
The Draft plan states that the current TSP will result in no additional risk reduction for 43,000 people and critical infrastructure in RD17. We understand this to mean that the USACE has determined that the RD17 levees do not provide 100-year protection, and they do not believe they should be improved to provide that protection. We are concerned that 43,000 existing residents

would be precluded from improved levee protection by excluding RD17 from the Feasibility Study.

Residual Risk Decreases by $24 Million/Year if RD17 Improvements are included as the TSP
Table 3-13 from the LSJRFS shows that expected annual damages within RD17 today is $25 million/year. With the recommended Alternative 7b levee improvements, the expected annual damages drop to $1 million/year. This represents an immediate reduction in risk of $24 million/year. If, as the USACE suggests, development were to suddenly double after the levees are improved, this would result in annual damages of $2 million. This still represents an immediate reduction of $23 million per year. As shown in the figure below from an Analysis of Development Risk Resulting from Levee Improvements to ULDC Standards by Peterson Brustad, Inc (Attachment E), With Project risk never approaches the No Project risk, even with extensive additional development. We interpret this to mean the risk to the public and to the State is greatly reduced if the RD17 levees are improved.



RD17 and the City of Lathrop are Ready to Improve Our levees
RD17, in conjunction with DWR, completed Phases 1 and 2 of their recent levee improvements. Phase 3 improvements are being reviewed now by the USACE. RD17 is cooperating with the cities of Lathrop and Manteca in preliminary design of Urban Level of Flood Protection (ULOP) improvements to provide RD17 with 200-year flood protection. Lathrop has applied for an Urban Flood Risk Reduction Grant from the State to share the cost of designing ULOP levee improvements. And finally, the General Plan Amendment to add new flood management

provisions has been drafted and delivered to the Central Valley Flood Protection Board for review, as required by SB5.

City of Lathrop's Wise Use of Floodplains

The City incorporated in 1989. Immediately afterwards in 1990, RD17 was removed from the FEMA 100-year floodplain. Based upon this status, Lathrop prepared its first General Plan in 1991, anticipating growth within this 100-year flood protected area. The City has chosen to enact regulations to preserve farmland, provide environmental stewardship, and provide recreational components that highlight the value of the riverine levee system, as indicated below:

Farmland Preservation

Development within Central Lathrop Specific Plan area requires payment of over $3,000 per acre toward an accredited farmland trust. In Lathrop, this provides over $4 million in revenue to the Central Valley Land Trust (Attachment A)

Environmental Stewardship

Development within Central Lathrop Specific Plan area requires payment of over $13,000 per acre toward the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (Attachment B). In Lathrop, this provides approximately $10 million in revenue towards habitat preservation, of which $2.6 million has already been paid (Attachment C).

Recreational Components and Levee Setbacks

Central Lathrop Specific Plan requires a Linear Park/Trails and Open Space Corridor along the RD-17 levee (Attachment D). Also, all streets in the Specific Plan area that border the levee are single loaded, eliminating any backup of homes along the levee to avoid any impediment to flood fighting, if it is ever needed.

A full listing of residual risk management measures being employed in RD 17 is provided (Attachment F).

Technical Review by SJAFCA

We have not given the document a thorough technical review because the City understands that SJAFCA has performed the detailed technical review and provided comments to USACE. We have reviewed SJAFCA's comments and we are surprised at the significance of many of the comments. It appears that the study has significant technical errors that could significantly change the costs, benefits, and impacts of the alternatives, and if corrected could result in a substantially revised NED/TSP. We feel it is critical that USACE address all of SJAFCA's technical comments in addition to our comments provided herein, and reconsider the NED/TSP recommendation.

In summary, we believe that inclusion of improvements to RD 17 levees does not conflict with EO 11988, and that alternative 7b, 8b, or 9b should be the TSP. If you have any questions regarding this letter, please feel free to call me at the number above or email me at ggebhardt@ci.lathrop.ca.us.

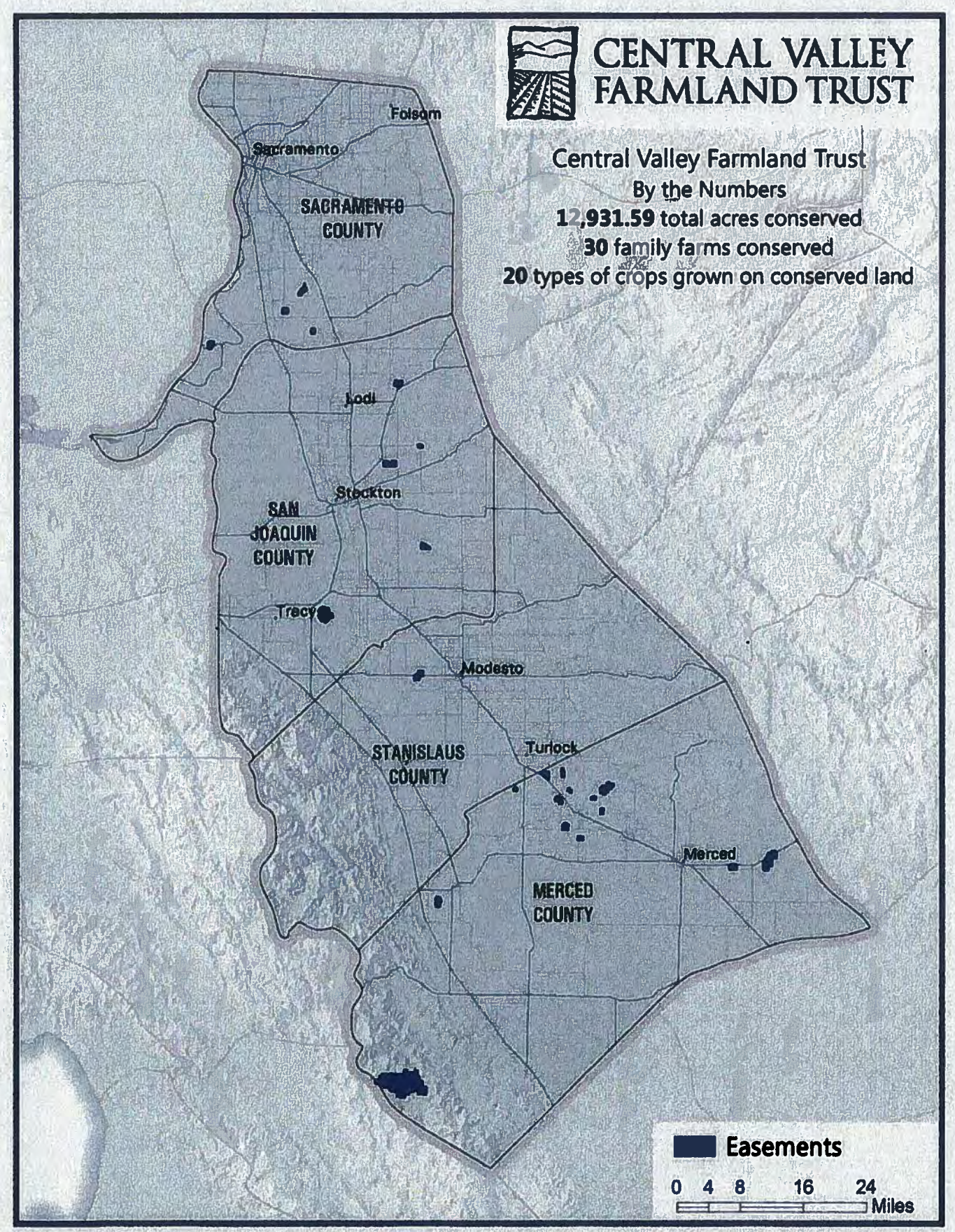
Sincerely,

Glenn Gebhardt,
City Engineer

Att.
- A. Central Valley Land Trust information
- B. San Joaquin Multi-Species Habitat Conservation and Open Space Plan
- C. Receipt for $2.6 Million Payment for Habitat Conservation
- D. Plan for Linear Park/Trails and Open Space Corridor
- E. Analysis of Development Risk Resulting from Levee Improvements to ULDC Standards
- F. Residual Risk Management Measures Being Employed in RD 17

Cc w/a:
Stephen Salvatore, Lathrop City Manager
Rebecca Willis, Director of Community Development
Dante Nomellini, Attorney, RD17
Karen McLaughlin, Manteca City Manager
James Giottonini, Executive Director, SJAFCA
Stacy Samuelson, Planning Study Manager, US Army Corps of Engineers

Attachment A



CENTRAL VALLEY FARMLAND TRUST

PRESERVING FARMS THAT FEED THE WORLD

March 3, 2014

Charlie Simpson
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Dear Charlie:

I am pleased to inform you that the Central Valley Farmland Trust (CVFT) was recently awarded renewal accreditation status. We are one of only 254 accredited land trusts across the country. As an accredited land trust, we must conform to the highest professional standards in the national land trust industry. This insures the work we do is of the highest quality and guarantees that our conservation efforts are permanent.

CVFT first received accreditation in 2008 and is one of the first land trusts to achieve renewal accreditation status. This is a significant achievement for us and a major milestone for the accreditation program. To achieve this goal we submitted extensive documentation for review by the Land Trust Accreditation Commission (Commission), an independent program of the Land Trust Alliance. This evaluation and improvement process verifies our operations continue to be effective, strategic and in accordance with the strict requirements of the Commission.

Currently CVFT holds 33 agricultural conservation easements protecting nearly 13,000 acres in Sacramento, San Joaquin, Stanislaus and Merced Counties.

The ability to utilize the farmland mitigation fees has greatly enhanced our ability to conserve some of the most valuable farmland in the San Joaquin Valley. We currently hold nearly 2,000 acres of ACEs in San Joaquin County.

Sincerely,

Bill

Bill Martin
Executive Director

8788 ELK GROVE BLVD, BLDG 1, STE 1 ELK GROVE CA 95624
916-687-3178 PHONE | 916-689-1041 FAX
WWW.VALLEYFARMLAND.ORG

If My Activities Aren't Covered, Can I Request Coverage from SJCOG, Inc. or Use the SJMSCP for Mitigation?

Yes. An applicant with a non-covered activity can submit a request of coverage using one of the four options to receive coverage or propose equivalent compensation to SJCOG, Inc. Activities not receiving coverage under the SJMSCP may still be eligible to purchase mitigation credits from mitigation banks.

What are the Steps Involved for an Applicant with a Non-covered Activity Requesting Coverage?

Prior to any groundbreaking work the project applicant submits to SJCOG, Inc. a "Request for Project Coverage Form" which will be reviewed by the Habitat Technical Advisory Committee. If the applicant agrees with the decision, then the applicant chooses one of the four options (see "How Does Coverage Work?"). If the applicant disagrees with the decision, they may appeal to the SJCOG, Inc. Board.

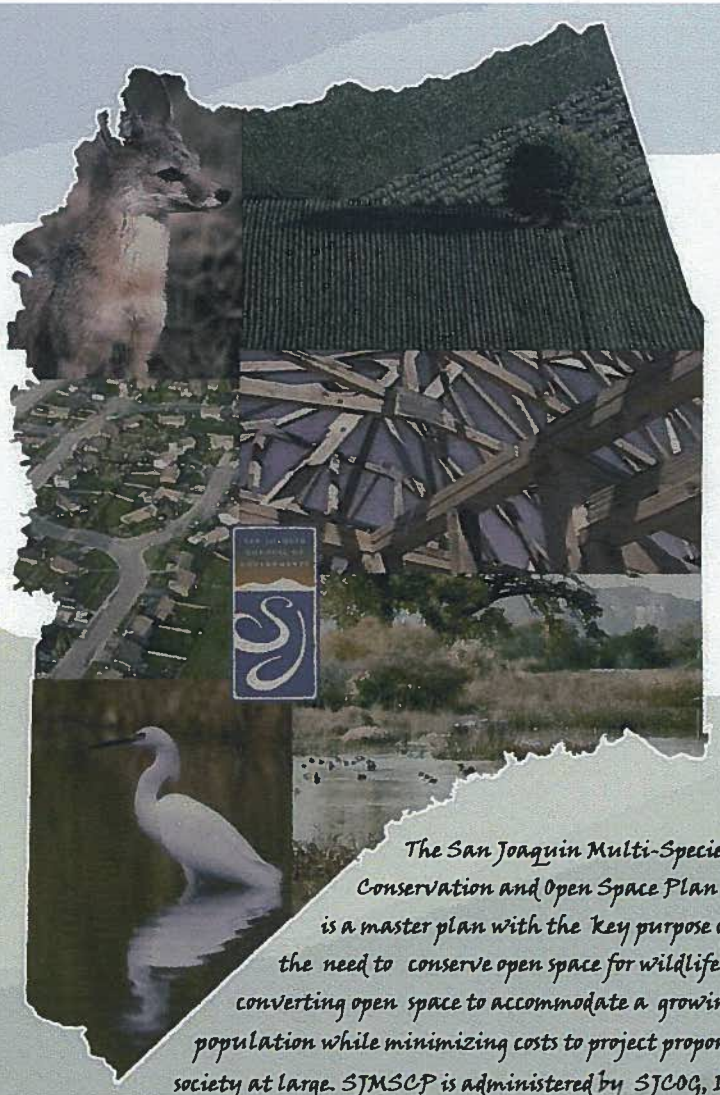
An applicant choosing option 4 must submit a SJMSCP Equivalent Proposal Form with a proposal. The form will be forwarded to the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) for comments.

SJCOG, Inc.

555 E. Weber Ave.
Stockton, CA 95202
Phone: 209-468-3913
Fax: 209-468-1084
E-mail: info@sjcog.org
www.sjcog.org

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)

PROJECT APPLICANT'S GUIDE *to the* SJMSCP



The San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) is a master plan with the key purpose of balancing the need to conserve open space for wildlife and converting open space to accommodate a growing population while minimizing costs to project proponents and society at large. SJMSCP is administered by SJCOG, Inc., a non-profit corporation established by San Joaquin County and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton and Tracy.

Attachment B

How does the SJMSCP apply to Project Applicants within San Joaquin County?

The Plan allows SJMSCP Permittees (SJCOG, Inc., San Joaquin County and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton and Tracy) to issue Incidental Take Permits or allows project applicants to mitigate for impacts to SJMSCP Covered Species resulting from Open Space land conversion resulting from covered projects. Once an Incidental Take Permit is issued it allows the project applicant to unintentionally "Take" a threatened or endangered species listed under the Federal and California Endangered Species Act.

What are the Covered Projects?

The SJMSCP covers the following activities within San Joaquin County: urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring on agriculturally-zoned properties, projects which could affect fisheries or wetlands indirectly which are located within non-jurisdictional waters, transportation projects, school expansions, non-federal flood control projects, new parks and trails, utility installation, maintenance activities, managing preserves, and similar public agency projects.

These activities can be undertaken by both public and private individuals operating in San Joaquin County.

What Are the Benefits of Participation?

- Fulfills ESA, CESA, NEPA, CEQA requirement
- Provides consistent and predictable mitigation measures
- Guarantees no further mitigation, except for Incidental Take Minimization Measures required in limited cases
- Provides a streamlined permitting process saving time and planning costs
- Eliminates costs of both biological surveys and pre-construction surveys for Project Proponents
- Allows for off-site mitigation, thereby allowing greater use of project land
- Benefits covered species such as San Joaquin kit fox, Swainson's hawk and California tiger salamander

How Does Coverage Work?

Project applicants have four options to receive coverage, with approval by SJCOG, Inc.:

1. Pay the appropriate fee. A fee is assessed depending on which of the four habitats the project lies within.
2. Dedicate habitat lands as conservation easement or fee title.
3. Purchase mitigation bank credits from a mitigation bank approved by SJMSCP.
4. Propose an alternative mitigation plan, consistent with the goals of the SJMSCP and equivalent in biological value.

Are There Areas Where Covered Activities Require Prior Approval to Participate?

Yes. Certain covered activities within San Joaquin County occur over a wide area and their exact locations cannot be precisely known, therefore the biological impacts cannot be assessed until submittal of a land development application to the San Joaquin County Community Development Department. Coverage for unmapped land uses shall be subject to a case-by-case review by the Habitat Technical Advisory Committee (HTAC) to ensure biological impacts fall within established parameters.

Am I Required to Participate in the SJMSCP?

Participation in the SJMSCP is voluntary for project applicants except when conditioned to participate by a Permittee. Project applicants within a Permittee's jurisdiction who opt out of the SJMSCP shall satisfy applicable ESA, CESA, NEPA, CEQA, and other applicable local, state and federal laws and regulations provisions through consultations with the Permitting Agencies and local planning agencies.

Is Access to My Property Required?

Yes. A biologist on-call with SJCOG, Inc. will be dispatched to the project site to conduct a pre-construction biological survey. The biologist collects information only relating to the project site such as habitat type and presence of covered species. The information collected is used to create Incidental Take Minimization Measures which is provided to the project applicant if a covered species is found.

What if a Covered Species is Found within the Project Site?

If a covered species is found within the project site and cannot be avoided through the measures provided then it may be relocated to an appropriate site by CDFG, USFWS (for federally-listed species) or a qualified biologist approved by permitting agencies at the project applicant's expense.

What Activities Aren't Covered?

- Any agricultural activities located on agriculturally zoned land. Project applicants shall negotiate directly with state and federal agencies if mitigation is required.
- Dredging activities are not covered except for dredging activities of limited size already permitted pursuant to Nationwide Permits #19 and #35 and Regional Permit #34.
- Activities which require a Streambed Alteration Agreement from the CA Dept. of Fish and Game. The SJMSCP may be amended in the future to include Streambed Alteration Agreements.
- Water Diversion and Conveyance.
- Activities currently receiving Take authorization under an existing biological opinion.
- The use of any pesticide is not a covered activity under the SJMSCP and remains subject to the Federal Endangered Species Act, California Endangered Species Act, Federal Clean Water Act and other state and federal regulations. Property owners are encouraged to contact state and federal agencies to determine requirements pertaining to their projects.
- Activities involving tidally influenced wetlands, jurisdictional wetlands or other waters of the United States.

Any Questions Regarding this information?

Please Contact:
San Joaquin Council of Governments
Habitat Conservation Plan Department
(209) 468-3913

Attachment C

S J C O G, Inc.

555 East Weber Avenue • Stockton, CA 95202 • (209) 468-3913 • FAX (209) 468-1084

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

Certificate of Payment

This Certificate of Payment serves as acknowledgement for payment of development fees pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. The project and fee amount paid are provided below.

Project: Central Lathrop Specific Plan Phase 1

Project Address: Multiple

Assessor Parcel Number: 191-220-20;19;18;17;35;14;42;43;30;29; 28;27;26;25;47;46;45;44; 191-210-02;04;05;13

Project Jurisdiction: City of Lathrop

Project Impact: 806.60

Payment Date: May 2, 2006

Fee Amount Paid: $2,655,006.40

Certificate Prepared By: Steve Mayo

Payment Received By Signature: Steve Mayo

STEVE MAYO
Print Name

Date: July 19, 2006

CENTRAL LATHROP COMMUNITY PARK MASTER PLAN EXHIBIT

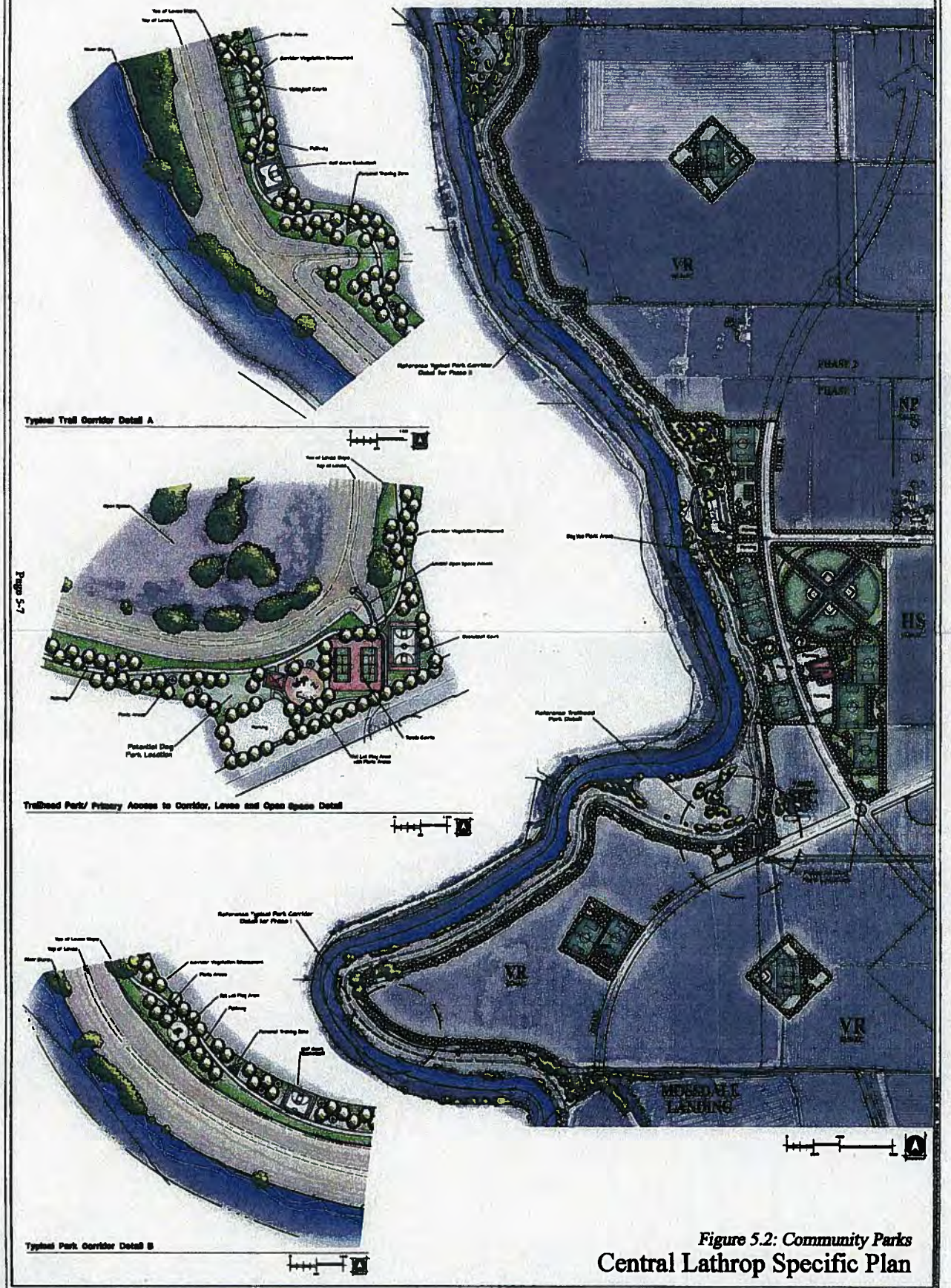


Figure 5.2: Community Parks

Central Lathrop Specific Plan

Technical Memorandum

PETERSON . BRUSTAD . INC .
ENGINEERING . CONSULTING

Analysis of Development Risk Resulting from Levee Improvements to ULDC Standards

Prepared for: Cities of Lathrop and Manteca *April 9, 2015*

Prepared by: Dave Peterson
Reviewed by: Mike Rossiter

Chapter 3 of the USACE *Lower San Joaquin River Project Interim Report, San Joaquin County, California, Draft Integrated Interim Feasibility Report/Environmental Impact Statement /Environmental Impact Report*, February 2015 (LSJRFS), evaluates policy compliance of Federal participation in a project to improve the RD 17 levees relative to Executive Order 11988. The primary concern identified by the USACE regarding EO 11988 compliance is the inducement of urban development within the already developed and levee protected floodplain. USACE estimated that there are approximately 12,500 acres of levee-protected land within RD 17 that could be urbanized, thereby increasing the population protected by RD 17 levees.

The non-Federal sponsors for the study, SJAFCA and the California Central Valley Flood Protection Board (CVFPB), were concerned that the 43,000 residents and billions of dollars of public and private assets that are already in place would be deprived of additional flood risk reduction as a result of the USACE evaluation. The quantity of developed but not yet urbanized land in RD 17 raised issues for USACE of whether inclusion of RD 17 would be compliant with EO 11988. For this reason, USACE excluded RD 17 alternatives from the final array of alternatives, and the non-Federal sponsors reluctantly accepted the exclusion to avoid further delay and/or cancelation of the study and to facilitate release of the draft for concurrent public and vertical team review. However, the non-Federal sponsors conditioned their acceptance on further consideration of the issue either within the LSJRFS, or in a subsequent study focused on RD 17. The non-Federal sponsors believe that EO 11988 should not be an obstacle to further federal investment in the RD 17 levees.

This memorandum is intended to address one of the issues at the core of EO 11988 in which a levee improvement project is said to induce growth in the floodplain and increase economic risk. This concern is shared by the State of California. The hypothesis being that expected annual damages (EAD) would decrease in the years immediately following completion of a levee improvement project, but that induced urban growth would end up increasing EAD over time, eventually exceeding without project EAD at some point in the future.

The draft LSJRFS provides the information needed to test this hypothesis, and is the basis for the analysis presented in this memorandum.

RD 17 current (2015) conditions
Developed acreage = 8,100 (based on numbers provided by Lathrop, Manteca, Stockton, and San Joaquin County)
Without project EAD = $25M/yr (LSJRFS Table 3-13)
With project EAD = $1M/yr (LSJRFS Table 3-13)

RD 17 future conditions, without project
Developed acreage = 8,100 (SB 5 precludes growth absent 200-year protection)

RD 17 future conditions, with project
2030 developed acreage = 8,100 + 5,300 = 13,400 (LSJRFS Section 3.6.1 step 4b identifies 5,300 acres of additional development in the General Plans of the cities and county)
2070 developed acreage = 8,100 + 5,300 + 7,200 = 20,600 (LSJRFS Section 3.6.1 step 4b identifies 7,200 acres of remaining land that could potentially be developed beyond the General Plans.)

PBI assumptions:

- Assume future development is similar in character to existing development, and that EAD can simply be extrapolated in proportion to developed area. So ignoring inflation, year 2030 with-project EAD = $1M + (5300/8100)*$1M = $1.7M. Similarly, year 2070 EAD = $1M + (12500/8100)*$1M = $2.5M.
- Assume that full buildout of all vacant ground under with project conditions would occur by the 2070 LSJRFS planning horizon. This is not the plan of any of the land use authorities, but the USACE's concern is that these plans change, so full buildout is the most conservative (high side) growth assumption.
- Assume that under without project conditions that growth is held at current levels due to SB 5 growth restrictions where 200-year flood protection does not exist.
- Assume that property values escalate at 2%/yr under both with- and without-project conditions.
- Assume the project is completed by the year 2020

Figure 1 presents EAD over time. Both with- and without project EAD start out at $25M/yr. Assuming no further growth under without project conditions, EAD continues to escalate due to property inflation to $33.6M/yr in 2030 and $74.3M/yr in 2070. Under with-project conditions, EAD drops to $1.3M/yr in 2020. This is greater than the published USACE estimate of $1M/yr, because we assume that 1/3 of the 5,300 acres builds out during the 2015-2020 timeframe, and there are 5 years of escalation. By year 2030 and 2070, growth plus escalation increase the with-project EAD to $2.2M, and $7.6M, respectively. Figure 2 presents the same data without property escalation.

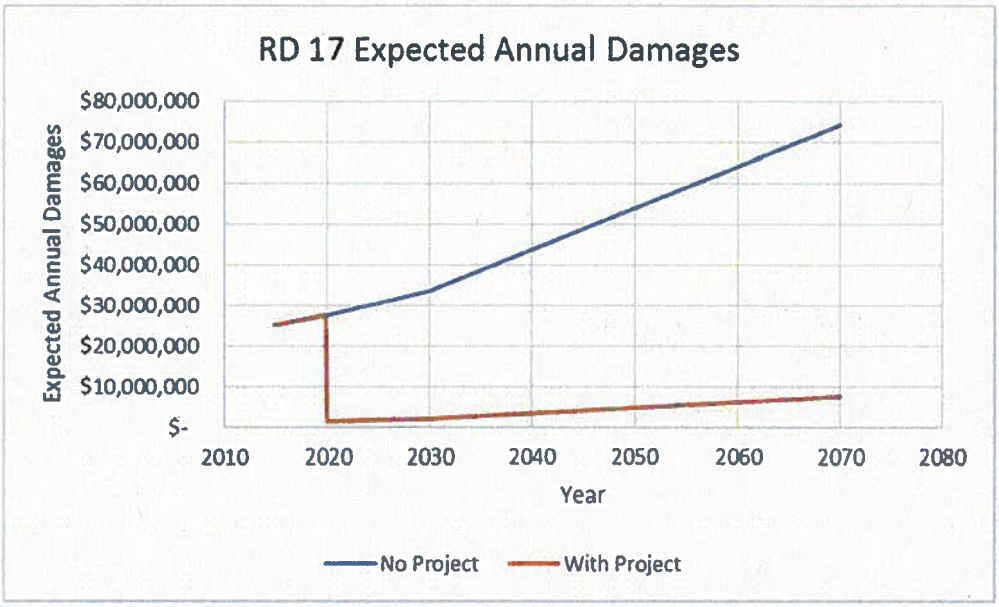


Figure 1. Comparison of residual economic risks for without- vs. with-project (assumes 2% property inflation).

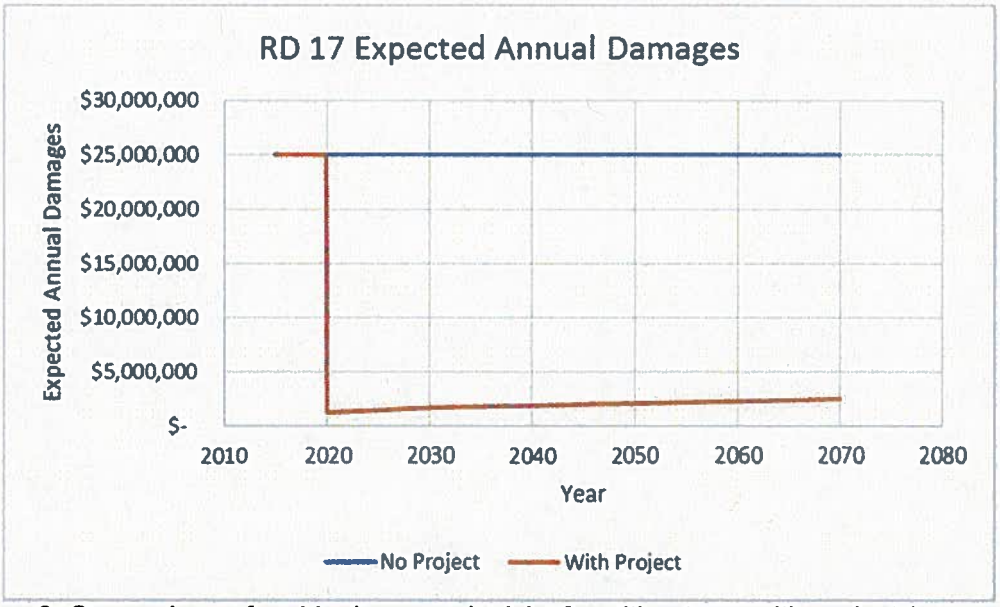


Figure 2. Comparison of residual economic risks for without- vs. with-project (no property inflation.

Both figures illustrate that without-project damage risk far exceeds with-project risk, and that the curves never cross. If inflation is considered, the curves diverge.

Life safety risk was not evaluated explicitly. It is reasonable to assume that life safety risk will generally trend with economic risk. However, in the case of RD 17 where geotechnical failure mechanisms dominate without-project conditions, failures are unpredictable and sudden, and evacuation is an ineffective risk management tool (LSJRFS Hydraulic Design Appendix, Section 4.7). Levee improvements under any of the LSJRFS "b" alternatives would remediate the geotechnical failure risk, so residual life safety risk would be primarily from overtopping, which can be forecasted several days in advance. So qualitatively, without- and with-project life safety risk curves are likely to diverge even more than economic risk curves.

PBI's conclusion is that both economic and life safety risk would be substantially reduced, and that this reduction would be sustained for the long term, if the RD 17 improvements included in the LSJRFS "b" alternatives are constructed, even when factoring in the most aggressive growth projections.

Attachment F

Residual Risk Management Measures Being Employed in RD 17

The agencies with land use authority in RD 17 do not intend to fully build out RD 17. The following residual risk mitigation measures are being employed by agencies in the RD 17 area:

1. *State & Federal Restrictions:* California Senate Bill 5 (signed 2007) prevents urban growth without 200-year protection. SB 5 precludes development unless 200-year protection exists, and institutes strong linkages between local land use and prudent floodplain management. Key among these linkages are requirements to amend local General Plans and zoning ordinances to reflect flood risk, modification to building codes, prohibition of permits and entitlements unless 200-year level of protection is demonstrated. FEMA regulations restrict growth in Special Flood Hazard Areas (SHFA's), but as noted earlier, none of the RD 17 lands are currently within a SFHA.
2. *Local Land-Use & Zoning Restrictions:* The General Plans (GPs) of San Joaquin County and the three cities in the basin limit urban growth to infill and growth at the fringe of the 3 cities. The GPs call for continued agricultural land use at all other points in the basin. Local land use policies and ordinances include numerous restrictions and approval requirements. These include requiring mitigations that exceed the minimum federal requirements including elevating lowest floors above anticipated flood levels and imposing building restrictions in areas not mapped into FEMA designated 100-year flood zones but have been known to be historically subjected to flooding.
3. *Levee Superiority:* Roberts Island (RD 524, RD 544) will remain rural, and levee superiority will be maintained. DWR, along with the local agencies, have an interest in maintaining agricultural land use on Roberts Island, directly across the river from RD 17. The RD 17 levees were constructed superior to Roberts Island levees (higher, stronger), and are operated and maintained to a higher degree. It is unlikely, if not impossible, to urbanize Roberts Island. Senate Bill 5 is State law which precludes development unless 200-year protection exists, and institutes strong linkages between local land use and prudent floodplain management. Neither the San Joaquin County General Plan nor the LSJ/DS RFMP contemplate urbanization or levee improvements to support urbanization.
4. *Upstream Transitory Storage:* The floodplain area upstream of RD 17 (RDs 2096, 2094, 2075, 2064) will remain rural, and will be a targeted place for restoration of natural and beneficial floodplain values.
5. *Commitment to work with others to advance a multi-objective Paradise Cut enlargement project.* Locals plan to improve RD 17's levees to 200-year State Urban Levee Design Criteria (ULDC) standards, so enlargement of the Paradise Cut is not an immediate need. However, it is recognized that accommodating greater San Joaquin River floods due to climate change will require an enlarged bypass. Therefore the *Lower San Joaquin River and Delta South Regional Flood Management Plan* recommends that this measure be

pursued as a long-term risk management strategy. The local agencies are committed to working with DWR and potentially the USACE toward this goal.

6. *Expanded rights-of-way along the landside toe of levees* is required by RD 17 to accommodate uncertainties and future needs.
7. *Parks and open space set-asides.* RD 17 requires a 50-foot wide land-side right of way strip to accommodate future needs. This exceeds the ULDC requirement of 20 feet and the USACE requirement of 15 feet.
8. *Conservation Easements.* Agreements between landowners and an agency (USFWS, etc) permanently preclude future development. San Joaquin County and the cities of Lathrop, Manteca, Stockton, Lodi, Escalon, Ripon, and Tracy have adopted the San Joaquin County Multi-Species Habitat and Conservation Plan. The SJMSCP has been approved by the U.S. Fish and Wildlife Service as a certified Habitat Conservation Plan (HCP). Habitat Conservation Plans (HCPs) provide a pathway forward to balance wildlife conservation with development. The primary objective of the HCP program is to conserve species and the ecosystems they depend on while streamlining permitting for economic development.

   Provided for by the Endangered Species Act, "regional" HCPs (such as the SJMCP) are a successful conservation tool because they can anticipate, prevent, and resolve controversies and conflict associated with project-by-project permitting. They do this by addressing these issues on a large regional scale, collaboratively and over the long term.

   The key purpose of the SJMSCP is to:

   - Provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy.
   - Preserve landowner property rights.
   - Provide for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA).
   - Provide and maintain multiple-use Open Space which contributes to the quality of life of the residents of San Joaquin County.
   - Accommodate a growing population while minimizing costs to project proponents and society at large.

   The *SJMSCP Planned Land Use Map* also identifies the boundaries for expected urban development and anticipated annexation areas and provides conservation strategies to offset the impacts of development. At the state and federal levels, the SJMSCP provides adequate compensation for and measures for avoiding impacts to plants, fish and wildlife for SJMSCP pursuant to the California Endangered Species Act (CESA), the California Native Plant Protection Act, the Federal Endangered Species Act (ESA), Section 404 of the Federal Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act of 1899, and the Migratory Bird Treaty Act (MBTA) for listed SJMSCP Covered Bird Species also protected under the MBTA as these laws relate to the California Department of Fish and

Game's (CDFG), United States Fish and Wildlife Service's (USFWS), and the U.S. Army Corps of Engineers' (USACE) responsibilities for Covered Species with respect to SJMSCP Permitted Activities located within the boundaries of San Joaquin County. Adoption and implementation of the SJMSCP by local planning jurisdictions provides adequate compensation for and minimization of impacts to plants, fish and wildlife for SJMSCP Permitted Activities as necessary to implement conservation and Open Space policies of local general plans, resolution, ordinances, and other regulations as they pertain to plants, fish and wildlife and as necessary to fulfill the obligations of local jurisdictions with respect to the analysis, minimization and mitigation of impacts to plants, fish and wildlife pursuant to the state and federal laws described above and pursuant to the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA).

The SJMSCP is designed to provide 100,841 acres of Preserves based on an estimated Conversion acreage of 109,302 acres. The SJMSCP anticipates acquiring land primarily through conservation easements and fee title at a ratio of approximately 90% easements to 10% fee title acquisition. Establishment and/or use of mitigation banks, and in-lieu land dedications also will play a role in preserving habitats under the SJMSCP. The SJMSCP has over 30 preserves totally 11,883 acres of land in San Joaquin County that has been permanently protected for habitat pursuant to its program.

9. *Williamson Act agreements.* These rolling 10-year agreements between government and farmers preserve the agricultural and open space in rural California by offering landowners tax breaks on the assessed land value. There are currently 2,164 ac in Williamson Act agreements in San Joaquin County
10. *Agricultural preservation easements.* These easements keep land in agriculture in perpetuity, essentially removing development rights. San Joaquin County and the cities of Lathrop, Manteca, and Stockton have agricultural mitigation fee programs to support the work of accredited land trusts. Within RD-17, the City of Lathrop requires development to pay an agricultural preservation fee to the Central Valley Farmland Trust to offset its development impacts. The Central Valley Farmland Trust currently holds 33 agricultural conservation easements protecting nearly 13,000 acres in the San Joaquin, Sacramento, Stanislaus and Merced Counties. San Joaquin County and the City of Stockton have similar programs, and both agencies also use the Central Valley Farmland Trust as its administrator. Stockton's program resulted in the preservation of 430 acres of prime farmland through the acquisition of conservation easements between 2007 and 2012, the initial five years of the program. During this time, the City collected almost $3 million in fees, which were transferred directly to the Trust to be used for the preservation of farmland. The County's program is very similar, but it requires that developers first attempt to acquire easements by demonstrating that a "good faith effort" was made before in-lieu fees are allowed to be paid. The County's program has been similarly successful in preserving prime farmland.

11. *Development impact fee and land purchase program.* A Development Impact Fee program is identified in the sponsor's local Finance Plan as an option to partially pay for the local share of the levee improvement program. This fee would be collected for any land developed in the benefit area, and would be dedicated to structural and non-structural flood risk reduction measures.
12. *FEMA CRS Rating.* San Joaquin County and the cities of Stockton, Lathrop, and Manteca are rated 6, 8, 8, and 9, respectively in the FEMA Community Rating System which rewards communities for advancing risk reduction programs. Ratings are on a scale of 1-10, with 1 representing the highest rating.
13. *Emergency response plan.* The San Joaquin County Office of Emergency Services coordinates emergency response planning and activities among the local parties, and is considered one of the strongest programs in the state. It has been awarded a $1.6M grant to improve its interagency flood response planning and to increase the availability of flood fighting supplies to local levee maintaining agencies. As part of this effort, San Joaquin County recently completed Flood Safety Plans for the more than 100 miles of levees it maintains. These levees provide flood protection to much of the City of Stockton and the urbanized areas of unincorporated County in the Stockton area. Also, the County has implemented a flood alert system which provides real-time monitoring of water levels in many of the major streams and rivers that pose a flood threat to the Stockton metropolitan area. This system will be used as part of the decision-making process to deploy flood prevention and flood fighting efforts before and during major storm events.
14. *Annual flood risk notifications.* Annual flood risk notifications are mailed to all owners of levee-protected parcels by the State of California. Local agencies also communicate flood risk through a variety of regular mailings, meetings, websites and other methods. Additional public outreach on flood risk and preparedness is done in conjunction with local CRS programs.
15. *RD 17 Levee Seepage Repair Project.* RD 17 has completed Phases 1 and 2 of their levee strengthening program, and Phase 3 is expected to be under construction in 2015.

Development Restrictions

Various development restrictions are in place for land use authorities within the RD17 Basin at the local, state, and federal levels as summarized below. San Joaquin County and the Cities of Stockton, Lathrop, and Manteca are governed by land use related laws and regulations, many of which are designed to specifically limit the extent and intensity of growth.

Local-Level Development Restrictions

State law requires that every city adopt a "general plan" that incorporates a long term framework for the physical development of the city itself, and any outlying land that is necessarily related to the city's land use planning. (Cal. Gov't Code § 65300.) While a city may add optional elements, each general plan must include seven mandatory elements - land use, circulation, housing, conservation, open space, noise, and safety. (Cal. Gov't Code § 65302.)

The general plan is considered the "constitution for all future development." (Lesher Communications, Inc. v. City of Walnut Creek, 52 Cal.3d 531, 540 (1990).) Furthermore, zoning ordinances are used to establish land uses included in a General Plan. Therefore, no development may occur within a given California city unless such development is consistent with the zoning and land use elements codified in a valid general plan. In the case where approving a land use decision would require amending the general plan, the city must follow a complicated procedure involving comment by numerous agencies and public hearings before the planning commission and city council. (Cal. Gov't Code § 65350 et seq.)

California's State Zoning Law gives all general law cities and counties the authority to divide land within a given entity's jurisdiction into use districts. (Cal. Gov't Code § 65800 et seq.) In addition, zoning laws allow a city or county to regulate the size and shape of physical structures. (See O'Loane v. O'Rourke, 231 Cal.App.2d 774, 780 (1965).) Zoning ordinances typically classify use districts into four different types: residential; commercial; industrial; and agricultural. Within each use category, the city may impose a different set of restrictions to regulate both the use to which a landowner may dedicate property and the size and placement of physical structures on the property. (See O'Loane, 231 Cal.App.2d at 780.) City and county zoning ordinances receive an extreme degree of deference from the courts, as they need only be "reasonably related" to the promotion of the public welfare. (See City of Del Mar v. City of San Diego, 133 Cal.App.3d 401, 409 (1982).)

State-Level Development Restrictions

Land use in areas prone to flooding is highly regulated in California. The state's Cobey-Alquist Floodplain Management Act requires cities and counties to enact zoning regulations that generally prohibit permanent residential construction in land adjacent to watercourses that could be inundated by flooding (known as "floodways"). (Cal. Water Code §§ 8401, 8402.)

Additionally, recent legislative actions have imposed stricter regulation of flood-prone areas within the State of California. Senate Bill 5 (SB 5) requires the State to establish a Central Valley Flood Protection Plan by July 2012, by July 2, 2015 (as required by Senate Bill 1278 and Assembly Bill 1965) cities and counties within the Central Valley must amend their general plans to include the data and analysis contained in the plan, identify goals and policies for the protection of lives and property from flooding, and include related feasible implementation measures. Within 12 months of taking this action, these agencies must also amend their zoning codes. And, once these two actions are complete, Central Valley cities and counties must make the findings specified in SB 5 when granting certain development entitlements.

Development in a flood hazard zone would only be allowed if the city or county can find, based on substantial evidence in the record, that urban or urbanizing areas will be protected to a 200-year-flood level or that "adequate progress" (as defined in the statute) is being made toward the construction of improvements that will result in this level of protection. Therefore, as of mid-2016, Central Valley cities and counties will be prevented from entering into development agreements, approving discretionary permits that would result in construction of a residence, and approving subdivision maps in urban or urbanizing areas without a finding of 200-year- flood-level protection unless these agencies are able to make the required findings.

Federal-Level Development Restrictions

Cities and counties participating in the National Flood Insurance Program (NFIP) must conform to Federal Emergency Management Agency regulations regarding approval of development and/or the type of development that may occur. These regulations have severe growth limiting measures for areas that are mapped in the 100-year floodplain. FEMA also incentivizes cities and counties (through reduced NFIP insurance rates) to limit or regulate development in the floodplain. Virtually all cities and counties in the State participate in the NFIP.

Williamson Act Contracts

San Joaquin County participates in the Williamson Act agricultural land preservation program. The Williamson Act aims to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. In exchange for agreeing to maintain Williamson Act compatible land uses, landowners receive the benefit of reduced property tax rates from the County. Williamson Act contracts are voluntarily established between a landowner and the County and are automatically renewed every ten years, unless a notice of non-renewal is filed by the landowner.

A Williamson Act contract influences a landowner's ability to use, subdivide or separately sell any parcel of land under an existing contract. Compatible uses under the Williamson Act generally consist of agricultural (i.e. farming, ranching, grazing, timber) and related uses such as processing facilities. One single-family home and agricultural housing is also allowed under the Williamson Act. Subdividing, selling, or using property in a manner not compatible with the Williamson Act can have serious consequences.

There are three ways a landowner can terminate a Williamson Act contract: non-renewal, cancellation, and breach of contract.

Non-renewal is the preferred method of terminating a contract. On each anniversary date of a Williamson Act contract, the original ten year term of the contract is automatically renewed unless notice is given by the landowner. When notice is provided on or before September 30th, the contract shall expire nine years from December 31st of the year that notice was provided. Upon notice of non-renewal, tax rates are incrementally increased over the nine year period up to the fair market valuation assessment. While the tax rate changes during this period, the land use restriction maintain in effect until the contract expires.

A landowner may also terminate a contract by petitioning the County for immediate cancellation of a contract for all or a portion of the property. These requests are only granted under extraordinary circumstances and must be consistent with Williamson Act principles, or be shown to have significant public benefit. To invoke this method of contract termination, the local government is required to make specific statutory findings that the termination is consistent with the Williamson Act requirements and/or that the cancellation has significant public benefit. A cancellation penalty equal to 12 ½% of the unrestricted fair market value is assessed to the landowner if the petition is granted.

If property subject to the Williamson Act is developed, divided, or sold, it could be considered a material breach of the contract. This could result in contract non-renewal and related increase in

the property tax rate. Additionally, a material breach of contract can result in a monetary penalty up to 25% of the unrestricted fair market value of the land, plus 25% of the value of any incompatible building and related improvements on the contracted land.

The local government may allow a lesser monetary penalty to be negotiated. Negotiating a lesser penalty involves the local government, the department and the landowner and could result in the monetary penalty being reduced to no less than 12½ percent of the unrestricted fair market value of the land and related improvements. The monetary penalty assessed is secured by a lien payable to the county treasurer. Simple interest of 10 percent per year will be assessed against any unpaid penalty after 60 days. Upon full payment of the lien, the local government will record a termination of contract by breach for the affected portion of land.

In summary, the Williamson Act is intended to preserve the agricultural and open space resources in rural California. These contracts are typically renewed in ten year increments and offer participating landowners tax breaks on the assessed land value. While the consequences can have monetary impacts, there are several options available for landowners to terminate or non-renew these contracts.

Agricultural/Conservation Easements

There are numerous agricultural and conservation easements within RD 17. These easements differ from the Williamson Act parcels in that the majority of the conservation easements are legal agreements between a landowner and a land trust that conserve agricultural or open space resources by permanently limiting future development. Conservation easements are tailor made to meet the needs of an individual landowner and can cover an entire parcel or portions of a property. Tax benefits and/or financial compensation are often available for grantors of conservation easements. Conservation easements typically restrict development and subdivision to the degree that is necessary to protect the significant conservation values of that particular property. Some conservation easements include "home sites," or areas known as "exclusions" where development is allowed. Generally, home sites or exclusions are small in size (1-2 acres) and located on areas low in conservation value. Landowners and land trusts work together to draft conservation easements that reflect both the landowner's desires and the need to protect conservation values.

CITY OF STOCKTON

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April 10, 2015

Ms. Tanis Toland
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DRAFT FEASIBILITY REPORT AND JOINT ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL IMPACT REPORT FOR THE LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY

The City of Stockton appreciates the opportunity to submit comments on the Draft Feasibility Report and Joint Environmental Impact Statement/Environmental Impact Report for the Lower San Joaquin River Feasibility Study.

8-1 The City concurs with the comments prepared by the San Joaquin Area Flood Control Agency (SJAFCA) on the draft documents, and incorporates them herein by reference. In addition, the City views two of SJAFCA's comments of particular importance, and would like to take this opportunity to highlight those. They include:

1. Confirm that the Tentatively Selected Plan (TSP) Provides 200-Year Level of Flood Protection

8-2 SJAFCA's comments on this issue indicate that the document is not clear whether the TSP will meet the sponsors' objective of complying with Senate Bill 5 requirements (i.e. providing 200-year level protection). As indicated in the comment, "Because this is such an important issue to the sponsors and their constituents, the Draft needs to be more clear and up-front about whether, or to what extent, Alternative 7a (the TSP) will meet 200-year protection requirements." The City concurs that this is a critical issue, and recommends that the Draft Report provide clarification regarding this.

2. Removing Reclamation District 17 (RD 17) Area from the Study

8-3 The City concurs with SJAFCA's position that inclusion of the RD 17 area in the study is policy compliant with Executive Order 11988, and the alternative that includes improvements for the area, specifically Alternative 7b, should be the TSP. If Alternative 7b or another alternative that includes the improvements for the RD 17 area are not ultimately identified as the Selected Plan for the Study, the City supports the position that exclusion is conditioned upon a subsequent feasibility study being initiated for the RD 17 area.

8-4 Notwithstanding the position that inclusion of RD 17 is policy compliant, it is important to note that the City of Stockton's present day situation is very different from the height of the real estate boom, when our General Plan was adopted in 2007 amid optimistic forecasts of aggressive growth. The General Plan included lands within its planned Urban Service Boundary/Area of Interest in the RD 17 area based in part on those growth projections and anticipated development. However, the expanded Sphere of Influence boundary was never approved by the San Joaquin Local Agency Formation Commission (LAFCO), and these lands remain outside of the City's adopted Sphere of Influence. Today, the City is influenced by lessons learned through the bankruptcy process about the perils of rapidly expanding service areas. Additionally, the recent adoption of the City's Climate Action Plan will influence the City's appetite for future annexations and growth. As a direct result of both issues, the City is currently in the process of a General Plan amendment intended to produce a land-use blue print that reels in the more aggressive aspects of the current plan which are no longer contiguous with our present situation.

8-5 City staff is exploring a reduced General Plan service boundary, holding the Sphere of Influence boundary in its current location consistent with the prior LAFCO decision not to approve the 2007 General Plan Sphere of Influence. While inclusion of RD 17 is already policy compliant as noted above, these more recent considerations also address the policy intent of Executive Order 11988.

8-6 Regardless, of the future growth it is important to call out the implications of not including RD 17 and the fact that exclusion could deny necessary flood protection for the approximately 43,000 Lathrop, Manteca and Stockton residents in the floodplain. RD 17 includes critical municipal, county and federal infrastructure and provides protection to Interstate 5 which carries 115,000 vehicles per day, along with State Highway 120 and major railroads. The highways are critical to evacuation of the region and response to emergencies in the Delta. Over $80M has been invested in infrastructure to facilitate development of RD 17, and a $325M VA Hospital is scheduled for construction in 2015. These investments were made in full partnership with the Federal government, including the Corps of Engineers.

Please feel free to contact Carl Hefner, Deputy Director for the Community Development Department, at (209) 937-8444 if you have any questions.

KURT O. WILSON
CITY MANAGER

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April 13, 2015

Ms. Tanis Toland
U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95814

Subject: Comments on Draft Lower San Joaquin River Draft Feasibility Study/DEIS/DEIR

Dear Ms. Toland:

I am responding to the Lower San Joaquin River Draft Feasibility Study released by the U.S. Army Corps of Engineers (USACE). Please accept this letter as formal comments from the City of Lathrop regarding this draft document to be considered by USACE.

The identified overall purpose of the Lower San Joaquin River Feasibility Study (LSJRFS) is to "reduce flood risk to urban and urbanizing parts of the study area. The Non-Federal Sponsors' objective is to meet the requirements of California Senate Bill (SB) 5 of 2007, the Central Valley Flood Improvement Act, to achieve a 200-year level of protection for the urban and urbanizing areas within the Study Area."

9-1 The City of Lathrop disagrees with selection of Alternative 7a as the Tentatively Selected Plan (TSP). We do not believe that Alternative 7a will adequately meet the flood risk reduction objective or the 200-year level of protection objective. We are asking that RD17 Alternatives not be removed from further consideration in the Draft Feasibility Study (7b, 8b, 9b). If not removed from the Feasibility Study, we believe Alternative 7b would become the TSP and would include RD17 improvements.

Removal of RD17 Improvements from the Feasibility Study Appears to Conflict with Prior Federal Actions

9-2 The City of Lathrop believes the action to remove RD17 alternatives from the Feasibility Study contradicts 165 years of prior action by Congress, 70 years of prior action by the U.S. Army Corps of Engineers (USACE), and 25 years of prior action by FEMA. Following is a brief history of these Federal actions that, until 2014, encouraged development behind the RD17 levees:

1850	**Congress adopts Arkansas Act of 1850 (aka Swamp Land Act). California Supreme Court determined: Objective of the Federal Government in making this munificent donation to the severed States was to promote the speedy reclamation of the lands and invite to them population and settlement."**
1863	**Reclamation District 17 (RD17) was formed**

1863 – 1944	**local farmers build levees to protect their land**
1944	**Federal Flood Control Act authorized the Lower San Joaquin River and Tributaries project, which included RD17 levees.**
1944 – 1963	**USACE designs and constructs improvements to RD17 levees, without using Risk and Uncertainty analysis.**
1963	**USACE issues "Supplement to Standard Operations and Maintenance Manual Lower San Joaquin River and Tributaries Project Unit No. 2", including the following:** **"1.03. Protection Provided. Levees along the left bank of French Camp Sough and right bank of San Joaquin River, as described in this unit, provide direct protection to about 12,000 acres of agricultural, industrial and residential lands within Reclamation District No. 17."**
1989 – 1990	**USACE reviews and approves design of RD17 levee improvements intended to provide 100-year protection, to be certified by FEMA. The EIR that reviewed the impacts of establishing 100-year protection receives no comments from USACE.**
1990	**FEMA issues 100-year accreditation for RD17 levees.**
1991	**City of Lathrop issues first General Plan/EIR, including development behind RD17 levees. Lathrop receives no comments on the EIR from USACE.**
1997	**+/- 89-year flood impacts RD17 levees, but levees do not fail. USACE, DWR and RD17 perform flood fight for RD17 levees.**
2000	**RD17 establishes assessment district to fund their share of levee improvements recommended by USACE. Improvements are specifically designed to retain 100-year FEMA accreditation after damage from 1997 flood.**
2001	**USACE designs and constructs improvements to RD17 levees (partially funded by RD17) to reduce seepage and boils. USACE does not use Risk and Uncertainty analysis.**
2003	**California State Reclamation Board accepts (for maintenance) improvements constructed by USACE.**
2011	**FEMA re-accredits RD17 levees as providing 100-year protection.**
2014	**USACE prepares Lower San Joaquin River Feasibility Study and decides the levees they designed and built to allow development do not provide flood protection adequate to allow development.**

To summarize the above history, RD17 levees have been endorsed by Congress, the USACE and by FEMA to provide protection for development. We fail to understand why the USACE chose a different analysis methodology to determine that the RD17 levees do not provide 100-year flood protection, when those levees have been accredited by FEMA for 25 years.

FEMA is Responsible for Determining 100-Year Levee Protection

9-3 Lathrop understands that FEMA was given the authority and responsibility to determine when to accredit levees as providing 100-year protection. For 25 years (since 1990) RD17 has been

determined by FEMA as providing 100-year flood protection. The City of Lathrop is concerned with the recent statements by the USACE that the FEMA accreditation may not be relied upon regarding RD17 levees.

The USACE Interpretation of EO 11988 Could Negatively Impact Federal Facilities

9-4 We are concerned this EO 11988 interpretation could negatively impact proposed large, Federal projects within RD17. We are also concerned that existing Federal facilities in RD17 would be negatively impacted if levees cannot be improved to provide 200-year flood protection.

Balancing Life Safety Against Aversion to Growth Inducement; EO 11988 Policy Compliance

9-5 Life safety and critical infrastructure pose a significant concern for the basin. The USACE LSJRFS Hydraulic Design Appendix highlights this:

> *"The flood warning time varies throughout the area and is dependent on the source and type of flood event. The principal sources of flood warnings are advisories by the National Weather Service (NWS) and river stage forecasts by the California Nevada River Forecast Center (CNRFC). The flood warning time would likely be greater for an overtopping related breach than a geotechnical failure type breach. It is estimated that flooding from a geotechnical type levee breach would have little to no advance warning (less than 1 hour) and the flood wave would rapidly inundate the immediately adjacent areas. Whereas, flooding from an overtopping related breach would likely have 24 to 48 hours of advance warning, due to forecasted reservoir operations. Therefore to answer whether the time would be sufficient to avoid loss of life and injury in critical infrastructures depends on the type and sources of flood event in the floodplain. It is highly unlikely that effective evacuation could occur if an unforeseen levee breach were to occur along the San Joaquin River or Delta Front."*

> *"Levee breach scenarios. Inundation maps were developed for fifteen levee breach locations within the study area. These breach locations were spatially distributed throughout the study area to reflect the floodplain characteristics. All breach scenarios assume levees were overtopped without failure at all locations other than the breach location. Breaches were simulated for 50% (1/2) ACE, 10% (1/10) ACE, 4% (1/25) ACE, 2% (1/50) ACE, 1% (1/100) ACE, 0.5% (1/200) ACE, and 0.2% (1/500) ACE events. The resulting inundation maps are hypothetical simulations of levee failures and do not represent the probability of occurrence (Appendix B.2, Hydraulic Design). For evaluation of life loss consequence the study area can be divided into a breach zone, zone with rapidly rising water, and a remaining zone (Jonkman, 2008). Simulations of levee breaches at the peak stage of a 1% ACE event were used to evaluate characteristics of each zone. Breach characteristics for other event magnitudes would be similar.*

> *Breach zone. The breach zone is characterized by destruction of buildings and the highest life safety consequence. Yonkman describes this area as having velocities greater than 6 fps and the product of depth and velocity greater than 22 ft^2 per second. For the Lower San Joaquin Feasibility study, the limit of this zone is estimated to range from 250 feet to 7,600 feet from the breach location. The results indicate a breach zone of approximately 250 feet for the Calaveras River, Mormon Slough, and upper reaches of French Camp slough. The breach zone for Lower San Joaquin River, Delta, and Lower French Camp Slough could be as much as 7600 feet. This was based on the evaluation of the maximum velocity and maximum depths in breach simulations."*

For persons with limited-mobility (sick, infirm, incarcerated), this issue is compounded. Many of the dead from Hurricane Katrina were limited mobility persons. The jail and hospital complex off Mathews Road in RD 17 contains a high concentration of particularly vulnerable limited mobility people.

But this is not to understate the threat to other critical infrastructure. Law enforcement command and control centers could be rapidly flooded, schools which are used as emergency shelters and evacuation centers, and thousands of ordinary people would be in the breach zone.

San Joaquin County Office of Emergency Services (OES) and RD 17 have developed a model emergency response plan. However, it's effectiveness at preventing substantial human tragedy in a geotechnical failure situation is limited.

For these reasons, local, state, and Federal interests should all recognize the overriding considerations of life safety in support of further improvements to RD 17's levees.

In light of the significant life safety risks described above, USACE ER 1165-2-26 provides the general guidance and policy for USACE's implementation of EO 11988 for all civil works projects. Paragraph 7 of the regulations states:

> *" ... It is the policy of the Corps of Engineers to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base flood plain and avoid inducing development in the base flood plain unless there is no practicable alternative. The decision on whether a practicable alternative exists will be based on weighing the advantages and disadvantages of flood plain sites and non-flood plain sites. Factors to be taken into consideration include, but are not limited to, the functional need for locating the development in the flood plain...The test of practicability will apply to both the proposed Corps action and to any induced development likely to be caused by the action."*

9-6

This statement says that Federal improvement of a levee could take place if there was no practicable alternative. The implication is that if the need for flood risk management is clear, that

need must be fulfilled by an action alternative. Stated another way, the no action alternative can be considered unacceptable if the residual risk is too great. And this means that an action alternative can have flood risk management performance which overrides growth inducement concerns. The LSJRFS acknowledges the lack of a practicable alternative to fix-in-place, but stops short of recommending action. The USACE acknowledges that this is an important policy discussion that needs to happen, but elected to defer this to a later study:

> *"It is understood that RD 17, with funding assistance from the State, is currently pursuing a phased strategy of levee improvements to initially increase the resistance of RD 17's levee system to under seepage and through seepage. Upon completion of that work, RD 17 and the non-Federal sponsors intend to pursue USACE participation in additional studies/improvements necessary to achieve the non-Federal objective of 200-year (0.5 percent ACE) flood risk management in order to meet SB 5 requirements. Consideration of future Federal participation would be subject to demonstration of a Federal interest in such incremental improvements."*

We believe that USACE's EO 11988 analyses for the LSJRFS should include a weighing of the risks and lack of a practicable alternative against growth inducement concerns, and conclude that policy compliant Federal interest exists in improving the RD 17 levees.

The USACE can Change the TSP in the Final Feasibility Report

According to the USACE Non-federal Sponsor Meeting Notes dated 8/21/14:

> "Headquarters made it clear during the TSP Conf. that they had yet to make their own determination on the EO11988 issue as it relates to RD17. They will be reviewing the study and relating issues during their reviews of the Draft Report and the Policy Review process which will run concurrently with the Public / Agency Review.
>
> If HQ returns a decision on the application of EO11988 in favor of including RD17 in the NED/TSP, the NFS would support amending the Draft Report and changing the NED/TSP to Alternative 7b. Alt 7b is the same as Alt 7a but includes the RD17 area."

9-7

We understand the USACE can change the TSP in the Final Feasibility Study. The potential impacts of the entire array of alternatives included 7b, 8b and 9b that all included the RD17 improvements. All potential impacts of RD17 improvements are documented and analyzed in the Draft EIS/EIR, so the USACE can determine in the Final LJSRFS that the TSP has changed to Alternative 7b. We are asking the USACE to make this change.

If RD17 Improvements are not in the TSP, 43,000 People Remain at Risk

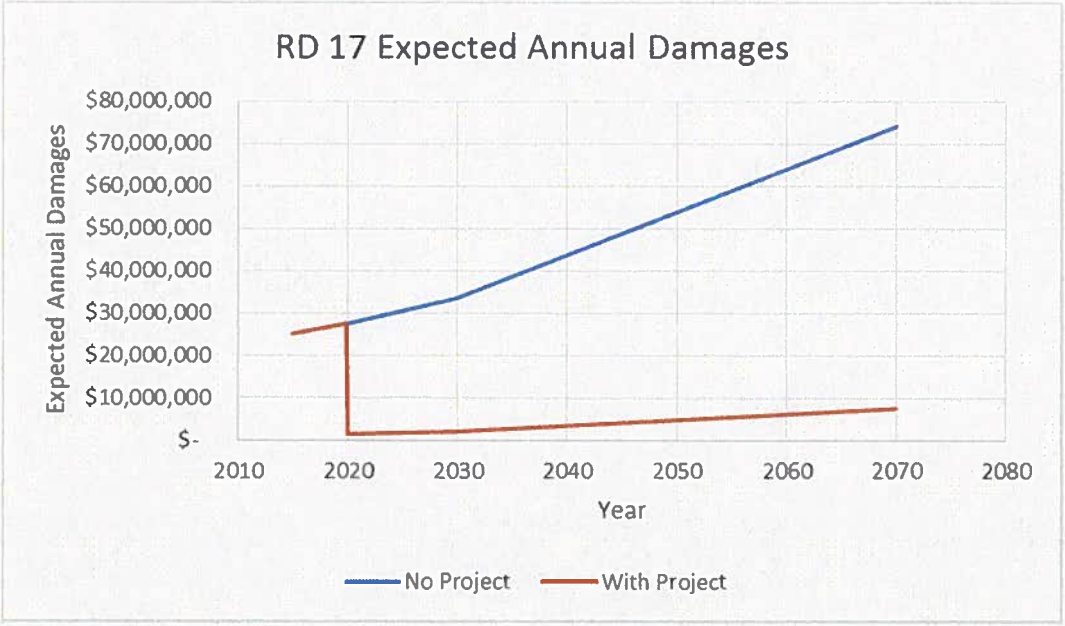
9-8

The Draft plan states that the current TSP will result in no additional risk reduction for 43,000 people and critical infrastructure in RD17. We understand this to mean that the USACE has determined that the RD17 levees do not provide 100-year protection, and they do not believe they should be improved to provide that protection. We are concerned that 43,000 existing residents

would be precluded from improved levee protection by excluding RD17 from the Feasibility Study.

Residual Risk Decreases by $24 Million/Year if RD17 Improvements are included as the TSP

9-9 Table 3-13 from the LSJRFS shows that expected annual damages within RD17 today is $25 million/year. With the recommended Alternative 7b levee improvements, the expected annual damages drop to $1 million/year. This represents an immediate reduction in risk of $24 million/year. If, as the USACE suggests, development were to suddenly double after the levees are improved, this would result in annual damages of $2 million. This still represents an immediate reduction of $23 million per year. As shown in the figure below from an Analysis of Development Risk Resulting from Levee Improvements to ULDC Standards by Peterson Brustad, Inc (Attachment E), With Project risk never approaches the No Project risk, even with extensive additional development. We interpret this to mean the risk to the public and to the State is greatly reduced if the RD17 levees are improved.



RD17 and the City of Lathrop are Ready to Improve Our levees

9-10 RD17, in conjunction with DWR, completed Phases 1 and 2 of their recent levee improvements. Phase 3 improvements are being reviewed now by the USACE. RD17 is cooperating with the cities of Lathrop and Manteca in preliminary design of Urban Level of Flood Protection (ULOP) improvements to provide RD17 with 200-year flood protection. Lathrop has applied for an Urban Flood Risk Reduction Grant from the State to share the cost of designing ULOP levee improvements. And finally, the General Plan Amendment to add new flood management

provisions has been drafted and delivered to the Central Valley Flood Protection Board for review, as required by SB5.

City of Lathrop's Wise Use of Floodplains

The City incorporated in 1989. Immediately afterwards in 1990, RD17 was removed from the FEMA 100-year floodplain. Based upon this status, Lathrop prepared its first General Plan in 1991, anticipating growth within this 100-year flood protected area. The City has chosen to enact regulations to preserve farmland, provide environmental stewardship, and provide recreational components that highlight the value of the riverine levee system, as indicated below:

Farmland Preservation

Development within Central Lathrop Specific Plan area requires payment of over $3,000 per acre toward an accredited farmland trust. In Lathrop, this provides over $4 million in revenue to the Central Valley Land Trust (Attachment A)

9-11

Environmental Stewardship

Development within Central Lathrop Specific Plan area requires payment of over $13,000 per acre toward the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (Attachment B). In Lathrop, this provides approximately $10 million in revenue towards habitat preservation, of which $2.6 million has already been paid (Attachment C).

Recreational Components and Levee Setbacks

Central Lathrop Specific Plan requires a Linear Park/Trails and Open Space Corridor along the RD-17 levee (Attachment D). Also, all streets in the Specific Plan area that border the levee are single loaded, eliminating any backup of homes along the levee to avoid any impediment to flood fighting, if it is ever needed.

A full listing of residual risk management measures being employed in RD 17 is provided (Attachment F).

Technical Review by SJAFCA

We have not given the document a thorough technical review because the City understands that SJAFCA has performed the detailed technical review and provided comments to USACE. We have reviewed SJAFCA's comments and we are surprised at the significance of many of the comments. It appears that the study has significant technical errors that could significantly change the costs, benefits, and impacts of the alternatives, and if corrected could result in a substantially revised NED/TSP. We feel it is critical that USACE address all of SJAFCA's technical comments in addition to our comments provided herein, and reconsider the NED/TSP recommendation.

9-12

In summary, we believe that inclusion of improvements to RD 17 levees does not conflict with EO 11988, and that alternative 7b, 8b, or 9b should be the TSP. If you have any questions regarding this letter, please feel free to call me at the number above or email me at ggebhardt@ci.lathrop.ca.us.

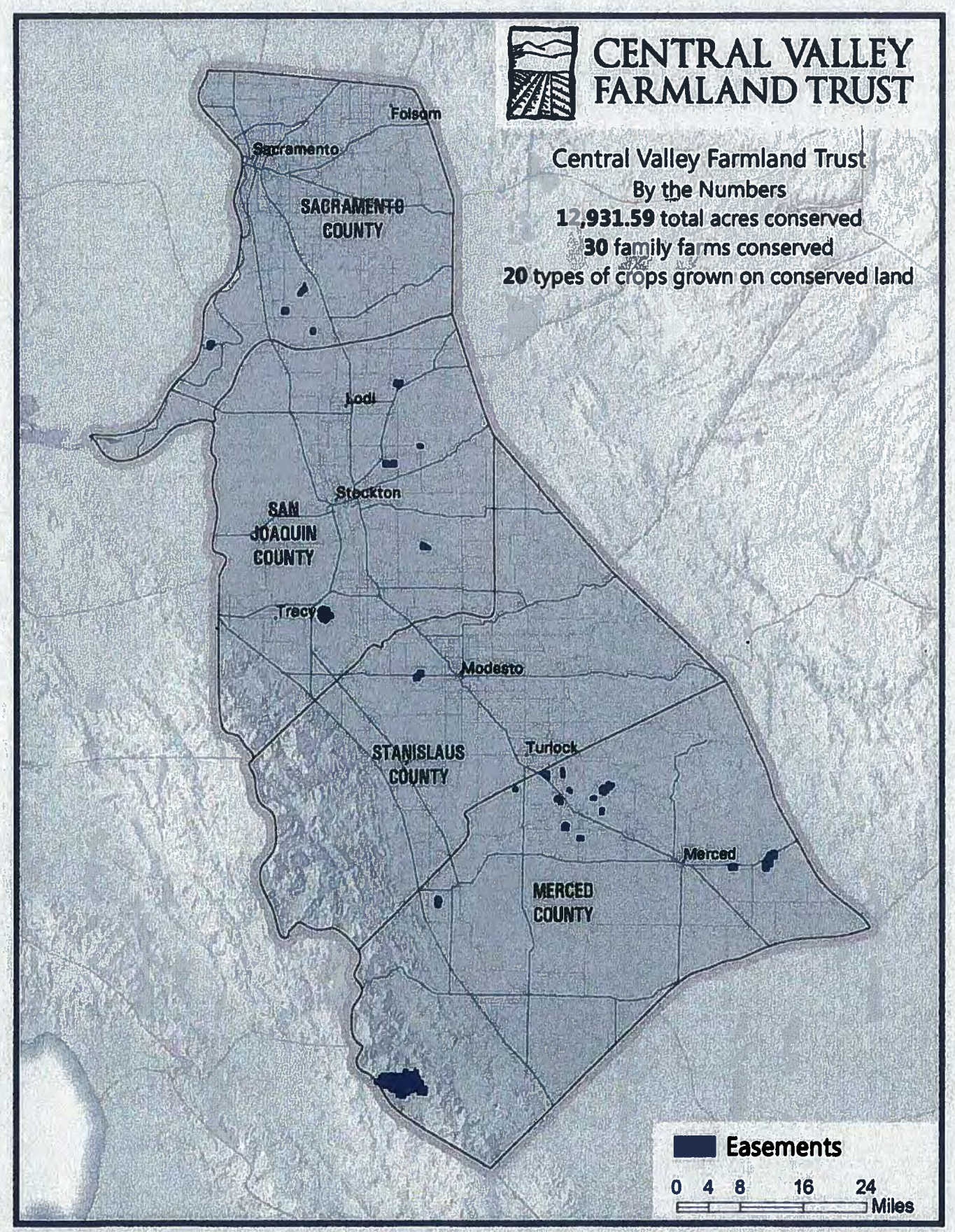
Sincerely,

Glenn Gebhardt,
City Engineer

Att.
- A. Central Valley Land Trust information
- B. San Joaquin Multi-Species Habitat Conservation and Open Space Plan
- C. Receipt for $2.6 Million Payment for Habitat Conservation
- D. Plan for Linear Park/Trails and Open Space Corridor
- E. Analysis of Development Risk Resulting from Levee Improvements to ULDC Standards
- F. Residual Risk Management Measures Being Employed in RD 17

Cc w/a:
Stephen Salvatore, Lathrop City Manager
Rebecca Willis, Director of Community Development
Dante Nomellini, Attorney, RD17
Karen McLaughlin, Manteca City Manager
James Giottonini, Executive Director, SJAFCA
Stacy Samuelson, Planning Study Manager, US Army Corps of Engineers

Attachment A



CENTRAL VALLEY FARMLAND TRUST

PRESERVING FARMS THAT FEED THE WORLD

March 3, 2014

Charlie Simpson
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Dear Charlie:

I am pleased to inform you that the Central Valley Farmland Trust (CVFT) was recently awarded renewal accreditation status. We are one of only 254 accredited land trusts across the country. As an accredited land trust, we must conform to the highest professional standards in the national land trust industry. This insures the work we do is of the highest quality and guarantees that our conservation efforts are permanent.

CVFT first received accreditation in 2008 and is one of the first land trusts to achieve renewal accreditation status. This is a significant achievement for us and a major milestone for the accreditation program. To achieve this goal we submitted extensive documentation for review by the Land Trust Accreditation Commission (Commission), an independent program of the Land Trust Alliance. This evaluation and improvement process verifies our operations continue to be effective, strategic and in accordance with the strict requirements of the Commission.

Currently CVFT holds 33 agricultural conservation easements protecting nearly 13,000 acres in Sacramento, San Joaquin, Stanislaus and Merced Counties.

The ability to utilize the farmland mitigation fees has greatly enhanced our ability to conserve some of the most valuable farmland in the San Joaquin Valley. We currently hold nearly 2,000 acres of ACEs in San Joaquin County.

Sincerely,

Bill

Bill Martin
Executive Director

8788 ELK GROVE BLVD, BLDG 1, STE 1 ELK GROVE CA 95624
916-687-3178 PHONE | 916-689-1041 FAX
WWW.VALLEYFARMLAND.ORG

If My Activities Aren't Covered, Can I Request Coverage from SJCOG, Inc. or Use the SJMSCP for Mitigation?

Yes. An applicant with a non-covered activity can submit a request of coverage using one of the four options to receive coverage or propose equivalent compensation to SJCOG, Inc. Activities not receiving coverage under the SJMSCP may still be eligible to purchase mitigation credits from mitigation banks.

What are the Steps Involved for an Applicant with a Non-covered Activity Requesting Coverage?

Prior to any groundbreaking work the project applicant submits to SJCOG, Inc. a "Request for Project Coverage Form" which will be reviewed by the Habitat Technical Advisory Committee. If the applicant agrees with the decision, then the applicant chooses one of the four options (see "How Does Coverage Work?"). If the applicant disagrees with the decision, they may appeal to the SJCOG, Inc. Board.

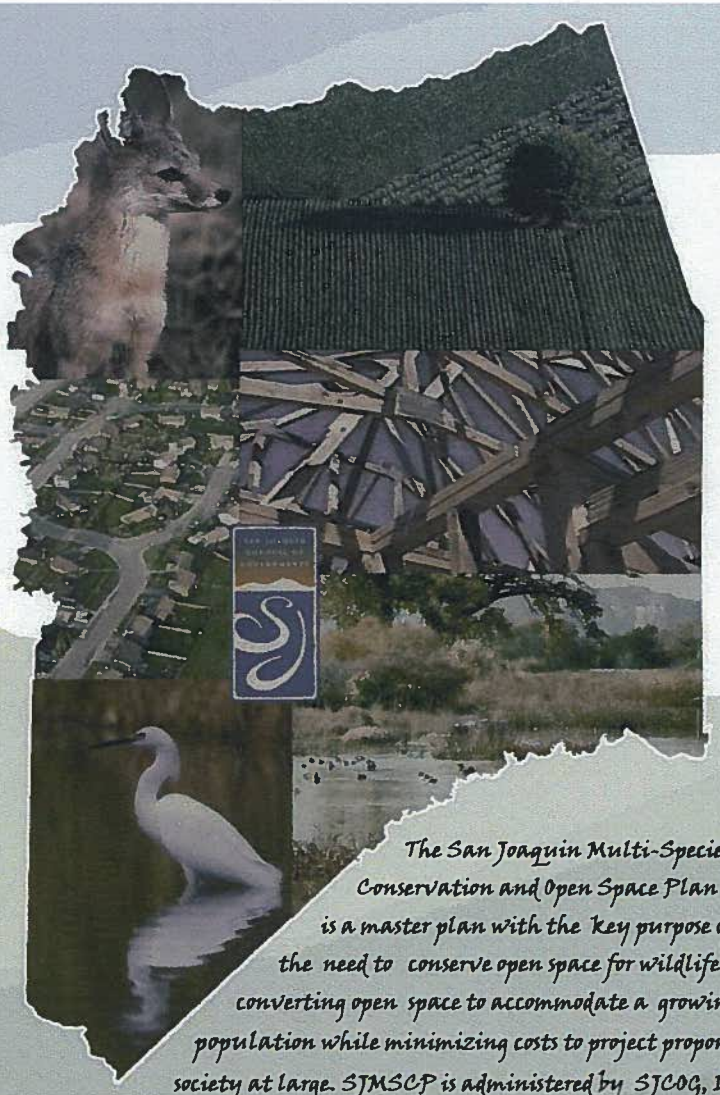
An applicant choosing option 4 must submit a SJMSCP Equivalent Proposal Form with a proposal. The form will be forwarded to the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) for comments.

SJCOG, Inc.

555 E. Weber Ave.
Stockton, CA 95202
Phone: 209-468-3913
Fax: 209-468-1084
E-mail: info@sjcog.org
www.sjcog.org

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)

PROJECT APPLICANT'S GUIDE *to the* SJMSCP



The San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) is a master plan with the key purpose of balancing the need to conserve open space for wildlife and converting open space to accommodate a growing population while minimizing costs to project proponents and society at large. SJMSCP is administered by SJCOG, Inc., a non-profit corporation established by San Joaquin County and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton and Tracy.

Attachment B

How does the SJMSCP apply to Project Applicants within San Joaquin County?

The Plan allows SJMSCP Permittees (SJCOG, Inc., San Joaquin County and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton and Tracy) to issue Incidental Take Permits or allows project applicants to mitigate for impacts to SJMSCP Covered Species resulting from Open Space land conversion resulting from covered projects. Once an Incidental Take Permit is issued it allows the project applicant to unintentionally "Take" a threatened or endangered species listed under the Federal and California Endangered Species Act.

What are the Covered Projects?

The SJMSCP covers the following activities within San Joaquin County: urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring on agriculturally-zoned properties, projects which could affect fisheries or wetlands indirectly which are located within non-jurisdictional waters, transportation projects, school expansions, non-federal flood control projects, new parks and trails, utility installation, maintenance activities, managing preserves, and similar public agency projects.

These activities can be undertaken by both public and private individuals operating in San Joaquin County.

What Are the Benefits of Participation?

- Fulfills ESA, CESA, NEPA, CEQA requirement
- Provides consistent and predictable mitigation measures
- Guarantees no further mitigation, except for Incidental Take Minimization Measures required in limited cases
- Provides a streamlined permitting process saving time and planning costs
- Eliminates costs of both biological surveys and pre-construction surveys for Project Proponents
- Allows for off-site mitigation, thereby allowing greater use of project land
- Benefits covered species such as San Joaquin kit fox, Swainson's hawk and California tiger salamander

How Does Coverage Work?

Project applicants have four options to receive coverage, with approval by SJCOG, Inc.:

1. Pay the appropriate fee. A fee is assessed depending on which of the four habitats the project lies within.
2. Dedicate habitat lands as conservation easement or fee title.
3. Purchase mitigation bank credits from a mitigation bank approved by SJMSCP.
4. Propose an alternative mitigation plan, consistent with the goals of the SJMSCP and equivalent in biological value.

Are There Areas Where Covered Activities Require Prior Approval to Participate?

Yes. Certain covered activities within San Joaquin County occur over a wide area and their exact locations cannot be precisely known, therefore the biological impacts cannot be assessed until submittal of a land development application to the San Joaquin County Community Development Department. Coverage for unmapped land uses shall be subject to a case-by-case review by the Habitat Technical Advisory Committee (HTAC) to ensure biological impacts fall within established parameters.

Am I Required to Participate in the SJMSCP?

Participation in the SJMSCP is voluntary for project applicants except when conditioned to participate by a Permittee. Project applicants within a Permittee's jurisdiction who opt out of the SJMSCP shall satisfy applicable ESA, CESA, NEPA, CEQA, and other applicable local, state and federal laws and regulations provisions through consultations with the Permitting Agencies and local planning agencies.

Is Access to My Property Required?

Yes. A biologist on-call with SJCOG, Inc. will be dispatched to the project site to conduct a pre-construction biological survey. The biologist collects information only relating to the project site such as habitat type and presence of covered species. The information collected is used to create Incidental Take Minimization Measures which is provided to the project applicant if a covered species is found.

What if a Covered Species is Found within the Project Site?

If a covered species is found within the project site and cannot be avoided through the measures provided then it may be relocated to an appropriate site by CDFG, USFWS (for federally-listed species) or a qualified biologist approved by permitting agencies at the project applicant's expense.

What Activities Aren't Covered?

- Any agricultural activities located on agriculturally zoned land. Project applicants shall negotiate directly with state and federal agencies if mitigation is required.
- Dredging activities are not covered except for dredging activities of limited size already permitted pursuant to Nationwide Permits #19 and #35 and Regional Permit #34.
- Activities which require a Streambed Alteration Agreement from the CA Dept. of Fish and Game. The SJMSCP may be amended in the future to include Streambed Alteration Agreements.
- Water Diversion and Conveyance.
- Activities currently receiving Take authorization under an existing biological opinion.
- The use of any pesticide is not a covered activity under the SJMSCP and remains subject to the Federal Endangered Species Act, California Endangered Species Act, Federal Clean Water Act and other state and federal regulations. Property owners are encouraged to contact state and federal agencies to determine requirements pertaining to their projects.
- Activities involving tidally influenced wetlands, jurisdictional wetlands or other waters of the United States.

Any Questions Regarding this information?

Please Contact:
San Joaquin Council of Governments
Habitat Conservation Plan Department
(209) 468-3913

Attachment C

S J C O G, Inc.

555 East Weber Avenue • Stockton, CA 95202 • (209) 468-3913 • FAX (209) 468-1084

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

Certificate of Payment

This Certificate of Payment serves as acknowledgement for payment of development fees pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. The project and fee amount paid are provided below.

Project: Central Lathrop Specific Plan Phase 1

Project Address: Multiple

Assessor Parcel Number: 191-220-20;19;18;17;35;14;42;43;30;29; 28;27;26;25;47;46;45;44; 191-210-02;04;05;13

Project Jurisdiction: City of Lathrop

Project Impact: 806.60

Payment Date: May 2, 2006

Fee Amount Paid: $2,655,006.40

Certificate Prepared By: Steve Mayo

Payment Received By Signature: Steve Mayo

STEVE MAYO
Print Name

Date: July 19, 2006

CENTRAL LATHROP COMMUNITY PARK MASTER PLAN EXHIBIT

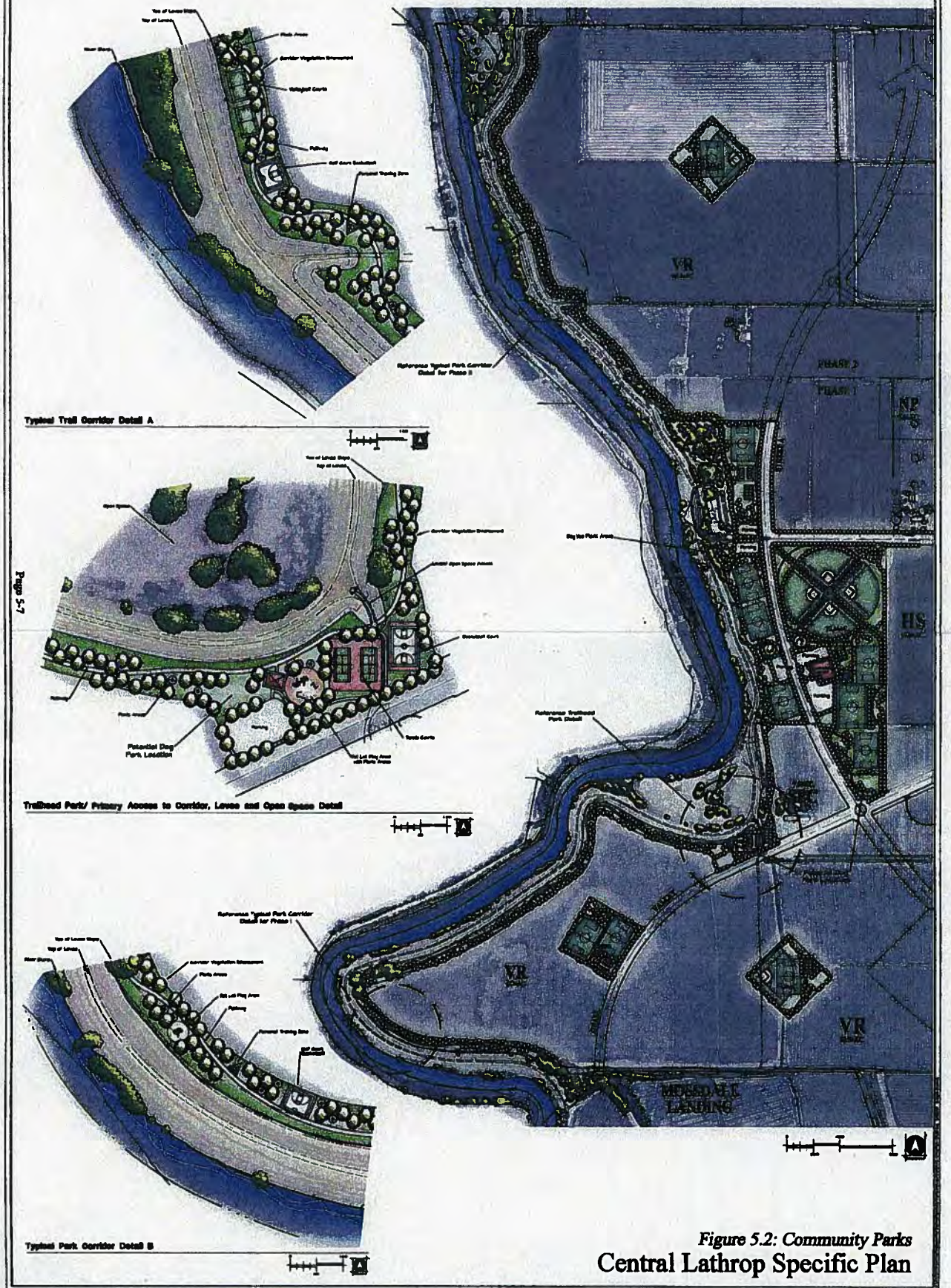


Figure 5.2: Community Parks

Central Lathrop Specific Plan

Technical Memorandum

PETERSON . BRUSTAD . INC .
ENGINEERING . CONSULTING

Analysis of Development Risk Resulting from Levee Improvements to ULDC Standards

Prepared for: Cities of Lathrop and Manteca *April 9, 2015*

Prepared by: Dave Peterson
Reviewed by: Mike Rossiter

Chapter 3 of the USACE *Lower San Joaquin River Project Interim Report, San Joaquin County, California, Draft Integrated Interim Feasibility Report/Environmental Impact Statement /Environmental Impact Report*, February 2015 (LSJRFS), evaluates policy compliance of Federal participation in a project to improve the RD 17 levees relative to Executive Order 11988. The primary concern identified by the USACE regarding EO 11988 compliance is the inducement of urban development within the already developed and levee protected floodplain. USACE estimated that there are approximately 12,500 acres of levee-protected land within RD 17 that could be urbanized, thereby increasing the population protected by RD 17 levees.

The non-Federal sponsors for the study, SJAFCA and the California Central Valley Flood Protection Board (CVFPB), were concerned that the 43,000 residents and billions of dollars of public and private assets that are already in place would be deprived of additional flood risk reduction as a result of the USACE evaluation. The quantity of developed but not yet urbanized land in RD 17 raised issues for USACE of whether inclusion of RD 17 would be compliant with EO 11988. For this reason, USACE excluded RD 17 alternatives from the final array of alternatives, and the non-Federal sponsors reluctantly accepted the exclusion to avoid further delay and/or cancelation of the study and to facilitate release of the draft for concurrent public and vertical team review. However, the non-Federal sponsors conditioned their acceptance on further consideration of the issue either within the LSJRFS, or in a subsequent study focused on RD 17. The non-Federal sponsors believe that EO 11988 should not be an obstacle to further federal investment in the RD 17 levees.

This memorandum is intended to address one of the issues at the core of EO 11988 in which a levee improvement project is said to induce growth in the floodplain and increase economic risk. This concern is shared by the State of California. The hypothesis being that expected annual damages (EAD) would decrease in the years immediately following completion of a levee improvement project, but that induced urban growth would end up increasing EAD over time, eventually exceeding without project EAD at some point in the future.

The draft LSJRFS provides the information needed to test this hypothesis, and is the basis for the analysis presented in this memorandum.

RD 17 current (2015) conditions
Developed acreage = 8,100 (based on numbers provided by Lathrop, Manteca, Stockton, and San Joaquin County)
Without project EAD = $25M/yr (LSJRFS Table 3-13)
With project EAD = $1M/yr (LSJRFS Table 3-13)

RD 17 future conditions, without project
Developed acreage = 8,100 (SB 5 precludes growth absent 200-year protection)

RD 17 future conditions, with project
2030 developed acreage = 8,100 + 5,300 = 13,400 (LSJRFS Section 3.6.1 step 4b identifies 5,300 acres of additional development in the General Plans of the cities and county)
2070 developed acreage = 8,100 + 5,300 + 7,200 = 20,600 (LSJRFS Section 3.6.1 step 4b identifies 7,200 acres of remaining land that could potentially be developed beyond the General Plans.)

PBI assumptions:

- Assume future development is similar in character to existing development, and that EAD can simply be extrapolated in proportion to developed area. So ignoring inflation, year 2030 with-project EAD = $1M + (5300/8100)*$1M = $1.7M. Similarly, year 2070 EAD = $1M + (12500/8100)*$1M = $2.5M.
- Assume that full buildout of all vacant ground under with project conditions would occur by the 2070 LSJRFS planning horizon. This is not the plan of any of the land use authorities, but the USACE's concern is that these plans change, so full buildout is the most conservative (high side) growth assumption.
- Assume that under without project conditions that growth is held at current levels due to SB 5 growth restrictions where 200-year flood protection does not exist.
- Assume that property values escalate at 2%/yr under both with- and without-project conditions.
- Assume the project is completed by the year 2020

Figure 1 presents EAD over time. Both with- and without project EAD start out at $25M/yr. Assuming no further growth under without project conditions, EAD continues to escalate due to property inflation to $33.6M/yr in 2030 and $74.3M/yr in 2070. Under with-project conditions, EAD drops to $1.3M/yr in 2020. This is greater than the published USACE estimate of $1M/yr, because we assume that 1/3 of the 5,300 acres builds out during the 2015-2020 timeframe, and there are 5 years of escalation. By year 2030 and 2070, growth plus escalation increase the with-project EAD to $2.2M, and $7.6M, respectively. Figure 2 presents the same data without property escalation.

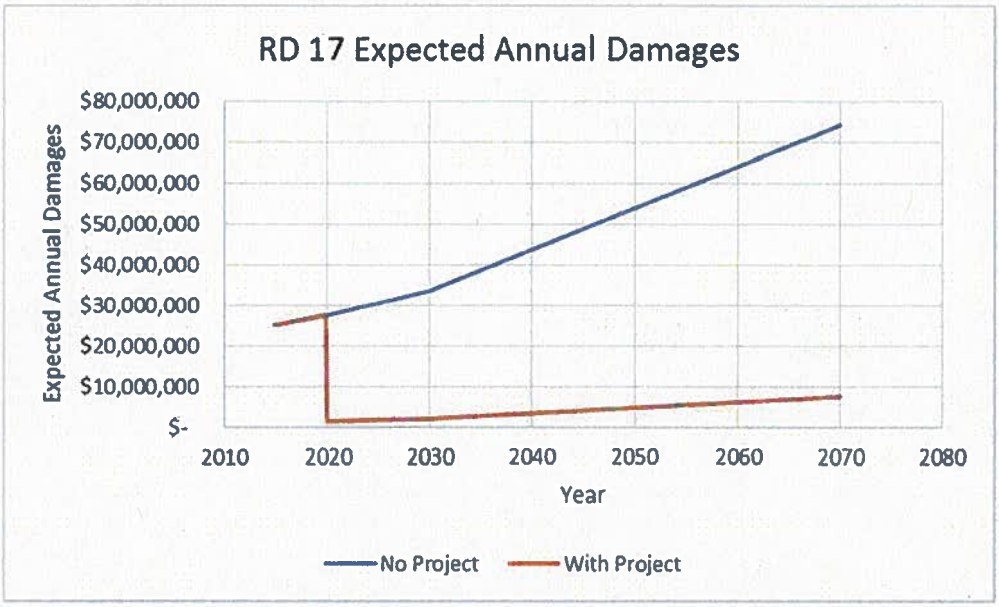


Figure 1. Comparison of residual economic risks for without- vs. with-project (assumes 2% property inflation).

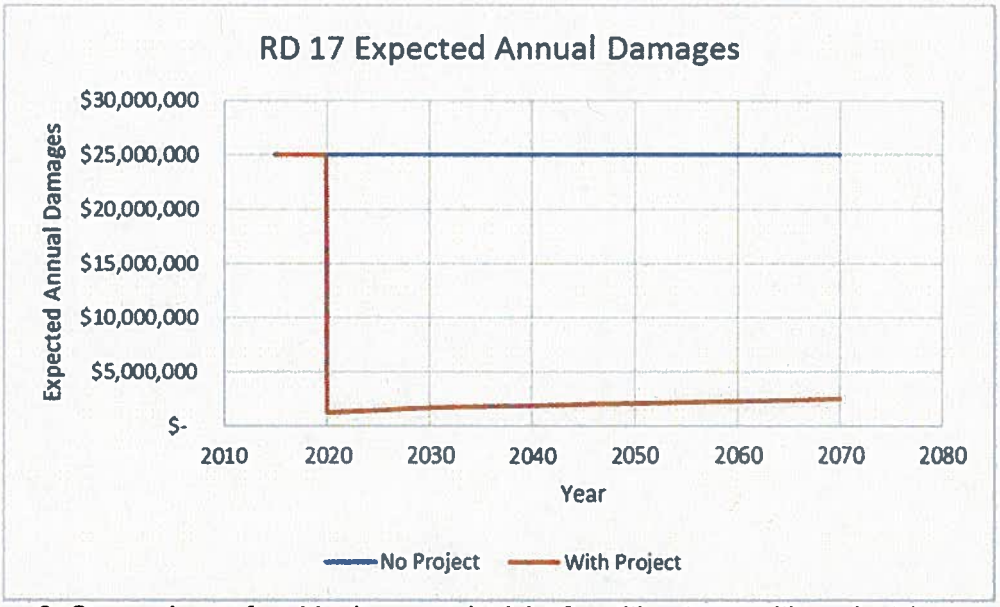


Figure 2. Comparison of residual economic risks for without- vs. with-project (no property inflation.

Both figures illustrate that without-project damage risk far exceeds with-project risk, and that the curves never cross. If inflation is considered, the curves diverge.

Life safety risk was not evaluated explicitly. It is reasonable to assume that life safety risk will generally trend with economic risk. However, in the case of RD 17 where geotechnical failure mechanisms dominate without-project conditions, failures are unpredictable and sudden, and evacuation is an ineffective risk management tool (LSJRFS Hydraulic Design Appendix, Section 4.7). Levee improvements under any of the LSJRFS "b" alternatives would remediate the geotechnical failure risk, so residual life safety risk would be primarily from overtopping, which can be forecasted several days in advance. So qualitatively, without- and with-project life safety risk curves are likely to diverge even more than economic risk curves.

PBI's conclusion is that both economic and life safety risk would be substantially reduced, and that this reduction would be sustained for the long term, if the RD 17 improvements included in the LSJRFS "b" alternatives are constructed, even when factoring in the most aggressive growth projections.

Attachment F

Residual Risk Management Measures Being Employed in RD 17

The agencies with land use authority in RD 17 do not intend to fully build out RD 17. The following residual risk mitigation measures are being employed by agencies in the RD 17 area:

1. *State & Federal Restrictions:* California Senate Bill 5 (signed 2007) prevents urban growth without 200-year protection. SB 5 precludes development unless 200-year protection exists, and institutes strong linkages between local land use and prudent floodplain management. Key among these linkages are requirements to amend local General Plans and zoning ordinances to reflect flood risk, modification to building codes, prohibition of permits and entitlements unless 200-year level of protection is demonstrated. FEMA regulations restrict growth in Special Flood Hazard Areas (SHFA's), but as noted earlier, none of the RD 17 lands are currently within a SFHA.
2. *Local Land-Use & Zoning Restrictions:* The General Plans (GPs) of San Joaquin County and the three cities in the basin limit urban growth to infill and growth at the fringe of the 3 cities. The GPs call for continued agricultural land use at all other points in the basin. Local land use policies and ordinances include numerous restrictions and approval requirements. These include requiring mitigations that exceed the minimum federal requirements including elevating lowest floors above anticipated flood levels and imposing building restrictions in areas not mapped into FEMA designated 100-year flood zones but have been known to be historically subjected to flooding.
3. *Levee Superiority:* Roberts Island (RD 524, RD 544) will remain rural, and levee superiority will be maintained. DWR, along with the local agencies, have an interest in maintaining agricultural land use on Roberts Island, directly across the river from RD 17. The RD 17 levees were constructed superior to Roberts Island levees (higher, stronger), and are operated and maintained to a higher degree. It is unlikely, if not impossible, to urbanize Roberts Island. Senate Bill 5 is State law which precludes development unless 200-year protection exists, and institutes strong linkages between local land use and prudent floodplain management. Neither the San Joaquin County General Plan nor the LSJ/DS RFMP contemplate urbanization or levee improvements to support urbanization.
4. *Upstream Transitory Storage:* The floodplain area upstream of RD 17 (RDs 2096, 2094, 2075, 2064) will remain rural, and will be a targeted place for restoration of natural and beneficial floodplain values.
5. *Commitment to work with others to advance a multi-objective Paradise Cut enlargement project.* Locals plan to improve RD 17's levees to 200-year State Urban Levee Design Criteria (ULDC) standards, so enlargement of the Paradise Cut is not an immediate need. However, it is recognized that accommodating greater San Joaquin River floods due to climate change will require an enlarged bypass. Therefore the *Lower San Joaquin River and Delta South Regional Flood Management Plan* recommends that this measure be

pursued as a long-term risk management strategy. The local agencies are committed to working with DWR and potentially the USACE toward this goal.

6. *Expanded rights-of-way along the landside toe of levees* is required by RD 17 to accommodate uncertainties and future needs.
7. *Parks and open space set-asides.* RD 17 requires a 50-foot wide land-side right of way strip to accommodate future needs. This exceeds the ULDC requirement of 20 feet and the USACE requirement of 15 feet.
8. *Conservation Easements.* Agreements between landowners and an agency (USFWS, etc) permanently preclude future development. San Joaquin County and the cities of Lathrop, Manteca, Stockton, Lodi, Escalon, Ripon, and Tracy have adopted the San Joaquin County Multi-Species Habitat and Conservation Plan. The SJMSCP has been approved by the U.S. Fish and Wildlife Service as a certified Habitat Conservation Plan (HCP). Habitat Conservation Plans (HCPs) provide a pathway forward to balance wildlife conservation with development. The primary objective of the HCP program is to conserve species and the ecosystems they depend on while streamlining permitting for economic development.

   Provided for by the Endangered Species Act, "regional" HCPs (such as the SJMCP) are a successful conservation tool because they can anticipate, prevent, and resolve controversies and conflict associated with project-by-project permitting. They do this by addressing these issues on a large regional scale, collaboratively and over the long term.

   The key purpose of the SJMSCP is to:

   - Provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy.
   - Preserve landowner property rights.
   - Provide for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA).
   - Provide and maintain multiple-use Open Space which contributes to the quality of life of the residents of San Joaquin County.
   - Accommodate a growing population while minimizing costs to project proponents and society at large.

   The *SJMSCP Planned Land Use Map* also identifies the boundaries for expected urban development and anticipated annexation areas and provides conservation strategies to offset the impacts of development. At the state and federal levels, the SJMSCP provides adequate compensation for and measures for avoiding impacts to plants, fish and wildlife for SJMSCP pursuant to the California Endangered Species Act (CESA), the California Native Plant Protection Act, the Federal Endangered Species Act (ESA), Section 404 of the Federal Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act of 1899, and the Migratory Bird Treaty Act (MBTA) for listed SJMSCP Covered Bird Species also protected under the MBTA as these laws relate to the California Department of Fish and

Game's (CDFG), United States Fish and Wildlife Service's (USFWS), and the U.S. Army Corps of Engineers' (USACE) responsibilities for Covered Species with respect to SJMSCP Permitted Activities located within the boundaries of San Joaquin County. Adoption and implementation of the SJMSCP by local planning jurisdictions provides adequate compensation for and minimization of impacts to plants, fish and wildlife for SJMSCP Permitted Activities as necessary to implement conservation and Open Space policies of local general plans, resolution, ordinances, and other regulations as they pertain to plants, fish and wildlife and as necessary to fulfill the obligations of local jurisdictions with respect to the analysis, minimization and mitigation of impacts to plants, fish and wildlife pursuant to the state and federal laws described above and pursuant to the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA).

The SJMSCP is designed to provide 100,841 acres of Preserves based on an estimated Conversion acreage of 109,302 acres. The SJMSCP anticipates acquiring land primarily through conservation easements and fee title at a ratio of approximately 90% easements to 10% fee title acquisition. Establishment and/or use of mitigation banks, and in-lieu land dedications also will play a role in preserving habitats under the SJMSCP. The SJMSCP has over 30 preserves totally 11,883 acres of land in San Joaquin County that has been permanently protected for habitat pursuant to its program.

9. *Williamson Act agreements.* These rolling 10-year agreements between government and farmers preserve the agricultural and open space in rural California by offering landowners tax breaks on the assessed land value. There are currently 2,164 ac in Williamson Act agreements in San Joaquin County
10. *Agricultural preservation easements.* These easements keep land in agriculture in perpetuity, essentially removing development rights. San Joaquin County and the cities of Lathrop, Manteca, and Stockton have agricultural mitigation fee programs to support the work of accredited land trusts. Within RD-17, the City of Lathrop requires development to pay an agricultural preservation fee to the Central Valley Farmland Trust to offset its development impacts. The Central Valley Farmland Trust currently holds 33 agricultural conservation easements protecting nearly 13,000 acres in the San Joaquin, Sacramento, Stanislaus and Merced Counties. San Joaquin County and the City of Stockton have similar programs, and both agencies also use the Central Valley Farmland Trust as its administrator. Stockton's program resulted in the preservation of 430 acres of prime farmland through the acquisition of conservation easements between 2007 and 2012, the initial five years of the program. During this time, the City collected almost $3 million in fees, which were transferred directly to the Trust to be used for the preservation of farmland. The County's program is very similar, but it requires that developers first attempt to acquire easements by demonstrating that a "good faith effort" was made before in-lieu fees are allowed to be paid. The County's program has been similarly successful in preserving prime farmland.

11. *Development impact fee and land purchase program.* A Development Impact Fee program is identified in the sponsor's local Finance Plan as an option to partially pay for the local share of the levee improvement program. This fee would be collected for any land developed in the benefit area, and would be dedicated to structural and non-structural flood risk reduction measures.
12. *FEMA CRS Rating.* San Joaquin County and the cities of Stockton, Lathrop, and Manteca are rated 6, 8, 8, and 9, respectively in the FEMA Community Rating System which rewards communities for advancing risk reduction programs. Ratings are on a scale of 1-10, with 1 representing the highest rating.
13. *Emergency response plan.* The San Joaquin County Office of Emergency Services coordinates emergency response planning and activities among the local parties, and is considered one of the strongest programs in the state. It has been awarded a $1.6M grant to improve its interagency flood response planning and to increase the availability of flood fighting supplies to local levee maintaining agencies. As part of this effort, San Joaquin County recently completed Flood Safety Plans for the more than 100 miles of levees it maintains. These levees provide flood protection to much of the City of Stockton and the urbanized areas of unincorporated County in the Stockton area. Also, the County has implemented a flood alert system which provides real-time monitoring of water levels in many of the major streams and rivers that pose a flood threat to the Stockton metropolitan area. This system will be used as part of the decision-making process to deploy flood prevention and flood fighting efforts before and during major storm events.
14. *Annual flood risk notifications.* Annual flood risk notifications are mailed to all owners of levee-protected parcels by the State of California. Local agencies also communicate flood risk through a variety of regular mailings, meetings, websites and other methods. Additional public outreach on flood risk and preparedness is done in conjunction with local CRS programs.
15. *RD 17 Levee Seepage Repair Project.* RD 17 has completed Phases 1 and 2 of their levee strengthening program, and Phase 3 is expected to be under construction in 2015.

Development Restrictions

Various development restrictions are in place for land use authorities within the RD17 Basin at the local, state, and federal levels as summarized below. San Joaquin County and the Cities of Stockton, Lathrop, and Manteca are governed by land use related laws and regulations, many of which are designed to specifically limit the extent and intensity of growth.

Local-Level Development Restrictions

State law requires that every city adopt a "general plan" that incorporates a long term framework for the physical development of the city itself, and any outlying land that is necessarily related to the city's land use planning. (Cal. Gov't Code § 65300.) While a city may add optional elements, each general plan must include seven mandatory elements - land use, circulation, housing, conservation, open space, noise, and safety. (Cal. Gov't Code § 65302.)

The general plan is considered the "constitution for all future development." (Lesher Communications, Inc. v. City of Walnut Creek, 52 Cal.3d 531, 540 (1990).) Furthermore, zoning ordinances are used to establish land uses included in a General Plan. Therefore, no development may occur within a given California city unless such development is consistent with the zoning and land use elements codified in a valid general plan. In the case where approving a land use decision would require amending the general plan, the city must follow a complicated procedure involving comment by numerous agencies and public hearings before the planning commission and city council. (Cal. Gov't Code § 65350 et seq.)

California's State Zoning Law gives all general law cities and counties the authority to divide land within a given entity's jurisdiction into use districts. (Cal. Gov't Code § 65800 et seq.) In addition, zoning laws allow a city or county to regulate the size and shape of physical structures. (See O'Loane v. O'Rourke, 231 Cal.App.2d 774, 780 (1965).) Zoning ordinances typically classify use districts into four different types: residential; commercial; industrial; and agricultural. Within each use category, the city may impose a different set of restrictions to regulate both the use to which a landowner may dedicate property and the size and placement of physical structures on the property. (See O'Loane, 231 Cal.App.2d at 780.) City and county zoning ordinances receive an extreme degree of deference from the courts, as they need only be "reasonably related" to the promotion of the public welfare. (See City of Del Mar v. City of San Diego, 133 Cal.App.3d 401, 409 (1982).)

State-Level Development Restrictions

Land use in areas prone to flooding is highly regulated in California. The state's Cobey-Alquist Floodplain Management Act requires cities and counties to enact zoning regulations that generally prohibit permanent residential construction in land adjacent to watercourses that could be inundated by flooding (known as "floodways"). (Cal. Water Code §§ 8401, 8402.)

Additionally, recent legislative actions have imposed stricter regulation of flood-prone areas within the State of California. Senate Bill 5 (SB 5) requires the State to establish a Central Valley Flood Protection Plan by July 2012, by July 2, 2015 (as required by Senate Bill 1278 and Assembly Bill 1965) cities and counties within the Central Valley must amend their general plans to include the data and analysis contained in the plan, identify goals and policies for the protection of lives and property from flooding, and include related feasible implementation measures. Within 12 months of taking this action, these agencies must also amend their zoning codes. And, once these two actions are complete, Central Valley cities and counties must make the findings specified in SB 5 when granting certain development entitlements.

Development in a flood hazard zone would only be allowed if the city or county can find, based on substantial evidence in the record, that urban or urbanizing areas will be protected to a 200-year-flood level or that "adequate progress" (as defined in the statute) is being made toward the construction of improvements that will result in this level of protection. Therefore, as of mid-2016, Central Valley cities and counties will be prevented from entering into development agreements, approving discretionary permits that would result in construction of a residence, and approving subdivision maps in urban or urbanizing areas without a finding of 200-year- flood-level protection unless these agencies are able to make the required findings.

Federal-Level Development Restrictions

Cities and counties participating in the National Flood Insurance Program (NFIP) must conform to Federal Emergency Management Agency regulations regarding approval of development and/or the type of development that may occur. These regulations have severe growth limiting measures for areas that are mapped in the 100-year floodplain. FEMA also incentivizes cities and counties (through reduced NFIP insurance rates) to limit or regulate development in the floodplain. Virtually all cities and counties in the State participate in the NFIP.

Williamson Act Contracts

San Joaquin County participates in the Williamson Act agricultural land preservation program. The Williamson Act aims to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. In exchange for agreeing to maintain Williamson Act compatible land uses, landowners receive the benefit of reduced property tax rates from the County. Williamson Act contracts are voluntarily established between a landowner and the County and are automatically renewed every ten years, unless a notice of non-renewal is filed by the landowner.

A Williamson Act contract influences a landowner's ability to use, subdivide or separately sell any parcel of land under an existing contract. Compatible uses under the Williamson Act generally consist of agricultural (i.e. farming, ranching, grazing, timber) and related uses such as processing facilities. One single-family home and agricultural housing is also allowed under the Williamson Act. Subdividing, selling, or using property in a manner not compatible with the Williamson Act can have serious consequences.

There are three ways a landowner can terminate a Williamson Act contract: non-renewal, cancellation, and breach of contract.

Non-renewal is the preferred method of terminating a contract. On each anniversary date of a Williamson Act contract, the original ten year term of the contract is automatically renewed unless notice is given by the landowner. When notice is provided on or before September 30th, the contract shall expire nine years from December 31st of the year that notice was provided. Upon notice of non-renewal, tax rates are incrementally increased over the nine year period up to the fair market valuation assessment. While the tax rate changes during this period, the land use restriction maintain in effect until the contract expires.

A landowner may also terminate a contract by petitioning the County for immediate cancellation of a contract for all or a portion of the property. These requests are only granted under extraordinary circumstances and must be consistent with Williamson Act principles, or be shown to have significant public benefit. To invoke this method of contract termination, the local government is required to make specific statutory findings that the termination is consistent with the Williamson Act requirements and/or that the cancellation has significant public benefit. A cancellation penalty equal to 12 ½% of the unrestricted fair market value is assessed to the landowner if the petition is granted.

If property subject to the Williamson Act is developed, divided, or sold, it could be considered a material breach of the contract. This could result in contract non-renewal and related increase in

the property tax rate. Additionally, a material breach of contract can result in a monetary penalty up to 25% of the unrestricted fair market value of the land, plus 25% of the value of any incompatible building and related improvements on the contracted land.

The local government may allow a lesser monetary penalty to be negotiated. Negotiating a lesser penalty involves the local government, the department and the landowner and could result in the monetary penalty being reduced to no less than 12½ percent of the unrestricted fair market value of the land and related improvements. The monetary penalty assessed is secured by a lien payable to the county treasurer. Simple interest of 10 percent per year will be assessed against any unpaid penalty after 60 days. Upon full payment of the lien, the local government will record a termination of contract by breach for the affected portion of land.

In summary, the Williamson Act is intended to preserve the agricultural and open space resources in rural California. These contracts are typically renewed in ten year increments and offer participating landowners tax breaks on the assessed land value. While the consequences can have monetary impacts, there are several options available for landowners to terminate or non-renew these contracts.

Agricultural/Conservation Easements

There are numerous agricultural and conservation easements within RD 17. These easements differ from the Williamson Act parcels in that the majority of the conservation easements are legal agreements between a landowner and a land trust that conserve agricultural or open space resources by permanently limiting future development. Conservation easements are tailor made to meet the needs of an individual landowner and can cover an entire parcel or portions of a property. Tax benefits and/or financial compensation are often available for grantors of conservation easements. Conservation easements typically restrict development and subdivision to the degree that is necessary to protect the significant conservation values of that particular property. Some conservation easements include "home sites," or areas known as "exclusions" where development is allowed. Generally, home sites or exclusions are small in size (1-2 acres) and located on areas low in conservation value. Landowners and land trusts work together to draft conservation easements that reflect both the landowner's desires and the need to protect conservation values.

SJAFCA
San Joaquin Area FLOOD CONTROL Agency

April 9, 2015

Ms. Tanis Toland
U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95814-2922

LOWER SAN JOAQUIN RIVER PROJECT INTERIM REPORT, SAN JOAQUIN COUNTY, CALIFORNIA, DRAFT INTEGRATED INTERIM FEASIBILITY REPORT/ENVIRONMENTAL IMPACT STATEMENT /ENVIRONMENTAL IMPACT REPORT, FEBRUARY 2015

The San Joaquin Area Flood Control Agency (SJAFCA) is a joint non-Federal sponsor of the subject study. The study was prepared by the Sacramento District U.S. Army Corps of Engineers (USACE). SJAFCA is also the CEQA lead agency for the study. SJAFCA has met with USACE staff regularly during development of the study and has provided input and comment leading to this Draft Integrated Interim Feasibility Report/Environmental Impact Statement /Environmental Impact Report (Draft). Many of our comments have been addressed in this process. However, we still have a number of comments with the subject Draft. This letter represents our comments for the record. Although SJAFCA is sponsoring the study on behalf of, and with financial assistance of a number of other local agencies, SJAFCA's comments herein do not preclude any of the other local agencies from independently commenting on the Draft. Similarly, SJAFCA's comments should not be ascribed to our co-sponsor, the State of California.

SJAFCA's comments are separated into two different categories:

1. Major issues that need to be addressed by USACE in actions leading to the Final EIS/EIR. These matters are summarized in this cover letter.
2. Detailed comments that we would like addressed in the Final EIS/EIR. These are provided in Attachment 1.

10-1 We request that USACE incorporate all comments into the USACE ProjNet database, and that the comments be provided to the USACE Vertical Team, Agency Technical Review (ATR) team, and the Independent Expert Panel Review (IEPR) team for their reference while they are conducting their own reviews of the Draft.

Context of how we got here

It is important to review the genesis of the study, the final array, and Tentatively Selected Plan (TSP). SJAFCA initiated the Lower San Joaquin River Feasibility Study in 2009, following passage of California SB 5, which mandated 200-year protection for urban and urbanizing areas in the Central Valley. SJAFCA locally partnered with 11

Reclamation Districts, San Joaquin County and the City of Lodi to develop and cost-share in the study. Later, the State signed on as a joint non-Federal sponsor for the study and shares the key study objective of achieving 200-year protection.

Early in the study, improvement measures to Bear Creek were screened out because the projected benefits did not appear to exceed the costs. Other developing areas of west Stockton (Atlas Tract, Shima Tract, Wright Elmwood Tract) were screened out of the study at the same time due to USACE concerns with Executive Order 11988 (EO 11988). This meant that approximately 15,000 acres of urban and urbanizing land was removed from the study.

Within the revised study area three main geographical areas of concern were identified involving North Stockton, Central Stockton, and RD 17. During subsequent policy analysis of the final array of alternatives, USACE District determined that measures protecting the RD 17 area had to be removed from the final array because it believed these measures were not consistent with EO 11988. We reluctantly accepted this change out of concerns that the additional time needed to resolve this issue would shut down the study. However, to address the remaining and significant residual risk, we requested that RD 17 improvements be considered in a subsequent study.

Out of the final array of alternatives, we would have preferred Alternative 8a, which is formulated for 200-year compliance. However, as these alternatives did not produce significantly different levels of net benefits, USACE study guidance called for selecting the least costly plan as the National Economic Development (NED) plan. Consequently, Alternative 7a was selected by USACE as the NED. Because Alternative 7a fully meets the non-Federal objective of 200-year flood protection and has basically the same improvements of Alternative 8a with the exception of the upstream improvements on Calaveras River and Diverting Canal, we again accepted USACE's selection of Alternative 7a as the NED/TSP.

We decided not to pursue Alternative 8a as a Locally Preferred Plan (LPP) because an approval of an LPP could take a year and its approval was not certain. In addition, since we are responsible for 100% of the costs of implementing the project increments not included in the NED, we felt that it was advantageous to do this increment through local efforts as we could do it faster and more economically. We still are concerned that residual damages for 8a have been overstated and if properly reflected could have resulted in a switch of the NED to 8a.

Issue 1: *Confirm that the TSP provides 200-year protection.*

10-2 The sponsors' objective with the study was properly characterized in Section 2.2.2 as "…to identify, develop and construct a plan that will achieve a minimum 200-year urban level of protection for areas within the study, as required by State of California Senate Bill 5". However, it is difficult to discern to what degree this goal will be achieved by

Alternative 7a. Section 3.5 states that Alternatives 8a and 8b were "formulated to meet the sponsors' objective of compliance with SB 5". That same section goes on to say that the difference between Alternatives 7a and 8a and Alternatives 7b and 8b are that Alternatives 8a and 8b include additional levee increments upstream of the 7a and 7b limits on the Calaveras/Diverting system. So the implication is that the improvements made under 7a and 7b will also meet SB 5 requirements, but that the sponsors will have to improve the extra upstream increments without Federal participation to fully meet SB 5. However, Figures 5-5 and 5-6 show that Alternatives 8a and 8b would still have 100-year and 200-year residual floodplains in Central Stockton. And Section 1.6 of the Hydraulic Design Appendix states that the alternatives may or may not meet SB 5 requirements. So one part of the document states 8a and 8b meet the sponsors' SB 5 objective, and another says they won't.

The sponsors would not proceed to fund design and construction of levee improvements which fall short of 200-year protection requirements. Adding upstream increment is somewhat explainable, but re-doing a freshly rebuilt levee is not.

Issue 2: *Dropping RD 17 from the study.*

We do not think that USACE's EO 11988 analysis and conclusions in Section 3.6 of the Draft are appropriate, and as noted above feel that a more balanced evaluation would conclude that all of the final array of Alternatives are EO 11988 policy compliant. While we had hoped that USACE would conclude that Alternative 7b should be the NED Plan and TSP, we accepted a follow-up study to further consider this issue.

10-3

Attachment 2 presents our interpretation of USACE's study analyses and the EO 11988 policy, and concludes that residual economic risk of no action is not correct. With-project risk, even with the most extreme growth projections to full saturation of vacant land in RD 17, is an order of magnitude lower than without project risk.

Detailed Comments

Detailed comments that we feel are important to be addressed in the Final EIS/EIR are provided in Attachment 1 to this letter.

We are eager to complete the study within the amended schedule and budget, as we have already expended considerable amount of time and money. In addition, should comments from the public, USACE Vertical Team, ATR, and/or IEPR review result in USACE electing to designate Alternative 7b as the Selected Plan we would gladly support this determination as we desire providing a higher level of flood protection for the approximately 43,000 people and the critical infrastructure in RD 17.

We appreciate USACE's hard work in moving the study to this point. We also appreciate the opportunity to comment on the Draft. We would like to be provided with a printout from the ProjNet database after all comments have been entered, and once responses have been entered for all comments. Please contact me if you would like clarification on any of our comments, and/or to discuss resolution of our comments.

JAMES B. GIOTTONINI
EXECUTIVE DIRECTOR

JBG:md

Attachments

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Attachment 1

Detailed comments on the Draft to be addressed in the FEIS/EIR

10-4 to 10-18

1. Executive Summary: **ENVIRONMENTAL**
2. ES-1, first paragraph: …(SJAFCA). The State of…
3. ES-2, Figure ES-1. The Central Stockton area on this figure differs from the other figures in the report.
4. ES-5, under "Consideration of Alternative Plans", reference to Appendix B.2 should be Appendix E.
5. ES-5, "ALTERNATIVES" 2nd paragraph: …the levees protecting the project area would continue to require **maintenance** to **continue** to meet FEMA's…
6. ES-8, Table ES-1, Levee extension on Duck Creek - This description should be used consistently throughout the report (see sections 3-6, 3-14, 4-17, 4-20, 4-23, etc).
7. ES-8, under "Affected Environment", there is a statement that says "Each alternative proposes exactly the same improvements in North Stockton." This is not correct. NS-B and NS-F, which are the basis for alternatives 7 and 8, respectively, differ in the length of improvement on the right bank Calaveras River. Elsewhere in the document (such as Chapter 4), the right bank Calaveras River improvements are incorrectly grouped with Central Stockton. Not enough detail exists in the document to verify whether costs were properly apportioned between North and Central Stockton, however.
8. ES-9, "COMMUNICATION WITH NATIVE AMERICANS", District **10**
9. ES-11, under "Areas of Controversy", the Real Estate Plan is in Appendix G, not D.
10. ES-12, under "Tentatively Selected Plan", the EAD reduction of 84% does not match Table 3-16 (82.8%), but it does match the Economics Appendix number.
11. ES-12, under "Tentatively Selected Plan", the sentence describing benefits to critical infrastructure conflicts with Table 3-18, which says that alternative 7a does not reduce the number of critical life safety facilities subject to less than 90% assurance of flooding in the 1% ACE event, and it only reduces the number of other critical infrastructure subject to the same flooding by 11 facilities (474 flooded under no action, 463 flooded under alternative 7a).
12. ES-15, Table ES-3, OMRR&R cost still seems low
13. Figure 1-3. The Central Stockton area on this figure differs from the other figures in the report.
14. P.1-6, 4th paragraph: add at the end of the 1st sentence "and concerns with undeveloped areas."
15. P. 1-20, 2nd/3rd paragraph: Where is Table 4?

16. P. 2-11, last bullet: the number of residences and population increases should be consistent throughout the report.
17. P. 2-11, Section 2.3. The without project condition assumes sponsor completion of the RD 404 cutoff wall and RD 17 Phases 1-3 improvements. However, the final array of alternatives throughout the document shows duplicate measures overlaying these improvements. This results in an overstatement of costs and impacts for the action alternatives.
18. P.3-2 Table 3-1: Table 3-1 objectives are not the same as those developed in the charette. "promote sustainable environmental design" is completely new. And "reduce flood risk" and "reduce flood damages" are so similar that check boxes are identical. These are somewhat similar to 2.2.3 planning objectives, but ignore life safety and 2.2.2 NFS objectives.

10-19 to 10-29

19. P. 3-3, 1st paragraph: "See Section 3.1" doesn't make sense since this is Section 3.1.
20. P. 3-3, Flood Warning System: …residents and business with**in** the area.
21. P. 3-8, In Table 3-2, ring levees around critical infrastructure was a measure not retained because the facilities would be inaccessible during a flood. However, the TSP leaves these many critical facilities completely vulnerable, which is worse. Suggest this measure be retained or added back in the final array for residual risk management.
22. P. 3-17, Section 3.2.5. The RD 17 D, E, and G alternatives list a small setback levee, but because the document later says the existing riverine levee must be maintained, the new feature is actually a secondary levee. This is correctly characterized in Section 3.4. But the terms are not interchangeable, and the entire document should be conformed to the term "secondary levee".
23. P. 3-25, In Table 3-6 all of the residual critical infrastructure numbers look too high, especially RD17-E (same issue in Table 3-8). Figure 5-6 (alternative 8b floodplains) shows RD 17 as protected from the 200-year flood, and alternative 8b utilizes RD 17E. So residual critical infrastructure in Table 3-6 and 3-8 should be zero. The last paragraph of Section 3.3 says that the "residual critical infrastructure" number in Table 3-8 reflects number of facilities with reduced flood risk resulting from the alternative, but this is counterintuitive. The columns in the tables imply that the numbers shown are critical infrastructure still exposed to flooding after the alternative is implemented. And if the text is true, the zeros for NS-B, NS-F, and CS-D mean that those alternatives do not improve conditions for critical infrastructure?
24. P. 3-28, 1st paragraph, 7th sentence: unclear. The combined number of structures in North and Central Stockton is 67,000.
25. P. 3-28, Alternative 2B: What is "the authorized design elevation"?
26. P. 3-32, the new/set back levee shown in all drawings differs from the one proposed by RD 17 (Typical, throughout the document).

27. P. 3-39, Section 3.5. The 3rd paragraph conflicts with chapter 2 claims that all 4 planning accounts will be considered in designation of the TSP. This paragraph says that USACE policy is to designate the TSP based on only one of the planning accounts, NED, unless an exception is approved by the Assistant Secretary of the Army for Civil Works (ASA(CW)). This should be described in Section 2.2.3.
28. P. 3-39, Section 3.5, descriptions for alternatives 7a, 8a, and 9a should include the new Duck Creek levee. "New levee" should be added in the "description" column of Table 3-10.
29. P. 3-44, Table 3-11 introduces a new set of planning criteria that does not match section 2.2.2 and 2.2.3. If these are valid planning criteria, they should be described in section 2.2.3.
30. P. 3-58, Table 3-13. Alternatives in the table include the prefix "LS-". Elsewhere in the document, alternatives do not have the prefix. The document should be made consistent.

10-30 to 10-40

31. P. 3-58 and 3-70, Tables 3-13, 3-15, and 3-16. Residual damages for Central Stockton are too high, reflecting an incorrect R&U analysis of the right bank French Camp Slough (index point FR1). The "b" alternatives should fully protect against 200-year flooding and reduce residual damages further than what is shown in the table. And the "a" alternatives should be formulated with a sufficient Duck Creek extension levee to eliminate flanking in the 200-year flood. Section 3.5 says that both 8a and 8b were formulated to achieve the SB 5 objective. And because alts 7a, 7b, 9a, 9b are identical to 8a and 8b for this area, they should also prevent 200-year flooding from the south. However, alternatives 7a and 9a will have higher residual damages to Central Stockton because of residual risk along the Diverting Canal and eastern-most reaches of the Lower Calaveras River. In addition, residual damages for North Stockton should be significantly lower for 8a than 7a because 7a is still subject to upstream levee breaks in the 1/50 or 1/100 ACE event. Addressing these issues may result in a switch to alternative 8a as the NED and TSP.
32. P. 3-58 and 3-70, Tables 3-13, 3-15, and 3-16. The numbers in these tables conflict with Table 4-21 of the Economics Appendix.
33. P. 3-59, 1st paragraph, last sentence: Figure 3-**21**…
34. P. 3-54, Second to the last bullet: Set-back levees: the stated work differs from the one proposed by RD 17.
35. P. 3-65, 1: Most, but not all, of the entire study area delineated in Figure 1-3 is in the 500-year floodplain
36. P. 3-66, Item 5, last paragraph: …as shown in Figure 3-2**1**…
37. P. 3-74, Table 3-18 shows Alt 8a having zero population with <90% assurance for the 1% ACE event in Central Stockton. But figure 5-5 shows a substantial residual 1% floodplain in Central Stockton. We suspect that the critical infrastructure with <90%

assurance is also understated and evacuation routes may be overstated. However, if the R&U analysis of index point FR1 is corrected (see comment 24.), the numbers may not change as much.

38. P. 4-2, Table 4-1: should seepage berm for 8b be 10 times 7b and 9b?
39. P. 4-2, Table 4-1: Floodwalls were deleted from the project and replaced with conventional fill.
40. P. 4-3, Section 4.3.2. We thought the USACE standard for new landside easements is 15 feet.
41. P. 4-9, Item 4.3.7 should be changed to Raise Grade, or delete.
42. P. 4-9, Section 4.3.6. This is a general measure description, so the 75,000 cy quantity is confusing. We suggest either deleting the quantity, or specifying the area of placement.
43. P. 4-11, 2nd to last paragraph: should the gate be "stainless steel"?
44. P. 4-12, Item 4.3.11, last paragraph: …Stockton Diver**ting** Canal…
45. P. 4-13, Section 4.4.1. 2nd paragraph says that performance of project levees has decreased since original construction due to identified structural deficiencies. This is not really true. Maintenance deficiencies may produce a temporary reduction in performance. But the levees perform pretty much as designed and constructed. It is fair to say that they are structurally deficient by today's standards. But the way it is worded denotes a decay in performance, rather than changes in construction and maintenance standards.

10-41 to 10-54

46. P. 4-14, Table 4-2. Are all of the segments with levee raising called out as such? Or is levee raising "built in" to some of the measures and not called out? This is important from a visual impact and right of way take standpoint.
47. P. 4-15 & 4-19: Smith Canal floodwall proposed measure should be deleted and replaced with conventional fill.
48. P. 4-15, Table 4-2 and text for "North Stockton Area, Levee Improvements" immediately following the table. Right bank Calaveras River improvements should be included in the North Stockton grouping, not Central Stockton.
49. P. 4-15, Table 4-2. In Central Stockton, the first "Smith Canal" entry should replace "Browns Island" with "RD 1614", or "Stockton Golf and Country Club". The second Smith Canal entry should replace "floodwall" with "Levee height fix, sea level rise".
50. P. 4-17, Section 4.4.2. Under "Central Stockton Area, Levee Improvements", strike reference to north bank Calaveras River. This is part of the North Stockton system.
51. P. 4-17, Section 4.4.2. Under "Central Stockton Area, Closure Structure…", replace floodwall with "levee height fix". And the 5-10' height appears excessive. SJAFCA's estimate is 0-5'. We suspect this is due to the issue with Delta stages used by the Corps being too high (see Appendix E comment #5 below).

52. P. 4-18, Section 4.4.2. Under "RD 17 Area, New Levees on Oxbow Cutoff and Tie-Back". Please clarify that the Oxbow levee is a secondary levee, and not a setback levee, and that the existing riverine levee, though not improved, would be maintained in its current condition.
53. P. 4-18, Section 4.4.3 and Table 4-3. Comments above for Table 4.2 and Section 4.4.2 apply to this section as well.
54. P. 4-21, Section 4.4.3. The text following Table 4-3 needs to be modified to move the right bank Calaveras River improvements from the Central Stockton to North Stockton system.
55. P. 4-21, first sentence: 8a and 8b cannot be the same as 7a and 7b since 7a and 7b do not include the upper reaches of the Calaveras River and Stockton Diverting Canal
56. P. 4-21, **New Levee on Duck Creek (Alternative 7a only):** doesn't make sense since it is describing 8a. Should probably be **(Alternative 8a only)**.
57. P. 4-22, Section 4.4.4 and Table 4-4. Comments above for Table 4.2 and Section 4.4.2 apply to this section as well.

10-55 to 10-79

58. P. 4-23, Table 4-4: Duck Creek (9a only): doesn't make sense since it previously said 7a only. Should probably say "7a/8a/9a only"
59. P. 4-26, 4.5 Staging Areas, first sentence, "publicly"
60. P. 4-28 & 4-29, floodwalls: They were deleted from the project.
61. P. 4-29, Table 4-7: Are the new levees on French Camp Slough for 7a and 9a not needing easements?
62. P. 5-1, 2nd paragraph: "….For the purposes of NEPA, potential project effects **are** assessed in relation…"
63. P. 5-4, Table 5-1: "Beneficial" in last row seems out of place.
64. P. 5-4, **Significant:** "….Those effects that cannot be reduce**d** to …are identified **as** significant…"
65. P. 5-5, **Regional and Local:** Add City of Stockton General Plan
66. P. 5-7, 2nd paragraph: "…meaning that **their** channels are shaped…"
67. P. 5-8, 3rd paragraph: Old Mormon Slough/Old Mormon Channel/ Mormon Slough/Mormon Channel needs to be consistently used throughout the document.
68. P. 5-9, 1st paragraph: "…**Due** to the size and nature of the proposed…"
69. P. 5-9, **Regional and Local:** Add City of Stockton General Plan
70. P. 5-11, 2nd paragraph: Add **Lathrop**
71. P. 5-15, 3rd bullet: Add City of Stockton General Plan
72. P. 5-15, 1st paragraph: "…and deposition of the rock types in and **a**long the San…"
73. P. 5-21, 2nd to last paragraph: "…If a breach were to occur in a Delta…"
74. P. 5-22, 2nd paragraph: Add Calaveras River and Bear Creek
75. P. 5-23, 2nd paragraph: Where is Plate 10?
76. P. 5-23, 4th paragraph: 4 miles **upstream**?

77. P. 5-24 & 25: Where are Plates 11, 12, 13, & 14?
78. P. 5-29, Figure 5-2. The western portions of North and Central Stockton are shown in the 50% ACE floodplain under no action. Significant disconnect in the R&U process; likely rooted in over-stated fragility curves and incorrect Delta stage-frequency used (see comments on Civil Engineering Appendix Section 2.6.1d and Hydraulics Design Appendix Section 4.2d).
79. P. 5-31, 1st paragraph: Where is Figure 2?
80. P. 5-31, 2nd paragraph: Senate Bill 5 requires 200-year protection but does not say "with 90% assurance".
81. P. 5-32, 3rd paragraph: "…from the Sacrament**o**-San Joaquin Delta."
82. P. 5-40, 4th paragraph: "…would alter the course of…"
83. P. 5-42, 1st paragraph: Where is Figure 5-8?
84. P. 5-42, 3rd paragraph: "…Alternative 9b would alter the course of…"
85. P. 5-42, 5th paragraph: Alternate **9b**
86. P. 5-43, 1st paragraph: This says it would reduce the stages to approximately a 30% event, while P. 5-32 says it reduces water surfaces for floods greater than a 30% event.

10-80 to 10-108

87. P. 5-43, **Local:** Add City of Stockton General Plan
88. P. 5-44, 1st paragraph: double check the "small extension into the Primary Zone"
89. P. 5-45, 2nd paragraph: "…The City **of** Stockton…
90. P. 5-45, 3rd paragraph: "…the result **of** tidal exchange…"
91. P. 5-45, 4th paragraph: "…oxygen concentration regularly fall…"
92. P. 5-46, 1st paragraph: Spelling of Kjeldah(l)?
93. P. 5-48, 3rd paragraph: "tidally influenced open water…"
94. P. 5-48, 4th paragraph: There is no proposed pump station at Smith Canal
95. P. 5-49, 1st paragraph: "…that could result in **the release** of…"
96. P. 5-52, 1st paragraph: "…implementing the LSJR **Project**."
97. P. 5-52, **Local:** Add City of Stockton General Plan
98. P. 5-55, 3rd paragraph, the 3rd to last sentence is unclear.
99. P. 5-55, last paragraph, per P. 4-17, only Alternative 7a has a new levee section on Duck Creek.
100. P. 5-56, **Alternatives 9a/9b**: Old Mormon Slough/ Mormon Channel are used interchangeably throughout the report
101. P. 5-57, **Local:** Add City of Stockton General Plan
102. P. 5-58, 1st sentence: "Waters of the United States" and "Wetlands"…"
103. P. 5-59, 2nd paragraph, last sentence: "…Deepwater **Ship** Channel…"
104. P. 5-59, 4th paragraph: "…Shima Tract, Wright-**Elmwood** Tract…"
105. P. 5-60, 2nd paragraph: "equestrian center located east **of the** levee…"

106. P. 5-63, Closure Structures, 8th paragraph: … every three years) and "**will open when the level of receding tides in the Delta is lower than the level behind the gate.**"…
107. P. 5.64, Borrow Areas, 2nd paragraph, 3rd sentence: The closure structures would **slightly** alter local water circulation…
108. P. 5-68, **Vegetation ETL**: "…United States under Alternative **8b**…"
109. P. 5-70, **Vegetation ETL**: "…as those identified for Alternative**??...**"
110. P. 5-72, **Vegetation ETL**: "…vegetation clearing to establish…"
111. P. 5-90, 1st paragraph: Where is Section 4.3.1.4?
112. P. 5-90, Alternative 7a: Table 8-6 Project schedule shows construction ending in 2030. This should apply to all alternatives throughout the chapter.
113. P. 5-136, 2nd paragraph: "…In these circumstances, the CEQ**A** encourages…"
114. P. 5-140, last sentence: "…**I**n the event that…"

10-109 to 10-138

115. P. 5-141, last paragraph: "…From Shima Trac**t** to…"
116. P. 5-144, 1st paragraph: What is "design elevation"?
117. P. 5-172, 5th paragraph: "…Mammals such as desert cottontail…" is not a sentence
118. P. 5-189, Central Stockton, 2nd paragraph, 4th sentence: …gates would be closed…
119. P. 5-189, Central Stockton, 3rd paragraph, 3rd sentence: why should not this also apply to Fourteen Mile Slough?
120. P. 5-201, last paragraph: Should clarify that "Phase 3" is the RD17 EIP project.
121. P. 5-207, **RD 17 Area**: What is "Developable Lands"?
122. P. 5-208, **RD 17 Area**: What is "Developable Lands" and River Miles X and Y?
123. P. 5-212, 1st paragraph: Where is Table 5.12-1?
124. P. 5-227, last paragraph: Where is Table 5.12-2?
125. P. 5-230 and 5-231: Where is **Section 5.12.4 below**?
126. P. 5-231: Section 5.2.1.1.1 is incorrect.
127. P. 5-232, 1st paragraph: It refers to Section 5.12.4, but this is in that Section
128. P. 5-236, last paragraph: It states that the closure structure needs to be operational twice a day. This is based on outdated information which is incorrect. If the analysis of the gate operation is based on operation criteria as stated and not controlled by expected flood tides then the environmental and water quality impacts will be over conservative.
129. P. 5-237, 3rd paragraph: The duration and timing of both gate closures are the same. See P. 5-305, 3rd paragraph.
130. P. 5-237, 3rd paragraph: …gates would be closed during high…
131. P. 5-241, **Valley Elderberry Longhorn Beetle**: No Section 5.12.4 below.
132. P. 5-261, 2nd paragraph: "…currently in agriculture and open space…"
133. P. 5-272, 3rd paragraph: Alternative 7**b**?
134. P. 5-273, 3rd paragraph: Alternative 8**a**?
135. P. 5-277, Section 5.2.1.1.2?

136. P. 5-287, 4th paragraph: "…In addition to the impacts described in Alternative **7a**, the channel improvements proposed in Alternative 9**a**…"
137. P. 5-288, Section 5.15.9: "…implementation of Alternative 9**b**…"
138. P. 5-290/5-291/5-292: Who is "the project proponent"?
139. P. 5-291, 2nd to last paragraph: "…described above for Alternative**s** 7a and **7b**…"
140. P. 5-291, last paragraph, Which bridges are to be replaced?
141. P. 5-292, 1st paragraph: "…(outlined in Alternatives 7a **and 7b**)…"
142. P. 5-293, 2nd paragraph: Add Stockton's Delta Water Supply project.
143. P. 5-296, 2nd paragraph: "…into French Camp Canal, which **flows** into…". Also, Stockton provides stormwater service in RD 17.
144. P. 5-297, last paragraph: RD 17 is also served by the Stockton Fire Department.
145. P. 5-298, **Police Services**: …"the County Sheriff Department…"
146. P. 5-301, last paragraph: The box culvert begins just upstream of Wilson Way and the storm drains connect into it downstream.
147. P. 5-303, last paragraph: Oakmore golf course is closed.

10-139 to 10-166

148. P. 5-311, notes restrictions on public access and lower population density in the area and refers to Figure 5-9. Unfortunately, Figure 5-9 is a view at Louis Park toward Smith Canal where there are no restrictions on public access and population density in the area is not lower.
149. P. 5-313, 1st paragraph: Stockton General Plan (200**7**).
150. P. 5-314, Alternative 9a: This alternative does not extend upstream somewhat on the Lower Calaveras River and on the Stockton Diverting Canal. Alternative 9a is Alternative 7a plus Mormon Channel.
151. P. 5-314, last sentence: "…for Alternative **9**b…"
152. P. 5-329, last sentence: Who is the "local sponsor"?
153. P. 5-330, 1st bullet: Who is the "project proponent"?
154. P. 5-331, **Local**: Add City of Stockton General Plan
155. P. 5-335/5-336/5-337/5-338/5-339/5-340: Identify the number and location of all known HTRW sites and what is meant by "in proximity"? Is the cost included in the estimates? We understand that it is the Local Sponsors responsibility to acquire LERRD's and the use of the words proximity and vicinity are ambiguous.
156. P. 5-353, 1st paragraph: Stockton does not have a landfill.
157. P. 5-354, 2nd paragraph: District **10**
158. P. 5-358, 9th bullet: Why DWR?
159. P. 5-363, 1st paragraph: Where is Table ES-5?
160. P. 5-366, 1st paragraph: "…P**L** 84-99…"
161. P. 5-366, last paragraph: Annual maintenance dredging is not described "above".
162. P. 5-367, 3rd paragraph: Where is "this list (above)"?
163. P. 5-367, 2nd bullet: "…related to hydrology…"

164. P. 5-369, 1st paragraph: "…At that **time**, and integrated BiOp…"
165. P. 5-372, "City **of** Lathrop"
166. P. 5-381, 2nd paragraph: "…vegetation on the lower one **half** of the levee…"
167. P. 5-382, 2nd paragraph: "…**V**oidance and minimization…"
168. P. 6-1, last paragraph: **Two** public workshops?
169. P. 6-5, 1st paragraph: District **10**
170. P. 7-12, 3th paragraph: refers to air quality district outside San Joaquin County (i.e., Sacramento, Yolo, and Bay Area).
171. P. 8.1, Item 8.1.1, 1st sentence: **Tenmile** Slough
172. P. 8-1, Sections 8.1 and 8.1.5. TSP economics don't match Appendix C (Economics), which reports net benefits of $254M, BCR of 6.64, and EAD reduction of 84%.

10-167 to 10-183

173. P. 8-1, Section 8.1. the sentence describing benefits to critical infrastructure conflicts with Table 3-18, which says that alternative 7a does not reduce the number of critical life safety facilities subject to less than 90% assurance of flooding in the 1% ACE event, and it only reduces the number of other critical infrastructure subject to the same flooding by 11 facilities (474 flooded under no action, 463 flooded under alternative 7a).
174. P. 8-5, Item 8.1.3 3rd sentence: delete second part of the sentence after "...estimated to be $275,000"
175. P. 8-9, Item 8.1.7: add at the end of the paragraph; "and flooding from the Calaveras River and Diverting Canal, which were not improved."
176. P. 8-9, Section 8.1.7. Residual damages for Central Stockton are too high, reflecting an incorrect R&U analysis of the right bank French Camp Slough (index point FR1). We understand that this index point was modeled as a hybrid of a failure point and a flanking point, and it should have been modeled as two separate index points. The "b" alternatives should fully protect against 200-year flooding and reduce residual damages further than what is shown in the table. And the "a" alternatives should be formulated with a sufficient Duck Creek extension levee to eliminate flanking in the 200-year flood. Section 3.5 of the report says that alternative 8a was formulated to achieve the SB 5 objective. And because alt 7a is identical to 8a for the French Camp Slough area, it should also prevent 200-year flooding from the south. Correcting this error will reduce residual damages.
177. P. 8-11, Item 10: …in stakeholder meeting throughout the process...
178. P. 8-12, Item 8.2.4: …sign by SJAFCA **and CVFPB** as the non-Federal…
179. P. 8-13, Section 8.3. Table 8-6 should reflect 2028 construction completion to be consistent with other chapters of the report.
180. P. 9-1, Item a.3: …a **cash** contribution of funds…

Appendix A – Environmental

10-184

No comments

Appendix B – Civil Engineering

1. Section 2.4.4. Conform the statement *"The geographical area of RD-17 conflicts with Corp policy EO 11988 which is being coordinated with the sponsor"* to the language in main report 3.6.2.
2. Section 2.6.1d. Low ACE event stages in Tables L-N are quite a bit higher than SJAFCA's studies. SJAFCA's 2010 stage frequency analysis, which was based on 57 years of record, show 200-yr stage at 9.4' for current conditions at both Rindge Pump and Burns Cutoff, and 10.5' for 2080 conditions at both gages (intermediate SLC estimate). USACE is estimating elevations of about 12.0 and 13.7 for Rindge Pump and Burns Cutoff, respectively in tables L-N, based on adding hydraulic losses to the stage-frequency curve data. But the stage-frequency data analysis for these gages already intrinsically considers hydraulic losses. In addition, the two tide gages are located in the Delta Pool, which is characterized by very low velocities, even during peak stage conditions. This is reinforced by the stage-frequency curves being nearly identical. Despite the caveat in the note to each table L-N, we remain concerned that the stages at Burns Cutoff and Rindge Pump are too high. If civil design is raising the delta front levees to accommodate these heights, costs may be too high and environmental impacts may be unreasonable. Also, USACE reports tend to become reference documents in the future, and subtleties of caveat notes get overlooked. We would prefer that these tables be corrected.
3. Section 2.7.1d. The Hydraulic Design Appendix Tables 41, 55 show hydraulic impacts (induced flooding) for the "b" alternatives. But the study does not conclude that the impacts are less than significant, or include mitigations. Please clarify that the quantified impacts are less than significant or add mitigation.

10-185 to 10-193

4. Section 2.9. Very little detail is provided on improvement measures, such as depth of cutoff walls, levee raise amounts, geometry adjustments with attendant right of way takes, and vegetation removal zones. It is impossible for the reader to understand the impacts contemplated. The alternative maps and cost estimate tables in the appendix are all roll-ups, and do not help clarify.
5. Section 2.9.5.3. We thought the USACE standard for new landside easements is 15 feet.
6. Section 2.10.3.10, and 3.1. The text says that civil design and cost engineering refinement of the TSP will be forthcoming after this Draft.
7. Section 3.1. The text says the Duck Creek extension "*functions to keep high flows from flanking the existing levee system into central Stockton*". The Hydraulic Design Appendix and main report however, show flanking in the 100-year and 200-year floods.
8. Section 3.4. Text says alt LS-7a is the "*recommended plan*". We believe that this should be "tentatively selected plan".
9. Section 2.10.3.8, 3.3, 3.4. Table T shows a construction duration of 11 years, and the text in 2.10.3.8 and 3.4 says it's 12 years.

Appendix C – Economics

10-194 to 10-201

1. Table 3-3, 3-5, 3-8. Hydraulics Appendix Plate 43 shows without project flooding from index point CR2 spreading over all 3 North Stockton damage areas in the 1/50 ACE and larger floods, so it does not make sense that Economics Appendix Table 3-3 shows no damages for floods less than the 1/250 ACE flood, and Tables 3-5 and 3-8 show no damages less than the 1/100 ACE flood. Did economics analysis use the correct set of floodplains in HEC-FDA analyses?
2. Table 3-9. Hydraulics Appendix Plate 43 shows without project flooding from index point CL2 spreading over all 3 Central Stockton damage areas in the 1/100 ACE and larger floods, so it does not make sense that Economics Appendix Table 3-9 shows no damages for floods less than the 1/250 ACE flood.
3. Section 4.1.2. NS-B and NS-F do not include Mosher Slough closures.
4. Table 4-2. Residual damages for Central Stockton are too high, reflecting an incorrect R&U analysis of the right bank French Camp Slough (index point FR1). We understand that this index point was modeled as a hybrid of a failure point and a flanking point, and it should have been modeled as two separate index points. The "b" alternatives should fully protect against 200-year flooding and reduce residual damages further than what is shown in the table. And the "a" alternatives should be formulated with a sufficient Duck Creek extension levee to eliminate flanking in the 200-year flood. Section 3.5 of the main report says that both 8a and 8b were formulated to achieve the SB 5 objective. And because alts 7a, 7b, 9a, 9b are identical to 8a and 8b for the French Camp Slough area, they should also prevent 200-year flooding from the south. However, alternatives 7a and 9a will have higher residual damages to Central Stockton because of residual risk along the Diverting Canal and eastern-most reaches of the Lower Calaveras River. Correcting this error may result in a switch to alternative 8a as the NED and TSP.
5. Table 4-3 through 4-6. Alt 7a assurances to CS-01 and CS-02 are too high. See preceding comment.
6. Table 4-3 through 4-8. Why is performance for Alt 8a worse for North Stockton damage areas than Alts 7a or 9a? Alts 7a and 9a do not fix index point CR2 but alt 8a does. Hydraulics Appendix Plate 43 shows flooding in 1/50 ACE events and higher for index point CR2, so Alt 8 should outperform 7a and 9a in North Stockton.
7. Table 4-3 through 4-14. These tables raise a number of questions. Why do the "a" alts outperform "b" alts in North Stockton? They should have identical performance. Why does 7a outperform 7b in all damage areas except CS-01 and CS-02? Why does 8a outperform 8b in CS-01 and CS-02? Why does 9a outperform 9b in most of the consequence areas? Why does 9a outperform alternative 8a in CS-01 and CS-02? Why does 7b outperform 8b in CS-01 and CS-02? These are all counterintuitive. Tables 4-3 through 4-14 have numerous entries that differ from the raw results in Economics Appendix Attachment 6.
8. Table 4-21. This table does not match table 3-13, 3-15, and 3-16 of the main report. Residual damages in North Stockton should be much greater for alternative 7a than alternative 8a due to not fixing index point CR2 under alt 7a, exposing North Stockton to residual damages in all floods of 1/50 ACE and higher. On figure 3-22 of the main report, index point D3 used for North Stockton 02 for residual damages for all

alternatives, has 0.03% AEP, but Attachment 6 says this should be 0.2%. Are residual damages also in error?

10-202

9. Attachment 6. For index point FR1, why do the "a" alternatives outperform the "b" alternatives? And why is with-project performance so poor at this index point?

Appendix D – Geotechnical

10-203

1. Section 3.5.4. Because judgment is an important and sometimes dominant fragility in many of the combined fragility curves, this is a key topic. The approach refers to an Expert Elicitation (Enclosure E6) which was conducted for the American River Common Features project. Notwithstanding the fact that American River conditions discussed in the expert elicitation are substantially different from the urban levees of Stockton, the text notes that the judgment fragility does not translate well to failure probability. But the judgment failure probabilities on the fragility curves developed for the LSJRFS are high. In some cases, seepage and stability fragility is nearly zero, but judgment leads to a conclusion that a continuous slurry wall is warranted. This likely overstates costs and construction impacts, but may also overstate damages.

Appendix E – Hydraulic Design

1. Section 1.6. The caveat at the end of this section conflicts with Section 3.5 in the main report which says that Alts 8a and 8b were formulated to meet the requirements of SB-5, and that Alts 7a, 7b, 9a, and 9b alternatives were identical to 8a and 8b where the project limits overlap.

10-204 to 10-208

2. Section 2.4c, Plate 28A. Paragraph "c" should also describe the genesis of the right bank levee of Lower Calaveras. Under sub-bullet 1 and on plate 28A, please clarify the upstream terminus of the Federal levee.
3. Section 2.4c. The last paragraph in "c" should be attributed to SJAFCA, and the modified design capacity from that work should be reflected in Table 4.
4. Section 4.2d and Plate 20. Low ACE event stages in Tables 17 and 18 are quite a bit higher than SJAFCA's studies. SJAFCA's 2010 stage frequency analysis, which was based on 57 years of record, show 200-yr stage at 9.4' for current conditions at both Rindge Pump and Burns Cutoff, and 10.5' for 2080 conditions at both gages (intermediate SLC estimate). USACE is estimating elevations of about 12.0 and 13.7, respectively in tables 17 and 18. Despite the caveat in the note to each table, we remain concerned that the stages at Burns Cutoff and Rindge Pump are too high. If civil design is raising the delta front levees to accommodate these heights, costs may be too high and environmental impacts may be unreasonable. Also, USACE reports tend to become reference documents in the future, and subtleties of caveat notes get overlooked. We would prefer that these tables be corrected.
5. Section 5.6, 5.8, 5.9, 6.8, 7.8, 8.8, 10.8. Tables 32, 35, 49, 42, 49, 56, 72. Why do FR1 and D3 perform so poorly if they are part of the improvement plan? Were improvements sized appropriately?

10-209 to 10-213

6. Section 6.7 and 8.7. Table 41, 55. Are the negatives in the table for LR2, LR3, LR4 and Paradise Cut represent significant hydraulic impacts of the action? Do they require mitigation, and if so, what features were added to Alts 7b, 8b and 9b?
7. Plate 43 shows flooding in the 1/50 ACE event and higher for index point CR2, but plate 52 shows no flooding from CR2 under Alt 7a. But 7a does not fix CR2 or alter the hydrology. The floodplains should be identical.
8. Section 7.7, 9.7. In tables 48 and 63 what caused the increase to long term risk (50 yr) on Paradise Cut?
9. Plate 75. If right bank French Camp Slough flanks the extended levee, why isn't there floodplain around the end of the levee?
10. Plate 75, 76, 84, 85. Why is central Stockton flooded in the 1% and 2% flood for 8b? Main report section 3.5 says alternatives 8a and 8b provide 200-yr protection.

10-214

Appendix F – Hydrology

No comments

10-215

Appendix G – Real Estate

1. The appendix provides precise numbers of acres of take and numbers of relocations, but the figures and text do not reveal where these impacts occur. It is difficult for a landowner, stakeholder, or agency to understand whether their interest will be impacted by the project. The appendix notes that following the draft, additional work will be done before the final report to conform to the requirements of Chapter 12 (ER 405-1-12).

Attachment 2

Sponsor white paper on Wise Use of the Floodplain in RD 17

Introduction

The U.S. Army Corps of Engineers (USACE) prepared the Lower San Joaquin River Feasibility Study (LSJRFS), which is intended to identify the Federal interest in a flood risk management project for the Lathrop to Stockton urban and urbanizing corridor. In evaluation of a final array of alternatives, the USACE identified potential issues with Executive Order 11988 (EO 11988).

The primary concern identified by the USACE regarding EO 11988 compliance is the inducement of urban development within the already developed and levee protected floodplain. USACE estimated that there are approximately 12,500 acres of levee-protected land within RD 17 that could be urbanized, thereby increasing the population protected by RD 17 levees. The non-Federal sponsors for the study, SJAFCA and the California Central Valley Flood Protection Board (CVFPB), were concerned that the 43,000 residents and billions of dollars of public and private assets would be deprived of additional flood risk reduction. The quantity of developed but not yet urbanized land in RD 17 raised issues for USACE of whether inclusion of RD 17 would be compliant with EO 11988. For this reason, USACE excluded RD 17 alternatives from the final array of alternatives, and the non-Federal sponsors reluctantly accepted the exclusion to avoid further delay and/or cancelation of the study and facilitate release of the draft for concurrent public and vertical team review. However, the non-Federal sponsors conditioned their acceptance on further consideration of the issue either within the LSJRFS, or in a subsequent study focused on RD 17. The non-Federal sponsors believe that EO 11988 should not be an obstacle to further federal investment in the RD 17 levees.

This white paper is intended to address the issues at the core of EO 11988, which include the potential for a levee improvement project to induce growth in the floodplain, and the potential to foreclose on natural and beneficial floodplain values.

Definition of "Floodplain"

The "floodplain" which is the subject of EO 11988 is the 1% chance, or 100-year floodplain, also called the base floodplain. FEMA mapping guidelines define this as the median estimate, or 50% assurance estimate of the 1% flood. This is typically the engineer's single best deterministic estimate of hydrologic and hydraulic conditions. And if a levee has been accredited under 44CFR 65.10, the levee is considered to provide protection during the base flood. RD 17 levees were accredited by FEMA in 2011, and FEMA Flood Insurance Rate Maps (FIRMs) show RD 17 as a moderate flood risk zone with X (shaded) designation. This is not a restricted 100-year floodplain, which would have a zone designation beginning with "A" (A, AE, AH, AO, etc.).

Most Federal agencies use the effective FEMA FIRMs in their evaluation of EO 11988, per 1978 Water Resources Council guidance. However, WRC guidance also allows agencies to do their own calculations using their own methodology if desired. The USACE chose the latter path, and defined the base floodplain using a probabilistic risk and uncertainty assurance method, and using a criteria of 90% assurance of conveying the 1% event. The risk and uncertainty calculation procedure is complex computationally, which implies accuracy. But each of the input parameters includes a substantial measure of judgment. The result is that it is very difficult for an existing levee to achieve a 90% assurance under risk and uncertainty. Not surprisingly, USACE estimates for RD 17 levees fell below 90% for the one percent chance event, and therefore, the USACE delineated the base floodplain assuming existing levees fail, and USACE considers the entirety of RD 17 to be within the 1% base floodplain.

For critical infrastructure, FEMA defines the base floodplain as the 500-year floodplain. RD 17 levees do not provide 500-year protection under either FEMA or USACE criteria. In spite of this, substantial critical infrastructure exists in RD 17, as described in the next section.

Current RD 17 Setting

The Federal Swamp Land Act of 1850 conveyed lands to the state of California for the purpose of reclamation and development. RD 17 was formed in 1863 to implement that Act. Levees were constructed immediately thereafter, and the land was reclaimed. Agricultural and urban development has occurred in accordance with this Federal vision. Upon initial reclamation the floodplain was severed from the floodway, at Federal direction. The reclaimed RD 17 lands have not been a riparian ecosystem for 150 years.

USACE's base floodplain contains approximately 43,000 residents in the Cities of Lathrop, Manteca and Stockton, and also includes unincorporated San Joaquin County. Critical infrastructure includes Lathrop's city hall, police stations and fire stations, and numerous schools, the San Joaquin County hospital, the San Joaquin County Sherriff's facilities, County Jail complex, the children's home, a Veterans Administrations clinic, and a future VA Hospital. The levees protecting RD 17 also provide protection to Interstate 5 which carries 115,000 vehicles per day, along with State Highway 120 and major railroads. The highways are critical to evacuation of the region and response to emergencies in the Delta. Over $80M has been invested in infrastructure to facilitate development of RD 17, and a $325M VA Hospital is scheduled for construction in 2015. These investments were made in full partnership with the Federal government, including the Corps of Engineers.

RD17 Levees were accredited by FEMA in 2011 as meeting the FEMA 100-year criteria. However, due to the importance of the critical infrastructure and significant population protected by the levees, RD 17 in partnership with the State of California, has undertaken a multi-phase levee improvement project. This work has been funded with local and state funds. The continuing effort will reduce under- and through-seepage of the existing levees, but will fall short of reaching the 200-year mandated State level of protection required for urban areas. Phases I and II of the strengthening project have been completed, and phase III work is anticipated to start in 2015.

Across the river from RD 17 lies Roberts Island (RD 524 and RD 544), which is a rural district. Its levees are lower and less robust than RD 17's. USACE's term for this is "levee superiority", meaning, in an overwhelming flood, the inferior levee is likely to fail first, relieving pressure on the system. All of the planning documents for San Joaquin County sustain these concepts. The County General Plan designates the island as agricultural, and the 2014 Lower San Joaquin Delta South Regional Flood Management Plan (LSJ/DS RFMP) sustains and strengthens the levee superiority concept by targeting RD 17's levees for Urban Level of Protection (ULOP) improvements.

Residual Economic Risk Projections

Residual risk is the risk that remains or is created after completion of a project. Residual risk was extrapolated by SJAFCA from economics in the LSJRFS. Without-project expected annual damages (EAD) was estimated by USACE to be $25M/yr and with-project EAD was estimated to be $1M. Assuming no further growth under without project conditions, EAD continues to escalate due to property inflation. With project EAD also escalates, but also increases in proportion to growth. The LSJRFS identified 5,300 acres of planned development within the General Plans of the 3 cities (build-out by approximately 2030), plus another 7,200 acres of agricultural land that USACE staff are concerned could potentially develop beyond that. Together, the 12,500 acres represent all of the remaining undeveloped land within RD 17. Although that is not in any plan, assuming all 12,500 acres were built out by the 2070 LSJRFS planning horizon, the calculated without project residual risk would still exceed with-project residual risk by an order of magnitude (Figure 1). This conclusion does not change if the property appreciation rate is set to zero. Risk would be substantially reduced if the RD 17 improvements included in the "b" alternatives are constructed, even with the most aggressive growth projections.

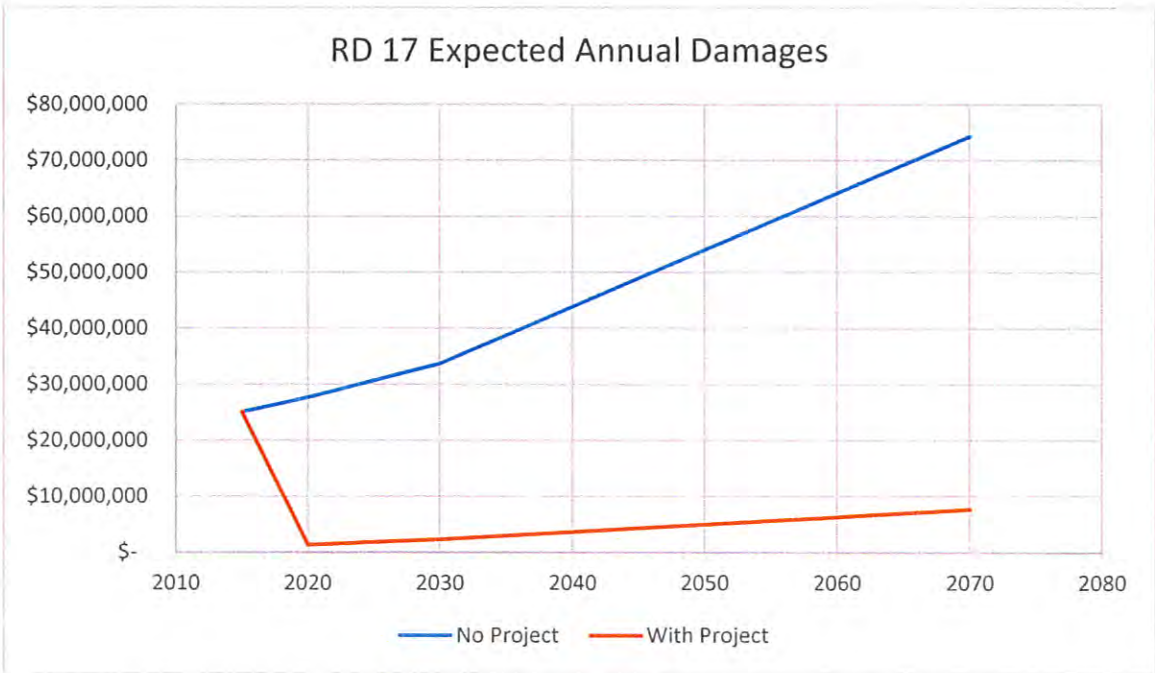

Figure 1. Comparison of residual risks for without- vs. with-project.

Balancing Life Safety against Aversion to Growth Inducement; EO 11988 Policy Compliance

In light of the significant life safety risks described above, USACE ER 1165-2-26 provides the general guidance and policy for USACE's implementation of EO 11988 for all civil works projects. Paragraph 7 of the regulations states:

> *" … It is the policy of the Corps of Engineers to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base flood plain and avoid inducing development in the base flood plain unless there is no practicable alternative. The decision on whether a practicable alternative exists will be based on weighing the advantages and disadvantages of flood plain sites and non-flood plain sites. Factors to be taken into consideration include, but are not limited to, the functional need for locating the development in the flood plain…The test of practicability will apply to both the proposed Corps action and to any induced development likely to be caused by the action."*

This statement says that Federal improvement of a levee could take place if there was no practicable alternative. The implication is that if the need for flood risk management is clear, that need must be fulfilled by an action alternative. Stated another way, the no action alternative can be considered unacceptable if the residual risk is too great. And this means that an action alternative can have flood risk management performance which overrides growth inducement concerns. The LSJRFS acknowledges the lack of a practicable alternative to fix-in-place, but stops short of recommending action. The USACE acknowledges that this is an important policy discussion that needs to happen, but elected to defer this to a later study:

> *"It is understood that RD 17, with funding assistance from the State, is currently pursuing a phased strategy of levee improvements to initially increase the resistance of RD 17's levee system to under seepage and through seepage. Upon completion of that work, RD 17 and the non-Federal sponsors intend to pursue USACE participation in additional studies/improvements necessary to achieve the non-Federal objective of 200-year (0.5 percent ACE) flood risk management in order to meet SB 5 requirements. Consideration of future Federal participation would be subject to demonstration of a Federal interest in such incremental improvements."*

We believe that USACE's EO 11988 analyses should have included a weighing of the economic and life safety risks against growth inducement concerns. The study correctly noted the lack of a practicable alternative to the "b" alternatives. We believe that upon further analysis and reflection, USACE will conclude that Alternatives 7b, 8b, and 9b are all policy compliant, that Federal interest exists in improving the RD 17 levees, and that Alternative 7b or 8b should be the Selected Plan.

SJAFCA
San Joaquin Area FLOOD CONTROL Agency

April 13, 2015

Alicia Kirchner, Chief
Planning Division, Sacramento District
U.S. Army Corps of Engineers
1325 J Street, Room 902
Sacramento, CA 95814

COMMENTS TO DRAFT LOWER SAN JOAQUIN RIVER FEASIBILITY REPORT EIS/EIR

11-1 I am writing at the close of the public comment period to officially state for the record that SJAFCA supports the issuance of the draft Lower San Joaquin River Feasibility Study and the Tentatively Selected Plan (TSP) within that draft Study.

11-2 I am pleased that we will have continued opportunities to work through the few remaining issues with the draft Study as the draft works its way through USACE-HQ, IEPR, and ATR review prior to USACE taking a final agency action. Of course, one of the issues we have been discussing is the inclusion or non-inclusion of Reclamation District 17 (RD17) within the Study. While SJAFCA believes that excluding RD17 is the wrong solution and has submitted additional analysis that it thinks explains why Executive Order 11988 does not require its exclusion, SJAFCA has publicly stated that it will support the Study going forward without RD17 at this time. Instead, SJAFCA will seek a further study to analyze this discrete issue and basin. SJAFCA has shared this position with staff at USACE-HQ and the office of the Assistant Secretary of the Army during our most recent visit to Washington DC. SJAFCA also looks forward to working with your staff to address the concern we raised in our public comment letter about whether the draft Study clearly explains the level of protection provided that was previously explained at the TSP conference.

Let me once again thank you and your staff for all of your hard work and again confirm that SJAFCA supports the draft Study and the TSP. I would be happy to discuss this with you, or anyone else within USACE, to ensure that our support is not misunderstood.

Roger Churchwell

For JAMES B. GIOTTONINI
EXECUTIVE DIRECTOR

JBG:dc

emc: Joana Saviñon, Project Manager, USACE

Stacy Samuelson, Water Resources Planner, USACE
Tanis Toland, USACE
Dante Nomellini, Nomellini, Grilli & McDaniel
Fritz Buchman, Deputy Director, SJC Public Works
Kurt Wilson, City Manager, City of Stockton
John Maguire, Engineering Services Manager, SJC Public Works
Dave Peterson, Peterson Brustad, Inc.
Scott Shapiro, Downey Brand

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April 13, 2015

Via Email: tanis.j.toland@usace.army.mil
tyler.m.stalker@usace.army.mil

Ms. Tanis Toland and Tyler Stalker
U.S. Army Corps, Corps of Engineers
1325 J Street, Rm. 1513
Sacramento, CA 95814

Re: Lower San Joaquin River, CA Draft Feasibility Report / Environment Impact Statement / Environment Impact Report - February 2015

Dear USACE:

This submittal constitutes Part Two of our comments. Part One which is attached hereto as Attachment One was hand delivered and submitted to the Public Workshop held Wednesday, April 8, 2015 in Stockton.

Attachment Two contains the additional comments on behalf of RD 17 prepared by Alicia Guerra of Buchalter Nemer, A Professional Law Corporation, which also has attachments. We have asked that it also be forwarded directly by her.

Attachment Three is the Analysis of Development Risk Resulting from Levee Improvements To ULDC Standards by Peterson Brustad, Inc., Engineering Consultants dated April 9, 2015. This analysis is specific to the RD 17 area and shows that the analysis of the USACE as a basis to reject flood risk reduction for RD 17 is incorrect.

Attachment Four contains our comments specific to the USACE's failure to properly consider life safety and critical infrastructure impacts resulting from the arbitrary and capricious determination of no federal interest in flood protection for RD 17.

Attachment Five contains our comments specific to residual risk mitigation which should be considered in a reanalysis of residual risk associated with the rejection of federal interest in reduction of flood risk to the residents and investments in RD 17. The USACE unreasonably overstates the likelihood of urbanization of the yet not fully urbanized areas within RD 17 and does not account for the efforts and plan to continually improve flood protection.

Attachment Six is a copy of our October 27, 2014 letter to the San Joaquin Area Flood Control Agency which we understand was forwarded to the USACE.

The Setback or Secondary Levee Imposed on RD 17 Alternatives Is Not the RD 17 Preferred Alternative and The Reanalysis of RD 17 Alternatives Should Consider Alterations Without Such Setback or Secondary Levee at the Confluence of the San Joaquin and Old River.

The alternatives for RD 17, 7b, 8b, and 9b, each have such a setback or secondary levee at the confluence of the San Joaquin and Old Rivers. This confluence is critical to maintain the flow split between the San Joaquin River flow downstream past Stockton and the flow that goes west into Old River and hence the Bay. At page 4-18 the Draft EIS/EIR provides:

12-1 "Constructing a new levee across the oxbow negates the need to improve a much longer reach of existing levee around the perimeter of the oxbow."

This statement is in error and is unsupported by any hydraulic analysis. If the levee around the perimeter of the oxbow fails it will cause more flood water to flow downstream in the San Joaquin River thereby adding increased risk to the downstream areas including the City of Stockton and the Stockton Port. There is no justification for providing a lower degree of protection for the perimeter levee than for the secondary levee or other levees protecting the downstream areas. The secondary levee will add significantly to the cost and adversely impact the agricultural and environmental values in the increased levee footprint.

Increasing Flood Protection for Areas Downstream From RD 17 Without Similarly Increasing Flood Protection for RD 17 Will Increase the Risk of Flooding To The Residents and Property Within RD 17.

12-2 During a flood when flows are at their peak a levee failure will provide relief to surrounding areas. River stages will drop while the area suffering the failure is filling with water. This acts as a flood retention basin. Much of the RD 17 levee system particularly on the lower

portion of the river will be adversely impacted because it does not provide the same level of protection as the other levees especially in the Delta Pool which are being improved by the projects in The Feasibility Study. These impacts need to be analyzed and addressed.

With or Without Further Urbanization of the Area Within RD 17 The Determination that there is No Federal Interest in Flood Protection for RD 17 Within RD 17 is Unconscionable.

12-3

Totally absent from the USACE consideration is the economic and social impact to the highly disadvantaged and minority residents within RD 17. The stigma associated with the USACE determination which we believe is the result of failure to comply with law will adversely affect property values and present and future public and private investments in the area. This will substantially damage the financial ability of the residents who are already distressed to retain their homes. The stigma will greatly inhibit the ability to raise funds for flood protection and other necessary services. Failure to recommend funding for a project that is far off in the future is not good for the community but to do so in a manner which will be directly harmful is unconscionable.

Neither the desire to restore land to flood plain nor the desire to restrict urbanization is a proper justification for abandoning 43,600 residents to a fate of economic disaster and increased threat to life and safety. The USACE has failed to properly conform to policy and law as there is no practical alternative to the improvements of the RD 17 levees. Relocation of the residents and public and private improvements at USACE expense was not even considered.

The callous abandonment of 43,600 people is particularly egregious in that much of the justification put forth by the USACE is the result of their failures to design and construct project levees to meet their own requirements,

Yours very truly,

Dante John Nomellini
Reclamation District No. 17

DJN/dh

Attachment One

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April 8, 2015

Via Email: tyler.m.stalker@usace.army.mil

Tyler Stalker
U.S. Army Corps, Corps of Engineers
1325 J Street, Rm. 1513
Sacramento, CA 95814

Re: Lower San Joaquin River, CA Draft Feasibility Report / Environment Impact Statement / Environment Impact Report - February 2015

Dear Mr. Stalker:

Reclamation District No. 17 which was founded in 1863 operates and maintains about 19 miles of levee extending along the right bank of the San Joaquin River, the left bank of French Camp Slough and the right bank of Walthal Slough. Of the 19 miles, 16.18 miles are project levees for which construction was completed by the USACE in about 1963.

Denial of Improved Flood Protection to 43,600 Residents and Billions of Dollars of Public and Private Investment is Unjust and Unlawful and will Increase the Risk of Loss of Human Life and Personal Health and Safety.

Your determination that there is no federal interest in providing needed flood protection for the 43,600 residents, two major highways, two major railroads, County hospital, County sheriff and jail complex, children center, multiple schools, police and fire facilities, City Hall and other public and private improvements, etc. is unjust and unlawful. Your analysis does not comply with your own guidelines and is predecisional in the NEPA process. (See DEIS/EIR pages 3-64 to 3-67 which are attached). Your actions interfere with the contractual relations as to operational maintenance of the project levees and the Corps responsibility to correct deficiencies

in the design and construction related thereto.

Your actions have wrongfully created a stigma on the communities within RD 17 and create a physical division in our community between those areas which will be provided with increased flood protection and those which will not.

The prejudice and risk created by your discriminatory treatment of the areas within RD 17 will diminish the value of the homes of 43,600 residents and the other public and private investments. Future public and private investments and the economic survival of the area will be jeopardized.

Two of the highest disadvantaged census tracts in the State of California are located within RD 17 and will be unjustly impacted by your action (Attached are Disadvantaged Community Maps and information for census tracts 6077003803 and 6077005119).

The Area protected by the RD 17 Levees is not Flood Plain. The Area was Fully Reclaimed from the Natural Flood Plain Prior to 1863.

The area although at some level of risk of flooding has levees which have been substantially and continually improved. The USACE completed the project levee improvements in about 1963 and additional privately funded improvements were completed by 1990 to meet FEMA standards. The flood protection has since 1990 met the FEMA requirements for urban development.

In 1850 Congress adopted the Arkansas Act of 1850 sometimes referred to as the Swamp Land Act of 1850 to aid the States in reclaiming swamp and overflowed lands. By way of such Act, such lands were conveyed to the State of California in consideration of the duty of the State to make and maintain the necessary improvements for such reclamation. In the case of *Kimball v. Reclamation Fund Commissioners (1873) 45 Cal.344, 360* the California Supreme Court found:

> "The object of the Federal Government in making this munificent donation to the several States was to promote the speedy reclamation of the lands and thus invite to them population and settlement, thereby opening new fields for industry and increasing the general prosperity." (Emphasis added.)

The area along the river for which the USACE seeks to treat as an unreclaimed flood plain consists of swamp and overflowed land conveyed in 1850 to the State for reclamation and development. Reclamation and development certainly commenced shortly after 1850. Reclamation District No. 17, one of the oldest reclamation districts in California was formed in 1863 and the levees along the San Joaquin River have been in place for more than 100 years.

The land along the river is not undeveloped but consists of highly developed farmland, multiple residences and some commercial structures dating back to the 1800's.

The Lower San Joaquin River and Tributaries Project, of which the Lower San Joaquin River Levee Project is a unit, was authorized by the Flood Control Act of 22 December 1944, Public Law 534, 78th Congress, 2nd Session, Section 10. Included in the Project were the RD 17 levees along the left bank of French Camp Slough, those along the right bank of the San Joaquin River and those along the right bank of Walthall Slough. Commencing in 1944, work on various portions of the RD 17 levees was carried out by the U.S. Army Corps of Engineers. The Standard Operation and Maintenance Manual for the Lower San Joaquin River Levees Project (prepared by the Sacramento District Corps of Engineers, U. S. Army, Sacramento, California, dated April, 1959) provides that the project includes construction or reconstruction of levees, channel improvement and the provision for bank protection along the Lower San Joaquin River from the mouth of the Merced River to the Delta, terminating at the Stockton Deep Water Ship Channel.

> "1.04. Protection Provided. The Lower San Joaquin River and Tributaries Project, including the levee and channel work of the Lower San Joaquin River Levees Project, when completed, will provide protection from all floods of record to about 120,000 acres of fertile agricultural lands; to a suburban area south of the City of Stockton and about four small communities; to other areas developed for residential and industrial purposes; to two transcontinental highways and other State and County highways. It will make possible the reclamation of areas that can be developed to a higher degree when protection against flood hazard is assured." (Emphasis added.)

In May 1963, the U. S. Army Corps of Engineers issued "Supplement to Standard Operation and Maintenance Manual Lower San Joaquin River and Tributaries Project Unit No. 2 Right Bank Levee of San Joaquin River and Left Bank of French Camp Slough Within Reclamation District No. 17."

> "1.03. Protection Provided. Levees along the left bank of French Camp Slough and right bank of San Joaquin River, as described in this unit, provide direct protection to about 12,000 acres of agricultural, industrial and residential lands within Reclamation District No. 17. Along French Camp Slough the grade of the adopted flood plane profile is level at elevation 11.0 from the San Joaquin River to the French Camp Turnpike. Along the right bank of the San Joaquin River, the grade of the adopted flood plane profile varies from elevation 11.0 at French Camp Slough to elevation 23.5 at Walthall Slough. All elevations are referred to mean seal level datum (1929) adjustment. Levee grades within this

> unit provide for a freeboard of at least 3 feet above the adopted flood plane profile. Within this unit, the project design flood for French Camp Slough is 3,000 cubic feet per second and for the San Joaquin River about 18,000 cubic feet per second from French Camp Slough to Old River and 37,000 cubic feet per second from Old River to Walthall. The flow in French Camp slough coincidental with the San Joaquin River design flood would be about 2,000 cubic feet per second." (Emphasis added.)

The supplement references work on the RD 17 levees commencing in January of 1944 and extending through January 1963.

On January 3, 1963, The Reclamation Board of the State of California accepted for Operation and Maintenance bank protection, levee enlargement, and access and patrol road construction, right and left banks, San Joaquin River from Head Old River to Stockton Deep Water Channel and other work.

The USACE actions to undo the reclamation of the RD 17 lands along the river is directly contrary to the clear intent and purpose of the Swampland Act of 1850 and the authorization and construction of the Lower San Joaquin River and Tributaries Project Unit No. 1 and Unit No. 2 which was to foster the very reclamation and development which the USACE is trying to reverse and obstruct.

Executive orders cannot change federal law. Congress has not changed the objectives of the Swampland Act of 1850 or the objectives of the Lower San Joaquin River and Tributaries Project.

Public and private investments have been made and thousands of people have located in RD 17 due to and in furtherance of the intent of Congress.

THE USACE CURRENT ACTIONS ARE INCONSISTENT WITH ITS PREVIOUS INTERPRETATION OF E.O. 11988 RELATING TO DEVELOPMENT IN RD 17

E.O. 11988 was adopted in about 1978. During the period of about 1988-1990 in connection with the permitting of the Weston Ranch residential development in the City of Stockton, the levees of RD 17 were improved to meet the FEMA requirements for urban development. FEMA accreditation was issued on February 2, 1990. The work necessary to bring the levee system up to the FEMA standards was approved by all regulatory agencies including the Corps of Engineers. Application for such work was submitted by RD 17 to the Corps on or about June 12, 1988. The work included clearing, placement of engineered fill, utility relocation, placement of gravel patrol road and placement of bank protection. The

application was supported by EIR Sch #87020305 certified by the City of Stockton on January 25, 1988, hydraulic study by Gil and Pulver and a formal Endangered Species Consultation. The impacts of removal of the RD 17 area from the FEMA floodplain restrictions were addressed in the EIR and hydraulic study. In about June of 1989, the Corps issued its Permit No. 9957 for the work determined by them as requiring such a permit. A similar application submitted to The Reclamation Board of the State of California resulted in their approval. Additionally, The Reclamation Board performed ongoing inspection and certification of the work.

During the January 1997 high water event, seepage and boils occurred at a number of locations along the RD 17 levees. The Corps, DWR and RD 17 actively and successfully addressed the seepage and boils. There were no failures in the RD 17 levees. Subsequently, the Corps, The Reclamation Board and RD 17 undertook a project to repair the seepage and boil areas along the RD 17 levees. The Corps designed and constructed the project. DWR reviewed the design. In October of 2004, the Corps notified The Reclamation Board

> "In October 2001, the U.S. Army Corps of Engineers (Corps) completed a portion of work for the Lower San Joaquin River and Tributaries Project, California. The features constructed under this contract included requirements associated with the rehabilitation of "Unit No. 2" along the right bank levee of the San Joaquin River within Reclamation District (RD) No. 17. In order to ensure the work transferred meets the specific requirements of the project objectives as well as the requirements of the non-Federal sponsor, the Corps requests a review of the enclosed 'Addendum to Standard Operation and Maintenance Manual, Lower San Joaquin River and Tributaries Project, California, Unit No. 2, Right Bank Levee of the San Joaquin River and Left Bank of French Camp Slough Within Reclamation District No. 17'."

The Addendum reflects that the State of California Reclamation Board officially accepted responsibility for operating and maintaining the construction completed in 2001 under Contract No. DACW05-00-C-0033 through a letter dated July 18, 2003.

No objection based on E.O. 11988 was raised by the USACE until the present. E.O. 11988 does not appear to have been changed by the President and it is the USACE that is unilaterally changing the interpretation of the Executive Order so as to conflict with federal law. Such action would appear to be both arbitrary and contrary to law.

The current feasibility study alternatives for RD 17 would not be a new project such that natural or undeveloped flood plain would be impacted but in reality would simply be an improvement of the 1944 Lower San Joaquin River and Tributaries Project which was intended to protect against the highest flood of record and foster development.

THE USACE'S FAILURE TO DESIGN AND CONSTRUCT THE RD 17 LEVEES TO CONFORM TO ITS OWN SEEPAGE REQUIREMENTS IS THE BASIS FOR THE CORPS DETERMINATION THAT RD 17 IS IN THE BASE FLOOD PLAIN AND THE REJECTION OF FEDERAL ASSISTANCE FOR IMPROVEMENT OF RD 17 LEVEES

At page 3-53 of the DEIS/EIR, it is stated:

The overall purpose of the project is to reduce flood risk to urban and urbanizing parts of the study area. The final array of alternatives involve improving levees or constructing new levees located in the base 1% (1/100) annual chance exceedance (ACE) flood plain. For the purpose of this study, the base flood plain is delineated as all areas that are at risk of being flooded by the 1/100 ACE flow. In other words, the base flood plain has been delineated assuming existing levees do not provide protection from the 1/100 ACE event. This is because this definition of the base flood plain addresses the USACE requirement in Engineer Regulation 1105-2-101 to describe a project's performance using risk and uncertainty methods and for purposes of studies 1105-2-101 does not require USACE to give deference to the current accreditation for RD17's levee system provided by the Federal Emergency Management Agency in 2011. For this reason, the entire study area was evaluated for E.O. 11988 compliance.

The bases for the Corp's determination that RD 17 is within the base flood plain are seepage concerns which were not addressed by the Corps in construction of the project levees completed in 1963 and not addressed in the seepage repairs completed in 2001.

The Corps designed and constructed the project levee improvements to the RD 17 levees during the period of 1944-1963. They apparently did not "provide protection from all floods of record "and the very claimed deficiencies which are cited by the Corps are due to their failures in design and construction." The levees along the San Joaquin River are in the same location as when improvements to project standards were completed by 1963 and they have been substantially improved.

After the 1997 high water event, the Corps carried out a project together with the State and RD 17 to repair the seepage and boil areas along the RD 17 levees. RD 17 successfully and with great effort conducted an assessment ballot proceeding to raise the money for its local share.

The Corps designed and constructed the project including all measures to address the seepage and boils. The Addendum to the Operation and Maintenance Manual prepared by the Corps provides:

"2-05. Berms.

a. Description. The berms construction in 2001 under Contract No. DACW05-00-C-0033 are located along the landside slope of the existing levee.

This construction contract included the installation of a berm at 21 separate sites between L.M. 0.98 and L.M. 13.08 of Unit No. 2. A berm is generally constructed to satisfy one or both of the following objectives: 1) Stability - Compacted fill is placed along the toe and slope of the levee as a buttress to stabilize the levee against sloughing or rotational slipping; or, 2) Seepage - Fill is placed over a layer of pervious drainage material or other drainage feature as a counterweight to uplift pressures associated with heavy seepage or boils. The height, width, cross-slope, and side-slope of each berm varies based on which objective it has been designed to satisfy. For information specific to any one of the berms constructed in 2001, refer to the attached Project Information Form, EXHIBIT A-2, or the As-Built Drawings, EXHIBIT B. In general, all berms should be operated and maintained in accordance with the principles that govern the operation and maintenance of a levee.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements, see the following:

(1) Sand Boils paragraph 8-09 of the standard Manual.

(2) Sub-levees or Bow Levees paragraph 8-10 of the Standard Manual."

(emphasis added)

Subsequent to 2001 substantial development has taken place within RD 17 and in the City of Lathrop developers have been required to install toe drains landward of the levee to intercept seepage. All work on the RD 17 levees since the Corps Project Levee Construction in 1963 including the improvements to meet FEMA accreditation requirements in 1990 has increased the ability of the levee system to address seepage and boil concerns.

The criteria presently used by the Corps to justify its unlawful attempt to reverse the reclamation of the RD 17 lands along the San Joaquin River was not used by the Corps in the construction of the project levees and not even used in the project to repair the seepage and boils which was completed in 2001.

The Corps' misguided use of its underseepage analysis to support its floodplain argument also ignores the EIP seepage repair project which is now being carried out by DWR and RD 17. Funding is in place to complete the project and any consideration of seepage should account for such project.

THE STATE AGREEMENT TO SERVE AS THE NON-FEDERAL SPONSOR OF AND THE RD 17 AGREEMENT WITH THE STATE TO OPERATE AND MAINTAIN THE PROJECT LEVEES WERE BASED UPON THE CLEAR INTENT AND PURPOSE

AS EXPRESSED IN THE SWAMPLAND ACT OF 1850 AND THE LOWER SAN JOAQUIN RIVER AND TRIBUTARIES PROJECT TO PERPETUALLY OPERATE AND MAINTAIN THE PROJECT LEVEES TO FOSTER DEVELOPMENT AND THE ECONOMY.

The actions of the USACE constitute a unilateral interference with the contracts and intentions of the State, RD 17 and the United States.

The safety of thousands of people, their livelihoods and homes and billions of dollars of public and private investment are being jeopardized by the arbitrary, capricious and unlawful actions of the Corps.

THE USACE ACTIONS ARE AN UNFAIR AFTER-THE-FACT ATTEMPT TO CHANGE LAND USE PLANS WHICH WERE BASED ON FEMA ACCREDITATION AND CORPS APPROVAL IN 1990.

The General Plans of the land use agencies have been in place for a number of years and are not being induced by reason of the feasibility study projects. Even the State SB-5 requirements to provide a 200-year level of protection for residential and some other types of developments do not require the reversal of the reclamation of the RD 17 lands.

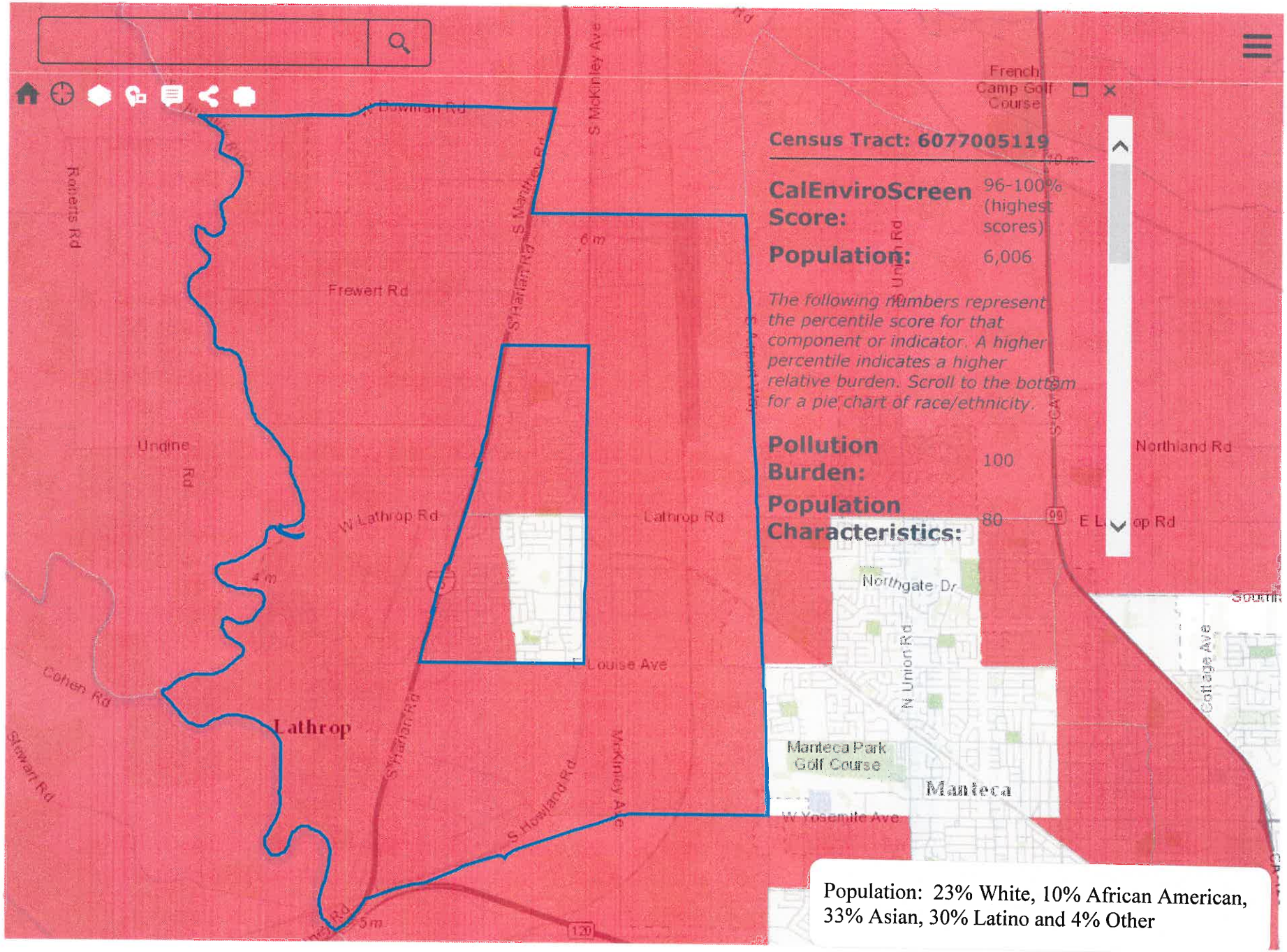
Changes in engineering analysis and creation of loosely defined rules of risk and uncertainty should not be used as a basis for total disruption and probable destruction of major communities by after-the-fact determinations.

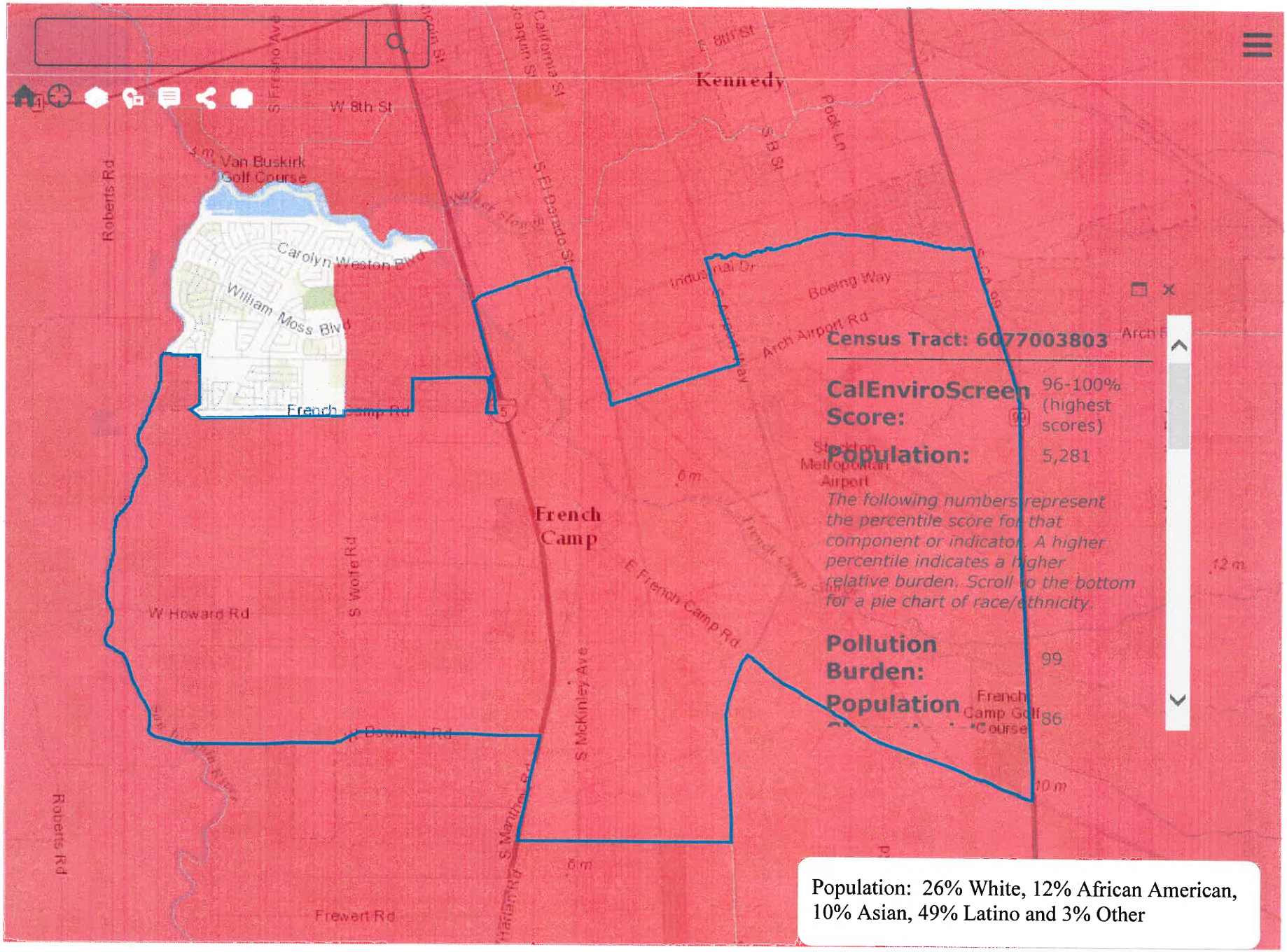
We request that the RD17 alternatives without the setback along the San Joaquin River be included for complete analysis in the current feasibility study and that reanalysis be conducted impartially and in compliance with law.

Yours very truly,

Dante John Nomellini
Reclamation District No. 17

This is part one of our comments. Part two will be submitted by the April 13, 2015 deadline.





6. As part of the planning process under the Principles and Guidelines, determine viable methods to minimize any adverse impact of the action including any likely induced development for which there is no practicable alternative and methods to restore and preserve the natural and beneficial flood plain values. This should include reevaluation of the "no action" alternative.

As discussed, the historic placement of levees in the study area precludes opportunities for restoration or enhancement of natural flood plain values.

Evaluation of the alternatives which included RD 17 with respect to development and minimization of adverse impacts caused USACE to reevaluate the final array of alternatives. Based on existing land use planning further inducing development in RD 17 in the deepest parts of the flood plain (highest life-safety consequence), the decision was made to remove the RD 17 alternatives from further consideration in this draft feasibility study (Alternatives 7b, 8b, and 9b). The Principles and Guidelines state that Federal investments in water resources should avoid the unwise use of flood plains and flood-prone areas and minimize adverse impacts and vulnerabilities in any case in which a flood plain or flood-prone area must be used. While few practicable alternatives to development in the flood plain were identified, it was determined that the proposed development, as shown in the General Plans, is unwise from the perspective of supporting Federal investment for a flood risk reduction project.

7. If the final determination is made that no practicable alternative exists to locating the action in the flood plain, advise the general public in the affected area of the findings.

The public will have an opportunity to comment on this analysis and determination when the Draft Integrated Feasibility Report/EIS/EIR is released for concurrent public, resource agency, independent external peer and USACE technical, policy and legal reviews.

8. Recommend the plan most responsive to the planning objectives established by the study and consistent with the requirements of the Executive Order.

Existing Project levees were historically placed in close proximity to the river channels, reducing the extent of natural flood plain within the study area. Existing infrastructure, such as transportation routes, housing, agricultural improvements, levees and drains, limits the potential for restoration of the San Joaquin River natural hydrology and ecosystem functions. The North and Central Stockton alternatives have little or no unmitigated adverse effects due to the fully developed nature of the North and Central Stockton areas. The proposed placement of development within the RD 17 basin is in the deepest part of the flood plain (highest life-safety consequence).

The RD 17 alternatives are removed from consideration based on the Principles and Guidelines which state that Federal investments in water resources should avoid

the unwise use of flood plains and flood-prone areas and minimize adverse impacts and vulnerabilities in any case in which a flood plain or flood-prone area must be used. The remaining alternatives (Alternatives 7a, 8a, and 9a) have little or no unmitigated adverse effects due to the fully developed nature of the North and Central Stockton areas.

Critical Actions. Repeat steps 1 through 8 above for critical actions in the critical action flood plain for the full range of potential residual flood risks. The critical action flood plain is defined as the 500-year flood plain (0.2 percent chance flood plain).

1. Determine if the proposed action is in the critical action flood plain.

The critical action flood plain (500-year flood plain) consists of the entire study area delineated in Figure 1-3. Proposed actions being analyzed by this study are within the critical action flood plain.

2. If the action is in the critical action flood plain, identify and evaluate practicable alternatives to the action or to location of the action in the base flood plain.

There are no practicable alternatives to the proposed actions being situated within the critical action flood plain. See Base Flood Plain Step 2.

3. If the action must be in the critical action flood plain, advise the general public in the affected area and obtain their views and comments.

See Base Flood Plain Step 3.

4. Identify beneficial and adverse impacts due to the action and any expected losses of natural and beneficial flood plain values. Where actions proposed to be located outside the 0.2% flood plain will affect the 0.2% flood plain, impacts resulting from these actions should also be identified.

The critical infrastructure currently located in the critical action flood plain includes 2 major inter-state and international highways (I-5, CSR-99), 4 hospitals, 9 fire stations, 8 police stations, 3 railroads, wastewater treatment plant, and an airport and currently consists of the developed portions of the Cities of Stockton, Lathrop and Manteca. There are no liquefied natural gas terminals and facilities producing and storing highly volatile, toxic or water-reactive materials in the study area. Current population at risk is approximately 235,047 within the 0.2% ACE (500-year) natural flood plain and economic damages as defined by damageable property amount to $21 billion. Without project expected annual damages range from $150 - $250 million. If flooded, an added dimension to the disaster would be a possible wastewater treatment plant containment failure which would impact water quality in the Delta and could interrupt water deliveries to the communities in the southern valley and to Southern California.

Beneficial impacts due to the action would include risk management to the current critical infrastructure within the study area. Adverse impacts due to the action include the possibility for additional critical infrastructure being located within the RD 17 basin, potentially in the deepest areas of flooding, thereby increasing to the critical infrastructure already in place.

See Base Flood Plain Step 4 above for the expected losses of natural and beneficial flood plain values discussion.

5. If the action is likely to induce development in the critical action flood plain, determine if a practicable non-flood plain alternative for the development exists.

There may be opportunities to locate some future critical facilities outside the critical action flood plain. However, facilities such as schools and fire stations must be placed within close proximity to any future development. Therefore, if development occurs as shown in Figure 3-20, there will be no practicable non-critical action flood plain alternative for these critical facilities.

6. As part of the planning process under the Principles and Guidelines, determine viable methods to minimize any adverse impact of the action including any likely induced development for which there is no practicable alternative and methods to restore and preserve the natural and beneficial flood plain values. This should include reevaluation of the "no action" alternative.

See Base Flood Plain Step 6.

7. If the final determination is made that no practicable alternative exists to locating the action in the flood plain, advise the general public in the affected area of the findings.

See Base Flood Plain Step 7.

8. Recommend the plan most responsive to the planning objectives established by the study and consistent with the requirements of the Executive Order.

As a result of the analysis required for compliance with E.O. 11988, USACE has made a determination that alternatives 7a, 8a, and 9a have little or no unmitigated adverse effects to flood plain areas and are therefore compliant with EO 11988.

3.6.2 Result of Executive Order 11988 Analysis

As a result of the analysis required for compliance with E.O. 11988 as discussed above, the RD 17 alternatives were removed from further consideration in this draft feasibility study. This action results in a policy compliant array of the following

alternatives for identification of the NED and TSP plans: Alternative 7a, Alternative 8a, and Alternative 9a.

It is understood that RD 17, with funding assistance from the State, is currently pursuing a phased strategy of levee improvements to initially increase the resistance of RD 17's levee system to under seepage and through seepage. Upon completion of that work, RD 17 and the non-Federal sponsors intend to pursue USACE participation in additional studies/improvements necessary to achieve the non-Federal objective of 200-year (0.5 percent ACE) flood risk management in order to meet SB 5 requirements. Consideration of future Federal participation would be subject to demonstration of a Federal interest in such incremental improvements.

3.7 Environmental Considerations and Mitigation

All appropriate environmental resources were analyzed during development of the proposed alternatives to fully comply with NEPA and CEQA. Most impacts to resources as a result of implementation of a proposed project can be mitigated, but there are challenges related to impacts to riparian habitats within the study area.

3.7.1 Regional Context

Riparian habitats are substantially reduced from their historical extents throughout the Central Valley. Only about 2-5 percent of the historic riparian habitat still exists (RHJV 2004). This is true along the San Joaquin River as well. Establishment of the FRM system, with levees set immediately adjacent to the main rivers and tributaries contributed to this decline and continues to result in conflicts between ecosystem health and sustainability and maintenance of the FRM system. Upstream of the proposed project area, considerable Federal and state investment has been made to improve the riparian corridor as part of the San Joaquin River Restoration Program and the Federal and state refuge systems.

In general, riparian communities are among the richest community types, in terms of structural and biotic diversity, of any plant community found in California. Riparian vegetation provides important ecological functions, including: wildlife habitat; migratory corridors for wildlife; pollution filtration and waterway shading, thereby improving water quality; provides connectivity between waterways and nearby uplands; and biomass (nutrients, insects, large woody debris, etc.) to adjacent waterways. Riparian forests and woodlands – even remnant patches – are important to resident and migratory fish, birds, and other wildlife.

3.7.2 Study Area

The riparian corridor in the study area is severely constrained by the proximity of the flood management levees to the rivers, tributaries and sloughs. Throughout most of the corridor vegetation is highly altered and fragmented. Nevertheless, this vegetation is all that remains as habitat to resident and migratory fish and wildlife in the proposed

Attachment Two

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April 13, 2015

VIA E-MAIL -
VIA FEDEX

Ms. Tanis Toland
U.S. Army Corps of Engineers
1325 J Street
Room 1513
Sacramento, CA 95814-2922

Re: Lower San Joaquin River Basin Integrated Interim Feasibility Report and Draft Environmental Impact Statement/Environmental Impact Report

Dear Ms. Toland:

Thank you for the opportunity to submit comments on behalf of our client, Reclamation District 17 ("RD 17"), regarding the Lower San Joaquin River Basin Lower San Joaquin River, CA Draft Integrated Interim Feasibility Report/Environmental Impact Statement/Environmental Impact Report ("Draft FR/EIS/EIR").

On numerous occasions during the plan formulation process, we advised the San Joaquin Area Flood Control Agency (SJAFCA) and the U.S. Army Corps of Engineers (USACE) of our concerns regarding the USACE's proposal to exclude the RD 17 levees from the USACE's Lower San Joaquin River Basin flood control project. (See Exhibit 1 *SJAFCA 2/5/15 Letter*). Our concerns fell on deaf ears.

We reviewed the Draft FR/EIS/EIR with a specific focus on the plan formulation process and the alternatives that the USACE and SJAFCA evaluated for flood management in the Lower San Joaquin River study area. As a major participant in the Local Sponsor Group, and a sponsor of significant funding for the Draft FR/EIS/EIR, RD 17 objects to the USACE's premature and unlawful decision to remove from consideration flood risk reduction alternatives for RD 17 in the Draft FR/EIS/EIR. Our review suggests that the draft documents provide clear and convincing evidence that the USACE already made up its mind to reject the RD 17 levees from consideration *before* the USACE and SJAFCA completed the Feasibility Report and the environmental review process under the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*) ("NEPA") and the California Environmental Quality Act (Pub. Res. Code 21000 *et seq.*) ("CEQA"), and long before the public had an opportunity to offer its comments on the alternatives under consideration.

As stated on Draft FR/EIS/EIR page ES-12, the USACE selected Alternative 7a – North and Central Stockton alternatives excluding RD 17 as the Tentatively Selected Plan (the "TSP"). The USACE's arbitrary and unlawful process for selecting Alternative 7a as the TSP for the Lower San Joaquin River Basin flood management plan as set forth in the FR/EIS/EIR is pre-decisional and deprived the public of a meaningful opportunity to review and comment on the practicable alternatives for flood management in the Lower San Joaquin River Basin. Yes, the USACE advised the public that it could comment on the draft documents, but unfortunately, it is too late; the USACE already recommended Alternative 7a as the TSP. To remedy the defects reflected in the FR/EIS/EIR, RD 17 requests that the USACE (1) analyze and consider the RD 17 alternatives (Alternatives 7b, 8b, and 9b) in this Feasibility Report at a level of detail commensurate with the level of analysis the USACE afforded Alternative 7a (the "Tentatively Selected Plan"), and add an analysis of the RD 17 preferred plan which consists of improvements to the RD 17 levees without the secondary levee along the San Joaquin River ("RD 17 Preferred Plan").

Overview of Reclamation District 17 and the Federal Interest

Reclamation District 17 was founded in 1863, and operates and maintains approximately 19 miles of levees within the Lower San Joaquin River Basin. The Lower San Joaquin River study area is located along the lower (northern) portion of the San Joaquin River system in the Central Valley of California. RD 17 is located just south of the confluence of French Camp Slough and the San Joaquin River, in the lower third of the Lower San Joaquin River Delta. RD 17 is defined by the levees extending along the right bank of the San Joaquin River, the left bank of French Camp Slough and the right bank of Walthal Slough. A dry-land levee is situated at the upstream end of the reclamation district (see Draft FR/EIS/EIR Economic Appendix, Appendix C – November 2014, page 13). Of the 19 miles of levees, 16.18 miles are Federal project levees for which the USACE completed construction in 1963 – over 50 years ago.

RD 17 is charged with the management and operation of existing Federal project levees which protect the Cities of Lathrop and Manteca and a portion of Stockton. As explained on page 1-20 of the Draft FR/EIS/EIR, improving the lower reaches of the San Joaquin River and Tributaries was authorized by the Flood Control Act of 1944 (Public Law 532, December 22, 1944, 78th Congress, 2nd Session), as modified by Public Law 327, 84th Congress, 1st Session (see also, Appendix C, Economic Appendix – November, 2014 at p. lxxiv). The San Joaquin River and Tributaries Project provided for the Federal Government to improve the levee system on the San Joaquin River from the Delta upstream to the Merced River, by raising and strengthening existing levees and revetment of river banks where required. The local interest plan of improvement was coordinated with the Federal Government's plan to provide for the maintenance and operation of the levees. After the Federal Government completed its project, the levees were turned over to the State and the reclamation districts for maintenance and operation in accordance with the Secretary of the Army's requirements (see FR/EIS/EIR at p. 1-20). Thus, since 1963, the USACE's Federal project system has protected the Lower San

Joaquin River Basin, and specifically, the RD 17 geographic area, and the Federal Government has retained a Federal interest in the Federal Project system.

RD 17 has maintained and operated the Federal Project levees in accordance with the Secretary of the Army's Operations and Maintenance Manual and Supplemental Manual for over 50 years. Further, since 1990, RD 17 has undertaken repairs to the levees to continue to maintain 100-year flood protection. At no time has the Federal Government informed RD 17 that Congress has de-authorized the Federal Project levees protecting RD 17, or otherwise revoked its decision to flood protect the area. Thus, the Federal interest in RD 17 has already been made, and the USACE cannot change its mind 50 years later and refuse to acknowledge the Federal investment made in the area.

The FR/EIS/EIR Fails to Adequately Analyze and Consider the RD 17 Alternatives, including the RD 17 Preferred Plan, and the FR/EIS/EIR Must be Revised.

The USACE and its non-Federal sponsors, SJAFCA, and the State of California Central Valley Flood Protection Board, propose to improve flood risk management in the Lower San Joaquin River Basin. The USACE and its non-Federal sponsors prepared the FR/EIS/EIR and purported to follow the Federal planning process for the development of water resource projects in order to identify the TSP to recommend to Congress for authorization (see e.g., FR/EIS/ EIR, Chapter 8).

The overall purpose of the proposed flood management project is to reduce flood risk to urban and urbanizing parts of the *Study Area* as explained in Chapter 3 of the FR/ EIS/EIR. The USACE, however, selected an agency preferred alternative that only protects *part of* the Study Area and completely excludes RD 17. During the Feasibility Report process, the USACE identified its preferred alternative (Alternative 7a) which was limited by the USACE's decision to remove from consideration the RD 17 Alternatives (Alternatives 7b, 8b, and 9b). Alternative 7a is the National Economic Development (NED) Plan, and it serves to set the level of Federal participation in a project resulting from the Feasibility Report. In the interest of time, the USACE proceeded with Alternative 7a as the TSP and removed from further consideration any improvements to RD 17 on the basis that the USACE must avoid the unwise use of floodplains and flood-prone areas (see Draft FR/EIS/EIR, p. 3-64). Consequently, the USACE decided it had no choice but to select Alternative 7a as the TSP. Even though the Federal investment has been made for a flood risk project to protect RD 17 since 1958, the USACE decided now in 2015 that it was "unwise" for the local communities to have ever made land use decisions based on that Federal investment (see Draft FR/EIS/EIR, p. 3-64).

The USACE's decision to remove from consideration any improvements to the RD 17 levees conflicts with Congress' prior authorizations to flood protect the area. While Alternative 7a provides flood risk management for North and Central Stockton, Alternative 7a does not meet the non-Federal sponsor's objectives of flood risk management and SB 5 compliance for RD 17 and the Cities of Lathrop and Manteca and a portion of Stockton as required as a matter of State law because Alternative 7a excludes any flood control improvements and flood management for

RD 17 and the Cities of Lathrop and Manteca and a portion of Stockton. The Draft FR/EIS/EIR evaluates the RD 17 Alternatives at a very general level of analysis, and, despite requests from RD 17 and SJAFCA, the document did not include *any* information and analysis for the RD 17 Preferred Plan. Because the RD 17 Preferred Plan meets the project objectives, is practicable and flood protects 43,600 residents who would otherwise be exposed to exacerbated flooding conditions associated with the TSP, the USACE must revise the FR/EIS/EIR to include a robust analysis of the RD 17 Preferred Plan and incorporate this information throughout the entire document.

The USACE's Decision to Reject from Further Consideration RD 17 Levee Alternatives is Pre-Decisional and Deprived the Public of a Meaningful Opportunity to Review and Comment on the USACE's Proposal and Alternatives.

The USACE's decision to omit the RD 17 Preferred Plan and its refusal to consider a more detailed level of analysis of the RD 17 Alternatives (Alternatives 7b, 8b, and 9b) in the FR/EIS/EIR was pre-decisional and violated Federal limitations on actions during the NEPA process. Specifically, until the USACE issues a record of decision (ROD) as provided in Title 40 of the Code of Federal Regulations section 1506.2, Section 1506.1 prohibits the USACE from undertaking any action which would limit the choice of reasonable alternatives (see USACE ER 200-2-2). Predetermination occurs when an agency irreversibly and irretrievably commits itself to a plan of action that is dependent upon the NEPA [and CEQA] analysis before that analysis has been completed (see e.g., *Cedar-Riverside Environmental Defense Fund v. Hills*, 422 F. Supp. 294 (D. Minn 1976), judgment vacated, 560 F. 2d 377 (8th Cir. 1977) (bias found when agency prematurely focused on project alternatives).

Here, the USACE prematurely selected and committed to the TSP, and then rejected from further review any alternatives involving the RD 17 levees *before* releasing the Draft FR/EIS/EIR for public review and comment because the USACE claims now that flood protection in RD 17 conflicts with Executive Order 11988 on Floodplain Management (see page 3-64). Such a decision conflicts with the decades of flood protection the USACE previously provided to the area. Since RD 17 was informed by SJAFCA before the release of the Draft FR/EIS/EIR that the USACE intended to remove from consideration the RD 17 levee alternatives, we requested that SJAFCA identify for CEQA purposes the local sponsors' alternatives to reduce flood risk in RD17 (see attached Exhibit A). Although SJAFCA requested that the USACE consider this information in the Draft FR/EIS/EIR document, the USACE refused to include the RD 17 Preferred Plan and instead released the document and pre-determined the outcome of the planning process.

The USACE's Process is Arbitrary and Capricious in Violation of the APA.

The USACE's decision-making process concerning the selection of Alternative 7a as the TSP violates the Administrative Procedures Act (Pub.L. 79-404, 60 Stat. 237). The USACE decided to remove from consideration the RD 17 Alternatives from detailed review in the FR/EIS/EIR on the basis that the alternatives do not comply with Executive Order 11988 before it

even considered the public's comments on the Feasibility Report and before completing the NEPA process. Further, the basis for selecting Alternative 7a as the TSP is without support, and the USACE's decision was arbitrary and capricious and an abuse of discretion under the Administrative Procedure Act, 5 U.S.C. § 706 (1980) ("APA"). In applying the "arbitrary and capricious" standard of the Administrative Procedure Act, a court will consider the administrative record already in existence. (*See e.g., Camp v. Pitts,* 411 U.S. 138, 93 S.Ct. 1241, 36 L.Ed.2d 106 (1973); *Avoyelles Sportsmen's League, Inc. v. Marsh,* 715 F.2d 897 (5th Cir.1983)). As the administrative record shows, the Draft FR/EIS/EIR documents the USACE's decision to proceed with Alternative 7a as the TSP and the preferred project before completing the NEPA process and before informing the public that it already made up its mind that it would exclude improvements to the RD 17 levees. The USACE's actions are arbitrary and capricious because the USACE attempted to justify its decision to remove the RD 17 Alternatives from further consideration by (1) claiming that Executive Order (EO) 11988 prohibits the USACE from making a Federal investment in RD 17 when it does not, and (2) failing to disclose to the public that the Draft FR/EIS/EIR not only removes from consideration RD 17 Alternatives, but the USACE has actually selected an alternative, Alternative 7a as the TSP which exacerbates flood hazards to the 43,600 residents. (*See e.g., Greater Yellowstone Coalition v. Lewis*, 628 F.3d 1143, 1148 (9th Cir. 2010) (as amended) (relying on *The Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008) (en banc), *overruled on other grounds by Winter v. Natural Res. Def. Council,* 555 U.S. 7 (2008)); *Envtl. Def. Ctr.*, 344 F.3d at 858 n.36; *Brower*, 257 F.3d at 1065). For these reasons, the USACE's actions violate the APA.

The USACE Failed to Comply with its own SMART Planning Procedures.

The USACE claims to follow the guidance contained in the Planning Bulletin No. PB 2013-03-Reissue (14 March 2014) regarding the SMART Planning Milestones, but it did not. Specifically, the USACE did not consider and disclose the effects of a reasonable range of alternatives that met its planning objectives for the LSJRFS.

First, under the SMART planning procedures, the TSP Milestone marks "vertical team concurrence on a single plan the PDT will carry forward in the feasibility study...." (PB 2013-03-Reissue, page 1, Item 4). The Planning Bulleting indicates that the identification of the TSP, however, does not preclude the PDT from also presenting another plan (PB 2013-03-Reissue, page 1, Item 4). The USACE did not do that. Instead, the USACE indicated that the single plan it will carry forward is Alternative 7a which excludes any improvements to the RD 17 levees. While the USACE noted that Alternative 7a did not address the objectives of the local sponsors, it removed from further consideration all of the RD 17 Alternatives, and it did not identify the RD 17 Preferred Plan which would have addressed the objectives of the local sponsors. In so doing, it also prejudiced the local sponsors' ability to seek future Federal investment in a locally-supported plan for flood control improvements to the RD 17 levees.

As an example of the USACE's efforts to pre-determine the outcome of the TSP process before it even started the process (and before the public could even comment on the process), the February 2015 LSFJS Engineering Summary (page 6) expressly states that:

> "Just *prior* to a TSP decision on which alternative to formulate for, USACE is recommending that only North and Central Stockton geographically defined areas be considered for TSP inclusion."

The Engineering Summary further claims that,

> "The geographical area of RD-17 conflicts with USACE policy EO 11988 which is being coordinated with the sponsor" (see page 6).[1]

With that, the USACE removed the RD 17 alternatives from further consideration in the Draft FR/EIS/EIR and identified the TSP, before the document was even circulated to Headquarters for review. Then, because the TSP excluded the alternatives with the RD 17 levees, the USACE rejected the RD 17 alternatives outright from further detailed consideration in the FR/EIS/EIR claiming that the RD 17 Alternatives could not be considered because they were not identified in the TSP.

To add to the confusion, the USACE stated in the FR/EIS/EIR that,

> "A full array of alternatives will be considered and evaluated. However, feasibility level design work will focus on the agency recommended plan *and a Locally Preferred Plan (LPP)* if appropriate" (see FR/EIS/EIR at p. 1-2).

The SMART Guidance, however, does not limit the USACE to considering only the agency recommended plan or a Locally Preferred Plan. In fact, the guidance indicates that the USACE may consider other plans as explained in the Planning Bulletin - PB 2013-03-Reissue. It was misleading for the USACE to advise the public that it was limited in the alternatives that could be considered, particularly in this case where another plan, the RD 17 Preferred Plan, meets the planning objectives of the LSJRFS, protects existing residents, and is policy compliant.

Secondly, the agency's preferred plan, the TSP, does not meet the USACE's own planning objectives for the area. For example, the first 2 planning objectives in Section 2.3.3 Planning Objectives (page 2-11) state that, "the planning objectives are as follows:

- Reduce risk to property and infrastructure due to flooding in Stockton; Lathrop and Manteca (NED Account);
- Reduce flood risk to public health, safety and life in Stockton, Lathrop, and Manteca (OSE Account)."

[1] EO 11988 is an Executive Order, and not a USACE policy. Moreover, the lands within the "geographical area of RD-17" were reclaimed pursuant to the Swamp Land Act of 1850 (U.S. Rev. Stats., sec 2479) and this is conclusively determined to be the lands which passed to the state under the act (*Foss v. Johnstone*, 158 Cal. 119 [110 P. 294]; *Bates v. Halstead*, 130 Cal. 62 [62 P. 305]. The USACE has provided flood protection to this agricultural and urbanizing area since 1963.

The USACE's TSP fails to meet its own planning objectives for half of the Study Area. Alternative 7a (which is the USACE's recommended TSP) only reduces flood risk to a portion of Stockton. RD 17 and SJAFCA informed the USACE on numerous occasions that the RD 17 Preferred Plan is either Alternative 7b or 9b (with the elimination of the secondary levee at the confluence of Old River and the San Joaquin River), with the expectation that the RD 17 Preferred Plan would be evaluated in the Draft FR/EIS/EIR. The USACE, apparently decided without any basis that evaluation and feasibility level design work was "not appropriate" and screened out all of the RD 17 Alternatives (including the RD 17 Preferred Plan) from any further design work and detailed analysis, as indicated on pages 1-6 and 3-64 of the Draft FR/EIS/EIR. Thus, the FR/EIS/EIR does not meet the USACE and local sponsors' planning objectives for the Study Area.

The FR/EIS/EIR does not comply with the USACE's December 2012 procedures entitled, "Environmental Evaluation and Compliance within the SMART Planning Framework" (the "SMART Environmental Framework"). According to page 4 of the SMART Environmental Framework:

> "Prior to this phase [preparation of the feasibility level analysis phase], and before making the *tentatively selected plan [emphasis added]* the agency recommended plan, there will be an Agency Decision Milestone that takes into consideration concurrent public/agency comments and technical, policy and legal review comments on the draft integrated feasibility report/NEPA document. At this stage, the agency has considered all impacts from the proposed plan and compared alternatives before making the final recommendation and documentation."

In this case, the USACE already screened out from further review the RD 17 Alternatives and never considered the RD 17 Preferred Plan as an alternative which should have been evaluated at a level of detail commensurate with the TSP. While the USACE informed the public in the Draft FR/EIS/EIR of its reasons for screening out alternatives (i.e., that "RD 17 has planned development which makes it difficult to comply with the EO 11988 guidance," see page 3-22), the basis upon which the USACE relies is unfounded because the water resource policies that the USACE claimed prohibited the USACE from considering the RD 17 Alternatives do not actually prohibit approval of the RD 17 Alternatives because there is planned development. Moreover, the TSP *exacerbates* flooding impacts to the existing 43,600 residents in RD 17, particularly in the lower sections of RD 17, because of the USACE's decision to improve flood protection north of RD 17 and exclude RD 17 from 100-year flood protection. Creating *greater* flood-related hazards to an *existing* population would hardly seem to comply with USACE water resources policies designed to minimize flood risk. The USACE, however chose not to disclose this information to the public.

For these reasons, the USACE must revise the FR/EIS/EIR to include the RD 17 Preferred Plan and provide a more robust analysis of the RD 17 Alternatives. The RD 17 Preferred Plan and the RD 17 Alternatives should be considered in the FR/EIS/EIR and Chapters

3, 4 and 5 must be revised accordingly. For example, the USACE should add a discussion of the RD 17 Preferred Plan on pages 3-6 and Section 3.2.5, pages 3-17 to 3-19 and Section 3.3, pages 3-22 to 3-27, and Section 3.4, pages 3-27 to 3-67 in the project description, as well as Section 4.4 Alternatives on pages 4-13 through 4-30.[2] The RD 17 Preferred Plan must be identified in the FR/EIS/EIR as the only practicable solution for reducing flood risk for RD 17 and the Study Area pursuant to the Feasibility Report's own planning objectives. If the USACE decides not to identify the RD 17 Alternatives in the Final FR/EIS/EIR, then the USACE must revise the FR/EIS/EIR to inform the public that the USACE's decision to eliminate the RD 17 alternatives will preclude the USACE's ability to provide improved FRM to the 43,000 residents and critical infrastructure located within RD 17 (see FR/EIS/EIR, page 3-56).

Removal of RD 17 Alternatives From Consideration Violates EO 11988.

Issued by the President of the United States on May 24, 1977 and recently amended by President Obama on January 30, 2015, Executive Order (EO) 11988, entitled "Flood Plain Management," seeks to minimize actions by Federal agencies which may adversely affect floodplains. EO 11988 and its implementing regulations direct Federal agencies to evaluate the effects of the proposed action on floodplains and to avoid taking action which would affect such areas unless there are no practicable alternatives (see 44 Fed. Reg. 28524, *et seq*, now published at 33 C.F.R. part 240). The USACE's decisions related to Executive Order 11988 are subject to judicial review under the Administrative Procedures Act (see e.g., *City of Carmel by the Sea v. U.S. Department of Transportation*, 123 F.3d 1142 (9th Cir. 1997).

The USACE follows an 8-step process to evaluate the effects of a Federal project on the floodplain as described in the Draft FR/EIS/EIR on pages 2-52 – 3-58). If an action is located within the floodplain, the USACE must advise the public about the action and then identify the beneficial and adverse impacts of the action and any expected losses of natural beneficial floodplain values. If the action is likely to induce development in the base floodplain, then the USACE must determine "whether a practicable non-floodplain alternative for the development is available" and if one is not, then the USACE must advise the public regarding its findings.

Over the years, RD 17 has continued to fulfill its obligations to maintain and operate the Federal project levees and to repair the levees, as necessary, to restore the functioning of the system and protect people within the RD 17 boundaries from 100-year events. In 2010, however, the USACE changed the methodology for assessing levee integrity and applicable levee seepage standards that govern whether an area is within the 100-year floodplain (even though this determination has been historically made by the Federal Emergency Management Agency) (FEMA). After changing the levee standards, the USACE concluded that the RD 17 Federal project levees which (the USACE built) do not meet the USACE's new standards, and so now the USACE found that the Federal project levees no longer provide 100-year flood

[2] The local non-Federal sponsors did not propose a secondary levee because it added significantly to the cost of construction and maintenance since improving the existing levee is necessary to avoid significant hydraulic consequences downstream. Further, abandoning the existing levee would conflict with federal law, the expectations of private ownership and the contracts regarding the operations and management of the USACE project levees.

protection. But then, rather than plan to fix the levees through this Feasibility Report, the USACE concluded that it is unable to fix the levees because EO 11988 prohibits the USACE from fixing the Federal levees to comply with the USACE's new standards.

But it doesn't stop there. In the Draft FR/EIS/EIR, the USACE first said that the impact analysis of alternative plans was based only upon an evaluation of effects,

> "against existing conditions since these conditions either reasonably represent future conditions in the project area or because using existing conditions will facilitate full evaluation and disclosure of the greatest potential impacts of the proposed project" (see page 5-1).

Page 1-21, however, which lists all of the projects and programs affecting the San Joaquin River levee system does not describe any improvements to the Federal Project levees in RD 17 since FEMA accreditation of discrete levee segments in RD 17 in 1990. For the past 25 years, however, the USACE has undertaken repairs and improvements to the RD 17 levees and RD 17 has obtained approval for and completed construction of two phases of the San Joaquin River Levee Stability Program. None of these projects are reflected in the existing or future baseline conditions, even though, the USACE changed its mind in the Draft FR/EIS/EIR and indicated that the analysis of alternative plans for flood control was based upon existing and future hydrologic and hydraulic conditions (see page 5-30). What happened to the 25 years of flood protection improvements to RD 17 levees that resulted in prior determinations that this area is not located within the 100 year floodplain?

The USACE decided to ignore the 25 years of existing flood control-related projects, and instead treat these *past and present* efforts to repair the existing levees and take the area out of the 100 year floodplain as *future* projects (see Draft FR/EIS/EIR pages 5-364 and 365). Then, because the USACE found that the RD 17 area is in the 100-year floodplain (which it is not), the USACE concluded it could not approve *any* RD 17 Alternatives to protect the existing 43,600 residents because that would be "unwise." The USACE claims that it is "unwise" to fix the RD 17 levees to reduce flood risk to Lathrop, Manteca, and portions of Stockton (which are urban and urbanizing parts of the Study Area) on the basis that the Cities' existing land use planning efforts (which relied on Congress' direction to reclaim the land under the Swamp Lands Act and the Federal investment made since 1958 to take the area out of the 100-year floodplain) could further induce development in an area that was already meant to be urbanized. That, according to the USACE, is not allowed. The very agency who built or accepted the levees in the first place has now decided it is prohibited from fixing the levees to continue protecting 43,600 existing residents, because Lathrop and Manteca planned for future development in this area in reliance on the 100-year flood protection the USACE provided under the Lower San Joaquin River and Tributaries Project. Rather than disclose the full range of impacts to the existing communities in accordance with EO 11988, the USACE, instead, chose to violate Congress' directives under the Swamp Lands Act and ignore the years of flood protection efforts implemented as part of the Lower San Joaquin River and Tributaries Project.

RD 17 is not in the 100-year floodplain as determined by FEMA. As even the Draft FR/EIS/EIR indicates (see pages 5-364 and 5-365), RD 17 has implemented Phases 1 and 2 of the seepage and repair project to fix seepage issues based on the USACE's new criteria, that the USACE is now using as the reason it has decided RD 17 is in the 100-year floodplain. Since the area is not in the 100-year floodplain as determined by FEMA, EO 11988 limitations on approving projects which may be growth-inducing should not even apply. If, however, the USACE continues to assume the RD 17 area is in the 100-year floodplain, then the USACE must revise its EO 11988 analysis to reflect the true existing and baseline conditions, and disclose the human and environmental impacts that the USACE's decisions concerning the TSP will have on the local communities. We request that the following information be incorporated into the FR/EIS/EIR discussion on pages 3-51 through 3-58 and pages 5-358 through 5-360, and all other applicable sections for consistency purposes.

- The RD 17 area is not in a natural floodplain. The area is already developed with a mix of urban residential, commercial, industrial, public/quasi-public uses, and commercial agriculture in reliance upon the existing Federal Project levee system.

- The RD 17 Preferred Plan (i.e., improvement of the existing RD 17 levees with the dry land / tie-back) is the only practicable alternative to reduce the flood risk to the 43,600 residents and billions of dollars of public and private investment including in particular Interstate 5, Highway 120, the San Joaquin County Hospital, the San Joaquin County Jail and correctional facilities, numerous schools, health care facilities, the City of Lathrop Civic Center, fire stations and police facilities. Interstate 5 and State Route 120 are critical evacuation routes.

- As flood risks increase due to climate change or re-evaluation of potential flood flows, the area dependent upon protection from the RD 17 levees will extend to the north and east encompassing the Sharpe Army Depot, critical rail facilities and major portions of the City of Stockton including the Port and the Regional Wastewater Treatment Facilities. Failure to increase the flood protection for RD 17 also increases the risk of flood damage to the environment and human health and safety. Loss of life, injury and disease for approximately 43,600 humans, as well as, pets and terrestrial species, stranding and predation of fish species including those with special status, loss of riparian habitat along the levee breaks and those areas eroded by the high velocity flows in the vicinity of the levee break, contamination of flood waters both within the flooded areas and the areas to which the flood waters will be discharged and severe vandalism and looting are all significant impacts that flow from the failure to provide adequate flood protection for RD 17.

- Even if the RD 17 levees are considered to be within the 100-year floodplain (which is not the case when the USACE considers the effectiveness of RD 17's levee seepage repair projects), the RD 17 Preferred Plan would take the area out of the 100-year floodplain. Assuming that the RD 17 area would be located outside of the 100-year

floodplain, whether or not additional development would actually occur in RD 17 would not impact the USACE's obligation to disclose indirect impacts or any measures to minimize the alternative's effects. Contrary to the statements made in the FR/ EIS/EIR (see e.g., pages 3-54 through 3-67), Executive Order 11988 and the implementing guidance do not prohibit the USACE from considering a project which is designed to protect existing residents and land uses because future development or growth may occur. In fact, EO 11988 requires only that the USACE disclose to the public that the proposed alternative is the "only practicable[3] alternative," and design a plan in which steps are taken to minimize potential damage to the floodplain (see e.g., *City of Carmel by the Sea v. U.S. Department of Transportation*, 123 F.3d 1142 (9th Cir. 1997)).

Removing RD 17 Alternatives From Further Consideration Violates EO 12898 on Environmental Justice.

The Draft FR/EIS/EIR includes a cursory discussion regarding the effects on low income and minority populations due to the proposed TSP. The Draft FR/EIS/EIR relies upon the Lower San Joaquin River Feasibility Report Other Social Effects Regional Economic Development report dated February 15, 2015 ("Social Effects Report") to support its conclusions. The assessment, however, is based only upon social characteristics of Stockton and California (see Table 2, page 7). Other than population density information, no data was provided regarding the minority and low-income status of residents within Lathrop, Manteca and Southern San Joaquin County. The exhibits included in the Social Effects Report further confirm that Alternative 7A results in no improvement whatsoever in flood protection for RD 17.

The Draft FR/EIS/EIR states on page 7-5:

> "No disproportionately high or adverse human health or environmental effects on minority or low-income communities have been identified."

Page 5-260 of the Draft FR/EIS/EIR, however, reaches a contrary conclusion finding that Alternatives 7a, 8a, and 9a would not address flood risk in RD 17 which would impact an area that is "more than 50 percent populated by minorities."

The USACE failed to inform the public that 43,600 residents in RD 17, many of whom would meet the definitions of minority and low-income for purposes of an environmental justice analysis, would be adversely impacted by the USACE's decision to proceed without flood risk management for RD 17. We understand that the City of Lathrop has submitted additional demographic data regarding the residents in the Lathrop portion of RD 17 to further illustrate the disproportionate impact on local residents. Accordingly, the analysis must be revised.

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[3] See e.g., the Federal Highway Administration's definition of "practicable" which is defined as "capable of being done within reasonable natural, social, or economic constraints" (23 CFR 650.105(k). This definition resembles the Section 404(b)(1) Guidelines which define practicability in terms of costs, logistics and other technological considerations.

The Draft EIS is Inadequate and Fails to Comply with NEPA and CEQA.

We understand that the local communities of Lathrop, Manteca and Stockton are submitting comments on the Draft FR/EIS/EIR. RD 17 hereby, incorporates by reference into RD 17's comments any comments submitted by the local municipalities. We further understand that SJAFCA recently submitted comments on the Draft FR/EIS/EIR. RD 17 incorporates by reference SJAFCA's April 9, 2015 critical comments on the Draft FR/EIS/EIR.

We also offer the following specific comments concerning the Draft FR/EIS/EIR's failure to adequately evaluate the RD 17 Alternatives and to properly disclose the impacts of Alternative 7a, the TSP plan, as the USACE's preferred alternative.

- The Notice of Intent to Prepare a Joint EIS/EIR for the Lower San Joaquin River Feasibility Study indicated that the USACE will "evaluate alternatives, including a locally preferred plan or other plan, for providing flood damage reduction and ecosystem restoration along the lower (northern) portion of the San Joaquin River System" (see 75 Fed. Reg. 2517). The USACE did not do that. Instead, the Draft FR/EIS/EIR evaluates in detail Alternative 7a, but it fails to evaluate in any detail the RD 17 Preferred Plan, and rejects from consideration any of the RD 17 Alternatives so there is little, if any, detailed analysis to accompany the EIS/EIR impact discussions. Consequently, the RD 17 Preferred Plan must be added to Chapter 3 in the FR and included in the evaluation of impacts and mitigation measures for RD 17 Preferred Plan throughout Chapters 5 through Chapter 9.

- *Chapter 5.4, the discussion of Alternative 7a on page 5-32* states that Alternative 7a would have a significant beneficial impact by reducing the exposure of people to a significant risk of loss, injury or death due to flooding, and that this alternative would not substantially alter drainage patterns. The Draft FR/EIS/EIR, however fails to disclose that the residents in RD 17 who would not receive a reduction in flood risk, would actually be exposed to a *greater* risk of flood hazards. This information should be added to Chapter 5.4.

- *Chapter 5.8 (see e.g., Pages 5-98, 5-104, 5-109 and 5-114)* states that "levee repairs and improvements would provide future flood-risk protection, as well as carbon sequestration (due to restoration of riparian habitat associated with levee repair and improvement)." While this may be true for the North and Central Stockton areas, it is not the case for RD 17. This discussion should be revised, accordingly, and a discussion of the RD 17 Preferred Plan should be added to Chapter 5.8.

- *Chapter 5.9 (see e.g., Pages 5-139, 5-159, and 5-160)* describes impacts to SRA habitat associated with Alternative 7b. Please explain what portion of this impact (if any) would be due to the secondary levee (which RD 17 does not support as a practicable alternative).

- *Chapter 5.14, Pages 5-270 to the third full paragraph on page 5-271* states that the changes in land use from the implementation of Alternative 7a do not conflict with land use plans, policies, or regulations. This statement does not accurately describe the impacts that would occur to the existing land uses, residents, businesses, and major public facilities and infrastructure within RD 17 that would be exposed to existing and increased risk of flood hazards due to the selection of Alternative 7a as the TSP, as well as the conflicts with the adopted general plans and policies for the cities of Lathrop, Manteca and Stockton.

- *Chapter 5.23, Cumulative Impacts* - The Draft FR/EIS/EIR fails to accurately disclose the cumulative impacts associated with Alternative 7a and the significant and unavoidable environmental impacts on RD 17 associated with implementation of Alternative 7a. For example, assuming RD 17 is in the 100-year floodplain (which it is not), no analysis is provided of the hydrology and flood impacts resulting from Alternative 7a's failure to flood protect RD 17 as further discussed above (see FR/EIS/EIR, pp. 5-386-387). Additionally, the Draft FR/EIS/EIR is silent on the fact that Alternative 7a would exacerbate flooding impacts to RD 17 and to the 43,600 residents that will experience greater flood risk. Further, the Draft FR/EIS/EIR analysis of cumulative impacts incorrectly treats all three phases of the RD 17 seepage repair project as if they are future projects. In fact, Phases I and II exist today and are part of existing conditions. Thus, the USACE must revise the FR/EIS/EIR to accurately reflect the baseline conditions for purposes of measuring the project's impacts and cumulative impacts under NEPA (40 C.F.R. § 1508.7) and in accordance with CEQA Guidelines Section 15130. Consequently, the USACE must revise the cumulative impact analysis and incorporate this analysis into the Final FR/EIS/EIR in order to accurately reflect cumulative impacts to RD 17.

The Draft EIR suffers from the same defects as the EIS, and thus, should be revised as set forth above to comply with CEQA for the same reasons.

The USACE failed to comply with the Section 404(b)(1) Guidelines.

The Section 404(b)(1) Evaluation included as an appendix to the Draft FR/EIS/EIR states that the overall purpose of the project is to reduce flood risk to urban and urbanizing parts of the study area, including the City of Stockton (Appendix A-4, page 5). The Section 404(b)(1) Evaluation fails to acknowledge that the original purpose was to reduce flood risk for the entire Lower San Joaquin River Basin. Moreover, the only alternatives evaluated in the Section 404(b)(1) Evaluation, other than the No Project Alternative, are Alternative 7a, 8a and 9a. The USACE removed from consideration the RD 17 Alternatives on the basis that they were impracticable because the USACE claimed that these alternatives do not comply with USACE water resources policies. The USACE's decision is puzzling at best. Now the USACE has found that an alternative which would require that the USACE maintain the Federal project levee system it was responsible for in the first place, is no longer practicable because that same Federal agency decided the same Federal project levee system is not consistent with that Federal

agency's water resources policies. As a result, the Section 404(b)(1) Evaluation did not, but should have, evaluated the RD 17 Preferred Plan because this alternative is a practicable alternative in terms of costs, logistics, and technological considerations. Consequently, the Section 404(b)(1) Evaluation must, at a minimum, be revised to include the RD 17 Plan as a practicable alternative.

We appreciate your consideration of our comments on the FR/EIS/EIR and look forward to the USACE's issuance of a revised FR/EIS/EIR with the requested analysis of the RD 17 Preferred Plan and the clarifications regarding the extent of the Alternative 7a impacts to RD 17.

Sincerely,

BUCHALTER NEMER
A Professional Corporation

By
Alicia Guerra

AG:al

Attachments

cc: Tyler Stalker
Dante Nomellini
Jim Giottonini, SJAFCA
Roger Churchwell, SJAFCA
Glenn Gebhardt, City of Lathrop