

U. S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
FEDERAL & COURTS BLDG., 650 CAPITOL MALL
P. O. BOX 1739, SACRAMENTO, CALIFORNIA 95808

Volume D *LJK*

OPERATIONS BRANCH
FLOOD CONTROL SECTION

Revised 29 Dec 2016

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL

LOWER SAN JOAQUIN RIVER AND
TRIBUTARIES PROJECT, CALIFORNIA

UNIT NO. 5
EAST LEVEE OF THE SAN JOAQUIN RIVER
WITHIN RECLAMATION DISTRICT NO. 2092



U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

Dual

Corps of Engineers
U. S. Army

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SAN JOAQUIN RIVER & TRIBUTARIES PROJECT

UNIT NO. 5
EAST LEVEE OF THE SAN JOAQUIN RIVER
WITHIN RECLAMATION DISTRICT NO. 2092

U. S. Army Engineer District, Sacramento
Corps of Engineers
Sacramento, California
August 1961

**SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
LOWER SAN JOAQUIN RIVER AND TRIBUTARIES PROJECT, CALIFORNIA**

UNIT NO. 5

EAST LEVEE OF SAN JOAQUIN RIVER
WITHIN RECLAMATION DISTRICT NO. 2092

LOCATION	ADDITION OR REVISION	DATE
Exhibit F	Add copy of letter of transfer dated 1 Mar 1961	25 May 2011
1-04	Add subparagraph d	25 May 2011
Exhibit B	Add drawing no. SJ-4-112	25 May 2011
Exhibit F	Add copy of letter of transfer dated 23 Feb 2001	25 May 2011
Exhibit F	Add copy of letter of acceptance dated 19 Oct 2001	25 May 2011
Exhibit F	Add copy of letter of transfer dated 29 Nov 2016	29 Dec 2016

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SAN JOAQUIN RIVER & TRIBUTARIES PROJECT

UNIT NO. 5
EAST LEVEE OF THE SAN JOAQUIN RIVER
WITHIN RECLAMATION DISTRICT NO. 2092

TABLE OF CONTENTS

<u>Paragraph</u>	<u>Subject</u>	<u>Page</u>
<u>SECTION I - INTRODUCTION</u>		
1-01	Location	1
1-02	Project Works	1
1-03	Protection Provided	1
1-04	Construction Data and Contractor	1
1-05	Flood Flows	2
1-06	Assurances Provided by Local Interests	2
1-07	Acceptance by the State Reclamation Board	2
1-08	Inspection Procedure.	2
<u>SECTION II - FEATURES OF THE PROJECT SUBJECT TO FLOOD CONTROL REGULATIONS</u>		
2-01	Levees	5
2-02	Drainage and Irrigation Structures	5
2-03	Channels	6
2-04	Miscellaneous Facilities	7
<u>SECTION III - REPAIR OF DAMAGE TO PROJECT WORKS AND METHODS OF COMBATING FLOOD CONDITIONS</u>		
3-01	Repair of Damage	9
3-02	Applicable Methods of Combating Floods	9
<u>EXHIBITS</u>		
A	Flood Control Regulations (Contained in Standard Manual)	Unattached
A-1	Location Map	1 Sheet
B	"As Constructed" Drawings	Unattached
C	Plates of Suggested Flood Fighting Methods (Contained in Standard Manual)	Unattached
D	Suggested Check List No. 1 - Levee Inspection Report (Contained in Standard Manual)	Unattached

TABLE OF CONTENTS (Cont'd)

<u>Paragraph</u>	<u>Subject</u>	<u>Page</u>
<u>EXHIBITS (Cont'd)</u>		
E	Suggested Check List - Levee, Channels and Structures	Sheets 1 thru 7
F	Letter of Acceptance by the State Reclamation Board	1 Sheet
G	Suggested Semi-Annual Report Form	Sheets 1 and 2

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SAN JOAQUIN RIVER & TRIBUTARIES PROJECT

UNIT NO. 5
EAST LEVEE OF THE SAN JOAQUIN RIVER
WITHIN RECLAMATION DISTRICT NO. 2092

SECTION I

INTRODUCTION

1-01. Location. - The improvement covered by this manual is that part of the San Joaquin River and Tributaries Project levee and channel located on the right bank of the San Joaquin River between levee miles 0.00 on the left bank of the Tuolumne River and levee mile 3.76 on the San Joaquin River. It lies generally about 8 miles westerly from the City of Modesto, California. The area is located in Reclamation District No. 2092 in the County of Stanislaus, California and in the general vicinity as shown on the Location Map, Exhibit A-1.

1-02. Project Works. - The project works covered by this manual is a part of the Lower San Joaquin River and Tributaries Project as authorized by the Flood Control Act of 22 December 1944, Public Law 534, 78th Congress, 2nd Session, Section 10, and consists of the east levee and channel (right bank) of the San Joaquin River from approximate river mile 89.0 to high ground on the left bank of the Tuolumne River, a distance of about 3.8 miles.

1-03. Protection Provided. - Levees of the San Joaquin and Tuolumne Rivers, as described in this unit, provide direct protection to adjacent agricultural land within Reclamation District No. 2092. Along the east levee of the San Joaquin River within this unit the grade of the adopted flood plane varies from elevation 45.0 at the upper end to elevation 40.0 at the mouth of the Tuolumne River and on the Tuolumne River 40.0 to 40.5. All elevations are referred to mean sea 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 the San Joaquin River is 45,000 cubic feet per second and for the Tuolumne River 15,000 cubic feet per second. Particularly along the Tuolumne River, project protection will not be completely realized until the New Don Pedro Dam is constructed.

1-04. Construction Data and Contractor. - Work required by the Corps of Engineers to bring levees of this unit to project standards was accomplished under the following contracts:

a. Emergency levee repairs on the left bank of the Tuolumne River was accomplished under Contract No. DA-04-167-CIVENG-57-50 by Craft and Galbraith during the period from 12 October 1956 to 14 November 1956.

b. Emergency levee repairs on the right bank of the San Joaquin River was accomplished under Contract No. DA-04-167-CIVENG-59-64 by Lee Stephens during the period from 21 October 1958 to 4 December 1958.

c. Levee construction on the right bank of the San Joaquin River and left bank of the Tuolumne River (Unit "C") was accomplished under Contract No. DA-04-167-CIVENG-60-49 by the M. Malfitano & Son, Inc., and Vega Engineering & Grading Company, contractors, during the period from 29 February 1960 to 20 February 1961.

d. Emergency levee and patrol road repairs on the right bank of the San Joaquin River, Levee Mile 0.09 to 1.25 was completed on 31 December 1997 by Ford Construction Company under Contract No. DACW05-97-C-0130. Specification No. 9893E, Drawing No. SJ-4-112.

1-05. Flood Flows. – For purposes of this manual, the term "flood" or "high water period" for the San Joaquin and Tuolumne Rivers shall refer to flows when the water surface in the San Joaquin River reaches or exceeds the reading of 40.0 on the State Department of Water Resources, City of San Francisco, Modesto and Turlock Irrigation Districts station on the left bank of Laird Slough channel of the San Joaquin River on the left bank of Laird Slough channel of the San Joaquin River on the Grayson Road Bridge. Such term for the Tuolumne River portion of this unit shall refer to flows when the water surface in the Tuolumne River reaches or exceeds the reading of 37.0 on the State Department of Water Resources, City of San Francisco, Modesto and Turlock Irrigation Districts station on the pier of the Tuolumne City Bridge near the right bank of the Tuolumne River, 3.3 miles upstream from the San Joaquin River. Both gages are set on mean sea level datum (1929 adjustment).

1-06. Assurances Provided by Local Interests. – Assurance of cooperation by local interests is provided by State legislation as contained in chapters 1 and 2, part 4, Division 5 of the State Water Code. (See paragraph 2-02a of the Standard Manual).

1-07. Acceptance by the State Reclamation Board. – Responsibility for operating and maintaining this unit was officially accepted by the State Reclamation Board by letter dated 30 March 1961, as shown on the attached letter, EXHIBIT F.

1-08. Inspection Procedure. – Since the enactment by State Legislation of Chapter 1528, Statutes of 1947, the Department of Water Resources, State of California, has made semi-annual inspections of all levees of authorized flood control projects in the Sacramento-San Joaquin drainage basin pursuant to the Federal Regulations of 16 August 1944 (Title 33), and reports its findings to the local agency, the State Reclamation Board and the Sacramento

District, Corps of Engineers, U. S. Army. This activity, initiated pursuant to section 208.10(a) of the Federal Regulations, has in effect provided for transfer from the local agencies to the State Department of Water Resources the obligation of compliance with Sections 8371, 8372, and 8373 of the Water Code of the State of California. These sections of the Code require the local responsible agencies to submit a report to the State Department of Water Resources on or before 1 June of each year on the condition of the levees within their jurisdiction. Supervisory powers and duties of the Department are applicable to all works of the Lower San Joaquin River and Tributaries Flood Control Project maintained and operated by the local agencies without regard to status of completion, or expenditure of Federal funds on the construction of such works.

The following procedure is used in inspecting the levees of the responsible maintaining agency:

Personnel of the State Department of Water Resources make a detailed inspection in the spring and fall of each year and make a report on any required maintenance. The inspection objectives are to determine if the following items, which are a condensation of Federal Regulations, are being adhered to:

- a. That all brush, trees and wild growth other than sod are removed from the levee crown and slopes.
- b. That all weeds, grass and debris on the levee have been burned during the appropriate season, where not dangerous or impractical.
- c. That all grass and weeds on the levee have been mowed where removal by burning is dangerous or impracticable. This applies only on peat levees or where burning would constitute a hazard to improvements.
- d. That all burrowing animals have been exterminated.
- e. That all caves, sloughs, burrows, holes, slips or other damaged portions of the levee have been repaired.
- f. That all irrigation and drainage structures through the levee are in good working condition.
- g. That no revetment work or riprap have been displaced, washed out or removed.
- h. That the crown of the levee is well shaped and maintained and that unauthorized vehicular travel is restricted.

i. That stock grazing on the levee is restricted to conditions and seasons when the levee would not be seriously scarred or otherwise damaged thereby.

j. That encroachments are not being erected on the levee which would hinder travel by authorized patrol vehicles.

k. Prevent the erection of structures on, additions to, or alterations of, the levee unless authorized by permit from the State Reclamation Board.

Following this detailed inspection a joint field inspection is made with representatives of the responsible maintaining agency and the State Department of Water Resources to review and discuss the inspection report.

Upon completion of the fall inspection the State Department of Water Resources publishes an annual report entitled, "Status of Project Levee Maintenance" which indicates the degree of proficiency attained by each obligated local agency in providing required maintenance.

SECTION II

FEATURES OF THE PROJECT SUBJECT TO FLOOD CONTROL REGULATIONS

2-01. Levees. -

a. The levee described in this manual lies along the east side of the San Joaquin River and the south side of the Tuolumne River and extends for a total distance of about 3.76 miles. The levee has been reconstructed with slopes of 1 of 3 waterside and 1 on 2 landside with a crown width of 12 feet. The necessary drainage structures, road approaches, bank protection, and appurtenances were also included in the work. For more complete detail in construction of the above-mentioned levee, refer to the "As Constructed" drawings of EXHIBIT B.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements see the following:

- (1) Maintenance-paragraph 4-02 of the Standard Manual.
- (2) Suggested Check Lists-EXHIBIT E of this Supplement Manual.
- (3) Operation-paragraph 4-04 of the Standard Manual.
- (4) Special Instructions-paragraph 4-05 of the Standard Manual.

2-02. Drainage and Irrigation Structures. -

a. Description. Drainage and irrigation structures which extend through the levee are listed as follows:

Levee : Mile ;	Size : of Pipe ;	Other Description	: Feet Below : Crown
0.18	60" CMP	Riser Unit W.S.	19.0
1.31	36" CMP	Riser Unit W.S.	15.0
1.71	24" CMP	Riser Unit W.S.	14.0
2.10	36" CMP	Flapgate W.S.	15.0
2.38	24" CMP	Riser Unit W.S. - Pump W.S.	11.0
2.44	24" CMP	Flapgate W.S.	15.0
2.83	24" CMP	Flapgate W.S.	6.0
3.52	36" CMP	Riser Unit W.S.	11.0

Note on abbreviations:

W.S. = Waterside

CMP = Corrugated Metal Pipe

b. For pertinent Requirements of the Code of Federal Regulations and other requirements, see the following:

- (1) Maintenance-paragraph 5-02 of the Standard Manual.
- (2) Suggested Check Lists-EXHIBIT E of this Supplement Manual.
- (3) Operation-paragraph 5-04 of the Standard Manual.
- (4) Additional Requirements-paragraph 5-05 of the Standard Manual.
- (5) Safety Requirements-paragraph 5-06 of the Standard Manual.

2-03. Channels. -

a. Description. The main channel and floodway of the San Joaquin and Tuolumne Rivers for this unit lie adjacent to the levees as described in paragraph 1-02. The project design capacities of said channels are as listed in paragraph 1-03 of this manual.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements, see the following:

- (1) Maintenance-paragraph 6-02 of the Standard Manual.
- (2) Suggested Check Lists-EXHIBIT E of this Supplement Manual.
- (3) Operation-paragraph 6-04 of the Standard Manual.
- (4) Safety Requirements-paragraph 6-05 of the Standard Manual.

It shall be the duty of the local agency responsible for maintenance to keep in contact with the State Department of Water Resources' Flood Operation Center during all periods of flood danger, and maintain a patrol of the project works in their area during periods of flood in excess of a reading of 40.0 on the gage located on the left bank of Laird Slough channel of the San Joaquin River on the Grayson Road Highway Bridge or a reading of 37.0 on the gage located on the pier of the Tuolumne City Bridge near the right bank of the Tuolumne River, as referred to in paragraph 1-05 of this manual.

The Flood Operation Center is responsible for Data Collection and issuance of a joint river forecast with the U. S. Weather Bureau and coordinates with the Sacramento District Engineer, and other agencies to keep apprised of the current situation in accordance with terms of the Memorandum of Understanding dated 1 November 1956, between the Division Engineer, U. S. Army Engineer Division, South Pacific, and the Director, Department of Water Resources, State of California for cooperative action during flood emergencies.

2-04. Miscellaneous Facilities. -

a. Description. Miscellaneous structures or facilities which were constructed as a part of, or in conjunction with, the protective works, and which might affect their functioning, include the following:

(1) Utility Relocation. Because of the nature of the construction of structures by local interests, records of utility relocations are not available.

(2) Hydrologic Facilities. Hydrologic facilities provided in the vicinity of this unit consist of the following:

(a) State Department of Water Resources, City of San Francisco, Modesto and Turlock Irrigation Districts continuous water stage recorder and staff gage located on the left bank of the Laird Slough channel of the San Joaquin River on the Grayson Road Highway Bridge. This gage to be maintained by the above-mentioned agencies

(b) State Department of Water Resources, City of San Francisco, Modesto and Trulock Irrigation Districts continuous water stage recorder and staff gage located on the pier of the Tuolumne City Bridge near the right bank of the Tuolumne River, 3.3 miles upstream from the San Joaquin River. This gage to be maintained by the above-mentioned agencies.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements, see the following:

(1) Maintenance-paragraph 7-02 of the Standard Manual.

- (2) Suggested Check Lists-paragraph 7-03 of the Standard Manual.
- (3) Operation-paragraph 7-04 of the Standard Manual.

SECTION III

REPAIR OF DAMAGE TO PROJECT WORKS AND METHODS OF COMBATING FLOOD CONDITIONS

3-01. Repair of Damage. - In the event of serious damage to the project works, whether due to flood conditions or other causes, and which may be beyond the capability of local interests to repair, the local agency responsible for maintenance will contact a representative of the Department of Water Resources, State of California, who coordinates maintenance of project works of the Lower San Joaquin River and Tributaries Flood Control Project. The State representative will give assistance or advise, or will determine appropriate action to be taken.

3-02. Applicable Methods of Combating Floods. - For applicable methods of combating flood conditions, reference is made to Section VIII of the Standard Operation and Maintenance Manual, revised May 1955, where the subject is fully covered.

EXHIBIT A

FEDERAL FLOOD CONTROL REGULATIONS

(SEE STANDARD MANUAL)

EXHIBIT A

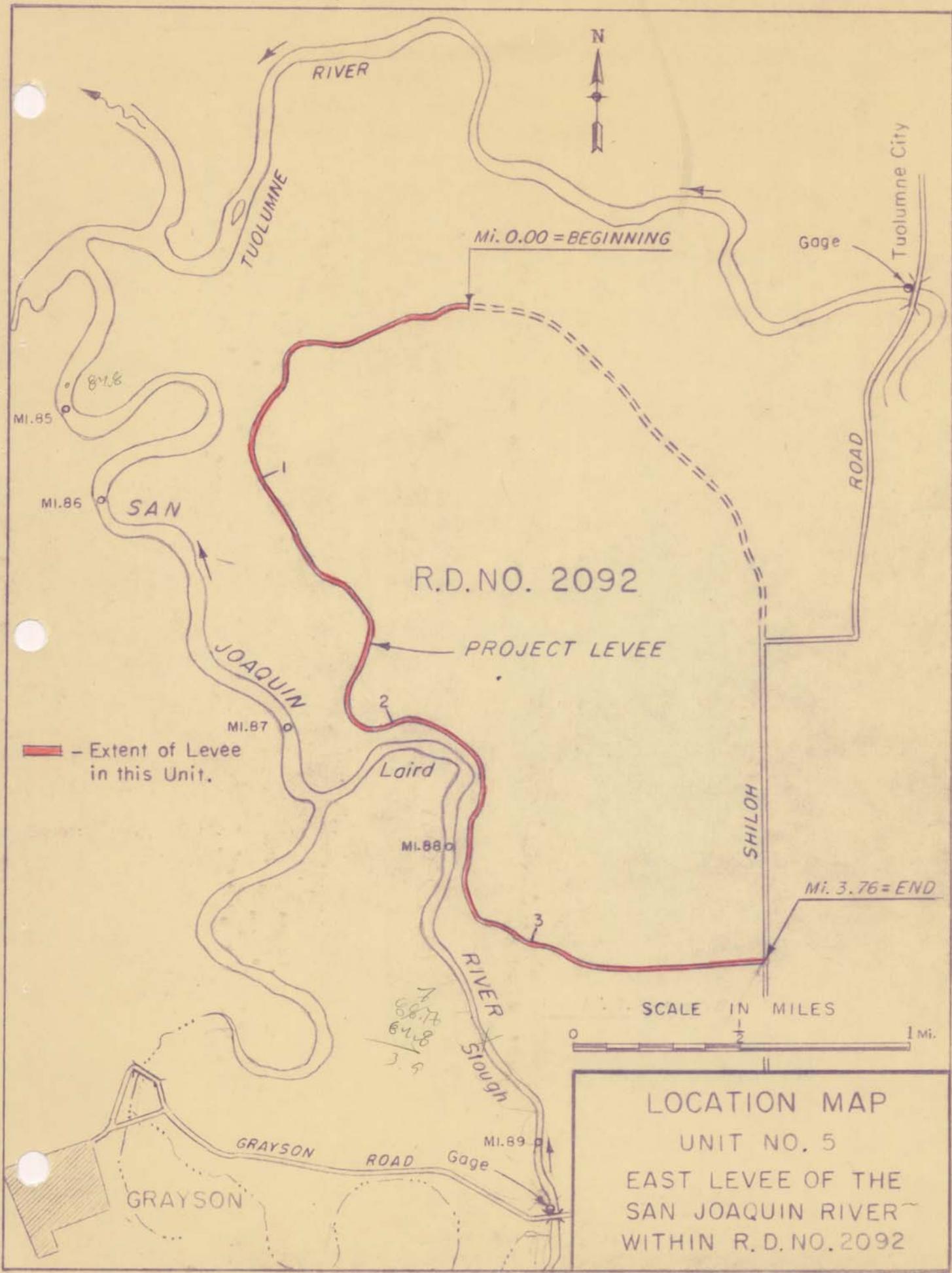


EXHIBIT B

“AS CONSTRUCTED”
DRAWINGS

(See separate folder for the following drawings:)

<u>File No.</u>	<u>Title</u>
7-4-1509	Emergency Levee Repairs, Left Bank Tuolumne River in 1 sheet
7-4-1555	Right Bank San Joaquin River Between Merced River and Tuolumne River, sheets 2, 18, 19, 20, 24, 38, 39, 40, 49, 55, 56, 57, 60 and 65.
7-4-1570	Emergency Levee Repairs – Right Bank of Tuolumne River, Right and Left Banks San Joaquin River and Right Bank Merced River, in 2 sheets.
SJ-4-112	Lower San Joaquin River RD 2092, SJ14 Phase III Levee Restoration Stanislaus County, California, sheets C-1 and G-1.

EXHIBIT C

PLATES OF SUGGESTED FLOOD FIGHTING METHODS

(SEE STANDARD MANUAL)

EXHIBIT C
Unattached

EXHIBIT D

SUGGESTED CHECK LIST NO. 1

LEVEE INSPECTION REPORT

(SEE STANDARD MANUAL)

EXHIBIT D

EXHIBIT E

SUGGESTED CHECK LISTS OF LEVEES,

CHANNEL AND STRUCTURES

For definition of "flood" or "high water period", see paragraph 1-05 of this manual.

SUGGESTED CHECK LIST NO. 2
UNIT NO. 5
SAN JOAQUIN RIVER

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

Item	Remarks
(a) Location by Station	
(b) Settlement, sloughing, or loss of grade	
(c) Erosion of both levee slopes	
(d) Condition of roadways, including ramps	
(e) Evidence of seepage	
(f) Condition of farm gates and fencing	
(g) Maintenance measures taken since last inspection	
(h) Comments	

Instructions for Completing Sheet 2, EXHIBIT E
(To be printed on back of Sheet 2)

- Item (a) Indicate levee station of observation, obtained by pacing from nearest reference point; indicate right or left bank.
- Item (b) If sufficient settlement of earthwork has taken place to be noticeable by visual observation, indicate amount of settlement in tenths of a foot. If sloughing has caused a change in slope of the embankment sections, determine the new slope. Note areas where erosion or gullyng of the section has occurred.
- Item (c) If sufficient erosion or gullyng of back face of back toe of levee has taken place to be noticeable by visual inspection, indicate area affected and depth.
- Item (d) Note any natural change in any section of roadway or ramps. Indicate any inadequacy in surface drainage system.
- Item (e) Indicate any evidence of seepage through the embankment section.
- Item (f) Indicate the serviceability of all farm gates across the embankments and roadway, and indicate if repainting is required.
- Item (g) Indicate maintenance measures that have been performed since last inspection and their condition at the time of this inspection.
- Item (h) Record opinion, if any, of contributory causes for conditions observed and also any observations not covered under other columns.

NOTE: One copy of the Inspector's Report is to be mailed to the District Engineer immediately on completion, and one copy is to be attached to and submitted with the Superintendent's semi-annual report.

SUGGESTED CHECK LIST NO. 3
 CHANNEL AND RIGHT-OF-WAY
 UNIT NO. 5
 SAN JOAQUIN RIVER

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

Item	Remarks
(a) Name of Channel and Location by Stations	
(b) Vegetal growth in channel	
(c) Debris and refuse in channel	
(d) New construction within right-of-way	
(e) Extent of a aggradation or degradation	
(f) Condition or riprapped section	
(g) Condition of bridges	
(h) Measures taken since last inspection	
(i) Comments	

Instructions for Completing Sheet 4, EXHIBIT E
(To be printed on back of Sheet 4)

- Item (a) Indicate station of observation obtained by pacing from nearest reference point.
- Item (b) Note nature, extent, and size of vegetal growth within the limits of flood flow channel.
- Item (c) Note nature and extent of debris and refuse that might cause clogging of the conduits of the irrigation intake works, fouling of the tainter gates, or the bridges over the channel.
- Item (d) Report any construction along the diversion channel or above the diversion channel or above the diversion works that has come to the attention of the inspector and that might affect the functioning of the project.
- Item (e) Indicate any change in grade or alignment of the channels, either by deposition or sediment or scour, that is noticeable by visual inspection. Estimate amount and extent.
- Item (f) Indicate any change that has taken place in the riprap such as disintegration of the rock, erosion, or movement of the rock. Note the presence of vegetal growth through the riprap.
- Item (g) Note any damage or settlement of the footings of the bridges. Indicate condition of wooden structures and if repainting is required. Indicate condition of bridge approaches, headwalls, and other appurtenances.
- Item (h) Indicate maintenance measures that have been performed since the last inspection and their condition at time of this inspection.
- Item (i) Record opinion, if any, of contributory causes for conditions observed, also any observations not covered under other columns.

NOTE: One copy of the inspector's Report is to be mailed to the District Engineer immediately on completion and one copy is to be attached to and submitted with the Superintendent's semi-annual report.

SUGGESTED CHECK LIST NO. 4
DRAINAGE AND IRRIGATION STRUCTURES
UNIT NO. 5
SAN JOAQUIN RIVER

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

(a) Levee Mile	(b) Bank	(c) Debris or other obstruction to flow	(d) Damage or settlement of pipe or conduit	(e) Condition of Concrete headwall or invert paving	(f) Condition of right-of-way adjacent to structure	(g) Repair Measures taken since last inspection	(h) Comments
0.18	Right						
1.31	Right						
1.71	Right						
2.10	Right						
2.38	Right						
2.44	Right						
2.83	Right						
3.52	Right						

Instructions for Completing Sheet 6, EXHIBIT E
(To be printed on back of Sheet 6)

- (1) Enter station of all structures under Column (a) for check list.
- (2) Inspect inlet, barrel, and outlet for accumulation of sediment, rubbish, and vegetal matter, Note condition under Column (c).
- (3) If any settlement or damage to the pipe, barrel, or invert of the drain has occurred, estimate the location and amount. Note particularly if any backfill has come into the pipe or been disturbed. Record observations under Column (d).
- (4) Inspect the concrete portions of the structures for evidence of settlement, cracks, "pop-outs", spaces, abrasive wear, or other deterioration. Record conditions under Column (e).
- (5) Inspect backfill area adjacent to structure for evidence of erosion caused by overflow of the drainage structure and note conditions in Column (f).
- (6) Under Column (g) indicate physical measures that have been taken to correct conditions reported in last inspection, and their condition at time of this inspection.
- (7) Under Column (h) record opinion, if any, of contributory causes for conditions observed, also any observations not covered under other columns.
- (8) A copy of the Inspector's Report is to be mailed to the District Engineer immediately on completion, and a record copy shall be attached to the Superintendent's semi-annual report.

EXHIBIT F

LETTER OF ACCEPTANCE BY
THE STATE RECLAMATION BOARD

EXHIBIT F



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

NOV 29 2016

Ms. Leslie M. Gallagher
Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, CA 95821

Dear Ms. Gallagher:

The purpose of this letter is to notify the Central Valley Flood Protection Board of the completion of an effort to update the Operation and Maintenance Manual Supplements for the Sacramento River Flood Control Project and the Lower San Joaquin River Levees and Lower San Joaquin River and Tributaries Project. These updates are a compilation of revisions made to the project over time and where we had record of a transfer letter to the Board. These updated supplements are the most current version and should be utilized as the baseline version for any future project modifications.

This process and the compiled updates have been coordinated with the Central Valley Flood Protection Board and Department of Water Resources staffs for review and comment. All comments have been addressed or incorporated into the manuals.

The Board staff has been provided a copy of the manuals in electronic format. Future updates will include entire unit supplements so updates can be seen in context with the entire unit supplement. The list of completed supplements, by the unit number and title, are attached. If you have any questions regarding this transmittal, please contact Gary Kamei at 916-557-6845.

Sincerely,

A handwritten signature in black ink, appearing to read "D. G. Ray", written over a horizontal line.

David G. Ray, P.E.
Colonel, U.S. Army
District Commander

Enclosures

Standard O&M Manual Sacramento River Flood Control Project	
Unit No.	Project Name
101	RD 341 Sherman Island
102	E. Levee of Sac River, Isleton to Threemile Slough & N. Levee of Threemile Slough from Sac River to SJ River
103	Both Levees of Georgiana Slough & E. Levee of Sac River from Walnut Grove to Isleton
104	Levees around Grand Island
105	Levees Around Reyer Island
106	S. Levee Lindsey Slough & W. Levee of Yolo BP from Lindsey Slough to Watson Hollow and N. Levee of Watson Hollow Drain
107	Levees Around Hastings Tract
108	Levees Around Peters Tract
109	West Levee of Yolo Bypass & E. Levee of Cache Slough
110	Levees Around Sutter Island
111	E. Levee of Sac River from Freeport to Walnut Grove
112	Levees Around Merritt Island
113	E. Levee Yolo Bypass, N. Levee Miner Slough, W. Levees Sutter Slough, Elkhorn Slough & Sac River, All Bordering RD 999
114	W. Levee of Sac River from Northern Boundary of RD 765 to Southern Boundary of RD 307
115	E. Levee of Sac River from Sutterville Rd to Northern Boundary of RD 744
116	W. Levee of Sac River from Sac Weir to Mi 51.2 & S. Levee of Sac Bypass & E. Levee of Yolo Bypass from Sac Bypass to Southern Boundary of RD 900
117	E. Levee Sac River through City of Sac from Tower Bridge to Sutterville Rd
118.1	E. Levee of Sac River from American River to Tower Bridge & S. Levee of American River from Mayhews Downstream to Sac River
118.2	N. Levee American River, E. Levee Natomas Canal, Both Levees Arcade Creek, S. Levee Linda Creek, & Magpie Creek Diversion Channel
118.2 Sup	Vegetation on Mitigation Sites E. Levee of Sac River from American River to Tower Bridge & S. Levee of American River from Mayhews Downstream to Sac River
119	Putah Creek Channel & Levees & W. Levee of Yolo Bypass from Yolo Causeway Downstream 3 mi. Includes O&M manual for the Yolo Basin wetlands, and South Fork Putah Creek Preserve Restoration Section 1135 Authorization.
120	Relocated Willow Slough Channel & Levees & W. Levee Yolo Bypass from mouth of Relocated Willow Slough to Yolo Causeway
121	R. Levee of Yolo Bypass from Willow Slough Bypass to Woodland Rd RD2035
122.1	W. Levee of Sac River from Mi 70.8 to Sac Weir & N. Levee of Sac Bypass & E. Levee of Yolo Bypass from Woodland Hwy to Sac Bypass
123	W. Levee of Sac River from East End of Fremont Weir to Mi 70.8 & E. Levee of Yolo Bypass from East End Fremont Weir to Woodland Hwy RD 1600

124	N. Levee of American River from Natomas E. Canal to Sac River & E. Levee of Sac River from Natomas Cross Canal to American River. Includes supplement, Vegetation on Mitigation Sites.
125	Back Levee of RD 1000
126	Cache Creek Levees & Settling Basin Yolo Bypass to High Ground
127	Knights Landing Ridge Cut & Sac River & Yolo BP Levees of RD's 730 and 819 & S. Levee of Sycamore Slough
128	E. Levee of Sac River from Sutter Bypass to Tisdale Weir all within RD 1500
129	S. Levee of Tisdale By-Pass from E. Levee Sac River to W. Levee Sutter BP & W. Levee of Sutter BP Downstream to E. Levee of Sac River
130	W. Levee Sac River from Sycamore Slough to Wilkins Slough (Mi. 89.9 to Mi. 117.8)
131	W. Levee Sac River from Wilkins Slough to Colusa (Mi. 117.8 to Mi. 143.5)
132	Back Levees of RD 108
133	E. Levee of Sac River from Winship School to Tisdale BP & N. Levee of Tisdale BP & W. Levee of Sutter BP from Long Bridge to Tisdale BP
134	Levees of RD 70, E. Levee of Sac River from Butte Slough Outfall Gates to Winship School & W. Levee of Sutter BP from Butte Slough Outfall Gates to Long Bridge
135	E. Levee of Sutter BP from Sutter Buttes Southerly to Junction with Feather River & E. & W. Levees of Wadsworth Canal & Levee of Intercepting Canals
136	E. Levee of Sac River from Butte Slough Outfall Gates to the Princeton-Afton Rd (Mi. 138.3 to Mi. 164.4)
137	W. Levee of Sac River from North End of Princeton Warehouse to Colusa Bridge
138	E. Levee of Sac River from Parrott-Grant Line to Princeton-Afton Rd
139	W. Levee of Sac River from N. Boundary of LD 2 to North End of Princeton Warehouse
140	W. Levee of Sac River in LD 1 (Mi. 170.5 to Mi. 184.7). Includes mitigation site O&M manual, Yuba County
141.1	E. Levee of Feather River from Bear River to Natomas CC & S. Levee of Bear River & Both Levees of Yankee Slough. Parts 1 and 2
141.2	E. Levee of Feather River from Bear River to Natomas CC & S. Levee of Bear River & Both Levees of Yankee Slough. Parts 1 and 2
142	Back Levee of RD 1001
143	W. Levee of Feather River from North Boundary of RD 823 to E. Levee of Sutter Bypass
144	W. Levee of Feather River from North Boundary of LD 1 to North Boundary of RD 823
145	E. Levee of Feather River, S. Levee of Yuba River, Both Levees of WPRR Intercepting Channel, W. Levee of South Dry Creek & N. Levee of Bear River
146	N. Levee of Bear River & S. Levee of South Dry Creek RD 817 & Vicinity of Wheatland
147	Levee Around the City of Marysville & N. Levee of Yuba River to a Point 1.8 Mi. Upstream from Marysville

148	W. Levee of Feather River from North Boundary of RD 777 to North Boundary of LD 1
149	S. Levee of Yuba River Maintenance Area No. 8
151	E. Levee Feather River from Honcut Creek to Marysville & S. Levee of Honcut Creek & E. Levee of RD 10
152	W. Levee of Feather River from N. Boundary of RD 777 to Western Canal Intake (Levee of Drainage District No. 1)
153	Lower Butte Creek Channel Improvement, Colusa, Glenn & Butte Counties
154	Moulton Weir & Training Levee Sacramento River
155	Colusa Weir & Training Levee Sacramento River
156	Tisdale Weir & Bypass
157	Fremont Weir, Sacramento River
158	Sacramento Weir, Sacramento River
159	Pumping Plants No. 1, 2 & 3, Sutter Bypass
160	Sutter Butte Canal Headgate
161	Butte Slough Outfall Gates
162	Knights Landing Outfall Gates, Sacramento River

Standard O&M Manual San Joaquin River

Unit No.	Project Name
1	Right Bank Levee of the San Joaquin River & French Camp Slough within RD 404
2	Right Bank Levee of the San Joaquin River & French Camp Slough within RD 17
3	North Levee of Stanislaus River & East Levee of the San Joaquin River within RD 2064, 2075, 2094 and 2096
4	East Levee of San Joaquin River within RD 2031
5	East Levee of the San Joaquin River Within RD No. 2092
6	East Levee of the San Joaquin River in RD Nos. 2063 & 2091
7	West Levee of San Joaquin River & North Levee of Old River RD Nos. 524 & 544
8	Right Banks of Old River & Salmon Slough Within RD No. 1 & RD No. 2089
9	Levees Around RD No. 2062 & San Joaquin County Flood Control District Area No.2
10	West Levee of Paradise Cut RD No. 2058 & SJ County Flood Control District, Area No.2
11	West Levee of San Joaquin River from Durham Bridge to Paradise Dam Within RD No. 2085 & 2095
12	West Levee of San Joaquin River From Opposite Mouth of Tuolumne River Downstream to Stanislaus County Line Within RD Nos. 2099, 2100, 2101, & 2102
13	West Levee of the San Joaquin River in RD No. 1602

SP100-C

1 MAR 1961

The Reclamation Board
State of California
1215 "O" Street
Sacramento 14, California

Gentlemen:

Reference is made to the joint inspection made on 25 and 26 January 1961 of certain levee sections pertaining to the Lower San Joaquin River and Tributaries Project for the purpose of transferring them to the State of California for operation and maintenance.

The required work, consisting of levee construction and bank protection on the San Joaquin River was completed on 17 February 1961 in accordance with Specification No. 2615, Contract No. DA-04-167-CIVENG-60-49 and Drawing No. 7-4-1555. The levee sections referred to above are listed as follows:

<u>LEVEE</u> <u>SECT. NO.</u>	<u>SITE NO.</u>	<u>BANK</u>	<u>SAN JOAQUIN RIVER MILE POINTS</u>
38	Unit "A"	Right	93.50 to 114.00 <i>unit 6</i>
39	Unit "C"	Right	85.00 to 88.00 <i>unit 5</i>

The levee sections Nos. 38 to 39 inclusive, described above now meet the requirements of the Lower San Joaquin River and Tributaries Project. Therefore, said levee sections together with the waterway banks contiguous thereto, are hereby transferred to the State of California for operation and maintenance.

The maintenance work required under the provisions of the Lower San Joaquin River and Tributaries Project shall be performed in accordance with existing Flood Control Regulations, inclosed herewith, which have been prescribed by the Secretary of the Army pursuant to Section 3 of the Act of Congress, approved 22 June 1936, as amended and supplemented by a Standard Operation and Maintenance Manual for the Lower San Joaquin River and Tributaries Project which is being prepared. As

Postcard

LHK: pnp

1 MAR 1961

SPKXO-C
The Reclamation Board

provided under Paragraph 203.10(10) of these regulations, a supplement to the Standard Operation and Maintenance Manual covering these units of work will be furnished to you upon completion.

A copy of this letter is being transmitted to the Department of Water Resources.

Sincerely yours,

1 Incl
F.C. Reg.

H. N. TURGER
Colonel, CE
District Engineer

- Copy furnished:
- ✓ Dept Water Resources
23rd & "R" Streets
Sacramento, California w/o incl
 - ✓ O. C. E. w/o incl
 - ✓ S. P. D. w/o incl

- cc: Engr Divn, Levees & Channels w/o incl
 Engr Divn, Program Dev. Br. w/o incl
 Northern Area Office w/o incl
 Operations Br. w/o incl

OPERATIONS BRANCH
CHANNELS & LEVEES SECTION

Concurrences	
Originator:	LHK
Date:	2/27/61
Dist.	
Engr.	<i>[Signature]</i>
Asst. D.E. (A)	
Asst. D.E. (O)	
Exec. Asst.	<i>[Signature]</i>
Cmptlr.	
Budget	
Fin. & Acctg.	
Mgmt.	
Property	
Office	
Engr. Divn.	
Const.	
Oper.	<i>[Signature]</i>
Engr. g.	
R. E.	
Print.	
Legal	
Supply	

Unit 516

[Handwritten mark]

C
O
P
Y

C
O
P
Y

THE RECLAMATION BOARD
of the
STATE OF CALIFORNIA

March 30, 1961

District Engineer
Sacramento District
U. S. Corps of Engineers
P. O. Box 1739
Sacramento 8, California

Dear Sir:

Reference is made to your letter of March 1, 1961, File SPKKO-C, regarding transfer to the State of California of levee sections on the Lower San Joaquin River and Tributaries Project, Specification No. 2615 at the locations listed below:

<u>Levee</u> <u>Section No.</u>	<u>Site No.</u>	<u>Bank</u>	<u>San Joaquin River Mile Points</u>
38	Unit "A"	Right	93.50 to 114.00
39	Unit "C"	Right	85.00 to 88.00

The Reclamation Board at its meeting of March 16, 1961, formally accepted these levee sections for operation and maintenance.

Sincerely yours,

/s/ A. N. MURRAY
A. N. MURRAY
General Manager and Chief Engineer

FEB 23 2001

Navigation and Flood Control Unit

Mr. Peter D. Rabbon, General Manager
The Reclamation Board
State of California
1416 - 9th Street, Room 1601
Sacramento, California 95814

Dear Mr. Rabbon:

This letter is to transfer a portion of work on the east levee of the San Joaquin River from Levee Mile 0.00 to Levee Mile 1.25 at Shiloh Road in RD 2092, to the State of California for operation and maintenance.

The work consisted of restoring the portion of the levee damaged by the January 1997 Flood from L.M. 0.09 to L.M. 1.25 by restoring the levee section with levee fill material over filter fabric on the waterside and placing 1-foot of aggregate base course on the road shoulder. The work as listed in the enclosure was completed on Nov. 29, 1997 in accordance with Specification No. 9893E, Drawing File No. SJ-4-112, Contract No. DACW05-97-C-0130.

The work was performed under the general authority of 33 U.S.C. 701n (69 Stat. 186) PL 84-99 and now meets the requirements of the Operations and Maintenance Manual for the San Joaquin River Flood Control System in RD 2092. Therefore, said flood control work, together with the waterway banks contiguous thereto, are transferred as of the date of this letter to the State of California for operation and maintenance.

This portion of the project work will be added by amendment to the Operation and Maintenance Manual, San Joaquin River Flood Control Project.

Sincerely,

Michael J. Walsh
Colonel, Corps of Engineers
District Engineer

Enclosure

cc:
CESPK-CO
CESPK-CO-E
CESPK-ED
CESPK-ED-D
CESPK-PM
CESPK-CO-RV

Unit 5

MINTON *JM*
TAVANA *MT*
SANDNER *SN*
WINTON *W*
DURHAM-AGUILERA *KA*
DOYLE *DO*
KORMAN *K*
CHARLTON *CH*
O'BRIEN *O*
WALSH *W*

THE RECLAMATION BOARD

1416 NINTH STREET, ROOM 1601
SACRAMENTO, CA 95814
(916) 653-5434 FAX: (916) 653-5805
Permits: (916) 653-5726 FAX: (916) 653-5805



OCT 19 2001

Colonel Michael J. Conrad Jr.
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Conrad:

This letter is in response to Coinei Michael Walsh's letter of January 30, 2001 to The Reclamation Board, the U.S. Army Corps of Engineers transferred the repaired right-bank levee of the San Joaquin River at Levee Mile 0.09 to LM 1.25 (in Reclamation District No. 2092) to the State of California for operation and maintenance. You advised the Board that the completed repairs would be added by amendment to the Operation and Maintenance Manual, San Joaquin River Flood Control Project. We understand that the repairs were completed in accordance with the original plans and specifications. We acknowledge receipt of as-constructed plans and will forward a copy to RD 2092.

The Board, on behalf of the State of California, accepted the completed repairs at its October 19, 2001 meeting and transferred the San Joaquin River levee repairs to RD 2092. Until the Corps provides the O&M Manual amendment, RD 2092 will perform operation and maintenance according to the current manual.

If you have any questions, you may contact Peter Rabbon, General Manager of The Reclamation Board, at (916) 653-5434, or your staff may contact Mel Yarwood, Acting Chief of the Department of Water Resources' System Integrity Unit of the Division of Flood Management, at (916) 574-0367.

Sincerely,

Betsy A. Marchand
President

cc: Mr. Kell Cloward, Chief
Readiness Branch
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Mr. William J. Lyons, Jr., President
Reclamation District No. 2092
10555 Maze Boulevard
Modesto, California 95358

Unit 5

EXHIBIT G

SUGGESTED SEMI-ANNUAL REPORT FORM

TO: The District Engineer
Sacramento District
Corps of Engineers
1209 - 8th Street
Sacramento, California

(1 May 19__)
(1 Nov 19__)

Dear Sir:

The semi-annual report for the period (1 May 19__ to 31 October 19__) (1 November 19__ to 30 April 19__) Unit No. 5 of the San Joaquin River and Tributaries Project is as follows:

a. The physical condition of the protective works is indicated by the inspector's report, copies of which are inclosed, and may be summarized as follows:

(Superintendent's summary of conditions)

It is our intention to perform the following maintenance work in order to repair or correct the conditions indicated;

(Outline the anticipated maintenance operations for the following 6 months).

b. During this report period, major high water periods (water level at 40.0 on the gage at Laird Slough and 37.0 on the gage at the Tuolumne City Bridge) occurred on the following dates:

<u>Dates</u>	<u>Maximum Elevation</u>
_____	_____
_____	_____
_____	_____

Comments on the behavior of the protective works during such high water periods are as follows:

(Superintendent's log of flood observations)

During the high water stages when the water level reached a height of _____, on the gage or excess thereof (dates) _____, it was necessary to organize and carry out flood operations as follows:

(See Maintenance Manual _____.)

c. The inspections have indicated (no) or (the following) encroachments or trespasses upon the project right-of-way.

d. (No) (_____) permits have been issued for (the following) improvements or construction within the project right-of-way.

Executed copies of the permit documents issued are transmitted for your files.

e. The status of maintenance measures, indicated in the previous semi-annual report as being required or as suggested by the representatives of the District Engineer, is as follows:

(Statement of maintenance operations, item by item with percent completion.)

f. The fiscal statement of the Superintendent's operations for the current report period is as follows:

	<u>Labor</u>	<u>Material</u>	<u>Equipment</u>	<u>Overhead</u>	<u>Total</u>
1. Inspection					
2. Maintenance					
3. Flood Fighting operations					
TOTAL					

Respectfully submitted,

Superintendent of Works