
**SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL**

**SACRAMENTO RIVER
FLOOD CONTROL PROJECT**

UNIT NO. 143

**WEST LEVEE OF FEATHER RIVER
FROM
NORTH BOUNDARY OF RECL. DIST. NO. 823
TO
EAST LEVEE OF SUTTER BY-PASS**



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

CORPS OF ENGINEERS

U. S. ARMY

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 143

WEST LEVEE OF FEATHER RIVER
FROM
NORTH BOUNDARY OF RECLAMATION DISTRICT NO. 823
TO
EAST LEVEE OF SUTTER BY-PASS

Sacramento District
Corps of Engineers
U. S. Army
August 1955

**SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT**

UNIT NO. 143

WEST LEVEE OF FEATHER RIVER
FROM
NORTH BOUNDARY OF RECL. DIST. NO. 823
TO
EAST LEVEE OF SUTTER BY-PASS

LOCATION	ADDITION OR REVISION	DATE
1-04 c.	Add contract no. 57-48	Nov 1963
Exhibit B	Add drawing no. 4-4-417	Nov 1963
1-04 d.	Add contract no. 63-40	Oct 1964
Exhibit B	Add drawing no. 4-4-531	Oct 1964
Exhibit F	Add letter of acceptance 25 Jun 1963	Oct 1964
Exhibit F	Add copy of letter of transfer dated 8 Dec 1951	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 2 Oct 1952	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 1 May 1963	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 4 Nov 1963	27 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 20 Feb 1964	27 Dec 2010
1-04	Add subparagraph e	27 Dec 2010

TABLE OF CONTENTS

<u>Paragraph</u>	<u>Subject</u>	<u>Page</u>
SECTION I - INTRODUCTION		
1-01	Location	1
1-02	Protection Provided	1
1-03	Project Works	1
1-04	Construction Data and Contractor	2
1-05	Flood Flows	2
1-06	Assurances Provided by Local Interests	2
1-07	Acceptance by State Reclamation Board	2
1-08	Superintendent	3

SECTION II - FEATURES OF THE PROJECT
SUBJECT TO FLOOD CONTROL REGULATIONS

2-01	Levees	4
2-02	Drainage and Irrigation Structures	4
2-03	Channel	5
2-04	Miscellaneous Facilities	6

SECTION III - REPAIR OF DAMAGE TO PROJECT WORKS
AND METHODS OF COMBATING FLOOD CONDITIONS

3-01	Repair of Damage	7
3-02	Applicable Methods of Combating Floods	7

EXHIBITS

<u>Exhibit</u>	<u>Description</u>	
A	Flood Control Regulations	Unattached
	(Contained in Standard Manual)	
A-1	Location Drawing	1 Sheet
B	"As Constructed" Drawings	Unattached
C	Plates of Suggested Flood Fighting Methods	Unattached
	(Contained in Standard Manual)	
D	Check List No. 1 - Levee Inspection Report	Unattached
	(Contained in Standard Manual)	
E	Check Lists - Levees, Channels and Structures	Sheets 1 thru 7
F	Letter of Acceptance by State Reclamation Board	
		Sheets 1 thru 3
G	Semi-Annual Report Form	Sheets 1 and 2

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT
UNIT NO. 143
WEST LEVEE OF FEATHER RIVER
FROM
NORTH BOUNDARY OF RECLAMATION DISTRICT NO. 823
TO
EAST LEVEE OF SUTTER BY-PASS

SECTION I

INTRODUCTION

1-01. Location. The improvement covered by this manual is that part of the Sacramento River Flood Control Project which includes the west levee and channel of the Feather River from the north boundary of Reclamation District No. 823 to its junction with the east levee of Sutter By-Pass. In general, the area lies about 25 miles north of the city of Sacramento and 13 miles south of Yuba City. The levee of this unit is located in Reclamation District No. 803 and Reclamation District No. 823, in Sutter County, California. The location of the completed unit covered by this manual is shown on Exhibit A-1.

1-02. Protection Provided. The Feather River is a tributary to the Sacramento River and is an essential feature of the Sacramento River Flood Control Project. The levee of this unit provides protection to adjacent agricultural lands against flood waters of the Feather River. The grade of the adopted flood plane in the Feather River varies from elevation 57.0 at the north boundary of Reclamation District No. 823 to elevation 49.33 at the junction of the west levee of the Feather River and the east levee of Sutter By-Pass. A freeboard above adopted project flood plane of 3 feet has been equaled or exceeded and the project design flood capacity in this reach of the river is 320,000 cubic feet per second.

1-03. Project Works. The flood-control improvement covered by this manual is a part of the Sacramento River Flood Control Project authorized by the Flood Control Act of 1917 as modified by the Acts of 1928, 1937, and 1941, and consists of:

The west levee of the Feather River from the north boundary of Reclamation District No. 823 downstream about 5.41 miles to the junction of the west levee of the Feather River and east levee of Sutter By-Pass.

The levee within this unit was originally built by local interests and that portion from Sutter By-Pass to Nicolaus Bridge was enlarged to project grade and section by the Corps of Engineers. Also that portion of levee from Nicolaus Bridge to the north boundary of Reclamation District No. 823 was graded and surfaced for patrol road purposes by the Corps of Engineers.

1-04. Construction Data and Contractor. Unit No. 143 of the flood control works described in this manual forms an integral part of the Sacramento River Flood Control Project. Original levee of this unit was built by local interest and construction necessary to bring this levee to project standards was performed as follows:

a. Enlargement of the west levee of the Feather River from Sutter By-Pass to Nicolaus Bridge was accomplished under Contract No. W-1105-eng-3940 by H. Earl Parker and N. M. Ball & Son, contractors and was completed on 6 October 1943.

b. Surfacing levee crown for patrol road purposes on that portion designated as Part "H" (See Exhibit B, Dwg. 50-4-2897) was accomplished under Contract No. DA-04-167-eng-828 by Browne and Krull, contractors. Work under this contract was started on 16 July 1952 and completed on 2 December 1952.

c. Emergency levee repairs, R. D. No. 803, vicinity of Nicolaus was accomplished under Contract No. DA-04-167-CIVENG-57-48 by C. K. Hulse, contractor, during the period from 12 September 1956 to 24 November 1956, Specification No. 2221, Drawing No. 4-4-417.

d. Levee stabilization, right bank Feather River, Reclamation District No. 803 and 823 was accomplished under Contract No. DA-04-167-CIVENG-63-40 by H. Earl Parker, Inc. during the period from 6 November 1962 to 25 April 1963, Specification No. 2783, Drawing No. 4-4-531.

e. Channel rectification, levee repair and bank protection on the right bank of the low water channel of the Feather River within the limits of Sutter By-Pass at Nelson Bend was completed on 21 October 1963 under Contract No. DA-04-167-CIVENG-64-26, Specification No. 2914, Drawing No. 4-4-536.

1-05. Flood Flows. For purposes of this manual, the term "flood" or "high water period" shall refer to flows when the water surface in the Feather River reaches or exceeds the reading of 59.0 on the State of California Division of Water Resources gage located on the right bank of the Feather River about five miles south of Yuba City (below Shanghai Bend). Also when the water surface reaches or exceeds the reading of 43.0 on the Division of Water Resources and U. S. Geological Survey gage located on the left bank of the Feather River about

2,000 feet downstream from Nicolaus. Continuous water state recorders and staff gages are set on the U. S. Corps of Engineers datum.

1-06. Assurances Provided by Local Interests. Assurance of cooperation by local interests is provided by State legislation, as contained in Chapter 3, Part 2, Division 5 of the State Water Code. (See paragraph 2-02a of the Standard Manual.)

1-07. Acceptance by State Reclamation Board. Responsibility for operating and maintaining the completed works was officially accepted by the Reclamation Board of the State of California on 18 December 19*51 and 2 December 1952, as shown on the attached letter of acceptance, Exhibit F.

1-08. Superintendent. The name and address of the superintendent appointed by local interests to be responsible for the continuous inspection, operation, and maintenance of the project works shall be furnished by the District Engineer, and in case of any change of superintendent, the District Engineer shall be so notified.

SECTION II

FEATURES OF THE PROJECT SUBJECT TO FLOOD CONTROL REGULATIONS

2-01. Levees.

a. Description. The levee described in this manual is located along the westerly side of the Feather River from the north boundary of Reclamation District No. 823 downstream to the east levee of Sutter By-Pass. The levee within this unit was originally built by local interests and that portion from Sutter By-Pass to Nicolaus Bridge was enlarged to project grade and section by the Corps of Engineers. Surfacing was applied to the crown of the levee as indicated in drawings of Exhibit B. Required turnouts and road approaches were also provided.

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) 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 levees are listed as follows:

Location : Station	Size and Kind of pipe	Other Structure Description	Elev. of Invert of Pipe
814+62	10" steel		59.2
905+44	24" Square	Slide gate L.S. This is one concrete L.S. with 36" C.M.P. on R.S. and 24" square concr. pipe L.S.	36.0
982+00	2-18" Steel	Pipes at low elev.-flap gates R.S. and gate valves L.S.	24.0

Abbreviations are as follows:

L.S. = Landside

R.S. = Riverside

C.M.P. = 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) 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. Channel.

a. The Feather River channel from the north boundary of Reclamation District No. 823 to the east levee of Sutter Bypass has a project capacity of 320,000 cubic feet per second. The low water channel meanders along a floodway which has a variable width of about 2,000 feet at the upper end of this unit to about 4,000 feet at the lower end. There is considerable growth of trees and brush in the overflow portion of the channel.

The responsibility of local interests for maintenance and operation of the channel of the Feather River, within this unit, shall be limited to flood control and the requirements which follows shall be observed only to that extent.

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) 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 Superintendent to maintain a patrol of the project works during all periods of flood in excess of a reading of 59.0 on the gage below Shanghai Bend or a reading of 43.0 on the gage located downstream from Nicolaus as indicated in paragraph 1-05 of this manual. The Superintendent shall dispatch a message by the most suitable means to the District Engineer whenever the water surface below Shanghai Bend or below Nicolaus reaches the gage readings indicated above. The Superintendent shall cause readings to be taken at said gages at intervals of two to four hours during the period when the water surface

is above the flood-flow stage indicated above and record the time of the observations. One copy of the readings shall be forwarded to the District Engineer following the flood, and a second copy transmitted as an inclosure to the semi-annual report in compliance with paragraph 3-06 of the Standard Manual.

2-04. Miscellaneous Facilities.

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

(1) Bridges.

(a) A swing span bridge with concrete structure approach at station 927+50 (Nicolaus^{OLD} Bridge) Garden Highway crossing.

^{95+00 - 9}
(b) Southern Pacific Railroad trestle at station 1022+00.

(2) Utility Relocations. None.

(3) Hydrographic Facilities.

(a) A continuous water stage recorder and staff gage located on the right bank of the Feather River about five miles south of Yuba City and below Shanghai Bend.

(b) A continuous water stage recorder and staff gage located on the left bank of the Feather River about 2,000 feet downstream from Nicolaus.

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) 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

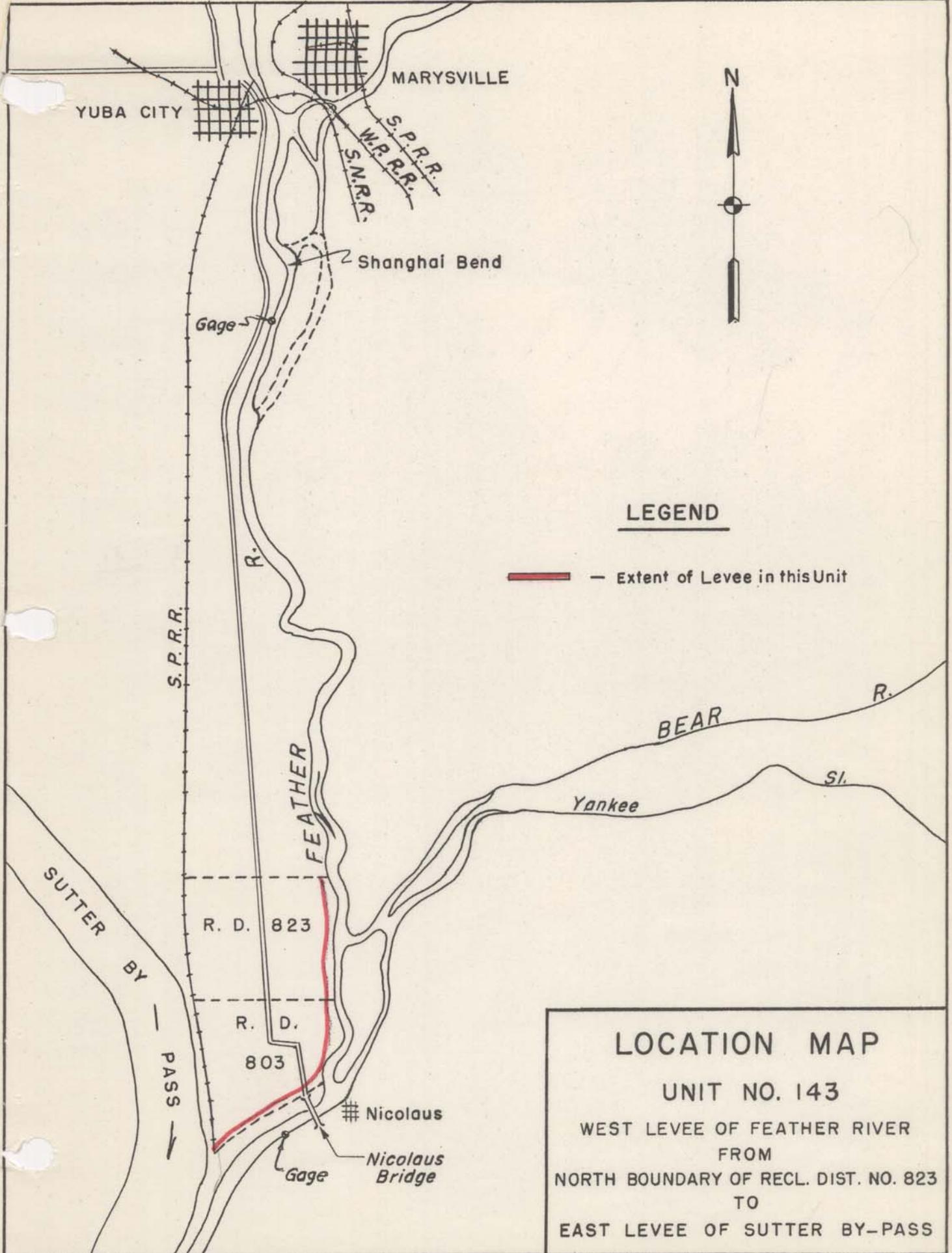
3-01. Repair of Damage. In the event of serious damage to the project works, whether due to flood conditions or other causes, and which may be beyond the capability of local interests to repair, the Superintendent will contact a representative of the State Division of Water Resources who coordinates maintenance of project works of the Sacramento River Flood Control Project. The State representative will give assistance or advice, 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 Revised Standard Manual, where the subject is fully covered.

EXHIBIT A

FLOOD CONTROL REGULATIONS

(See Standard Manual)



LEGEND

 - Extent of Levee in this Unit

LOCATION MAP
UNIT NO. 143
 WEST LEVEE OF FEATHER RIVER
 FROM
 NORTH BOUNDARY OF RECL. DIST. NO. 823
 TO
 EAST LEVEE OF SUTTER BY-PASS
 EXHIBIT A - 1

EXHIBIT B

"AS CONSTRUCTED"

DRAWINGS

See separate folder for the following drawings:

<u>File No.</u>	<u>Title</u>
50-4-2033	Levee Enlargement - West Levee Feather from Sutter Bypass to Nicolaus Bridge in 1 sheet.
50-4-2897	Surface Levee Crown for Patrol Road Purposes, sheets 1 and 5
4-13-94	Feather River from Marysville to its Mouth, sheets 8 and 9

Additional drawings of cross-sections, structures, and miscellaneous facilities are available in the Office of the District Engineer.

4-4-417	Emergency levee repairs, R. D. 803, vicinity of Nicolaus, in 1 sheet
531	Levee Stabilization, Right Bank, Feather River, Reclamation Districts 803 and 823, in 6 sheets.

EXHIBIT B
Unattached

EXHIBIT C

PLATES OF SUGGESTED FLOOD FIGHTING METHODS

(See Standard Manual)

EXHIBIT D

CHECK LIST NO. 1

LEVEE INSPECTION REPORT

(See Standard Manual)

EXHIBIT E

CHECK LISTS OF LEVEES,
CHANNEL AND STRUCTURES

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

CHECK LIST NO. 2

UNIT NO. 143

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

Item	Remarks
(a) Location by Station	
(b) Settlement, sloughing, or loss of grade	
(c) Erosion of back slope	
(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.

CHECK LIST NO. 3

CHANNEL AND RIGHT-OF-WAY

UNIT NO. 143

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 aggradation or degradation	
(f) Condition of 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.

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES
UNIT NO. 143

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

(a) Location by Station	814 / 62 905 / 44 982 / 00
(b) Bank	Right Right Right
(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	

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 STATE RECLAMATION BOARD

THE RECLAMATION BOARD
OF THE
STATE OF CALIFORNIA

March 11, 1953

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

Dear Sir:

Reference your letters file No. SPKKO-P 824.3 (Sac. R.F.C.P.) dated 1 December 1951, 3 December 1941, 4 December 1951, three letters dated 6 December 1951, 7 December 1951 and six letters dated 8 December 1951. Subject letters transferred to The Reclamation Board for operation and maintenance, various levee units of the Sacramento River Flood Control Project.

The Reclamation Board at its 18 December 1951 meeting, on behalf of the State of California, accepted certain of the transferred units together with their contiguous waterway banks for operation and maintenance, and rejected others. A tabulation of the units so accepted or rejected is attached hereto.

Yours very truly,

THE RECLAMATION BOARD
A. M. BARTON
Chief Engineer and General Manager

By _____

D. M. CARR

December 18, 1951

The Board accepted the transfer from the Corps of Engineers, in letters of dates listed below, the following reaches of levees and their contiguous waterway banks where applicable for flood control operation and maintenance, as complete and meeting the requirements of the Sacramento River Flood Control Project.

<u>NO.</u>	<u>DATE OF LETTER</u>	<u>LEVEE LOCATION</u>	<u>REMARKS</u>
--	---	-----	-----
11	8 Dec 51	W. Levee Feather River except: 3.31 Mi. North from Nicolaus Bridge; 1400 Ft. in Yuba City; from Sta. 774+80 to Sta. 1188+00 of "Y.C.H.B." Traverse.	Maintained by Maintenance Area No. 3, Levee Dist. Nos. 1 & 9 of Sutter Co. Recl. Dist. No. 777 and Stats.
--	---	-----	-----

NOTE: Only a portion of item shown in the above copy pertains to Operation and Maintenance Manual No. 143. Other items were omitted.

THE RECLAMATION BOARD
OF THE
STATE OF CALIFORNIA

December 3, 1952

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

Dear Sir:

Reference is made to your SPKKO-P 824.3 (Sac. Riv. FCP) dated 2 October 1952, transferring certain completed levee units, together with the patrol roads thereon and with the waterway banks contiguous thereto, to the State of California for operation and maintenance.

The Reclamation Board at its meeting December 2, 1952, accepted said levee units on behalf of the State of California.

The units so accepted are:

Part "F" -----

Part "G" and "H" - Westerly Levee of the Feather River:

1. -----

2. From Station 0+00 to 172+70, levee and patrol road along the right bank of the Feather River, from Nicolaus Bridge upstream approximately 3.31 miles, near Nicolaus, Sutter County, California, completed 24 September 1952.

Very truly yours,

THE RECLAMATION BOARD
A. M. BARTON
Chief Engineer and General Manager

By _____
S. A. HONAKER, Asst. Secretary

NOTE: Only item pertaining to Operation and Maintenance Manual No. 143 is included in the above copy.

RECEIVED MAIL
Receipt Receipt
Requested

Letter No. 12

12

SPKKA 824.3(Sac. Riv. F.C.P.)

8 DEC 1951

The Reclamation Board
State of California
1100 "G" Street
Sacramento 16, California

Gentlemen:

Reference is made to your letter of 22 June 1951 acknowledging that certain reaches of the levees of the Sacramento River Flood Control Project and the waterway bank contiguous to said levee reaches meet the requirements of the project as authorized prior to the Flood Control Act of 1944.

The levee reaches in question are located as follows:

140. a. Northerly levee of the American River from Jibboom Street Bridge to Sacramento River. 118.2 (P)

b. Easterly levee of the Sacramento River.

Reach 15 141. (1) American River to Natones Out. 60.25 to 79.0 124

Reach No. 11 142. (2) At Moulton Weir. (man 2) 154

143. (3) Mile 158.5 (North End Moulton Weir) to Mile 164.4 (Princeton Ferry). (man 2) ? 134

144. (4) Mile 168.5 to Mile 168.9 (at Butte City). (man 2) ? 138

c. Westerly levee of the Sacramento River.

145. (1) Mile 59.3 to Mile 60.75. 116

146. (2) Mile 61.3 to Mile 62.65 (at Drye Bend) 116

62.65

Accepted by
letter
dated
9 March 1953

Letter 12
Items 140 to 198

12

SPKIA 624.3 (Sac. Riv. F. C. P.)
The Reclamation Board

Letter No. 12

12

c. Westerly levee of the Sacramento River, (cont'd)

- ✓ 147. (3) Mile 62.65 to Mile 63.1 (South End Sacramento Weir). 116
- ✓ 148. (4) At Sacramento Weir. 158
- ✓ 149. (5) Mile 63.5 (North End Sacramento Weir) to Mile 67.11. 122
- ✓ 150. (6) Mile 68.42 to Mile 70.9. 122
- ✓ 151. (7) Mile 76.5 to Mile 81.7 (East End Fremont Weir). 123
- ✓ 152. (8) Along Fremont Weir. 157
- ✓ 153. (9) Mile 84.0 (West End Fremont Weir) to Mile 85.3. 128
- ✓ 154. (10) Mile 85.5 to Mile 85.9. 128
- ✓ 155. (11) Mile 87.6 to Mile 88.4. 128
- ✓ 156. (12) Mile 89.2 to Mile 89.8 (Knights Landing Highway Bridge). 128
- ✓ 157. (13) Mile ^{89.2} 89.8 (Knights Landing Highway Bridge) to Sycamore Slough. 89.9 128
- ✓ 158. (14) Mile ^{100.6} 100.6 to Mile 101.4. 128
- ✓ 159. (15) Mile 110.9 to Mile 111.2. 128

Reach No. 5

Reach No. 4

d. Westerly levee of the Feather River.

- Reach 39 ✓ 160. (1) Sutter Bypass to Nicolaus Bridge. 143
- ✓ 161. (2) From a point 3.51 miles northerly from Nicolaus Bridge to the Fifth Street Bridge between Marysville and Yuba City. 143, 144
- Reach 38 ✓ 162. (3) From a point 1,400 feet northerly from the Fifth Street Bridge between Marysville and Yuba City to Station 774+00 "Y.C.N.B." Traverse. 144
- ✓ 163. (4) From a point east of Station 1188+00 "Y.C.N.B." Traverse to high ground just northerly from the Western Canal Headgate. 144
- Reach 42 ✓ 164. a. Easterly levee of the Sacramento River from Matomas Cut to Feather River. 141.1

12

Letter No. 12

12

f. Easterly levee of the Feather River.

- Reach 42 ✓ 165. (1) Sacramento River to a point 2.37 miles southerly from Nicolaus Bridge. 141 Pt 1
- Reach 41 ✓ 166. (2) Bear River to Mile 14.4. } 145
- ✓ 167. (3) Mile 14.4 to Mile 14.7. }
- ✓ 168. (4) Mile 14.7 to Mile 21.5. }
- ✓ 169. (5) Mile 21.5 to Mile 22.75. }
- ✓ 170. (6) Mile 22.75 to Mile 26.5 (Point where levee and S.N.R.R. meet). 145

g. Levees protecting the City of Marysville. AU 147

- Reach 43 ✓ 171. (1) From the W.P.R.R. at Simerly Slough easterly to the Yuba River.
- ✓ 172. (2) Along the Yuba River from the "D" Street Bridge to the back levee near the Valley Meat Company.

h. Levees protecting Reclamation District No. 10.

- Reach No. 40 ✓ 173. (1) Northerly levee of Simerly Slough from the W.P.R.R. to the S.P.R.R. 151
- ✓ 174. (2) Easterly levee of the Feather River from Simerly Slough to a point 4.3 miles northerly from Simerly Slough. 151

- Reach 46 ✓ 175. i. Northerly levee of the Yuba River from the back levee of the City of Marysville to a point 1.3 miles easterly from said back levee. 147

- Reach 47 ✓ 176. j. Southerly levee of the Yuba River from Feather River (i.e. S.N.R.R.) easterly to the S.P.R.R. Main Line. 147

- 45 ✓ 177. k. Northerly levee of Bear River from Feather River easterly to the W. P.R.R. Interceptor. 145

- 45 ✓ 178. l. Westerly levee of the W.P.R.R. Interceptor and Clark Slough Interceptor (i.e. back levee of Reclamation District No. 784) from Bear River to the southerly end of the Clark Slough Interceptor. 145

12

SPEKA 824.3(Sac.Riv.F.C.P.)
The Reclamation Board

Letter No. 12

12

m. Southerly levee of the American River.

Reach
No. 25

- ✓ 179. (1) Sixteenth Street Bridge to the S.N.R.R. 118.1
- ✓ 180. (2) From a point 800 feet easterly from the W.P.R.R. to Mayhew Station. 118.1

n. Westerly levee of the Yolo Bypass.

- ✓ 181. (1) Sacramento River to Knights Landing Ridge Cut. 127
- ✓ 182. (2) Knights Landing Ridge Cut to the northeast corner of the Cache Creek Settling Basin. 126
- 28 ✓ 183. (3) S.N.R.R. Woodland Branch to a point 1.6 miles southerly from said railroad. 121
- 28 ✓ 184. (4) From a point 1.6 miles southerly from the S.N.R.R. Woodland Branch to the Willow Slough Pipes. 121
- 28 ✓ 185. (5) From a point 1.48 miles southerly from the Willow Slough Pipes to a point 1.9 miles southerly from said pipes. 121
- 28 ✓ 186. (6) From a point 1.9 miles southerly from the Willow Slough Pipes to the Willow Slough Interceptor. 121
- 28 ✓ 187. (7) From the Willow Slough Interceptor to Highway U.S. 40. 120
- ✓ 24 ✓ 188. (8) From Highway U.S. 40 to Putah Creek. 119

27 ✓ 189 o. Easterly and Westerly training levees of Cache Creek Settling Basin from Cache Creek southerly. 126

28 ✓ 190 p. Northerly and Southerly levees of the Willow Slough Interceptor from the S.P.R.R. to the Yolo Bypass. 120

29 ✓ 191 q. Northerly levee of Putah Creek from Yolo Bypass westerly to high ground. 119

✓ 192 r. Southerly levee of Putah Creek from high ground on Dixon Ridge westerly to high ground. 119

s. Southerly levee of Knights Landing Ridge Cut. 127

- 26 ✓ 193 (1) From Yolo Bypass westerly 600 feet. Also covered under Unit 96-A
- 26 ✓ 194 (2) { From a point 2,500 feet westerly from Yolo Bypass to a point 2,900 feet westerly from Yolo Bypass. 127
Also covered under 96-A

12

SPKKA 624.3(Sac.Riv.F.C.P.)
The Reclamation Board

Letter No. 12

12

s. Southerly levee of Knights Landing Ridge Cut. (cont'd)

- 76 ✓ 195 (3) { From a point 3,300 feet westerly from Yolo Bypass to a point 7,100 feet westerly from Yolo Bypass. 127
Also covered under Unit No. 96-A
- 35 ✓ 196 t. That portion of the back or westerly levee of Hastings Tract which runs east and west along the County Road for a distance of approximately one mile. 107
- ✓ 197 u. Northerly levee of Sycamore Slough from Sacramento River to Knights Landing Outfall Gates. 130
- ✓ 198 v. Southerly levee of Sycamore Slough from Sacramento River to Knights Landing Outfall Gates. 132

The records of this office show that your Board has accepted the levees and/or works covered by Items b.(1), b.(2), b.(3), c.(2), c.(4), c.(8), c.(11), c.(12), c.(14), d.(1), d.(3), d.(4), f.(3), f.(5), g., h., i., l., m., n.(1), n.(2), n.(3), n.(6), n.(7), n.(8), o., p., q., r. and s.(1) above, as complete. Accordingly the waterway bank contiguous to said Items is hereby transferred to the State of California for maintenance and operation.

The levee covered by Items a., b.(4), c.(1), c.(3), c.(5), c.(6), c.(7), c.(9), c.(10), c.(15), c.(15), d.(2), e., f.(1), f.(2), f.(4), f.(6), j., k., n.(4), n.(5), s.(2), s.(3), t., u. and v., above, although complete has not been formally transferred as contemplated by the Project documents. Accordingly the levee covered by said Items, together with the waterway bank contiguous thereto, is hereby transferred to the State of California for maintenance and operation.

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations 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. As provided under paragraph 208.10(10) of these regulations, a maintenance manual covering these works is in process of preparation and will be furnished your Board upon completion.

A copy of this letter is being transmitted to the State Engineer.

FOR THE DISTRICT ENGINEER:

Sincerely yours,

Copy Furnished:
Office, Chief of Engrs.
So. Pac. Div. Engr.
State Engineer
Engr. Div. (2)
C. de Arrieta

H. R. Reifsnnyder
Lt. Colonel, Corps of Engineers
Executive Officer

12

REGISTERED MAIL
Return Receipt
Requested

SPKKO-P 824-3 (Sac. Riv. FCP)

2 OCT 1952

10/2/52

The Reclamation Board
State of California
1100 "O" Street
Sacramento, California

Gentlemen:

Reference is made to District Engineer letter dated 3 September 1952, wherein it was suggested that a joint inspection be made for the purpose of transferring to the jurisdiction of the State of California, when completed, various levee units of the Sacramento River Flood Control Project. Reference is also made to joint inspections of these units of work which were made on 18 July and 11 September 1952.

In accordance with the above, you are hereby advised that the units listed below, which are covered under Specification No. 1636, Drawing No. 50-4-2897, have been completed as follows:

Part "F" - Levees protecting the City of Marysville:

1. Levee and patrol road along the left bank of Nigger Jack Slough, also known as "Simmerly Slough", from the Western Pacific Railroad to the Feather River at Marysville, California, completed 24 September 1952.

2. Levee and patrol road along the left bank of the Feather River and the right bank of the Yuba River, from Nigger Jack Slough to "D" Street Bridge at Marysville, California, completed 24 September 1952.

Part "G" and "H" - Westerly Levee of the Feather River:

1. Levee and patrol road along the right bank of the Feather River, from 5th Street bridge, Yuba City, upstream 1400 feet, at Yuba City, Sutter County, California, completed 5 September 1952.

147

147

144

Concurrence		
Originator		
Date:	30	Sept 1952
Emc. O	3	
Chief		
Ad. Asst.	2	
Chf. Tech		
Asst.		
Enag.		
Svcs.		
Oper.		
Eng's		
R. E.		
Pls.		
Pers.		
Legal		
Supply		

Levee sections 352 to 362

Letter No. 37

36

824-3
[Handwritten signature]

SPKCO-P
The Reclamation Board

143

2. From Station 0+00 to 173+70, levee and patrol road along the right bank of the Feather River, from Niclaus Bridge upstream approximately 3.31 miles, near Niclaus, Sutter County, California, completed 24 September 1952.

Part "I" - Southerly Levee of Bear River:

From Station 46+80 to 343+70, levee and patrol road along the left bank of Bear River from a point 5,400 feet upstream from Carlin Bridge upstream to high ground, near Wheatland, Yuba County, California, completed 8 September 1952.

141.1

Part "J" and "K" - Southerly and Northerly Levees of Yankee Slough:

1. From Station 316+70 to 511+10, levee and patrol road along the left bank of Yankee Slough, from the W.P.R.R. upstream to high ground, near Rio Oso, Sutter County, California, completed 24 September 1952.

141.1

2. From Station 166+70 to 536+09, levee and patrol road along the right bank of Yankee Slough, from its junction with Bear River upstream to high ground, completed 16 September 1952.

141.1

Part "L" - Southerly Levee of South Dry Creek and Easterly and Westerly Levees of Grasshopper Diversion Channel:

1. From Station 98+45 to 671+28, levee and patrol road along the left bank of South Dry Creek Channel, from a point 1.86 miles upstream from Bear River to the westerly levee of Grasshopper Diversion Channel, near Wheatland, California, completed 8 September 1952.

146

2. From Station 377+60 to 418+16, levee and patrol road along the left bank of South Dry Creek, from the easterly levee of Grasshopper Diversion Channel upstream approximately 4056 feet, near Wheatland, California, completed 8 September 1952.

146

3. From Station 0+00 to 25+69, levee and patrol road along the westerly bank of Grasshopper Diversion Channel, from the southerly levee of South Dry Creek upstream approximately 2569 feet near Wheatland, California, completed 8 September 1952. Station 25+69 corresponds to Station 390+20 shown on drawing.

146

4. From Station 0+00 to 13+85, levee and patrol road along the easterly bank of Grasshopper Diversion Channel from the southerly levee of South Dry Creek upstream approximately 1385 feet, near Wheatland, California, completed 8 September 1952.

146

SPKCO-P
The Reclamation Board

The levee units referred to above, together with the patrol roads thereon, form an integral part of the Sacramento River Flood Control Project and meet with the requirements of the project. Therefore, said levee units, 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 Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations 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. As provided under Paragraph No. 208.10 (10) of these regulations, a maintenance manual covering these levee units is in process of preparation and will be furnished to you upon completion.

A copy of this letter is being transmitted to the State Engineer.

FOR THE DISTRICT ENGINEER:

Copy furnished:
State Engineer,
✓ Dept. of Public Works
1120 "N" St., Sacto, Calif.

Sincerely yours,

Earl C. Peacock
Lt. Col., Corps of Engineers
Executive Officer

cc: ✓ Office of C. of E.
✓ So. Pac. Div. Eng.
✓ Eng. Div.
✓ Sacto Field Office
✓ C. deArrieta
✓ Service Section

Supplement #1

SPAKO-C

1 MAY 1963

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

Gentlemen:

Reference is made to the joint inspection made on 28 March 1963 of flood control work on a unit of the Sacramento River Flood Control Project for the purpose of transferring it to the State of California for operation and maintenance. Reference is also made to Supplement dated 29 November 1957 to the Memorandum of Understanding entered into with the State of California under date of 30 November 1953, covering added items of work required to complete the Sacramento River Flood Control Project.

The flood control work consisting of levee stabilization and asphalt spray treatment of levee road on the right bank of the Feather River, designated as Items 73c and d in the above referenced Supplement, was completed on 28 March 1963, in accordance with Specification No. 2783, Contract No. DA-04-167-CIVENG-63-40, and Drawing No. 4-4-531.

The foregoing supplemental work having been completed to current standards for the Sacramento River Flood Control Project, is hereby transferred to the State of California for operation and maintenance. A manual for this portion of the project has already been furnished which adequately covers operation and maintenance requirements for the above item.

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

Sincerely yours,

H. N. TURNER
Colonel, CE
District Engineer

LJK
4/30/63
KRISTOF/pnp

[Signature]
THOMPSON

[Signature]
JOHNSON

[Signature]
TURNER

Unit 143

Copy furnished:
Dept Water Res.

O.C.E.

cc: Engr Div-Lev & Channels
Engr Div-Pro Dev Br
F & A
Northern Area Ofc.

REGISTERED
RETURN RECEIPT REQUESTED

Hom 736

OPERATIONS BRANCH
CHANNELS & LEVELS SECTION

THE RECLAMATION BOARD

June 25, 1963

Refer to: 7000.70.601

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

Dear Sir:

Reference is made to your letter of May 1, 1963, concerning transfer to the State of California of Levee Improvement and Road work on the right bank of the Feather River described as items 73c and 73d in the Supplement to the Memorandum of Understanding which was completed on March 22, 1963, in accordance with Specification No. 2783.

The Reclamation Board at its meeting of June 24, 1963, formerly accepted the above referred to levee and road work for operation and maintenance.

Sincerely yours,

A. E. McCollam /s/
A. E. McCOLLAM
General Manager

4 November 1963

The Reclamation Board
State of California
1215 "O" Street
Sacramento, California 95814

Gentlemen:

Reference is made to flood control work performed on the Sacramento River Flood Control Project on the right bank of the low water channel of the Feather River within the limits of Sutter By-Pass at Nelson Bend in the vicinity of River Mile 7.0.

The above work, consisting of channel rectification, levee repair and bank protection, was completed on 21 October 1963 in accordance with Specification No. 2914, Contract No. DA-04-167-CIVENG-64-26 and Drawing No. 4-4-536.

The flood control work described above now meets the requirements of the Sacramento River Flood Control Project. Therefore said flood control work, together with the waterway banks contiguous thereto are transferred to the State of California for operation and maintenance. A maintenance manual for these sections of project levees has already been furnished which adequately covers operation and maintenance requirements for the above item.

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

Sincerely yours,

LJK
KRISTOF/pnp

ROBERT E. MATHE
Colonel, CE
District Engineer

Unit 143

MCGUIRE *[Signature]*

C. R. TEAGLE
Chief Engineer, Lev & Chann
Deputy District Engineer
F & A
Northern Area Office

TEAGLE
[Signature]
[Signature]

Copy furnished:
Dept Water Resources

O.C.E.
S.P.D.

THE RECLAMATION BOARD

1215 O STREET • SACRAMENTO 95814



STANLEY W. KRONICK, *President*
J. J. MADIGAN, *Vice Pres.*
WALLACE McCORMACK, *Secy.*
GEORGE W. NICKEL, JR.
CHARLES J. MATHEWS
HAROLD J. O'BANION
MAX S. VANN, SR.
COL. A. E. McCOLLAM, *General Manager*

February 20, 1964

Refer to: 4130.70.603

cont 64-26

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

Dear Sir:

Reference is made to your letter of 4 November 1963, concerning transfer to the State of California of channel rectification and bank protection work on the Feather River within the limits of the Sutter Bypass at Nelson Bend in the vicinity of River Mile 7.0, in accordance with Specification No. 2914.

The Reclamation Board at its meeting of February 20, 1964, formally accepted the above-referred to bank protection work for operation and maintenance.

Sincerely yours,

A. E. McCOLLAM
General Manager

JHMacC:gg

Copies sent to Valley
Bardsdale
Jensen
3/9/64
Bill Calvin
Unit 143

EXHIBIT G

SUGGESTED SEMI-ANNUAL REPORT FORM

(1 May 19____)
(1 Nov 19____)

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

Dear Sir:

The semi-annual report for the period (1 May 19____ to 31 October 19____) (1 November 19____ to 30 April 19____). Sacramento River Flood Control Project Unit No. 143, the west levee of the Feather River from the north boundary of Reclamation District No. 823 to the east levee of Sutter By-pass, 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 of 59.0 at the gage below Shanghai Bend and water level of 43.0 at the gage below Nicolaus) 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