SUPPLEMENT TO STANDARD OPERATION AND MAINTENANCE MANUAL

SACRAMENTO RIVER
FLOOD CONTROL PROJECT
UNIT NO. 154
MOULTON WEIR AND TRAINING LEVEE
SACRAMENTO RIVER, CALIFORNIA

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

Encl #1

CORPS OF ENGINEERS
U. S. ARMY

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

UNIT NO. 154
MOULTON WEIR AND TRAINING LEVEES
SACRAMENTO RIVER, CALIFORNIA

Prepared by the Sacramento District
Corps of Engineers, U. S. Army
Sacramento, California, dated August 1955

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

UNIT NO. 154

MOULTON WEIR AND TRAINING LEVEE
SACRAMENTO RIVER, CALIFORNIA

LOCATION	ADDITION OR REVISION	DATE
Exhibit F	Add copy of letter of transfer dated 1 Dec 1951	28 Dec 2010
Exhibit F	Add copy of letter of transfer dated 8 Dec 1951	28 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 18 Dec 1951	28 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 2 Apr 1952	28 Dec 2010

TABLE OF CONTENTS

EXHIBIT

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

UNIT NO. 154
MOULTON WEIR AND TRAINING LEVEES

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 Moulton Weir together with its adjoining outflow channel and training levees.

Moulton Weir is located along the easterly side (left bank) of the Sacramento River at river mile 158.5 and about eight miles north of the town of Colusa, California within Levee District No. 3, in Colusa County, as shown on the Location Map, Exhibit A-1.

1-02. Project Works. - The flood-control works included in this manual was authorized by the Flood Control Act of 1917 as modified by the Acts of 1928, 1937, and 1941. As shown on drawings of Exhibit B, Moulton Weir is a fixed concrete weir with concrete abutments at each end, and the outlet channel is flanked by training levees. Adjoining the abutments are levees that are paved with cobbles on the riverside slopes.

1-03. Protection Provided. - The primary function of Moulton Weir is to provide a means for release of overflow waters of the Sacramento River into Butte Basin at such times when floods exceed the safe carrying capacity of the main channel of the Sacramento River downstream from the weir. The weir structure was built to prevent scour of the by-pass channel during flood periods. Since the crest elevation of Moulton Weir is fixed at elevation 77.0, protection is provided to agricultural land in Butte Basin only during low or intermediate flood stages. The project design capacity of Moulton Weir is 25,000 cubic feet per second.

1-04. Construction Data and Contractor. - Construction of Moulton Weir was accomplished by Lord & Bishop under Contract No. W-1105-eng-879 with the Sacramento District Corps of Engineers. Work was started on 13 November 1931 and completed on 12 March 1932. Under Contract No. W-1105-eng-890 C. W. Wood constructed the Moulton By-Pass levees.

1-05. Flood Flows. - For the purposes of this manual, the term "flood" or "high water period" shall refer to flows when the water surface in the Sacramento River reaches or exceeds the reading of 79.0 on the U. S. Corps of Engineers and State Division of Water Resources continuous water stage recorder and staff gage located near the south end of Moulton Weir. This gage is set on 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 1951, as shown on the attached letter of acceptance, Exhibit F.

1-08. Superintendent. - The name and address of the Superintendent appointed by the State or acting as a representative of the State Division of Water Resources to be responsible for the continuous inspection, operation and maintenance of the project works shall be furnished the District Engineer, and in case of any change of Superintendent, the District shall be so notified.

SECTION II

FEATURES OF THE PROJECT SUBJECT TO FLOOD CONTROL REGULATIONS

2-01. Drainage and Weir Structure. -

a. Description. The Moulton Weir is a fixed concrete drainage structure located in a natural overflow area, along the easterly side of the Sacramento River about 8 miles north of Colusa, California. The main concrete section of the weir is 17 feet high and has a crest length of 500 feet. Concrete abutments at each end of the weir are 40 feet wide and 54.5 feet long and extend 8.5 feet above the crest of the weir. A concrete apron adjoins the weir and extends for 30 feet downstream and contacts a cobble-lined channel bottom 2 feet thick that extends an additional 70 feet downsteam. Upstream the channel bottom is paved with cobbles for a distance of 34 feet beyond the face of the weir. The weir outlet channel is flanked by training levees, paved with cobbles, that adjoin the abutments and extend downsteam from Station 17+50 to 21+90 along the north side and from Station 11+30 to 17+30 along the south side.

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.

2-02. Channel.

a. Description. The leveed channel in which Moulton Weir is located extends from the Sacramento River easterly about 3,000 feet, as shown on drawings of Exhibit B. Adjacent to Moulton Weir the channel is paved with cobble stones from a point 34 feet upstream from the weir section to a point 70 feet downsteam from the weir section.

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 79.0 on the gage located near the south end of Moulton Weir, 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 at Moulton Weir reaches the gage reading indicated above. The Superintendent shall cause readings to be taken at intervals of two to four hours during the period when the water surface is above flood-flow stage and record the time of the observations. One copy of the readings shall be forwarded to the District Engineer immediately 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.

2-03. Levees.

a. Description. The training levees described in this manual are located along the outlet channel and adjoin the north and south abutments of Moulton Weir. As shown on Dwg. No. 50-4-1297-1 of Exhibit B, the north levee extends from station 17+50 to station 21+90 and the south levee extends from station 11+30 to station 17+30. The crown width is 20 feet and slopes are 1 on 3 on the water side and 1 on 2 on the landside.

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.

2-04. 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. None.

(2) Hydrographic Facilities.

(a) U. S. Corps of Engineers and State Division of Water Resources continuous water stage recorder and staff gage located near the south end of Moulton Weir.

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.

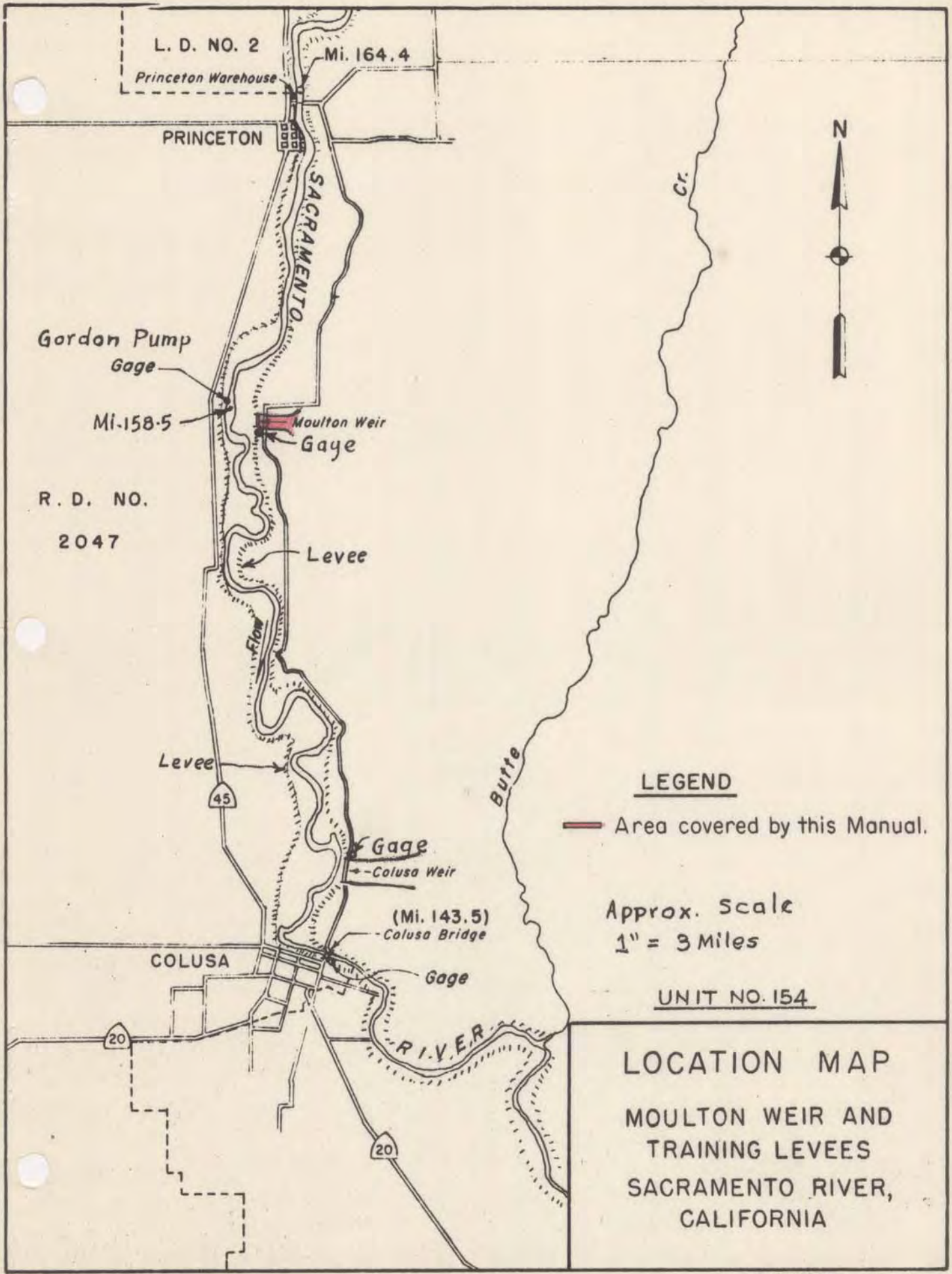
SECTION III - REPAIR OF DAMAGE TO PROJECT WORKS AND METHODS OF COMBATING FLOOD CONDITIONS

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 Division of Water Resources, State of California 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)



LOCATION MAP

MOULTON WEIR AND TRAINING LEVEES SACRAMENTO RIVER, CALIFORNIA

EXHIBIT A - 1

EXHIBIT B

"AS CONSTRUCTED"

DRAWINGS

See separate folder for the following drawings:

File No.	Title
50-9-1248-5	Moulton Weir - Plan, Location, Cross-sections and Borings. Sheet 1
50-9-1248-6	Moulton Weir - Weir Details. Sheet 2
50-9-1297-1	Levees near Moulton Weir. 1 Sheet.

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
MOULTON WEIR

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

Item	Remarks
(a) Location by Station	
(b) Settlement, sloughing, or loss of grade	
(c) Erosion of 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 gullying of the section has occurred.

Item (c) If sufficient erosion or gullying 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
MOULTON WEIR

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

WEIR STRUCTURE

MOULTON WEIR

Inspector's Report Sheet No._____ Inspector_____

Date_____ Superintendent_____

Item	Remarks
(a) Condition of Concrete Abutments	
(b) Condition of concrete weir	
(c) Condition of concrete apron	
(d) Condition of riprapped sections	
(e) Vegetal growth	
(f) Accumulation of trash and debris	
(g) Measures taken since last inspection	
(h) Comments	

EXHIBIT E
Sheet 6 of 7

INSTRUCTIONS FOR COMPLETING SHEET 6, EXHIBIT E

(To be printed on back of sheet 6)

Items (a) (b) & (c) Inspect condition of concrete on abutments, weir and apron and record observations under appropriate item.

Item (d) Note condition of riprap such as erosion, movement of the rock or presence of vegetal growth through the riprap.

Item (e) Note nature, extent, and size of vegetal growth in and around the structure.

Item (f) Note nature and extent of debris that might cause scour around the abutments, weir or apron.

Item (g) Indicate maintenance measures that have been performed since the last inspection and their condition at time of this inspection.

Item (h) Record opinion, if any, of contributary causes for conditions observed, also any observations not covered under other columns.

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 1951, 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 /s/ D. M. Carr
D. M. CARR

EXHIBIT F
Sheet 1 of 2

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.

No.	Date of Letter	Levee Location	Remarks
1	1 Dec. 1951	N. and S. Training Levees Moulton Weir	Maintained by State
*	**********	**********	**********
11	8 Dec. 1951	E. bank Sacramento River at Moulton Weir	Maintained by State
**	**********	**********	**********

Note: Only items pertaining to Operation and Maintenance Manual No. 154 are included in the above copy.

EXHIBIT F
Sheet 2 of 2

EARL WARREN
GOVERNOR

THE RECLAMATION BOARD
OF THE
STATE OF CALIFORNIA
1100 O STREET
SACRAMENTO 14, CALIFORNIA

April 2, 1952

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

Dear Sir:

This is in reply to your 1 December 1951, your file SPKKA 824.3 (Sac.Riv.F.C.P.) transferring levees and contiguous waterway banks to The Reclamation Board as follows:

Item 1 a. Southerly Moulton Weir Training Levee

Item 2 b. Northerly Moulton Weir Training Levee

Item 3 c. Southerly Colusa Weir Training Levee

Item 4 d. Northerly Colusa Weir Training Levee

Item 5 e. Grasshopper Diversion Channel from Grasshopper Creek to South Dry Creek

Levees, a, b, c, and d themselves constitute all of the waterway banks involved. Maintenance of these levees since their construction and the adjoining by-pass areas has been continuously performed by the State as required by Section 8361 of the Water Code of the State of California and Chapter 774, Statutes of California of 1927. Acceptance of these levees has been an actual fact since their construction. Formal acceptance by The Reclamation Board was made December 18, 1951.

Grasshopper Diversion Channel is less than one mile in length and does not constitute a unit capable of single economic maintenance. Formal acceptance will be made upon formal transfer of the south levee of South Dry Creek and the north levee of Bear River east of Reclamation District No. 817, at which time Sections

Items 1 to 5

8400 to 8447 of the Water Code of the State of California, may become operative.

No Federal maintenance of this channel has been done and none is required.

Yours very truly,

THE RECLAMATION BOARD

By _____
A. M. BARTON
Chief Engineer and General Manager

AMB:FK

cc: Chief of Engineers
Washington, D. C.

Division Engineer
South Pacific Division
Corps of Engineers, U. S. Army
P.O. Box 3339, Rincon Annex
San Francisco 19, California

State Engineer
Sacramento

(2)

Items 1 to 5

(3)

2

This copy was furnished on 24 Feb. 1953 by SPA.

Accepted items

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.

No.	Date of Letter	Levee Location	Remarks
(2)-(3)	1	1 Dec.1951 N. and S. Training* Levees Moulton Weir*	Maintained by State
(3)-(4)	1	Do N. and S. Training* Levees Colusa Weir*	Maintained by State
(6)	2	3 Dec.1951 W. Levee Sacramento River, Mile 177.5 Mile 174.1	Maintained as Maintenance Area No. 2
(9)	3	4 Dec.1951 E. Levee Yolo By-pass Fremont* Weir to Miner Slough*	N. 2 mi. maintained by State. Remainder by local districts. Conditioned upon completion of levee section and no acceptance of banks of Sacramento Deep Water Channel.
(10) (11)	3	Do N.&S. Levees Sacramento By-pass*	Maintained by State. Waterward slopes on 4 to 1 not required.
(21a)	4	6 Dec.1951 Back levee Egbert District*	Maintained by R. D. No. 536
(22)	4	6 Dec.1951 W. Levee Yolo By-pass Lindsey* Slough to Watson Hollow Drain*	Maintained by R. D. No. 536
(24)	4	Do N.Levee Watson Hollow Drain*	Do
(16)	5	6 Dec.1951 W.Levee Sacramento River Mile 59.0 to Lake Washington Barge Canal	Maintained by R. D. No. 900
(18)	5	Do W. Levee Sacramento Riv.Mile 50.8 to 50.5	Bank protection contract. Maintained by R. D. No. 765

Copy to USED.

(1)

3

Accepted Items

No.	Date of Letter	Levee Location	Remarks
6 (12)(13)(14)(15)	6 Dec.1951	Levees of Wadsworth Canal* South levees of E. and W. Intercepting Canals.	Maintained by State. Waterward slopes on 4 to 1 not required.
7 = 329 (87-A)	7 Dec.1951	Site 2 Part A. W.Levee Sacramento River-Mile 28.5 -Grand Island.	Maintained by R.D. No. 3. Completed contract.
= 331 (89-A)		Site 1,Part B. E. levee Sacramento River-Mile 15.0 Brannan Island.	Maintained by R.D.No. 2067 Completed contract.
8 (51)(52)(53)(54)(55)(56)(57)	8 Dec.1951	W. levee Sacramento River Mile 163.8 to Mile 143.5 except 320 ft. at Colusa Warehouse & Mile 146.1 to Mile 146.4.	Maintained as Maintenance Area No. 1.
8 (58)(59)(60)(61)(62)(63)	Do	E. levee Sacramento River, Mile 153.3 to Mile 152.7; Mile 149.9 to Mile 149.7; Mile 149.4 to Mile 149.0; at Colusa Weir; Mile 143.3 to Mile 140.2;Mile 139.3 to Mile 138.2.	Maintained by State Separate completed contracts.
8 (64)(65)(66)(67)(68)(69)(70)	Do	E. levee Sacramento River Mile 138.2 to Mile 137.9; Mile 136.9 to Mile 133.8; Mile 133.2 to Mile 132.3; Mile 131.8 to Mile 125.9; Mile 125.8 to Mile 123.1; Mile 122.6 to Mile 122.0.	Maintained by R.D.No. 70, Completed contracts.
(71)(72)(73) 8	Do	West levee,Sutter By-pass*	Maintained by R.D.Nos. 70, 1660, 1500.Condition upon completion of remaining part to standard section.
(74) 8	Do	North levee Tisdale By-pass*	Maintained by R.D.No. 1660. Waterward slope of 4 to 1 not required.
(75) 8	Do	South levee Tisdale By-pass*	Maintained by R.D.No.1500. Waterward slope of 4 to 1 not required.
(76) 8	Do	East levee Sutter By-pass*.	Maintained by State.
(81) 9	Do	W. levee Sacramento River Mile 35.15 to 35.86.	Maintained by R.D.No. 150 (Merritt Island).Completed contract bank protection.

(21)

(2)

Accepted Items

No.	Date of Letter	Levee Location	Remarks
(91) 10	8 Dec. 1951	Cross levee Steamboat Slough to Sacramento River.*	Maintained by R.D. No. 3 (along U.S.spoil bank).
(140) 11	Do	N. levee American River from Jibboom St.Bridge to Sacramento River.	Maintained by R.D. No. 1000.
(141) 11	Do	E. levee Sacramento River American River to Natomas Cut.	Maintained by R.D.No. 1000.
(142) 11	Do	E. bank Sacramento River At Moulton Weir.	Maintained by State.
(143) 11	Do	E. Levee Sacramento River Mile 158.5 to Mile 164.4.	Maintained partly by State; remainder by Levee District.No. 3, Glenn County, Completed Contract.
(146) 11	Do	W. levee Sacramento River Mile 61.8 to Mile 62.65.	Maintained by Maintenance Area No. 4. Completed contract.
(147) 11	Do	W. Levee Sacramento River Mile 62.65 to Mile 63.1.	Maintained by R.D. No. 537 Completed contract.
(148) 11	Do	Sacramento Weir.	Maintained by State.
(152) 11	Do	Fremont Weir.	Maintained by State.
11 (153) (156) (157)	Do	W. Levee Sacramento River Mile 87.6 to Mile 88.4; Mile 89.2 to Sycamore Slough	Maintained by R.D. No. 730 Completed contracts.
(158) 11	Do	W. Levee Sacramento River Mile 100.6 to Mile 101.4	Maintained by Sacramento River West Side Levee District. Completed contract.
11 (160) (161) (162) (163)	Do	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 State.
(164) 11	Do	E. Levee Sacramento River, Natomas Cut to Feather River	Maintained by Recl.Dist.No.1001.
11 (165) (166) (167) (168) (169) (170)	Do	E. Levee Feather River from mouth to Mile 26.5,except from 2.37 miles of Nicolaus Bridge to Bear River	Maintained by R.D. Nos. 1001 and 784.

5

Accepted Items

No.	Date of Letter	Levee Location	Remarks
11 (171-172)	8 Dec.1951	Marysville levees from W.P.R.R. at Simmerly Slough E.to Yuba River and from D St. Bridge on Yuba River upstream to Valley Meat Co.	Maintained by Marysville Levee Commission.
11 (173) (174)	Do	N.Levee Simmerly Slough from W.P.R.R. to S.P.R.R. and E. Levee Feather River from Simmerly Slough upstream 4.8 miles	Maintained by R.D. No. 10 Completed contract.
(175) 11	Do	N. Levee Yuba River from back levee of Marysville upstream 1.8 miles	Maintained by Marysville Levee Commission.
(176) 11	Do	S.Levee Yuba River from S.N.R.R. to S.P.R.R.	Maintained by R.D. No. 784.
(177) 11	Do	N.Levee Bear River from Feather River to W.P.R.R. Interceptor	Maintained by R.D. No. 784.
(178) 11	Do	E. Levee R.D.784 (W.Levee W.P.R.R.Interceptor) Bear River to intersection with W.P.R.R. in S½ Sec.17, T.14 N.,R. 4 E.	Maintained by R.D. No. 784.
11 (179) (180)	Do	S. Levee American River from 16th St.Bridge to Mayhew except from S.N.R.R. to a point 800 ft. E. of W.P.R.R.	Maintained by American River Flood Control District.
(181-182-183-184-185-186-187-188) 11	Do	W. Levee Yolo By-pass from Sacramento River to Putah Creek except from N.line Cache Cr.Settling Basin to S.N.R.R. & from old Willow Slough pipes south 1.48 mi.*	Maintained by State and R. D. #2035.
(190) 11	Do	N.&S. levees Willow Slough Interceptor*	Maintained by State and R. D. No. 2035.
(191) (192) 11	Do	N.&S. levees of Putah Creek	Maintained by State.
11 (197-198)	Do	N.&S. levees Sycamore Slough from Sacramento River to Knights Landing Outfall Gates	Maintained by R.D. 730 and Sacramento River West Side Levee District.

(21)

(4)

6

Accepted Items

No.	Date of Letter	Levee Location	Remarks
12	8 Dec. 1951	Five reaches of Ryer Island levee along Miner Slough as follows:	
		a. Junction Miner and Sutter Sloughs westerly 5000 feet. (38 / 19A) Covered by letter dated 16 Nov. 1951 (321)	
		b. From State Highway Bridge West. 3035 ft.	
		c. Spec. 1473, Sta. 53+00 to 64+00 about one mi. No. of Ryde Road. Mile 29.4 to 29.6 (303 Covered by letter dated 17 Nov. 1951 — 53A)	Maintained by R.D. No. 501. All are completed separate contracts.
		d. Spec. 1473, Sta. 0+00 to 12+00 being 600 ft. each side of Ryde Road. Mile 30.4 to 30.6 (304 — 54A)	
		e. Ryer Island cut-off levee beginning at east bank of Cache Slough and extending upstream 3,300 feet at junction of Cache and Miner Sloughs. (28 / 50)	

*No waterway banks contiguous to these levees.

(5)

C. de ARRIETA

[illegible] MAIL
Return 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 14, 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 (?)

b. Easterly levee of the Sacramento River.

Reach 15 (141) (1) American River to Natomas Cut. 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) ? 184

Accepted by letter dated 9 March 1953 (144) (4) Mile 168.5 to Mile 186.9 (at Butte City). (man 2) ? 138

c. Westerly levee of the Sacramento River.

(145) (1) Mile 59.9 to Mile 60.75. 116

(146) (2) Mile 61.8 to Mile 82.65 (at Bryte Bend) 116

62.65

Letter 12 Items 140 to 198

(12)

Letter No. 12

(12)

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

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 85.5. 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

Reach No. 5

157. (13) Mile ~~89.8~~ 89.2 (Knights Landing Highway Bridge) to Sycamore Slough. 89.9 128

Reach No. 4

158. (14) Mile ~~100.6~~ 100.6 to Mile 101.4. 128

159. (15) Mile 110.9 to Mile 111.2. 128

d. Westerly levee of the Feather River.

Reach 39

160. (1). Sutter Bypass to Nicolaus Bridge. 143

161. (2) From a point 5.31 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. e. Easterly levee of the Sacramento River from Natomas 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.

(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. 145

(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. All 147

Reach 43 (171.) (1) From the W.P.R.R. at Simmerly 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 Simmerly Slough from the W.P.R.R. to the S.P.R.R. 151

(174.) (2) Easterly levee of the Feather River from Simmerly Slough to a point 4.6 miles northerly from Simmerly Slough. 151

Reach 46 (175.) i. Northerly levee of the Yuba River from the back levee of the City of Marysville to a point 1.8 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)

SPKKA 824.3(Sac.Riv.P.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

29 (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

96 (193) (1) From Yolo Bypass westerly 600 feet. Also covered under Unit 96-A

96 (194) (2) From a point 2,500 feet westerly from Yolo Bypass to a point 2,800 feet westerly from Yolo Bypass. 127
Also covered under 96-A

1000

(12)

Letter No. 12

(12)

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

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

(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

(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.(13), 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,

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

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

(12)

REGISTERED MAIL
Return Receipt
Requested

Arrieta (1)

Letter No 1

1 DEC 1951

Legend Notes:
Accepted Items (15)
Not accepted Items (18)

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

Refer. Recl. Board letter 2 April 1952:
Items (1) to (4) were formally accepted by the Board on 18 Dec. 1951.
Item (5) will not be accepted. The Board considers this unit is not suitable for maintenance.
The Board requests formal transfer of [redacted] South Levee of South Dry Creek and North Levee of Bear River east of Reclamation District No. 817

The Reclamation Board
State of California
1100 "O" Street
Sacramento 14, California

Ref. map - Reach No. 45: Information showing acceptance of levees east the S.P.R.R is incorrect.

Gentlemen:

A recent review of the status of the works comprising the Sacramento River Flood Control Project as authorized prior to the Flood Control Act of 1944 has disclosed that the following works meet the requirements of the Project:

Reach 12 (1.) a. Southerly Moulton Weir Training levee from Sacramento River southeasterly to the County Road. 154

Reach 11 (2.) b. Northerly Moulton Weir Training levee from Sacramento River to Moulton Weir. 154

Reach 12 (3.) c. Southerly Colusa Weir Training levee from Sacramento River easterly to its terminous in Butte Basin. 155

Reach 12 (4.) d. Northerly Colusa Weir Training levee from Sacramento River easterly to its terminous in Butte Basin. 155

Reach 45 (5.) e. Grasshopper Creek Diversion Channel, easterly from Wheatland, from its head at Grasshopper Creek northerly to South Dry Creek. 146

The works covered by Items a. to e., inclusive, above, although complete have not been formally transferred as contemplated by the Project documents. Accordingly said works, together with the waterway banks contiguous thereto, are hereby transferred to the State of California for maintenance and operation.

106 to 158

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing

Reach 45 ?

Items 1 to 5 (1)

Letter No. 1

(1)

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

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

Sincerely yours,

C. C. Haug
Colonel, Corps of Engineers
District Engineer

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

(1)

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__) Sacramento River Flood Control Project --Moulton Weir 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 79.0 on the gage at southend of Moulton Weir) occurred on the following dates:

Dates	Maximum Elevation

EXHIBIT G
Sheet 1 of 2

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

	Labor	Material	Equipment	Overhead	Total
1. Inspection					
2. Maintenance					
3. Flood fighting operations					
TOTAL					

Respectfully submitted,

_____
Superintendent of Works

EXHIBIT G
Sheet 2 of 2