0050
Book H

SUPPLEMENT TO STANDARD OPERATION AND MAINTENANCE MANUAL

SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 129

SOUTH LEVEE OF TISDALE BY-PASS
FROM
THE EAST LEVEE OF SACRAMENTO RIVER
TO
THE WEST LEVEE OF SUTTER BY-PASS
AND
WEST LEVEE OF SUTTER BY-PASS
DOWNSTREAM TO EAST LEVEE OF SACRAMENTO RIVER

SACRAMENTO DISTRICT

CORPS OF ENGINEERS
U. S. ARMY
SACRAMENTO, CALIFORNIA

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Accompanying Map #4010

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LOCATION	ADDITION OR REVISION	DATE
1-04 c.	Add description for section III	Jul 1966
1-05	Add section III-contract No. 65-151	Jul 1966
Exhibit B	Add drawing No. 50-4-4021	Jul 1966
Exhibit F	Add copy of letter of acceptance dated 10 Feb 1966	Jul 1966
1-04 d.	Add description for section IV	Dec 1968
1-05	Add section IV- contract no. DACW05-68-C-0077	Dec 1968
Exhibit B	Add drawing no. 50-4-4393	Dec 1968
Exhibit F	Add copy of letter of acceptance dated 24 Dec 1968	Dec 1968
1-04 e.	Add description for section V	Mar 1971
1-05	Add section V-contract no. DACW05-70-C-0080	Mar 1971
Exhibit B	Add drawing no. 50-4-4310	Mar 1971
Exhibit F	Add copy of letter of acceptance dated 2 Oct 1970	Mar 1971
1-04	Add subparagraph f.	Jan 1985
1-05	Add section VI	Jan 1985
Section II, page 16	Add paragraph 2-05	Jan 1985
Exhibit B	Add drawing no. 50-4-5595	Jan 1985
Exhibit F	And copy of letters of transfer dated 19 Jun 1984 and 18 Oct 1984	Jan 1985
1-04	Add subparagraph g.	Jul 1985
1-05	Add section VII	Jul 1985
Exhibit B	Add drawing no. 50-4-5722	Jul 1985
Exhibit F	Add copy of letter of transfer dated 28 Nov 1984	Jul 1985
1-04	Add subparagraph h.	Sep 1990
Exhibit B	Added drawing no. 50-4-5798	Sep 1990
Exhibit F	Added transfer letter dated 22 Nov 1989	Sep 1990
Exhibit F	Add copy of letter of transfer dated 13 Dec 1951	22 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 18 Dec 1951	22 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 2 Jan 1952	22 Dec 2010

LOCATION	ADDITION OR REVISION	DATE
1-04	Combine Section 1-04 (Construction Data) and Section 1-05 (Contractor); renumber subsequent sections.	22 Dec 2010
1-04	Add subparagraph i	22 Dec 2010
Exhibit F	Add copy of letter of transfer dated 4 Nov 1980	22 Dec 2010
1-04	Add subparagraph j	22 Dec 2010
Exhibit F	Add copy of letter of transfer dated 16 Jan 1987	22 Dec 2010
Exhibit F	Add copy of letter of transfer dated 17 Jan 1966	2 Feb 2011
Exhibit F	Add copy of letter of transfer dated 22 Nov 1968	2 Feb 2011
Exhibit F	Add copy of letter of acceptance dated 27 Mar 1990	8 Mar 2011

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* Added January 1985

EXHIBITS

A	Flood-Control Regulations	Unattached
A-1	Location Map	1 Sheet
B	"As Constructed" Drawings	Detached
C	Plates of Suggested Flood Fighting Methods (Contained in Standard Manual)	Unattached
D	Check List No. 1 – Levee Inspection Report (Contained in Standard Manual)	Unattached
E	Check Lists – Levee, Channels and Structures	Sheets 1 – 7
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G	Suggested Semi-Annual Report Form	Sheets 1 & 2

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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 south levee of Tisdale Bypass from the east levee of the Sacramento River to the west levee of Sutter Bypass and the west levee of Sutter Bypass downstream to the east levee of the Sacramento River. Tisdale Bypass and Sutter Bypass are leveed floodways which convey excess flood waters from the Sacramento River. The levees of this unit are located in Reclamation District No. 1500, in Sutter County, in the general vicinity of the towns of Knights Landing and Meridian. The location of the completed unit covered by this manual is shown on Exhibit "A-1".

1-02. Protection provided. - Tisdale and Sutter Bypasses are essential features of the Sacramento River Flood-Control Project. Their primary function is to divert excessive overflow waters of the Sacramento River and its tributaries. The levees of this unit provide protection to adjacent agricultural lands against high water in the Sutter Bypass and Tisdale Bypass. The grade of the adopted flood plane in Tisdale Bypass varies from elevation 53.0 at the Sacramento River to 50.2 at the junction with Sutter Bypass. The grade of the adopted flood plane in Sutter Bypass varies from elevation 50.2 at its junction with Tisdale Bypass to elevation 40.8 at its junction with Sacramento River. (All elevations are referred to U.S.C.E. datum.) The levee grade provides

for a freeboard of 6 feet above the flood plane. The project design flood flow for Tisdale Bypass is 38,000 cubic feet per second and for Sutter Bypass it is 178,000 cubic feet per second above Tisdale Bypass and 216,500 cubic feet per second below Tisdale Bypass.

1-03. Project works. The Project works covered by this manual include the following:

a. The south levee of Tisdale Bypass and the west levee of the Sutter Bypass from Tisdale Bypass southerly (downstream) 14.2 miles as constructed by local interests as enlarged by the Corps of Engineers.

b. The west levee of the Sutter Bypass from 1 mile above its mouth northerly (upstream) 5.8 miles as constructed by local interests or as enlarged by the Corps of Engineers.

1-04. Construction data and contractor. Unit No. 129 of the flood-control works described in this manual forms an integral part of the Sacramento River Flood-Control Project. The construction to bring this unit to project standards was performed under the following contracts, record copies of which are on file with the Corps of Engineers, U.S. Army, Sacramento District, Sacramento, California.

a. Enlargement where necessary of the local interest levee on the south bank of Tisdale Bypass and the westerly levee of the Sutter Bypass from Tisdale Bypass southerly (downstream) 14.2 miles. Construction was started on 17 September 1942 and completed 6 October 1943 under Contract No. W-1105-eng-3940 by H. Earl Parker and N.M. Ball Sons Inc., Contractors.

b. Enlargement where necessary of the existing local interest levee on the westerly levee of Sutter Bypass from 1 mile above its mouth 5.8 miles northerly (upstream). Construction was started 25 September 1941, and completed 5 December 1942 by N.M. Ball Sons, Inc., Contractors under Contract No. W-1105-eng-3249.

c. Levee revetment along west levee of Sutter Bypass from Karnak Pump to 6.0 Miles upstream. Construction was started on 7 July 1965 and completed on 24 December 1965 by Sutherland Construction, Inc. under Contract No. DA-04-167-CIVENG-65-151. Specification No. 3131, Drawing No. 50-4-4021.

d. Levee revetment along west levee of Sutter Bypass from Karnak Pump downstream for a distance of 5,432 feet (site 3). Construction was completed on 5 November 1968 by Spike Voudouris under Contract No. DACW05-68-C-0077. Specification No. 3492, Drawing No. 50-4-4393.

e. Bank revetment along left bank of the Sacramento River at Site Mile 83.45 (a portion of Unit 16, Sacramento River Bank Protection Project) was completed on 23 September 1970 by H. Earl Parker under Contract No. DACW05-70-C-0008. Specification No. 3390, Drawing No. 50-4-4310.

f. Emergency repairs to project levees on the Sutter Bypass – Reclamation District 1500 – were completed on 26 September 1983 by Wayne L. Grist, Inc. under Contract No. DACW05-84-C-0037. Specification No. 6875, Drawing No. 50-4-5595.

g. Emergency repairs to project levees on the Sutter Bypass right bank levee – Reclamation District No. 1500, were completed on November 2, 1984 by Sybon & Reid, Inc., under Contract No. DACW05-84-C-0127. Specification No. 7256, Drawing No. 50-4-5722.

h. Bank sloping, stone protection and selective clearing on the right bank of the Sutter by-pass at Site Mile 64.0 (a portion of Contract 43) was accomplished on 14 November 1989. Specification No. 8367, Drawing No. 50-4-5798.

i. Emergency repairs of project levees along the right bank of the Sacramento River, RD 1600 and Sutter Bypass, RD 1500 was completed on 21 October 1980 under Contract No. DACW05-80-C-0114. Specification No. 5954, Drawing No. 50-4-5561.

j. Emergency repairs to project levees consisting of restoring portions of the left bank of the Sacramento River and the right bank of Sutter Bypass in R.D. 1500 was completed on 3 December 1986 under Contract No. DACW05-86-C-0108. Drawing No. FE-3-4-2.

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 Tisdale Bypass reaches or exceeds the reading of 48.0 on the cooperative U.S. Corps of Engineers and State of California continuous water stage recorder and staff gage, set on U.S. C.E. datum, located on the left bank of the Sacramento River at north end of Tisdale Weir; it also applies to floods in the Sutter Bypass rising above the reading of 36.0 on the continuous water stage recorder and staff gage set on U.S.C.E. datum, located on west levee of Sutter Bypass at Sacramento Slough at Reclamation District No. 1500 Pumping Plant.

1-06. Assurances provided by local interests. Assurances 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 the 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 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. Channels. -

a. Description - The principal structures consist of:

Channels or floodways - When flood discharge exceeds the carrying capacity of the Sacramento River along Butte Basin, water overflows into that basin through natural overflow channels at the upper end and over Moulton and Colusa Weirs farther downstream, which have crest lengths of 500 and 1650 feet, respectively. The overflow waters, after passing through Butte Basin, are concentrated in Sutter Bypass which has a width of 4,000 feet at its upper end, levees 18 to 20 feet in height and a project design capacity of 178,000 cubic feet per second above, and 216,500 cubic feet per second below Tisdale Bypass, with a freeboard of six feet. Flows in the Sacramento River are further relieved at Tisdale Weir, which has a crest of 1,155 feet over which waters are discharged through a leveed bypass (Tisdale Bypass) into Sutter Bypass. The Sutter Bypass increases in width to 7,000 feet and in capacity to 416,500 cubic feet per second below its confluence with Feather River. The discharge from Sutter Bypass crosses the Sacramento River Channel and enters Yolo Bypass over Fremont Weir, which has a crest length of 9,120 feet.

b. Inspection -

(1) Pertinent requirements of the Code of Federal Regulations - Flood-Control Regulations, paragraph 208.10 (g) (1) are quoted in part as follows:

"(g) Channels and floodways .... (1) Maintenance. Periodic inspections of improved channels and floodways shall be made by the superintendent to be certain that:

"(i) The channel or floodway is clear of debris, weeds, and wild growth;

"(ii) The channel or floodway is not being restricted by the depositing of waste materials, building of unauthorized structures or other encroachments;

"(iii) The capacity of the channel or floodway is not being reduced by the formation of shoals;

"(iv) Banks are not being damaged by rain or wave wash, and that no sloughing of banks has occured;

"(v) Riprap sections and deflection dikes and walls are in good condition;

"(vi) Approach and egress channels adjacent to the improved channel or floodway are sufficiently clear of obstructions and debris to permit proper functioning of the project works.

"Such inspections shall be made prior to the beginning of the flood season and otherwise at intervals not to exceed 90 days. Immediate steps will be taken to remedy any adverse conditions disclosed by such inspections ...."

(2) The purpose of the flood flow channel inspection is to insure that conditions which affect the channel capacity will remain the same, as far as possible, as those considered in the design assumptions and that no new conditions develop that may affect the stability of the project structures. At each inspection required by paragraph 208.10 (g) (1) of the Flood-Control Regulations, particular attention will, therefore, be given the following:

(a) Location, extent and size of vegetal growth.

(b) Unauthorized operations within the flood flow channel right-of-way, such as excavations, buildings and other structures, levees, bank protection, or training dikes.

(c) Rubbish and industrial waste disposal.

(d) Changes in the channel bed such as aggradation or degradation, which would interfere with free-flow from side drainage structures or induce local meanders that would scour the banks.

(e) Operations of any nature upstream from the project that would affect flow conditions within the limits of the flood-control project.

(f) Condition of project structure.

1. Channel walls:

a. Deviation from alignment and grade.

b. Development of cracks and spalls.

c. Mechanical injuries.

2. Fencing:

a. Injuries to posts, fencing or barbed wire.

b. Damage to galvanizing.

3. Earth Fills:

a. Settlement.

b. Erosion of levee slopes

c. Excessive seepage or saturation area back of fills.

d. Condition of bank protection - concrete or stone blanket.

4. Right-of-way:

a. Presence of dumped refuse.

b. Encroachment or trespass.

(3) No excavation within the limits of the Sutter Bypass or Tisdale Bypass will be permitted unless an excavation permit has been approved by the Reclamation Board, State of California.

(4) If any work is done to improve flow conditions in Sutter Bypass above the project, it should be coordinated with the District Engineer to insure that proper provisions are made for channel alignment and capacity to conform to the existing project.

(5) The intent of these inspections is to disclose all conditions which in any way affect the stability of the

structures and their functioning for the control of floods. Each inspection report should note and comment on any repair measures that have been taken since the last inspection. In making these inspections, the check sheets included as exhibit E shall be explicitly followed.

c. Maintenance.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10 (g) (1), are quoted in part as follows: ".... Immediate steps will be taken to remedy any adverse conditions disclosed by such inspection...."

(2) Shoaling or aggradation at the inlets or outlets of side drainage structures may render them inoperative. It is, therefore, imperative that all drains be kept open and unobstructed at all times.

(3) Dumped rock or other suitable types of protection should be placed at locations found by experience to be critical trouble points, with a view to stabilizing the channel alignment and preserving the general uniformity of the bank lines.

(4) Sediment and debris plugs or other obstructions should be removed from the channel to prevent any tendency for the flows to be deflected within the channel. The heavy material likely to accumulate in the new channel at the mouths of tributaries should be removed to keep the channel clear.

(5) The channel and right-of-way shall be kept reasonably clear of debris, refuse matter, or industrial wastes.

(6) Weeds and other vegetal growth in the channel shall be cut in advance of the flood season and, together with all debris, removed from the channel.

(7) All eroded concrete shall be repaired as soon as any reinforcing steel is exposed or erosion reaches a depth of 4-inches. For this purpose, it is recommended that the repair be made by thoroughly cleaning the surface by sandblasting

and building up the section with pneumatically placed Portland cement mortar. All evidence of settlement, uplift, or failure of concrete structures shall be referred to the District Engineer for analysis and remedial measures.

(8) All damage to fencing, whether resulting from accidental or willful injuries or from corrosion, shall be promptly repaired with new material in order to maintain satisfactory protection to the public.

(9) All subdrainage structures which have become cemented due to the evaporation of ground water or other causes, shall be thoroughly cleaned out and repacked with fresh gravel.

d. Operation.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10 (g) (2), are quoted in part as follows:

"(g) Channels and floodways. (2) Operation. Both banks of the channel shall be patroled during periods of high water ..... Appropriate measures shall be taken to prevent the formation of jams .... of debris. Large objects which become lodged against the bank shall be removed. The improved channel or floodway shall be thoroughly inspected immediately following each major high water period. As soon as practicable thereafter all snags and other debris shall be removed and all damage to .... walls, drainage outlets or other flood control structures repaired."

(2) It shall be the duty of the Superintendent to maintain a patrol of the project works during all periods of flow in excess of a reading of 48.0 and 36.0 respectively, on the recording gages, as indicated in paragraph 1-06 of this manual. The Superintendent shall dispatch a message by the most suitable means to the District Engineer whenever the water surface in Tisdale and Sutter Bypasses reaches the

gage readings indicated above. The Superintendent shall also cause readings to be taken at the gages at intervals of one to two 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 immediately following the flood, and a second copy transmitted as an inclosure to the semi-annual report in compliance with paragraph 3-03 c. of the standard manual.

2-02. Levees.

a. Description. The levees described in this manual are located along the southerly edge of Tisdale Bypass and the westerly edge of Sutter Bypass from Tisdale Bypass southerly to the east levee of the Sacramento River. The original levees were constructed by local interests. They were rebuilt where necessary by the Sacramento District to bring them to project standards. Crushed rock surfacing to provide a patrol road to the crown of the levee, as indicated on the drawings of Exhibit B. For more complete details of items included in construction or reconstruction of the above-mentioned levees, by the Sacramento District refer to the "as constructed" drawings of Exhibit B.

b. Inspection.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10 (b) (1), are quoted in part as follows:

"(b) Levees - (1) Maintenance .... Periodic inspection shall be made by the Superintendent .... to be certain that:

(i) No unusual settlement, sloughing, or material loss of grade or levee cross section has taken place;

(ii) No caving has occurred on either the landside or the riverside of the levee which might effect the stability of the levee section;

(iii) No seepage, saturated areas, or sand boils are occurring;

(iv) Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged;

(v) Drains through the levees and gates on said drains are in good working condition;

(vi) No revetment work or riprap has been displaced, washed out, or removed;

(vii) No action is being taken, such as burning grass and weeds during inappropriate seasons, which will retard or destroy the growth of sod; (see note (a) below)

(viii) Access roads to and on the levee are being properly maintained.

(ix) Cattle guards and gates are in good condition.

(x) Crown of levee is shaped so as to drain readily, and roadway thereon, if any, is well shaped and maintained.

(xi) There is no unauthorized grazing or vehicular traffic on the levees.

(xii) Encroachments are not being made on the levee right-of-way which might endanger the structure or hinder its proper and efficient functioning during times of emergency.

Such inspections shall be made immediately prior to the beginning of the flood season; immediately following each major high water period; and otherwise at intervals not exceeding 90 days; and such intermediate times as may be necessary to insure the best possible care of the levee ...."

NOTE (a) Since the growth of sod on the slopes of the levees of this project is not practicable and as the nature of the levee growth warrants burning thereof to facilitate inspection, the provisions of subparagraph b (1) of the regulations inconsistent therewith shall not apply. In place of item (vii), the following will be observed: Weeds, grasses and debris on the levee shall be burned during appropriate seasons where not dangerous or impracticable, in order to permit the detection and extermination of burrowing

animals and that grass and weeds on levee slopes be mowed where removal by burning is dangerous or impracticable, such as on peat levees or where burning would constitute a hazard.

(2) To insure the taking of such maintenance measures as will be required for proper functioning of the levee, the following items shall be specifically covered in each inspection:

(a) Aggradation or degradation of the stream bed along the toe.

(b) Settlement of levee fill.

(c) Erosion of levee slopes; both sides of levees.

(d) Presence of seepage, saturated areas, or sand boils back of levee.

(e) Condition of access roads and roadway on levee.

c. Maintenance.

(1) Repairs to Levee Embankment. Methods used for repair or reconstruction of the levee fill will depend on the extent of the damaged section. If of small extent, the most suitable method will be to bring the levee back to line and grade by a fill made in 6-inch layers of dirt free from brush, roots, sod or other unsuitable matter. If of larger extent, the fill should be made in the same manner as the original construction, of selected material from the borrow pits approved for the project, placed in uniform layers of loose material and not more than 6 inches in depth and compacted in accordance with the specifications under which the work was completed.

(2) Depredations of Burrowing Animals. Dens and runways formed within the levee by burrowing animals are frequently the causes of levee failures during flood stages. Burrowing animals such as muskrats, ground hogs, ground squirrels, moles and gophers, found in the levee should be exterminated. The dens and runways should be opened up and thoroughly compacted as they are backfilled. Levees kept properly cleared are not seriously menaced by burrowing animals as they prefer areas where a protective cover, such as high grass, weeds, and brush, is found. Several methods of extermination are

found effective, such as trapping, baiting, and poison gases, depending on the type of animal present and the time of year the work is done. Advice concerning the best methods in each locality can be obtained from the County Agricultural Agent.

(3) Access Roads. Access Roads to the levees shall be maintained in such condition that they will be accessible at all times to trucks used to transport equipment and supplies for maintenance or flood fighting.

d. Operation.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations paragraph 208.10 (b) (2) are quoted in part as follows:

"(2) Operation. During flood periods, the levee shall be patrolled continuously to locate possible sand boils or unusual wetness of the landward slope to be certain that:

(i) There are no indications of slides or sloughs developing;

(ii) Wave wash or scouring action is not occurring;

(iii) No low reaches of levee exist which may be overtopped;

(iv) No other conditions exist which might endanger the structures.

Appropriate advance measures will be taken to insure the availability of adequate labor and materials to meet all contingencies. Immediate steps will be taken to control any condition which endangers the levee and to repair the damaged section."

2-03. Drainage and Irrigation Structures.

a. Description. Drainage and Irrigation Structures provided in the project works are located and described as follows:

(1) Reinforced concrete pipes or conduits extending through the levees to drain the areas adjacent to the Tisdale and Sutter Bypasses are as listed in the following table:

See Drwg. No. 50-4-1940-2, sheet 3 of Exhibit B

Location Station	Bank	Concrete Conduits	Gate Model No. (a)	Description
1224+75 Pumping Plant 1	Right	3-78"	100	(b)
1226+00 Pumping Plant 2	Right	3-4'x4'	100	(b)
1227+00 Pumping Plant 3	Right	4-6'x7'	100	(b)

(2) Concrete and corrugated metal pipes extending through the levees to irrigate the areas adjacent to the Tisdale and Sutter Bypasses are as listed in the following table:

See Drwg.No. 50-4-1992-1, sheets 1 and 3 of Exhibit B

Location Station	Bank	Concrete & C.M.P.	Gate Model No. (a)	Description
61+25	Right	54" Conc.	101	(c)
299+44	Right	20" I.P.		

Notes pertaining to tables: (a) Gate Model No. 100 is a Calco automatic drainage gate on outlet end of pipe. It closes against face pressure and opens automatically to permit outflow when pressure is released.

Gate Model 101 is a Calco slide gate which operates by handscrew on a steel frame.

Gate Model No. 1001 is a combination gate which includes the features of gates No. 100 and 101.

(b) With concrete cut-off walls and reinforced concrete headwall.

(c) With concrete cut-off walls only.

b. Inspection.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10 (d) (1), are quoted in part as follows:

"(d) Drainage Structures (1) Maintenance. Adequate measures shall be taken to insure that inlet and outlet channels are kept open and that trash, drift, or debris is not allowed to accumulate near drainage structure..... ...Periodic inspections shall be made by the Superintendent to be certain that:

(i) Pipes, gates, operating mechanism, riprap and headwalls are in good condition;

(ii) Inlet and outlet channels are open;

(iii) Care is being exercised to prevent the accumulation of trash and debris near the structures and that no fires are being built near bituminous coated pipes;

(iv) Erosion is not occuring adjacent to the structures which might endanger its water tightness or stability.

Immediate steps will be taken to repair damage, replace missing or broken parts, or remedy adverse conditions disclosed by such inspection."

(2) At each inspection required by paragraph 4-02 (b) (2) of the Standard Manual, the following items, if applicable, shall be particularly noted:

(a) Debris or other obstructions to flow.

(b) Condition of pipes and gates.

(c) Damage or settlement of pipe.

(d) Condition of concrete - cracks, spalls, erosion.

c. Maintenance -

(1) All eroded concrete shall be repaired as soon as any reinforcing steel is exposed or erosion reaches a depth of 4 inches. For this purpose it is recommended that the repair be made by thoroughly cleaning the surface by sandblasting and building up the concrete to its original section with pneumatically placed Portland cement mortar. All evidences of settlement, uplift, or failure of concrete structures should be referred to the State Engineer for analysis and recommendation of remedial measures.

(2) If the inspection shows that the automatic drainage structures have been jammed in an open position by debris or other obstructions, they shall be thoroughly cleaned so that they swing freely to a true closure. If any parts of the gates have been damaged or broken, they shall be replaced by new parts.

(3) Compliance with the provisions prescribed above pertaining to drainage structures is essential for proper maintenance of the levee system covered by this manual. Levee failures caused by neglected drainage structures are of common occurrence; it is, therefore, of utmost importance that these structures always be kept in perfect working condition in accordance with the regulations.

(4) Care should be taken not to bury any of the side drainage inlets in the event that it becomes necessary to fill any of the low-lying pockets in back of the levee. Plans for the maintenance of drainage facilities at any such points should be submitted to the State Engineer for approval before such work is started.

d. Operation -

(1) Pertinent Requirements of the Code of Federal Regulations - Flood-Control Regulations, paragraph 208.10 (d) (2), are quoted in part as follows:

"(2) Operation. Whenever high water conditions impend, all gates will be inspected a short time before water reaches the invert of the pipe and objects which might prevent closure of the gate shall be removed. Automatic gates shall be closely observed until it has been ascertained that they are securely closed .... All drainage structures in the levees shall be inspected frequently during floods to ascertain whether seepage is taking place along the lines of their contact with the embankment. Immediate steps shall be taken to correct any adverse conditions."

(2) The outlets of side drainage structures inundate at relatively low river stages. They should, therefore, be inspected at the first sign of a rise in the river to make certain that the gates are not jammed in an open position and thus allow flood waters to enter behind the levee.

2-04. Miscellaneous facilities. -

a. Description - No miscellaneous structures or facilities were constructed as a part of, or in conjunction with, the protective works.

(1) Utility relocations - No miscellaneous utilities interfered with the project works and, therefore, no utility relocations were necessary.

* 2-05. Environment Protection.

a. Vegetation preserved as a part of selective clearing on the waterside berm or slope above the bank protection during prosecution of the contract shall not be removedas a part of normal maintenance. Dead trees with wildlife value will be retained except where they constitute a hazard to existing flood control works. * JAN 1985

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 V of the Standard Manual, where the subject is fully covered.

SPKGE 8 June 1954

SUBJECT: Operation and Maintenance Manuals

MEMORANDUM TO: CHIEF, CONSTRUCTION-OPERATIONS DIVISION

1. A supplement to the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project, Unit No. 129, entitled, "South Levee of Tisdale Bypass from the East Levee of the Sacramento River to the West Levee of Sutter Bypass and the West Levee of Sutter Bypass Downstream to the East Levee of the Sacramento River," dated June 1954 is submitted herewith.

2. Copies of the supplement have also been furnished the Division Engineer, the State Reclamation Board and the State Division of Water Resources.

1 Incl
1. O&M Manual

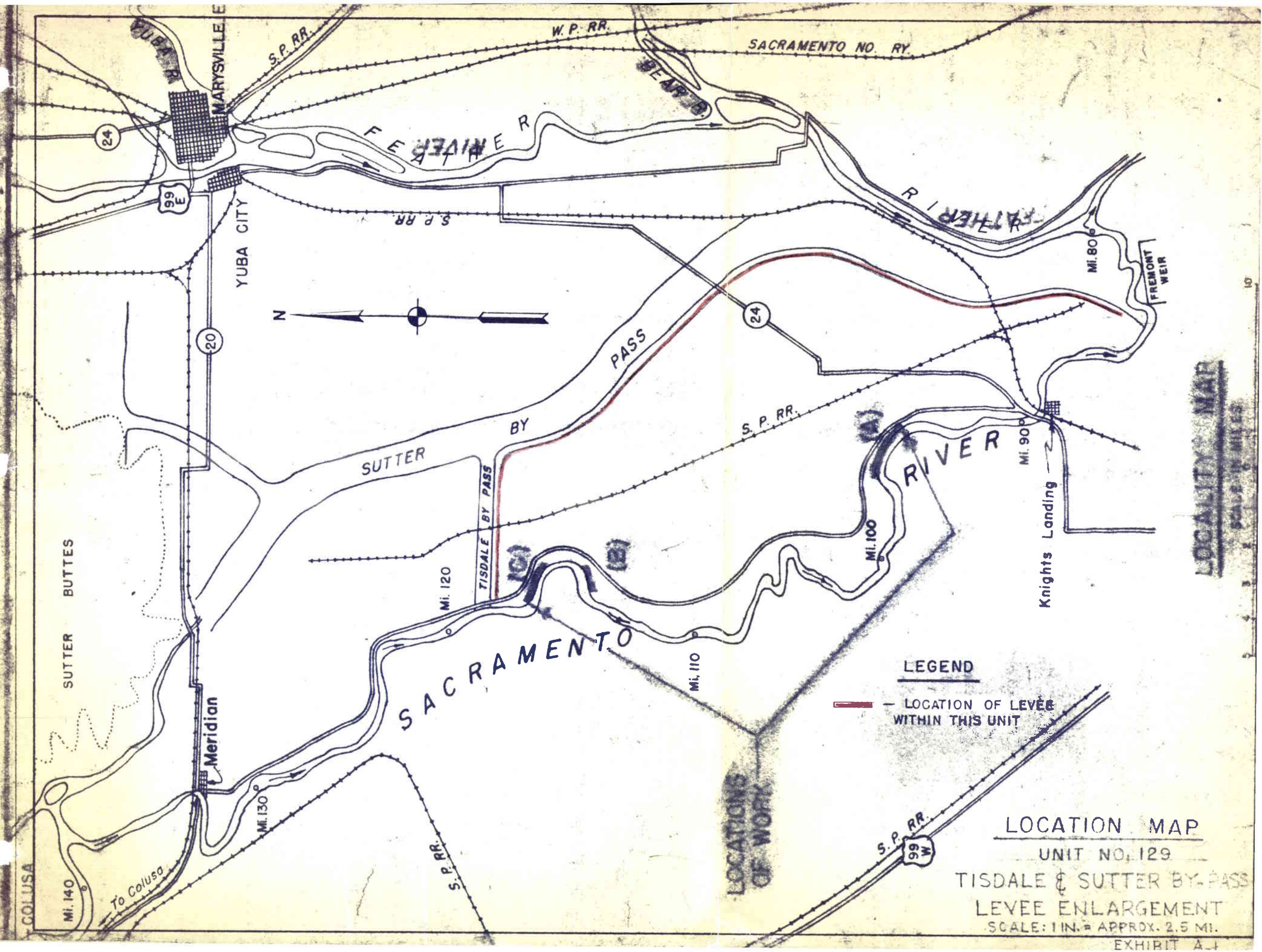
F. KOCHIS
Chief, Engineering Division

cc: Levees

EXHIBIT A

FLOOD CONTROL REGULATIONS

(See Standard Manual)


YUBA R.
MARYSVILLE
S.P. RR.
W.P. RR.
SACRAMENTO NO. RY.
BEAR R.
FEATHER RIVER
24
99 E
YUBA CITY
S.P. RR.
N
20
24
SUTTER BY PASS
S.P. RR.
TISDALE BY PASS
(C)
(B)
SACRAMENTO RIVER
Mi. 80
Mi. 90
Mi. 100
Mi. 110
Mi. 120
Mi. 130
Mi. 140
FREMONT WEIR
Knights Landing
SUTTER BUTTES
Meridian
To Colusa
COLUSA
S.P. RR.
S.P. RR.
99 W
LOCATIONS OF WORK
LEGEND
— LOCATION OF LEVEE WITHIN THIS UNIT
LOCATION MAP
UNIT NO. 129
TISDALE & SUTTER BY-PASS
LEVEE ENLARGEMENT
SCALE: 1 IN. = APPROX. 2.5 MI.
EXHIBIT A-1

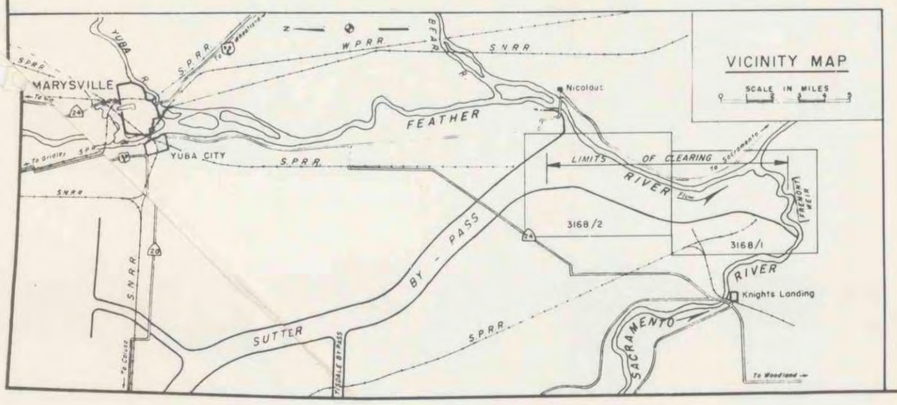
N

LEGEND

= AREA TO BE CLEARED

PHOTOGRAPHS FLOWN IN SEPT 1955

AS CONSTRUCTED



REVISION	DATE	DESCRIPTION	BY	BY

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

DRAWN BY: M.S.
TRACED BY: PBV
CHECKED BY: M.S., JHK
SUBMITTED BY: R.W. Beardsley — CHIEF LEV. & CHAN. SECTION

SACRAMENTO RIVER, CALIFORNIA
FLOOD CONTROL PROJECT
CLEARING SUTTER BY-PASS
FROM FREMONT WEIR UPSTREAM
TO NELSON BEND

APPROVED: Harry A. Dettmer — CHIEF DESIGN BRANCH
J. F. Mueller — for CHIEF ENGINEERING DIVISION
APPROVED: Harry Sands — CHIEF, CORPS OF ENGINEERS, U.S.A.
DISTRICT ENGINEER
DATE DECEMBER 1955

SCALE: 1" = 800'
SPEC. NO. 2017
FILE NO. 50-6-3168
SHEETS 3168/1 To 3168/2
SHEET NO. 3168/1

CORPS OF ENGINEERS

AS CONSTRUCTED

REVISION	DATE	DESCRIPTION	BY	BY

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

DRAWN BY: PBV
CHECKED BY: M S; JHK
PREPARED BY: M S
SUBMITTED BY: R.W. Barsdale — CHIEF LEV & CHAN. SECTION

SACRAMENTO RIVER, CALIFORNIA
FLOOD CONTROL PROJECT

CLEARING SUTTER BY-PASS

FROM FREMONT WEIR UPSTREAM
TO NELSON BEND

APPROVED: Harry Dettmer — CHIEF DESIGN BRANCH
for J.H. Mathews — CHIEF DESIGN DIVISION
APPROVED: [illegible] — LT. COL., CORPS OF ENGINEERS, U.S.A. — DISTRICT ENGINEER
DATE: DECEMBER 1955

SCALE: 1" = 800' | SPEC. NO. 2017
FILE NO. 50-6-3168
SHEETS 3168/1 To 3168/2 | SHEET NO. 3168/2

EXHIBIT "B"

"AS CONSTRUCTED"
DRAWINGS

(See Separate Folder for the following Drawings)

Drawing No.	
50-4-1940-1	Sheets 1 to 5, incl.
50-4-1992	Sheets 1 to 11, incl.
50-6-3168	Clearing Sutter By-Pass - Fremont Weir to Nelson Bend Sheets 1 & 2

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

50-4-4021	Bypass Levee Revetment, West Levee Sutter Bypass from Karnak Pump to 6.0 Miles Upstream, in 16 sheets
-4-4393	Bypass Levee Revetment Yolo and Sutter Bypass Levees, in 7 sheets.
50-4-4310	Bank Protection, Various Locations Right and Left Banks Sacramento River between Tisdale Weir and Sacramento, in 26 sheets.
50-4-5595	Emergency Levee Repairs, Colusa Basin Drain, RD 108, and Sutter Bypass, RD 1500, in 2 sheets.
50-4-5722	Emergency Levee Repairs, West Bank RD 1500, East Bank RD 1600, in one sheet.
-5798	Bank Protection, Contract 43, Right and Left Banks, Feather River, Colusa Basin Drain, Yolo and Sutter By-pass, in 35 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 1-06 of this manual

CHECK LIST NO. 2

SOUTH LEVEE OF TISDALE BYPASS

AND WEST LEVEE SUTTER BYPASS

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 slopes of levee	
(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) Indicated levee station of observation, obtained by pacing from nearest reference point; indicate right or left bank.

Item (b) If sufficient settlement of earth work 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 grade and section of roadway or ramps. Indicated any inadequacy in surface drainage system.

Item (e) Indicated 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

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 the back of sheet 4)

Item (a) Indicated station of observation obtained by pacing from nearest reference point.

Item (b) Note nature, extent, and size of vegetal growth within the limits of the 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, or fouling of the bridges over the channel.

Item (d) Report any construction along 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 of 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, 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. 4
DRAINAGE AND IRRIGATION STRUCTURES

Inspector's Report Sheet No._____ Inspector_____

Date_____ Superintendent_____

(a) Location by Station	(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
1224+75 (Pumping Plant No. 1)	Right						
1226+00 (Pumping Plant No. 2)	Right						
1227+00 (Pumping Plant No. 3)	Right						
61+25	Right						
299+45	Right						

EXHIBIT E
Sheet 6 of 7

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 of the 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, and 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

STATE OF CALIFORNIA–RESOURCES AGENCY

GEORGE DEUKMEJIAN, *Governor*

THE RECLAMATION BOARD
1416 Ninth Street, Room 455-6
Sacramento, CA 95814
(916) 445-9454

MAR 2 7 1990

Colonel Jack A. Le Cuyer
District Engineer
Sacramento District
U. S. Army Corps of Engineers
650 Capitol Mall
Sacramento, CA 95814-4794

Dear Colonel Le Cuyer:

Reference is made to your letter of November 22, 1989, concerning the transfer of a portion of the Sacramento River Bank Protection Project in Contract 43 to the State of California for operation and maintenance.

The flood control work consisted of selective clearing, bank sloping, placement of stone bank protection, and such miscellaneous work as necessary to complete the construction at the following sites:

1. Site Mile 51.1, Right Bank, Feather River.
2. Site Mile 8.5, Left Bank, Colusa Basin Drain
3. Site Mile 54.1, Left Bank, Yolo Bypass
4. Site Mile 64.0, Right Bank, Sutter Bypass

The sites were completed on November 14, 1989. The work was constructed in a workmanlike manner and in conformance with Drawing No. 50-4-5798, Specification No. 8367, and Contract No. DACW 05-88-C-0063, insofar as could be determined visually.

The Reclamation Board, at its regular meeting of December 15, 1989, formally accepted the completed work on the above referenced sites from the District Engineer for operation and maintenance.

If you have any questions concerning the above, please contact me at the above address or call Richard Goodnight at (916) 445-9335.

Sincerely,

RAYMOND E. BARSCH
General Manager

UW 15 123, 129, 132, 152

Copies to VRO
C.D. Nolan

'C CERTIFIED MAIL - RETURN RECEIPT REQUESTED

November 22, 1989

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 - 9th Street, Room 455-6
Sacramento, California 95814

done

Members of the Board:

This is in regard to the joint inspection of November 14, 1989, made for the purpose of transferring a portion of the Sacramento River Bank Protection Project (Unit 43) to the State of California for operation and maintenance. The flood control work consists of bank sloping, placement of stone protection and miscellaneous work on the Feather River right bank at Site Mile 51.1; Colusa Basin Drain left bank at Site Miles 8.5; Sutter Bypass right bank at Site Mile 64.0 and Yolo Bypass left bank at Site Mile 54.1.

The sites were completed on November 14, 1989, in accordance with Contract Number DACW05-88-C-0063, Specification Number 8367 and Drawing Number 50-4-5798.

The work was performed under general authority of the Flood Control Act of 1960, 86th Congress, 2nd Session (PL 86-645, July 14, 1960), Section 2304(a), Title 10, and the Water Resources Development Act of 1986 (PL 99-662,October 17,1986), and now meets the requirements of the Sacramento River Bank Protection Project. Therefore, said work together with the waterway bank contiguous thereto is transferred as of November 14, 1989 to the State of California for operation and maintenance.

This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 123, 129, 132 and 152, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

Jack A. Le Cuyer
Colonel, Corps of Engineers
District Engineer

cc:
C-O Div; Fld Cntrl Unit;
Central Valley Sec; Prog
Dev; F&A Br; Valley Res
Ofc; Reading
Copies Furnished:

DWR, ATTN: G. Snow; DWR, ATTN: G. Qualley; Cdr, SPD, ATTN: CESPD-O;
Cdr, USACE, ATTN: DAEN-CECW-OM

ROMPALA/mt
KELLY
A.SMITH
HELM
FAST
DENNIS
MASON
Le CUYER

PC#LTRUNIT43

Units 123, 129, 132, 152

OJ

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 16, 1987

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 - 9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed emergency repairs to project levees under authority of Section 5 of the Flood Control Act of August 18, 1941, as amended (Public Law 99, 84th Congress, 1st Session). The work was completed on December 3, 1986, and consisted of restoring portions of the Sacramento River left bank levee and the Sutter Bypass right bank levee in Reclamation District 1500, in accordance with Contract Number DACW05-86-C-0108 and Drawing Number PG-J-4-2. This work shall be maintained in accordance with the assurances which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 128 and 129, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

Wayne J. Schell
Colonel, Corps of Engineers
District Engineer

cc:
E.M. (Garrett)
>Ops Br
Engr Div (Civ Des Sec D - Pahl)
Valley Res Ofc (Cameron)

Copies furnished:

Commander, South Pacific Division, ATTN: SPDCO-O
PWR, ATTN: J. Angel
DWR, ATTN: G. Snow

Chuck's 128/129

SUTTER BYPASS R.B. & SACTO R. L.B.

1-20
ROMPALA/th
KELLY
A. SMITH
FAST
DENNIS
McCOLLAM
SCHOLL
WANG #6287a

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

November 28, 1984

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 - 9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed emergency repairs to project levees under authority of Section 5 of the Flood Control Act of August 18, 1941, as amended (Public Law 99, 84th Congress, 1st Session). The work was completed on November 2, 1984, and consisted of restoring the Yolo Bypass left bank levee in Reclamation District 1600, and the Sutter Bypass right bank levee in Reclamation District 1500, in accordance with Contract Number DACW05-84-C-0127 and Drawing Number 50-4-5722. This work shall be maintained in accordance with the assurances which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 123 and 129, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

Albert E. McCollam, Jr.
Lieutenant Colonel, Corps of Engineers
Acting District Engineer

Copies Furnished:

Commander, South Pacific Division, ATTN: SPDCO-O
DWR, ATTN: M. Luttropp

EXHIBIT F

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

June 19, 1984

REPLY TO
ATTENTION OF
Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 - 9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed emergency repairs on two project levees under authority of Section 5 of the Flood Control Act of August 18, 1941, as amended (Public Law 99, 84th Congress, 1st Session). The work was completed on May 29, 1984 and consisted of repairing project levees along the Colusa Basin drain left bank R.D. 108 and along the Sutter Bypass right bank R.D. 1500 in accordance with Contract Number DACW05-83-C-0037 and Drawing Number 50-4-5595. Additional work will be accomplished in R.D. 1500 to repair a slide area in and adjacent to the repaired site this year. This work shall be maintained in accordance with the assurances which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 129 and 132, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely,

Arthur E. Williams
Colonel, Corps of Engineers
District Engineer

Copy Furnished:
Commander, South Pacific Division, ATTN: SPDCO-C

C-O-P-Y

C-O-P-Y

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

October 18, 1984

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 Ninth Street, Room 455-6
Sacramento, California 95814

Members of the Board:

Reference is made to our letter to you, dated June 19, 1984, notifying you of the completion of emergency repairs on project levees in Reclamation District 108 (left bank of Colusa Basin Drain) and Reclamation District 1500 (right bank of Sutter Bypass) and the need to accomplish additional work in Reclamation District 1500 to repair additional damage. This is to advise you that the additional work in Reclamation District 1500 has been completed. This work shall be maintained in accordance with the assurances which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplement Number 129, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely,

Albert E. McCollam, Jr.
Lieutenant Colonel, Corps of Engineers
Acting District Engineer

Copy Furnished:

Commander, South Pacific Division, ATTN: SPDCO-C

TRANSFER FILE #13D
AC RIVER FLOOD CONTROL PROJECT

CERTIFIED - RETURN RECEIPT REQUESTED

SPKCO-O

4 November 1980

The Reclamation Board
1416-Ninth Street, Room 335-18
Sacramento, CA 95814

Gentlemen:

You are hereby notified that the Corps of Engineers has completed emergency repairs on two project levees under authority of Section 5 of the Flood Control Act of 18 August 1941, as amended (Public Law 99, 84th Congress, 1st Session). The work was completed on 21 October 1980 and consisted of repair of the project levees along the right bank of the Sacramento River, R.D. 1600 and Sutter Bypass, R.D. 1500 in accordance with Contract No. DACW05-80-C-0114, Drawing No. 50-4-5561 and Specification No. 5954. This work shall be maintained in accordance with the assurances which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 123 and 129, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely,

PAUL F. KAVANAUGH
Colonel, CE
District Engineer

Copy furnished:
DWR, ATTN: R. Franson

cc:
Ops Br
SPDCO-O
Engineering Division (Levees & Channels - Nolan)
Valley Res. Office

JL 4 NOV
ROMPALA/bc
McBRIDE
A. SMITH
PROBASCO
KAVANAUGH

Units 123, 129

C O P Y

DEPARTMENT OF WATER RESOURCES
STATE OF CALIFORNIA

C O P Y

October 2, 1970

District Engineer
U. S. Army Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Subject: 4130.60.204
Your Contract 70-C-0008
Sacramento River Bank Protection
Project, Unit No. 16

Dear Sir:

Reference is made to the precompletion inspection of a portion of the above referenced project made on September 23, 1970.

The work sites inspected were as follows:

Site Mile 61.0, Left Bank, Sacramento River
Site Mile 70.4, Right Bank, Sacramento River
Site Mile 71.5, Right Bank, Sacramento River
Site Mile 71.9, Right Bank, Sacramento River
Site Mile 77.0, Right Bank, Sacramento River
Site Mile 77.85, Right Bank, Sacramento River
Site Mile 84.5, Right Bank, Sacramento River
Site Mile 96.8, Right Bank, Sacramento River
Site Mile 83.45, Left Bank, Sacramento River
Site Mile 89.6, Left Bank, Sacramento River
Site Mile 95.4, Left Bank, Sacramento River
Site Mile 95.6, Left Bank, Sacramento River

The work appeared to be completed in an acceptable manner and, insofar as could be determined visually, in conformance with the plans and specifications for the project. No deficiencies were noted.

Sincerely yours,

/s/ Clyde E. Shields
Clyde E. Shields, Chief
Construction Branch
Division of Design and Construction

EXHIBIT F

C
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Y

THE RECLAMATION BOARD
STATE OF CALIFORNIA

DEC 24 1968

4130.55.605

District Engineer
Corps of Engineers
U. S. Army
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

Reference is made to your letter of November 22, 1968 concerning transfer to the State of California of the Sutter and Yolo Bypass Levee Revetment Project, Sites 1, 2, 3 and 4 for maintenance and operation.

This work was constructed in accordance with Specification No. 3492, Contract No. DACW05-C-0077, Drawing No. 50-4-4393.

The Reclamation Board, at its meeting of December 20, 1968, formally accepted the above referred to work for operation and maintenance.

Sincerely yours,

/s/ A. E. McCOLLAM
A. E. McCOLLAM
Chief Engineer and
General Manager

EXHIBIT F

SPKCO-O

22 November 1968

The Reclamation Board
State of California
1416 - 9th Street, Room 1335
Sacramento, California 95814

Gentlemen:

Reference is made to the joint inspection of 21 November 1968, made for the purpose of transferring four completed rock revetment sites to the State of California for operation and maintenance. This work consists of two sites on the Yolo Bypass east levee and one site each on the Sutter Bypass east and west levees, as delineated on the attached inclosure. The work was constructed as part of the Sacramento River Major and Minor Tributaries Flood Control Project and completed on 5 November 1968, in accordance with Specification No. 3492, Contract No. DACW05-68-C-0077, Drawing No. 50-4-4393.

The work was performed under the general authority of the Flood Control Act of 22 December 1944 (Public Law 534, 78th Congress, 2nd Session) and now meets the requirements of the Sacramento River Major and Minor Tributaries Flood Control Project. Therefore, said work, together with waterway banks contiguous thereto, is transferred 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, Supplement Nos. 122, 129 and 135, Sacramento River Major and Minor Tributaries Flood Control Project, and furnished to your office at a later date.

Sincerely yours,

CRAWFORD YOUNG
Colonel, CE
District Engineer

1 Incl
As stated

Units 122, 129, 135

ROMPALA/jmc
COLEMAN
HENSON
HART
YOUNG

22

CF:
DWR
OCE
SPD

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

cc: Engrg Div (Lev & Chan); Engrg Div (Prog Dev); Valley; F&A(Cordano)

Copies to Jensen & Huber 25 NOV 68 K

SUMMARY OF SACRAMENTO RIVER MAJOR & MINOR TRIBUTARIES PROJECT
CONTRACT NO. 68-C-0077

YOLO BYPASS LEFT BANK:

SITE	STONE PROTECTION STATION	LINEAL FEET	DESCRIPTION
1.	102+00 to 116+00	1400 feet	1.8 mile upstream from Sacramento Bypass
2.	254+00 to 316+00	*6030 feet	Downstream from State Highway 16
SUTTER BYPASS RIGHT BANK:			
3.	426+43 to 481+50	5507 feet	Downstream from Karnak Pump
SUTTER BYPASS LEFT BANK:			
4.	0+00 to 3+60	360 feet	Near Gilsizer Slough

*170 feet by others

Units 122, 129, 135

C
O
P
Y

THE STATE RECLAMATION BOARD
State of California
February 10, 1966

C
O
P
Y

District Engineer
Corps of Engineers
U. S. Army
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

Reference is made to your letter of January 17, 1966 concerning transfer to the State of California of the rock revetment on the west levee of Sutter Bypass from Karnak Pump to six miles upstream, in accordance with Specification No. 3131.

The Reclamation Board, at its meeting of February 3, 1966, formally accepted the above referred to work for operation and maintenance.

Sincerely yours,

A. E. McCOLLAM
General Manager

EXHIBIT F

SPKKO-F 17 January 1966

The Reclamation Board
State of California
1416 - 9th Street, Room 1335
Sacramento, California 95814

Gentlemen:

Reference is made to the joint inspection of 12 January 1966, on the flood control project on Sutter Bypass Levee Revetment work. This portion of work is a part of the Sacramento River Major and Minor Tributaries Flood Control Project and was inspected for the purpose of transferring it, upon completion, to the State of California for operation and maintenance.

The flood control work consists of 7.03 miles of levee bank sloping and 6.39 miles of stone revetment on the waterside slope of the west levee of Sutter Bypass, beginning near Karnak Pump and running upstream 7.03 miles. The work was completed on 24 December 1965, in accordance with Specification No. 3131, Contract No. DA-04-167-CIVENG-65-151 and Drawing No. 50-4-4021.

This work was performed under the general authority of the Sacramento River Major and Minor Tributaries Flood Control Project, which was authorized by the Flood Control Act of 22 December 1944 (Public Law 534, 78th Congress, 2nd Session).

The above flood control work now meets the requirements of the Sacramento River Major and Minor Tributaries Flood Control Project. Therefore, said flood control work is hereby transferred to the State of California for operation and maintenance.

This portion of the project work will be added by amendment to the Operation & Maintenance Manual, Supplement No. 129, Sacramento River Flood Control Project, and furnished to your office at a later date.

Sincerely yours,

ROBERT E. MATHE
Colonel, CE
District Engineer

OPERATIONS BRANCH
FLOOD CONTROL SECTION

COLEMAN/p
HENSON
HART
MATHE

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Copy furnished:
Dept Water Resources
O.C.E. AND S.P.D.

cc: Engr Div-Lev&Chan; Engr Div-Prog Dev;
F&A (Cordano); Valley Res Ofc

REGISTERED

RETURN RECEIPT REQUESTED

[illegible] (Sacto. Div. F.C.D.) 18 DEC 1956

The Reclamation Board
State of California
3215 [illegible] Street
Sacramento, California

Gentlemen:

Reference is made to the District Engineer's letter dated 30 November 1956 relative to the joint inspection, made on 6 December 1956, of the clearing work in the Sutter Bypass from Pennsylvania Avenue to Nelson Road.

The clearing work referred to above was completed on 30 December 1956 under Contract No. [illegible], Specification No. [illegible] and Drawing No. [illegible]. This work forms an integral part of the Sacramento River Flood Control Project and under the requirements of the project, therefore said work is hereby transferred to the jurisdiction of 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 adopted Flood Control Regulations, Federal regulations, which have been incorporated by the operation of the May memorandum to Section 3 of the Act of Congress, approved 22 June 1936, as amended and supplemented by the current issue of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. As provided under Paragraph [illegible] of those regulations, a supplement to the Standard O. and M. Manual covering this unit of work is in process of preparation and will be furnished to you upon completion.

REGISTERED

RETURN RECEIPT REQUESTED

Cont. # 56-224
Unit 579

W. B. HARDGRAVES

[illegible] (Civil. Div. P.C.P.)
[illegible]

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

Sincerely yours,

A. E. McCOLLAM
Colonel, CE
District Engineer

1 Incl
1. [illegible]

Copy furnished:
Dept. of Water Resources
Secretary, PCMPC, w/o incl
CGS w/o incl
Secretary Engr. w/o incl

cc: Engr. Div. w/o incl
North [illegible] Area Off w/o incl
W. B. [illegible] w/o incl

C
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Y

STATE RECLAMATION BOARD LETTERHEAD

April 2, 1952

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

Dear Sir:

1. Reference is made to your letter of 8 December 1951, File SPKKA 824.3 (Sac. Riv. F.C.P.), transferring to The Reclamation Board for operation and maintenance of levees and their contiguous waterway banks as follows:

a. ——————————————————

b. ——————————————————

c. Westerly levee of the Sutter Bypass.

1. ——————————————————

2. and 3. - From Tisdale Bypass to Sacramento River.

d. ——————————————————

e. South levee of Tisdale Bypass

f. ——————————————————

——————————————————————————

——————————————————————————

2. There are no contiguous waterway banks other than the adjacent bypass areas under Items "c", "d", "e", and "f". On December 18, 1951, The Reclamation Board formally accepted the levees covered by these items together with their contiguous bypass areas subject to the provision that the portion of Item "c-1" now having waterward slopes of three horizontal to one vertical would

EXHIBIT F
Sheet 1 of 2

C
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be rectified by Federal construction. All other levees of the Sutter Bypass are now constructed to waterward slopes of four horizontal to one vertical. The Flood-Control Act of December 22, 1944, calls for construction of waterward slopes of four horizontal to one vertical on the Tisdale Bypass levees. The existing section of these levees is ample.

Yours very truly,

THE RECLAMATION BOARD

BY /s/ A. M. Barton
A. M. BARTON

Chief Engineer and General Manager

C
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P
Y

NOTE: Only items pertaining to Operation and Maintenance Manual No. 129 are included in the above copy.

Jan. 2, 1952

The Board accepted the transfer from the Corps of Engineers, in letters as 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
Unit No. 80A = 322	1	13 Dec. 1951	a. Left Bank Sacramento River Mile 94.0 to 96.6	Completed contract. Spec. No. 1485. Maintained by R. D. No. 1500
Unit No. 81A 323			b. Left Bank Sacramento River Mile 114.2 to 115.6	Do
Unit No. 82A 324			c. Left Bank Sacramento River Mile 116.1 to 117.0	Do
Unit No 86A 325	2	19 Dec. 1951	Part A, Site 1 - Right Bank Sacramento River, Spec. No. 1515, Grand Island Mile 30.25 to 30.5	Completed contract. Maintained by R. D. No. 3
	3	13 Dec. 1951	199 a(1) Sherman Island Levee Bridge to Sacramento River	Completed contract. Maintained by R. D. No. 341. 101
			200 a(2) Sherman Island Levee Bridge East 1300 ft.	Do 101
			203 b. Plug across Seven Mile Slough	Constructed and maintained by R.D. Nos. 1601 and 2067.
			204 c. Brannan Island levee of Seven Mile Slough plug and along Three Mile Slough to Sacramento River	Spoil area owned by S. & S.J.D.D. 102 No maintenance required.
			218 d(14) East levee Sacramento River Mile 18.5 to 21.5	Completed contract. Maintained by R.D. No. 407. 103
			219 d(15) East levee Sacramento River Mile 21.6 to 26.3	Completed contract. Maintained by R.D. No. 556.
			220 d(16) East levee Sacramento River Mile 26.4 to Georgiana Sl.	Completed contract. 103 Maintained by R. D. No. 556.
			221 d(17) East levee Sacramento River Mile 26.5 to 27.55	Completed contract. Maintained by R.D. No. 554. 111 No liability for Delta Cross Channel.

Units No. 80A - 81A - 82A and 86A, and Items 199 to 295

1005

15

No.	Date of Letter	Levee Location	Remarks
3	13 Dec. 1951	d(28) East levee Sacramento River Mile 35.38 to 35.74	Completed contract. Maintained by R.D. No. 755.
		d(44) East levee Sacramento River Mile 44.5 to 45.3	Constructed by Assessment No. 5.
		d(46) East levee Sacramento River Mile 56.1 to American River	Constructed and maintained by City of Sacramento.
		d(50) East levee Sacramento River Mile 92.9 to 94.0	Completed contract. Maintained by R.D. No. 1500.
		d(52) East levee Sacramento River Mile 97.5 to 97.7	Completed contract. Maintained by R. D. No. 1500.
		d(54) East levee Sacramento River Mile 99.9 to 102.5	Do
		d(57),(58) East levee Sacramento River Mile 104.2 to 105.65	Do
		d(59) East levee Sacramento River Mile 110.9 to 111.5	Do
		d(61) East bank Sacramento River at Tisdale Weir	Maintained by State under Section 8361 Water Code.
		h(3) West levee Sacramento River Mile 133.1 to 133.3	Completed contract. Maintained by Sacramento River West Side Levee District.
		h(5) West levee Sacramento River Mile 134.3 to 140.6	Do
		h(7) West levee Sacramento River Mile 141.3 to 142.0	Do
		h(9) West levee Sacramento River Mile 142.3 to 142.7	Do
		i. East levee Georgiana Slough from S.P.R.R. upstream 22,500 ft.	Completed contract. Maintained by Tyler Island District.
		j. North levee American River from Jibboom St. Bridge to El Camino Avenue	Constructed by and maintained by R. D. No. 1000.

Items 199 to 295

No.	Date of Letter	Levee Location	Remarks
3	13 Dec. 1951	288 l. Back levee R.D. No. 2068	Completed contract. Maintained by R.D. No.2068. 109
		289 m. S. levee North Dry Creek to W.P.R.R. Interceptor	Completed contract.
		290 n. E. levee W.P.R.R. Interceptor from North Dry Creek to Bear River	Do
		291 o. N. levee Bear River from W.P.R.R. Interceptor to South Dry Creek	Completed contract. Maintained by R. D. No. 784.
		292 p. N. levee South Dry Creek from Bear River to high ground	Completed contract. Maintained by R. D. No. 817.
		293 q. South levee Bear River from W.P.R.R. easterly to 5,400 feet east of Carlin Bridge	Completed contract. Maintained by R. D. No. 1001. 141.1
		294 r. South levee of South Dry Creek from Bear River easterly 1.86 miles	Completed contract. Maintained by R. D. No. 817.
		295 s. North levee Bear River from South Dry Creek easterly to 4,000 feet easterly from Carlin Bridge	Completed contract. Maintained by R. D. No. 817.

145

146

31

Items 199 to 295

15

6

2

This copy was furnished on 24 Feb. 1953 b de A.

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
1-2	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.

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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.

4

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.
153 156 157	11	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.
160 161 162 163	11	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.
165 166 167 168 169 170	11	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.

21

3

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.
11 (181) (182) (183) (184) (185) (186) (187) (188)	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

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) b. From State Highway Bridge West. 3035 ft. (79A) Covered by letter dated 16 Nov. 1951 321 c. Spec. 1473, Sta. 53+00 to 64+00 about one mi. No. of Ryde Road. Mile 29.4 to 29.6 (53A) 303 Covered by letter dated 17 Nov. 1951 d. Spec. 1473, Sta. 0+00 to 12+00 being 600 ft. each side of Ryde Road. Mile 30.4 to 30.6 (54A) 304 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)	Maintained by R.D. No. 501. All are completed separate contracts.

*No waterway banks contiguous to these levees.

C. de ARRIETA

REGISTERED MAIL
Return Receipt
Requested

Letter No. 13

(1)

(13)

13 DEC 1951

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

Accepted by the Recl. Board:
Completed by Contract by C. of E.
Const. by Local Interests 203-248-250-285
No maint. is required. 204

Not Accepted

No capable of separate maint.

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

Gentlemen:

Reference is made to your letter of 2 July 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:

a. Sherman Island levee of Three Mile Slough.

199 (1) State Highway Bridge to Sacramento River. 101

200 (2) From the State Highway Bridge, 1300 feet toward the San Joaquin River. 101

201 (3) From a point 3900 feet toward the San Joaquin River from the State Highway Bridge to a point 6900 feet toward the San Joaquin River from the State Highway Bridge. 101

202 (4) From a point 10,500 feet toward the San Joaquin River from the State Highway Bridge to the San Joaquin River. 101

203 b. Plug across Seven Mile Slough near Three Mile Slough. 102

204 c. Bramman Island levee of Seven Mile Slough and Three Mile Slough from the Plug across Seven Mile Slough southwesterly to Sacramento River. 102

Items 199 to 295

(13)

Letter No. 13

(13)

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

d. Easterly levee of the Sacramento River.

Reach 19

205 (1) From a point 23,650 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 21,950 feet downstream from Three Mile Slough. 101

206 (2) From a point 14,850 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 7,700 feet downstream from Three Mile Slough. 101

207 (3) From a point 6,300 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 3,450 feet downstream from Three Mile Slough. 101

208 (4) From a point 3,300 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 700 feet downstream from Three Mile Slough. 101

2. 209 (5) From a point 500 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to Three Mile Slough. 101

210 (6) Three Mile Slough to Mile 10.58. 102

211 (7) Mile 10.71 to Mile 13.1. 102

212 (8) Mile 13.59 to Mile 14.5 (Junction Point). 102

213 (9) Mile 14.5 (Junction Point) to Mile 15.0. 102

214 (10) Mile 15.1 to Mile 16.9. 102

215 (11) Mile 16.95 to Mile 17.5. Brannan 102

216 (12) Mile 17.6 to Mile 18.0. Andras 103

217 (13) Mile 18.15 to Mile 18.5. " 103

218 (14) Mile 18.5 to Mile 21.5. ✓ ○ " 103

219 (15) Mile 21.6 to Mile 26.3. ✓ ○ " 103

Reach 19

220 (16) Mile 26.4 to Georgiana Slough. ✓ ○ 103

221 (17) Mile 26.5 to Mile 27.55. ✓ ○ 111

222 (18) Mile 27.7 to Mile 28.5. 111

(13)

Letter No. 13

(13)

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

d. Easterly levee of the Sacramento River. (cont'd)

223 (19) Mile 28.6 to Mile 28.9.
224 (20) Mile 29.1 to Mile 29.9.
225 (21) Mile 30.25 to Mile 30.55.
226 (22) Mile 30.75 to Mile 31.3.
227 (23) Mile 31.8 to Mile 32.2.
228 (24) Mile 32.4 to Mile 33.0.
229 (25) Mile 33.1 to Mile 34.45.
230 (26) Mile 34.55 to Mile 34.95.
231 (27) Mile 35.1 to Mile 35.38.
232 (28) Mile 35.38 to Mile 35.74.
233 (29) Mile 35.85 to Mile 36.35.
234 (30) Mile 36.5 to Mile 36.75.
235 (31) Mile 36.85 to Mile 37.15.
236 (32) Mile 37.3 to Mile 37.85.
237 (33) Mile 38.0 to Mile 38.3.
238 (34) Mile 38.5 to Mile 39.15.
239 (35) Mile 39.75 to Mile 39.9.
240 (36) Mile 40.0 to Mile 40.15.
241 (37) Mile 40.25 to Mile 40.35.
242 (38) Mile 40.5 to Mile 40.8.
243 (39) Mile 41.2 to Mile 41.6.
244 (40) Mile 41.75 to Mile 42.35.
245 (41) Mile 42.5 to Mile 43.05.

111

Reach 17

(13)

Letter No. 13

(13)

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

d. Easterly levee of the Sacramento River. (cont'd)

Reach 17

246 (42) Mile 43.3 to Mile 43.55.
247 (43) Mile 43.85 to Mile 44.2. } 111
248 (44) Mile 44.5 to Mile 45.3. x D 115
249 (45) Mile 55.4 to Mile 55.5. 115
250 (46) Mile 56.1 to American River. x D 118.1
251 (47) West levee of Sutter Bypass 84.5 to Mile 87.5.
252 (48) Mile 91.4 to Mile 92.1.
253 (49) Mile 92.6 to Mile 92.7.
254 (50) Mile 92.9 to Mile 94.0. ✓ o
255 (51) Mile 96.6 to Mile 97.4.
256 (52) Mile 97.5 to Mile 97.7. - o
257 (53) Mile 97.7 to Mile 97.8.
258 (54) Mile 99.9 to Mile 102.5. ✓ o
259 (55) Mile 103.45 to Mile 103.7.
260 (56) Mile 103.8 to Mile 104.2.
261 (57) Mile 104.2 to Mile 104.7. - o
262 (58) Mile 104.7 to Mile 105.65.
263 (59) Mile 110.9 to Mile 111.5. ✓ o
264 (60) Mile 118.4 to Mile 118.6 (South End Tisdale Weir).
265 (61) At Tisdale Weir. ✓ o 156

Reach 14

129

266 e. Northerly levee of Miner Slough from a point 1,200 feet easterly from the easterly levee of Yolo Bypass to a point 4,400 feet easterly from the easterly levee of Yolo Bypass.

(13)

Letter No. 13

(13)

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

f. Westerly levee of Sutter Slough. 113

Reach 36

267 (1) Mile 26.3 to Mile 26.7.

268 (2) Mile 27.05 to Mile 27.2.

269 (3) Mile 27.3 to Elkhorn Slough.

g. Westerly levee of Elkhorn Slough. 113

270 (1) Sutter Slough to Station "A" 431+00.

271 (2) Station "A" 429+50 to Station "A" 405+00.

272 (3) Station "A" 403+60 to Station "A" 344+75.

273 (4) Station "A" 340+75 to Station "A" 326+00.

274 (5) Station "A" 70+50 to Station "A" 60+50.

h. Westerly levee of the Sacramento River. 131

275 (1) Mile 119.2 to Mile 119.7.

276 (2) Mile 131.4 to Mile 131.8.

277 (3) Mile 133.1 to Mile 133.3.

Reach 3

278 (4) Mile 134.0 (Meridian Bridge) to Mile 134.3.

279 (5) Mile 134.3 to Mile 140.6.

280 (6) Mile 140.6 to Mile 141.3.

281 (7) Mile 141.3 to Mile 142.0.

282 (8) Mile 142.0 to Mile 142.3.

283 (9) Mile 142.3 to Mile 142.7 (Union Oil Co. Wharf).

AA 284 i. Easterly levee of Georgiana Slough from the S.P.R.R. sp- 103
stream 22,500 feet.

48 285 j. Northerly levee of the American River and the back levee
of Reclamation District No. 1000 from Jibboom Street Bridge to El Camino
Avenue. 125

(13)

Letter No. 13

(13)

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

k. Northerly levee of Natomas Cut.

286 (1) From Sacramento River easterly to a point 1,550 feet easterly from the Garden Highway Bridge. 142

287 (2) From a point 2,550 feet easterly from the Garden Highway Bridge to a point 3,250 feet easterly from the Garden Highway Bridge. 142

Reach No. 30

288 l. Back levee of Reclamation District No. 2068 along the S.N.R.R. from the County Road northeasterly 7,200 feet to high ground. 109

289 m. Southerly levee of North Dry Creek near Wheatland from high ground to the W.P.R.R. Interceptor. 145

290 n. Easterly levee of the W. P. R. R. Interceptor from North Dry Creek southerly to Bear River. 145

291 o. Northerly levee of Bear River from the W. P. R. R. Interceptor easterly to South Dry Creek. 145

292 p. Northerly levee of South Dry Creek near Wheatland from Bear River easterly to high ground, including the Singh saddle closure levee. 145

293 q. Southerly levee of Bear River from the W.P.R.R. easterly to a point 5,400 feet easterly from Carlin Bridge. 141.1

294 r. Southerly levee of South Dry Creek near Wheatland from Bear River easterly 1.86 miles. 146

295 s. Northerly levee of Bear River from South Dry Creek easterly to a point 4,000 feet easterly from Carlin Bridge. 146

The records of this office show that your Board has accepted the levees and/or works covered by Items d.(14), d.(15), d.(16), d.(28), d.(50), d.(52), d.(54), d.(57), d.(59), d.(61), h.(3), h.(5), h.(7), h.(9), i., m., n., o., p., q., r., and s., 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. to c., inclusive, d.(1) to d.(13), inclusive, d.(17), to d.(27), inclusive, d.(29), to d.(49), inclusive, d.(51), d.(53), d.(55), d.(56), d.(58), d.(60), e., f., g., h.(1), h.(2), h.(4), h.(6), h.(8) and j. to l., inclusive, above, although complete has not been formally transferred as contemplated by the Project documents.

(13)

Letter No. 13 (13)

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

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

(13)

TYPED COPY REGISTERED MAIL RETURN RECEIPT REQUESTED TYPED COPY

SPKKA 824.3(Sac. Riv. F.C.P.) 8 Dec 1951

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

Gentlemen:

Reference is made to your letter of 4 May 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:

a. Westerly levee of the Sacramento River.

(51) (1) Mile 163.8 (Princeton) to Mile 155.3.

(52) (2) Mile 155.3 to Mile 154.3.

(53) (3) Mile 154.3 to Mile 152.1.

(54) (4) Mile 152.1 to Mile 151.3.

(55) (5) Mile 151.3 to Mile 146.4.

(56) (6) Mile 146.1 to Upstream outskirts of Colusa.

(57) (7) Upstream outskirts of Colusa to Mile 143.5 (Colusa Bridge), excepting 320 lin. ft. at Colusa Warehouse Mile 144.2.

b. Easterly levee of the Sacramento River.

(58) (1) Mile 153.3 (Terrill's Landing) to Mile 152.7 (South Line Bogg's Ranch).

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

(59) (2) Mile 149.9 to Mile 149.7 (Graham's Ranch).

(60) (3) Mile 149.4 (Farnsworth Pump) to Mile 149.0 (Sailor Bend).

(61) (4) At Colusa Weir.

(62) (5) Mile 143.3 (Arnold's) to Mile 140.2.

(63) (6) Mile 139.3 to Mile 138.2 (Butte Slough Outfall Gates).

(64) (7) Mile 138.2 (Butte Slough Outfall Gates) to Mile 137.9 (Marty's Pump).

(65) (8) Mile 136.9 (Opposite Steidelmayer's Pump) to Mile 134.0 (Meridian Bridge).

(66) (9) Mile 134.0 (Meridian Bridge) to Mile 133.0.

(67) (10) Mile 133.2 to 132.3.

(68) (11) Mile 131.8 to Mile 125.9.

(69) (12) Mile 125.8 to Mile 123.1.

(70) (13) Mile 122.6 to Mile 122.0.

c. Westerly levee of the Sutter Bypass.

(71) (1) Butte Slough Outfall Gates to Tisdale Bypass.

(72) (2) Tisdale Bypass to a point 5.8 miles northerly from Sacramento River.

(73) (3) From a point 5.3 miles northerly from Sacramento River to Sacramento River.

(74) d. Northerly levee of Tisdale Bypass.

(75) e. Southerly levee of Tisdale Bypass.

(76) f. Easterly levee of the Sutter Bypass from high ground near Longbridge to Feather River.

The records of this office show that your Board has accepted the levees covered by Items a.(1), a.(3), a.(5), a.(6), b.(4), b.(5), b.(6), b.(7), b.(8), b.(9), b.(10), b.(11), b.(12), b.(13), c.(1), c.(2), d. and e., above as complete. Accordingly the waterway bank contiguous to

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

said Items is hereby transferred to the State of California for maintenance and operation.

The levee covered by Items a.(2), a.(4), a.(7), b.(1), b.(2), b.(3), c.(3) and f. 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 Engineers.
So.Pac.Div. Engineer
State Engineer.
Engr. Div. (2)
C. deArrieta

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__) on the south levee of Tisdale Bypass from the east levee Sacramento River to the west levee of Sutter Bypass and west levee of Sutter Bypass downstream to the east levee of Sacramento River Unit No. 129 of the Sacramento River Flood Control Project, is as follows:

a. The physical condition of the protective works is indicate by the inspector's reports, copies of which are inclosed, and may be sum marized as follows:

(Superintendent's summary of conditons)

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 48.0 on staff gage on left bank of Sacramento River at north en of Tisdale Weir and 36.0 on staff gage on west levee of Sutter Bypass at Sacramento Slough at Reclamation District No. 1500 Pumping Plant) occurred on the following dates:

Dates	Maximum Elevation
_____	_____
_____	_____
_____	_____

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 in excess thereof (dates) - _____, it was necessary to organize and carry out flood operations as follows:

(See Maintenance Manual_____)

EXHIBIT "G"
Sheet 1 of 2

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

Action or prosecution for abatement of these encroachments or trespasses is summarized as follows: (or state none has been necessary).

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

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

e. The status of maintenance measures, indicated in the previous semiannual 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