
SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL

SACRAMENTO RIVER
FLOOD CONTROL PROJECT

UNIT NO. 117

EAST LEVEE SACRAMENTO RIVER
THROUGH THE CITY OF SACRAMENTO
FROM
TOWER BRIDGE TO SUTTERVILLE ROAD



SACRAMENTO DISTRICT

CORPS OF ENGINEERS

U. S. ARMY

SACRAMENTO, CALIFORNIA

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Prepared by the Sacramento District
Corps of Engineers, U. S. Army
Sacramento, California dated May 1953

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LOCATION	ADDITION OR REVISION	DATE
1-03	Add subparagraph a.	Sep 1983
Section II, page 15	Add paragraph 2-05	Sep 1983
Exhibit B	Added drawing no. 50-4-5347	Sep 1983
Exhibit F	Add copy of letter of transfer dated 19 Jan 1981	Sep 1983
1-03	Add subparagraph b.	Aug 1993
2-04	Add subparagraph (4)	Aug 1993
Exhibit A-2	Add location map of observation wells	Aug 1993
Exhibit B	Add drawing no. 50-4-5834	Aug 1993
Exhibit F	Add copy of letter of transfer dated 30 Apr 1993	Aug 1993
2-02	Revise paragraph 2-02 heading and paragraph 2-02 a. description	Apr 1998
2-02 b.	Revise the following subparagraphs	Apr 1998
2-02 b.	Add subparagraphs I, II, III, IV, V, VI, VII, and VIII	Apr 1998
2-02 c.	Add subparagraph 4	Apr 1998
Exhibit B	Add drawing no. 50-04-5886	Apr 1998
Exhibit F	Add copy of letter of transfer dated 17 Mar 1998	Apr 1998
Exhibit F	Add copy of letter of transfer dated 31 Dec 1953	21 Dec 2010
1-03	Add subparagraph c	21 Dec 2010
Exhibit F	Add copy of letter of transfer dated 17 Dec 1993	21 Dec 2010
1-03	Add subparagraph d	21 Dec 2010
1-03	Add subparagraph e	15 Mar 2013
2-04 a.	Revised (4) to split the section into a. description and b. inspection and maintenance similar the rest of 2-04	15 Mar 2013
2-04 a.	Add (5) Seepage Berm and (6) Relief Wells	15 Mar 2013
2-04 b.	Add (6) Seepage Berm and (7) Relief Wells	15 Mar 2013
2-04 c.	Add (2) Relief Wells	15 Mar 2013
Exhibit A-3	Exhibit added that includes seepage berm and relief wells at Pioneer Reservoir	15 Mar 2013
Exhibit B	Add Record Drawing File No. 50-04-6239	15 Mar 2013
Exhibit F	Add copy of letter transfer dated 15 Mar 2013	15 Mar 2013
Exhibit H	Add PCA	15 Mar 2013
Exhibit B	Add drawing no. 50-04-5862	Dec 2013
2-02 b.	Add subparagraphs I, II, III, and IV	Nov 2014

LOCATION	ADDITION OR REVISION	DATE
Exhibit F	Add copy of letter transfer dated 29 Nov 2016	29 Dec 2016

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B	“As Constructed” and “Record” Drawings	Detached
C	Plates of Suggested Flood Fighting Methods	Unattached (Contained in Standard Manual)
D	Check List No. 1 – Levee Inspection Report	Unattached (Contained in Standard Manual)
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F	Letter of Acceptance by State Reclamation Board	12 sheets
G	Semi-Annual Report Form	2 sheets
H	ARCF PCA and Amendments	54 sheets

* Revised April 1983

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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 east levee of the Sacramento River through the City of Sacramento from the Tower Bridge to Sutterville Road. The location of this unit is as shown on Exhibit A-1 of this manual.

1-02. Protection Provided. - The levee of this unit provides direct protection to the city of Sacramento against high water in the Sacramento River. The grade of the adopted flood plane along this reach varies from elevation 34.3 at the Tower Bridge to elevation 33.2 at Sutterville Road (all elevations are referred to U.S. Corps of Engineers datum). The levee grade provides a freeboard of 3 feet or more above the flood plane profile and the project design capacity is 110,000 cubic feet per second in this reach of the Sacramento River.

1-03. Project Works. - No project work was necessary on the east levee of the Sacramento River within this unit, having been built by local interests at various times and in various parts, and at present equals or exceeds the adopted grade and section. This unit is now a part of the Sacramento River Flood Control Project and consists of the following: The east levee of the Sacramento River extending from the Tower Bridge downstream to Sutterville Road within the City of Sacramento.

a. Bank sloping, stone protection and selective clearing on the left bank of the Sacramento River at Site Mile 56.6 (a portion of Unit 33) was accomplished under Contract No. DACW05-77-C-0101 by Dutra Construction Company, Inc. Construction was completed on 12 October 1980, specification No. 5267, Drawing No. 50-4-5347.

b. Construction of a slurry cutoff wall in the City of Sacramento levee between Miller Park and Sutterville Road. Observation wells were placed at various locations along the slurry cutoff wall (EXHIBIT A-2). This work was accomplished under Contract No. DACW05-91-C-0114, Specification No. 8849, Drawing No. 50-4-5834.

c. Excavation, embankment construction, stone protection, clearing and grubbing, and erosion control revegetation at four sites on the left bank of the Sacramento River, downstream of the Garcia Bend Park, between River Miles 48 and 51 was completed on 7

December 1993 under Contract No. DACW05-92-C-0087. Specification No. 9219, Drawing No. 50-04-5862.

d. Construction of the Old Sacramento Floodwall along the left bank of the Sacramento River between River Miles 58.6 and 58.9 was completed on 26 March 1997 under Contract No. DACW05-95-B-0095. Specification No. 9644, Drawing No. 50-04-5886

e. Construction of Seepage Berm and Six Relief Wells along the left bank of the Sacramento River, River Mile 58.5 was completed on December 2006 under Contract No. W91238-06-C-0029, Specification No. 1527, Drawing No. 50-04-6239.

1-04. 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 25.0 of the U.S. Weather Bureau recording gage at the “I” Street bridge.

1-05. 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).

1-06. Acceptance by the State Reclamation Board. - Responsibility for operating and maintaining the complete works officially accepted by the Reclamation Board of the State of California on 2 January 1952, as shown on the attached letter of acceptance, Exhibit F.

1-07. Superintendent. - The name, address and telephone number of the Superintendent appointed by local interests 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 Engineer.

SECTION II

FEATURES OF THE PROJECT SUBJECT TO FLOOD-CONTROL REGULATIONS

2-01. Channels. -

a. Description. The principal features consist of:

(1) A channel. In this unit of the Sacramento River, only a small portion of the total flood waters is carried by the Sacramento River proper. The Yolo Bypass, which parallels and lies west of the Sacramento River in the vicinity of the City of Sacramento has a project design capacity of 480,000 cubic feet per second, whereas, the Sacramento River within this unit has a project design capacity of 110,000 cubic feet per second.

b. Inspection.

(1) Pertinent requirements of the Code of Federal Regulations. Flood-Control Regulations, Par. 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 occurred;

(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 channels 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 Par. 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) 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 inclosed as Exhibit E shall be explicitly followed.

c. Maintenance.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, Par. 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 reinforced 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 evidences of settlement, uplift, or failure of concrete structures shall be referred to the State 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. Par. 208.10 (g)(2), are quoted in part as follows:

"(g) Channels and floodways(2) Operation. Both banks of the channel shall be patrolled during periods of high water Appropriate measures shall be taken to prevent the formation of jamsof 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 towalls, 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 flood in excess of a reading of 25.0 on the U. S. Weather Bureau recording gage at the "I" Street Bridge, as indicated in paragraph 1-04 of this manual.

SECTION II

2-02. Levees and floodwall.

a. Description. The levee described in this manual is located along the east bank of the Sacramento River and extends from the Tower Bridge downstream to Sutterville Road. A concrete retaining wall has been built on the riverside of the levee to accommodate wharf facilities. The wall extends from Station 21+80 at the Tower Bridge downstream to Station 43+50 at the foot of R Street, a distance of 0.41 miles. At the lower end of this unit a concrete slab paving was laid on the river slope of the levee to protect it from erosion between Stations 150+70 and 177+93, as shown on Drawings No. 6-13-110 sheets 1, 2 and 3, Exhibit B.

b. Inspection.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10 (b)(1), and Paragraph 208-10 (c)(1) states in part:

“(b) & (c) Levees and floodwall – (1) Maintenance ... Periodic Inspection shall be made by the Superintendent... to be certain that:

Levees

- i. No unusual settlement, sloughing, or material loss of grade of levee cross section has taken place.
- ii. No caving has occurred on either the landside or the riverside of the levee and floodwall which might affect 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 on riprap has been displaced, washed out, or removed.
- vii. No action is being taken, such as burning grass and weeds, during inappropriate season which will retard or destroy the growth of Sod; (see note (a) at end of subparagraph (1).)
- 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.

Floodwalls

- i. No seepage, saturated areas, or sand boils are occurring
- ii. No undue settlement has occurred which affects the stability of the wall or its water tightness.
- iii. No trees exist, the roots of which might extend under the wall and offer accelerated seepage paths.
- iv. The concrete has not undergone cracking, chipping, or breaking to an extent which might affect the stability of the wall or its water tightness.
- v. There are no encroachments upon the right-of-way which might endanger the structure or hinder its functioning in time of flood.
- vi. Care is being exercised to prevent accumulation of trash and debris adjacent to walls. And to insure that no fires are being built near them.
- vii. No bank caving conditions exist riverward of the wall which might endanger its stability.
- viii. Toe drainage systems and pressure relief wells are in good working condition. And that such facilities are not becoming clogged.

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...”

Also Periodic Inspection shall be made by the superintendent to be certain that:

- i. No unusual settlement or lateral movement of the floodwall which might affect the integrity of the levee section and wall or the freeboard criteria.
- ii. No cracks in the flood wall which might expose the tell reinforcing bars, concrete expansion anchors and ground anchors.
- iii. That the concrete caps and the concrete patches provide a watertight seal for the ends of the steel bars and anchors.

- iv. No additional loading, excavation, or pile driving adjacent to the floodwall which might affect the stability of the wall.

Note (a)

Since the growth of sod on the slopes of the levee 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), therefore, the following shall be observed:

Weeds, grades and debris on the levee are burned during appropriate seasons, where not dangerous or impracticable, in order to permit the detection of cracks, holes, burrows, slips and other damage and 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 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 and floodwall, 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 and floodwall.
 - (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 earth free from brush, roots, sod or other unsuitable material. If of larger extent, the fill should be made in the same manner as the original construction, of selected material from 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 or compacted according to approved construction practices.

(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 of flood fighting.

(4) Floodwall. All evidence of settlement or lateral movement of the floodwall should be referred to the State Engineer for analysis and recommendation of remedial measures. All cracks in the concrete wall that expose or potentially could expose the steel reinforcing bars or anchors shall be repaired. For this purpose it is recommended that the repair be made by thoroughly cleaning the crack, sandblasting the area, and filling the crack with pneumatically-placed Portland Cement mortar. Damage to the concrete caps and the concrete patches should also be referred to the State Engineer for recommendation of repairs.

d. Operation.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood control regulations, Par. 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 might endanger the structures.
- 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 stops will be taken to control any condition which endangers the levee and to repair the damaged section.

2-03. Drainage Structures.

a. Description. Drainage structures located along the east levee of the Sacramento River within the city of Sacramento from the Tower Bridge to Sutterville Road are shown on Drawing No. 6-13-1100, sheets 1, 2, and 3 are listed in the following tables:

Location : Station :	Pipe, size and kind :	Other Structure Description :	Elevation of Invert at pipe :
54 + 48	6" steel	Gate valve -- landside	26.0
54 + 49	6" steel	" " "	22.7
54 + 50	4" steel	" " "	22.6
54 + 51	10" steel	" " "	20.0
55 + 03	18" steel	" " "	16.4
55 + 30	12" steel	With Gate Valve	31.7
55 + 30	3-6" steel	3-6+ pipes into manifold	32.0
55 + 30	2-8" steel	P.G.&E. Co. Gas Line Crossing with two regulating valves	32.0
56 + 03	6" steel	Gate Valve in valve box	32.6
56 + 13	10" cast iron	Gate Valve -- landside	7.6
56 + 33	60" riveted steel	Sewer Outfall with slide gate on riverside of crown	12.0
151 + 85	84" steel	Sewer Outfall	12.0
152 + 00	90" concrete	Sewer Outfall with slide gate on riverside crown of levee	8.0
156 + 00	16" CMP	Valve in box -- landside	9.2
156 + 40	12" CMP	Valve in box -- landside	9.0
157 + 80	2" steel	With gate valve	31.0

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 structures. Flap gates and manually operated gates and valves on drainage structures shall be examined, oiled and trial operated at least once every 90 days Periodic inspections shall be made by the Superintendent to be certain that:

(i) Pipes, gates, operating mechanism, rip-rap 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 occurring 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) 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.

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

(1) Bridge. (For further detail see Exhibit "B".)

a. The Tower Bridge located at station 21+80 is a lift span (not a swing span as shown on Dwg. 6-13-1100, sheet 1) which carries the traffic of U. S. Highway No. 40 and the main line of the Sacramento Northern Railroad.

(2) Wharves.

- a. Wharfs owned by the River Lanes, City of Sacramento and the Western Pacific Railroad extending from the station 22+00 to approximately station 41+00.
- b. Pacific Gas and Electric wharf located at approximately station 54+50.
- c. Three wharfs for discharging oil products from oil barges – Standard Oil Company wharfs, Associated Oil Company wharf, and Union Oil Company wharf extending from station 71+00 to station 77+00.

(3). Railroad tracks.

- a. Tracks of the Southern Pacific Railroad occupy a portion of the crown of the levee between the Tower Bridge and R Street.
- b. Tracks of the Western Pacific Railroad occupy a portion of the crown of the levee between the Tower Bridge and R Street.

(4). Slurry Cutoff Wall and Observation Wells.

- a. Slurry cutoff wall between Miller Park and Sutterville Road.
- b. Observation wells (see Exhibit A-2 for locations) along the slurry cutoff wall.

(5). Seepage Berm

- a. 550 foot long, 50 foot wide seepage berm along the upstream side of Highway 50.

(6). Relief Wells

- a. 6 relief wells, two located downstream of the above mentioned seepage berm and four located upstream.

b. Inspection and maintenance.

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

“(h) Miscellaneous Facilities. (1) Maintenance. Miscellaneous structures and facilities constructed as a part of the protective works and other structures and facilities which function as a part of, or affect the efficient functioning of the protective works, shall be periodically inspected by the Superintendent and appropriate

maintenance measures taken. Damaged or unserviceable parts shall be replaced without delay”

(2) Inspection of the miscellaneous facilities shall be made at the same time that the inspection of the other features of the project are made, and shall be reported on check list No. 3, sheet No. 4 of Exhibit E.

(3) The interest of the Corps of Engineers and the responsibility of the local interests in the existing highway and railroad bridges is confined to their effect on the safety and functioning of the flood control channel, but any conditions noted in the inspections that may affect them in any way should, as a matter of courtesy, be brought to the attention of the agencies maintaining and operating them. If the inspection of any miscellaneous structure, either existent or constructed in the future under permit, discloses any condition that indicates the probability of failure during periods of high water, the Superintendent shall address a letter to the owner of the structure, quoting this manual as authority and inviting attention to the conditions observed and requesting that immediate steps be taken to correct them. A copy of such letter shall be forwarded to the District Engineer for his information. A report on the action taken by the owner shall be submitted to the District Engineer to accompany the next semi-annual report under provisions of paragraph 3-03c of the Standard Manual. A suggested report form is included as Exhibit G of this manual.

(4) The purpose of maintenance work is to insure continuous satisfactory operation of equipment. It is therefore, important in such work that all possible causes of future trouble be found and corrected. Particular attention should be given to minor weaknesses which may be an indication of future trouble.

(5) Slurry cutoff wall and observation wells.

a. All observation well readings shall be referenced from the top of the PVC riser pipe.

b. Observation well readings should be collected monthly for at least a one year period and plotted along with the river stage. After the first year of data collection, the frequency may be reduced such that readings are only be collected during the high river stage.

c. High watering monitoring of the observation wells should begin 48 to 72 hours before the river stage is forecasted to be at elevation 20 and continue until 48 to 72 hours following the return of river stage to that elevation. Observations should be made at 12 hour intervals.

d. If any of the following conditions are noted, they should be reported immediately through DWR and the Central Valley Flood Protection Board to the Chief, Emergency Management Division (916-557-6919), U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814.

- (1) Visual signs of levee distress, such as cracking, sloughing, settlement, etc.
- (2) Seepage emerging at or above the landside levee toe.
- (3) Saturation and/or development of boils near the landside toe.
- (4) Sudden or rapid rise of water level in the landside observations wells (i.e., ≥ 6 inches in 12 hours)

e. The data should be tabulated and furnished in report form annually before 1 September of each year to the Chief, Geotechnical Branch, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814.

f. Maintenance of observation wells shall include determining individual sediment levels annually, by measuring from the top of the PVC riser pipe to the sediment in the slotted interval. Ensure that the well is capped between readings and the cap is vented with a 1/8-inch diameter air hole. No fluids such as antifreeze or preparations designed to lubricate the inside of the riser pipe shall be introduced into any observation well. These types of fluids can damage the water tight joints, promote clogging of the slotted interval, and introduce contaminants into the groundwater. Any well observed with signs of tampering or vandalism should be measured for depth and checked for obstructions.

(6) Seepage Berm

a. Inspect berm during high flows. Saturated landside toes, sand boils, cracking, sloughing, seepage or any other signs of distress shall be reported to the superintendent immediately. See Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project, Section VIII Suggested Methods of Combating Flood Conditions.

b. Seepage berms shall be mowed regularly and kept free of rodent burrows and woody vegetation

c. Collection pipes shall be inspected regularly to insure proper functioning. Clogged pipes shall be cleared.

d. No construction is allowed on top of the seepage berm.

(7) Relief Wells

a. Inspection

1. Inspection Frequency

Inspections should be made of the relief wells and the general surface conditions in the area of monitoring in accordance with the frequencies identified in the overall O&M Manual. This includes:

- During the month of October, prior to the start of flood season
- Immediately prior to and after every high water event

2. Inspection Reporting

Inspection results specific to the relief well network should be attached to the overall inspection checklist as specified in the O&M manual.

Such an attachment shall provide the following:

- The physical condition of the relief well network and the overall condition of the ground surface along the Pioneer Reservoir alignment.
- Copies of inspection notes & logs.
- Maintenance and repair, replacement and rehabilitation (RR&R) works to be performed prior to the next report or flood season.
- Maintenance measures, RR&R, and surveillance actions taken since the last report; nature, date of construction, and date of removal of temporary repairs; and date of permanent repairs.
- Photographs showing any areas of concern and/or any RR&R construction activities.
- Fiscal statement of cost for maintenance and operation for the period.

b. Maintenance

1. During each monitoring cycle, each part of the wells should be observed and inspected for signs of wear and need for replacement or repair. A catalogue of the parts of each well is summarized in Table 2-04.1 below. Well installation details is shown in Table 2-04.2. Individual well schematics are shown in the figures following Table 2-04.2.

TABLE 2-04.1 - RELIEF WELL PARTS INVENTORY

Relief Well Number →	1	2	3	4	5	6
Equipment and Parts						
casing: 8-inch schedule 10 304-guage Stainless steel pipe PVC	X	X	X	X	X	X
screen: 2-in sch.40 PVC - 0.010 slot	X	X	X	X	X	X
check valve with urethane pad (under)	X	X	X	X	X	X
manhole lock-bar with Master Lock® type “keyed alike” locks				X	X	X
above ground vault box with built-in ladder on wall				X	X	X
flush mounted vault box	X	X	X			
manhole 2.15 foot inside diameter with steel lid	X	X	X	X		
manhole 3.2 to 3.25 foot inside diameter with steel lid					X	X
18-inch well guard ending below casing riser	X	X	X	X	X	X

TABLE 2-04.2: Summary of Well Installation Details

	RW-1	RW-2	RW-3	RW-4	RW-5	RW-6
Top of Manhole Elev.	TBD	TBD	TBD	TBD	TBD	TBD
Ground Surface Elev.*	TBD	TBD	TBD	TBD	TBD	TBD
Top of Casing Elev.*	TBD	TBD	TBD	TBD	TBD	TBD
Northing† feet Decimal degrees	1969921.61 38.5704	1969951.17 38.5705	1970350.8 38.5716	1970375.4 38.5716	1970416.5 38.5718	1970457.7 38.5719
Easting † feet Decimal degrees	6700537.48 121.5143	6700571.96 121.5142	6700906.4 121.5130	6700879.6 121.5131	6700906.4 121.5130	6700933.6 121.5129
8-inch stainless steel casing	3.6 to 32.6	2.7 to 31.2	2 to 26	2.8 to 28.8	3.9 to 31.8	6.5 to 31.8
18-inch steel well guard**	3.9 to 18.9	3.5 to 18.5	3.3 to 18.3	3.7 to 18.7	4.7 to 19.7	5.5 to 20.5
Cement**	4.9 to 14.9	4.5 to 14.5	5.3 to 15.3	4.7 to 14.7	6.2 to 16.2	7 to 17
Filter**	14.9 to ~101.3	14.5 to ~96.2	15.3 to ~94.7	14.7 to ~98.5	16.2 to ~100.6	17 to ~100.7
Screen**	32.6 to 92.6	31.2 to 91.2	26 to 86	28.8 to 88.8	31.8 to 91.8	31.8 to 91.8
Silt Trap**	92.6 to 97.6	91.2 to 96.2	86 to 91	88.8 to 93.8	91.8 to 96.8	91.8 to 96.8
Borehole TD	~101.3	~96.2	~94.7	~98.5	~100.6	~100.7
TD 15-17 Jan 2013	~101.3	~96.2	~94.7	~98.5	~100.6	~100.7
DTW 15-17 Jan 2013	10.1	10.8	6.9	10.8	12.4	12.4

NOTES:

* Ground surface elevation in feet at north side of manhole parallel to the axis of the levee alignment

** All vertical dimensions in feet relative to ground surface - above ground surface measurements in (parentheses).

Datum = NGVD29 (all vertical elevations)

DTW: Depth to Water in casing - measured in feet from top of casing

TD: Total Depth (in feet)

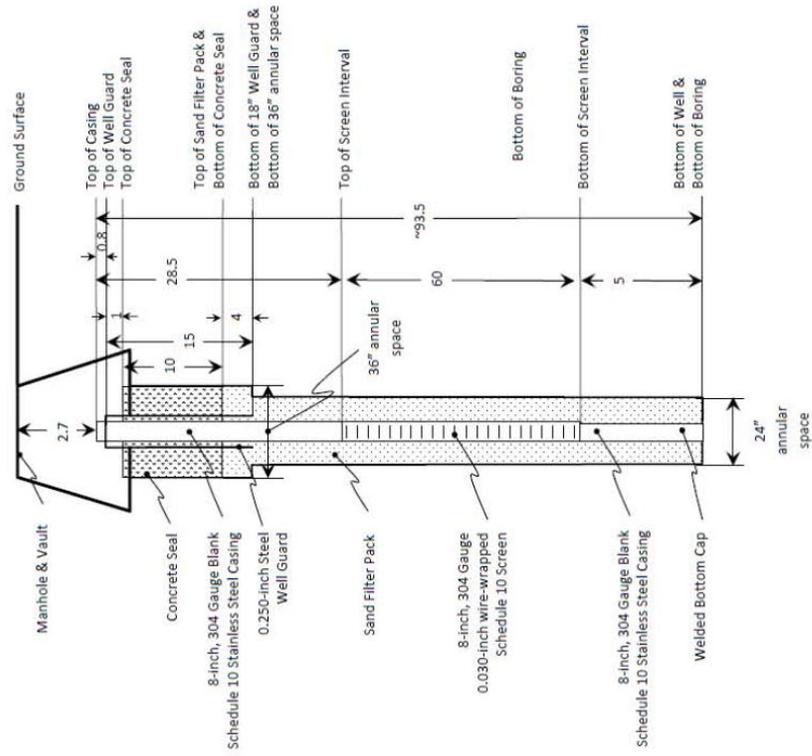
† Northing and Easting coordinate Datum = NAD83 California Zone 2 - based on contract specifications

Decimal Degrees were derived from Corpscon software based on the following input framework: CA State Plane NAD 83 Zone 0402 US Survey Feet to Geographic NAD 83

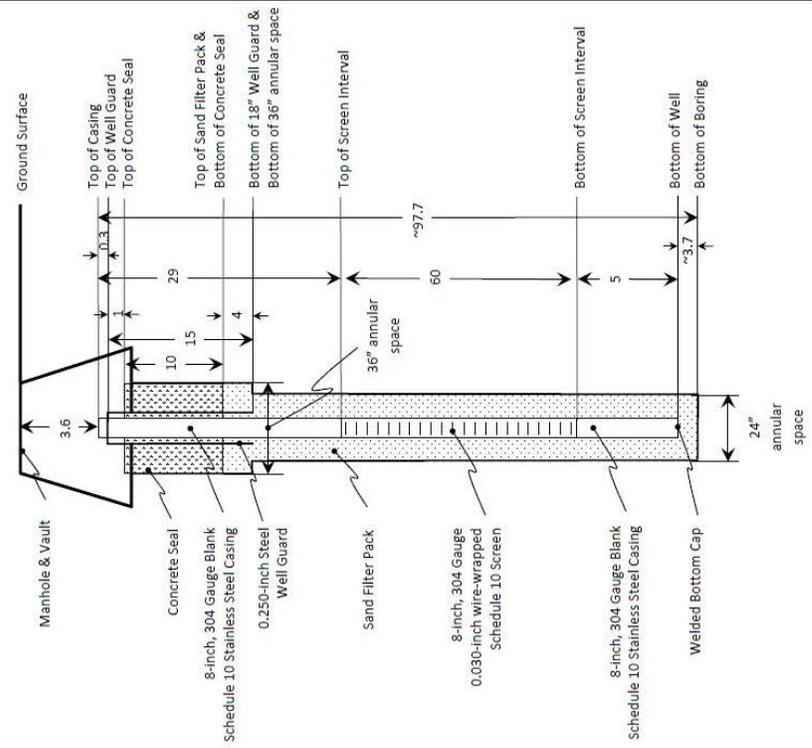
~ indicates approximation based on log or other field reports/observations

Common materials to all 6 wells include 8-inch I.D. schedule 10 304-gauge Stainless Steel pipe with 0.030 continuous wire wrapped slot where screened; #2/20 sand; and 5 foot bottom silt trap with welded end cap.

RELIEF WELL 2
As-Built Dimensions Schematic
 Dimensions in feet unless
 otherwise specified

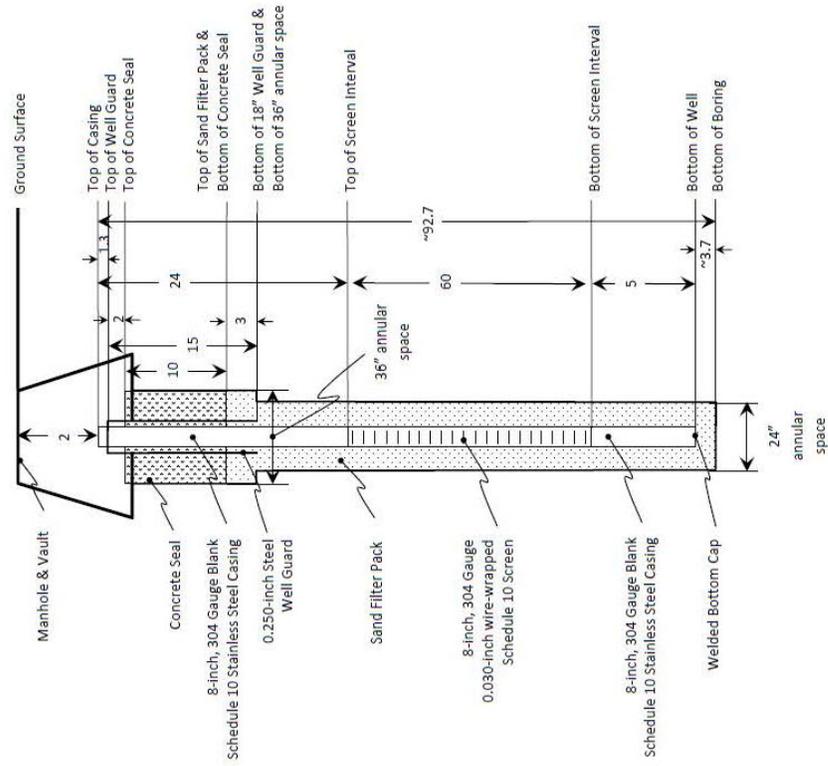


RELIEF WELL 1
As-Built Dimensions Schematic
 Dimensions in feet unless
 otherwise specified



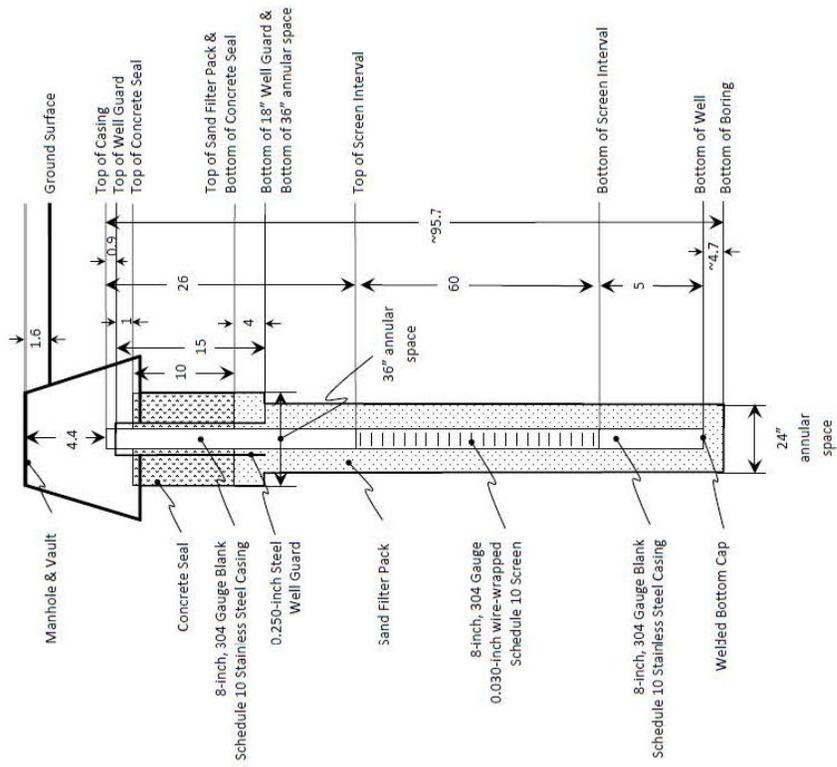
RELIEF WELL 3
As-Built Dimensions Schematic

Dimensions in feet unless otherwise specified



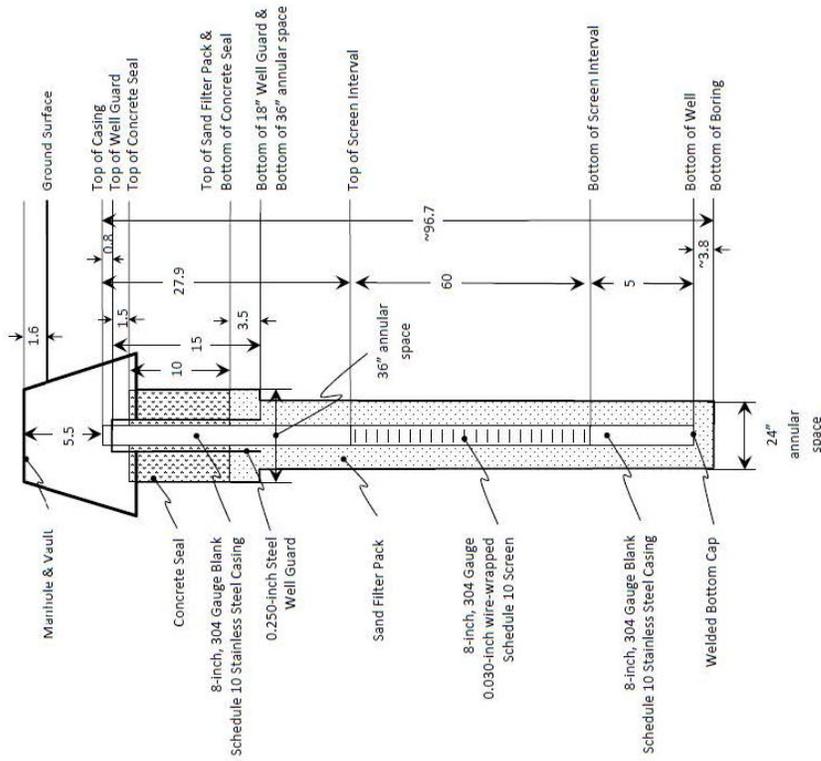
RELIEF WELL 4
As-Built Dimensions Schematic

Dimensions in feet unless otherwise specified



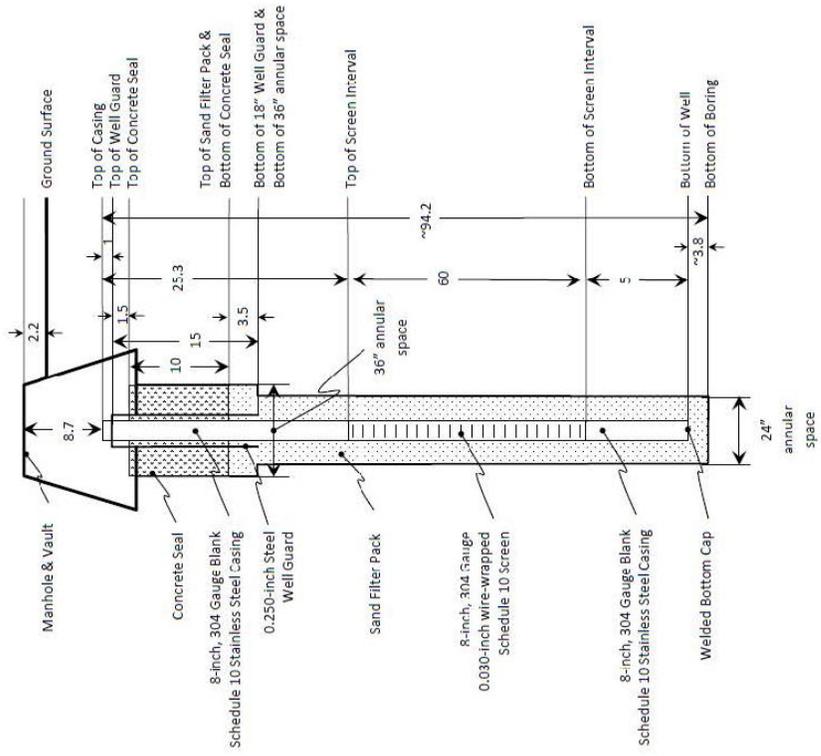
RELIEF WELL 5
As-Built Dimensions Schematic

Dimensions in feet unless otherwise specified



RELIEF WELL 6
As-Built Dimensions Schematic

Dimensions in feet unless otherwise specified



2. Regular Maintenance Items. The following maintenance elements are recommendations for future users and are designed to facilitate continued use.

Locks exposed to elements

- Spray key hole and bolt and hasp holes during each monitoring event (as needed) with silica lubricant spray. Apply away from wellhead only.
- Use vegetable shortening to cover key holes between monitoring events (as needed). Apply liberally to lock as last action before departing well location.

Wellheads

- Observe wellhead concrete collar or flush mounted manhole for signs of damage.
- Add concrete or repair as needed to stabilize.
- Observe urethane gasket seal on underside of check valve for signs of degradation. Re-glue as needed.

Casings

- Use flashlight or reflected sunlight (mirror) to observe interior of sch. 10 stainless steel well casing for signs of root intrusion.
- At yearly intervals, wells should be sounded for evidence of deposition of sand or other material in the wells.
- Relief wells should be inspected annually, preferably immediately prior to normal high-water seasons and more often during major high waters.
- Flow quantities and piezometric levels should be measured approximately a week after a peak in the river level at the levee.

Vault Boxes

- Observe exterior concrete vault box for signs of damage especially at the interface between ground surface and concrete.
- Observe interior of vault boxes for signs of silt or sand deposits. Clean as needed.

General

- The area around each relief well should be kept free of weeds, trash and debris. Mowing and weed spraying should be performed at least 5 feet from the well heads and the ground should be shaped to facilitate access to the wells.
- Observations should be made for evidence of wet spots on the levee or on the ground around the wells and structures, for evidence of sloughing or piping,

- Observations should be made for evidence of discharge of sand or other materials from the wells, and for surface signs of damage.
- The inspection should detect whether vandalism, theft, abuse by carelessness, unauthorized use of the wells or other irregularities have occurred.
- The inspection should include an examination of check valves, gaskets, well guards, and other appurtenances.
- Malfunctioning or damaged items should be repaired or replaced.

3. Long-term Maintenance Items - 5 years

- Replace keyed-alike locks for lock bars.
- Repaint numbers on manhole covers or replace signs as needed.
- Re-develop wells with the objective of removing accumulated sediment in the 5-foot silt trap at the bottom of each well and removing as many fine entrapped in the filter pack as possible.
- Pumping tests should be performed following redevelopment at five-year intervals on wells that flow infrequently. The tests should be performed to determine the specific capacities and the efficiencies of the wells. The amount of sediment in the wells should be measured before and after performance of the pumping tests.
- If the pumping tests indicate that the specific capacity of a relief well is less than 80 percent of that determined at the time of installation, then corrective measures should be employed in accordance with USACE Engineering Manual EM-1110-2-1914 (29 May 1992).

4. Long-term Maintenance Items – Greater than 5 years (including possible abandonment)

- If the pumping tests indicate that the specific capacity of a relief well is less than 80 percent of that determined at the time of installation, then corrective measures should be employed in accordance with USACE Engineering Manual EM-1110-2-1914 (29 May 1992).
- Investigations as described in EM-1110-2-1914 Chapter 10 should be conducted prior to initiating the rehabilitation methods described in Chapter 11. If the rehabilitation methods are unsuccessful in restoring the well(s) to at least 80 percent of original efficiency, consideration should be given to replacing the well(s).
- Abandon wells not functional during high stage floods. Well abandonment to be conducted in accordance with California Well Standards – Department of Water Resources Bulletin 74-90. In addition, the vault boxes should be removed from any abandoned well location and disposed or recycled.

5. Records. The summary of activities below describes the details of recommended record keeping for relief wells.

A record should be kept of all inspections and maintenance performed on each well.

Records of maintenance should include cost data, contractor point of contact information, dates and times of service or maintenance by staff, maintenance outcomes, and recommendations for further work.

Records of inspections should include dates and times of inspections and detailed logs of conditions observed.

6. Depth to Water Data

Before flood season each relief well should be measured for depth to water from the “lip” of the manhole lid collar using a straight edge or level to provide a uniform and repeatable point of reference for depth to water measurements.

Entries should include the well number, depth to water (DTW), depth to bottom of well, date and time of DTW measurement, and the type of meter(s) used for acquiring DTW measurements. The bottoms of the relief wells are designed with a 5-foot unscreened sediment trap at the bottom of the well. Therefore, it is probable that the bottom of any well will be soft and will not provide a hard bottom. It is important to note this when measuring the depth of the well so that the amount of sediment at the bottom can be estimated and a decision made whether to redevelop the well on the basis of accumulated sediment.

Prior to leaving for the field the inspection crew should have acquired the data for the depth of each well and depth to water from previous inspection logs.

7. Evaluation

It should be noted that a reduction in well discharge accompanied by a fall in piezometric levels in downstream areas probably indicates a decrease in seepage due to siltation in the riverbed areas, which is a favorable condition. It is possible, however, that such a reduction was caused by erosion or excavation of an impervious top stratum at a point downstream of the line of wells, thus permitting exit of seepage to tailwater much closer to the wells. This condition would be unfavorable, because it would indicate a higher value of the seepage gradient and an increased potential for piping immediately downstream from the well line. A reduction in well discharge accompanied by an increase in piezometric levels indicates clogging or obstruction of the relief wells, and requires immediate remedial action.

The values obtained from measurement or piezometric levels and flow quantities should be extrapolated to predict the values that would be

produced by a maximum design river elevation. If these values are greater than those for which the structure was designed, or if the specific capacities or the efficiencies of the wells are less than 80 percent of the values that were obtained at the time of installation of the wells, additional investigations should be performed to determine the cause of the inadequacies. Investigations may include the examination of the well screen by means of a borehole camera, sounding the well with a caliper, and the performance of chemical tests on the water and on any deposits or incrustations found in the well. If there are any inclinometer tubes installed in the foundation in the vicinity of the wells, they should be read to determine if there has been any horizontal movement of the foundation that would cause disruption of well screens or risers.

8. Rehabilitation

The major causes of reduced specific capacity of relief wells with time are (a) mechanical, (b) chemical, (c) biological. Methods for addressing these causes are presented in USACE Engineering Manual EM 1110-2-1914, chapters 11 and 12.

c. Operation.

(1) Requirements of the Code of Federal Regulations.

Flood Control Regulations, paragraph 208.10 (h) (2) are quoted as follows:

"(2) Operation. Miscellaneous facilities shall be operated to prevent or reduce flooding during periods of high water. Those facilities constructed as a part of the protective works shall not be used for purposes other than flood protection without approval of the District Engineer unless designed therefore."

(2) Relief Wells

Inspections During Flood Events. Inspectors should operate with care near the relief wells during a flood event.

After Flood Events. The operator should perform an inspection of all wells at the site after any high water event that results in the river level rising up to and above the flood plain. The following items should be part of the checklist of inspection items:

- i. Check for and photograph any erosion and scour of the ground surface on the flood plain.
- ii. Check for and photograph any erosion or scour resulting in undercutting of the well head concrete collars.
- iii. Check for and photograph any debris on the flood plain that could pose a threat to the wellheads if remobilized in a subsequent flood event
- iv. Note and photograph any deposition of debris, sand or sediment

Repairs. Perform any repairs or replacements as necessary to restore the relief well network back to functional operating condition. Refill holes and scour rills and re-grade deposited sediment.

2-05. Environment Protection. *

a. Vegetation left during construction on the waterside berm or slope above the bank protection shall not be removed under normal maintenance. Dead trees with wildlife value will be retained except where they are a hazard to existing flood control works.

*Revised April 1983

THE RECLAMATION BOARD

16 Ninth Street, Room 455-6
Sacramento, CA 95814-5594
(916) 653-5434 FAX: (916) 653-5805



FFR 1 5 1994

Colonel John N. Reese
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Reese:

This is in reference to additions to the supplements of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project for Units 115, ~~117~~ and 124. These additions address the reconstruction work completed as part of the Sacramento Urban Area Levee Reconstruction Project.

The Reclamation Board requests the additions to the Standard Operation and Maintenance Manual for Item C, subparagraph 7, Paragraph 2.04, Miscellaneous Facilities, within Section II be modified. The requirement to begin well observations 48 to 72 hours prior to the river stage being forecasted to reach 20 feet is incompatible with current practice. Reclamation District 1000, local maintaining agency for unit 124, and the City of Sacramento, local maintaining agency for unit 117, commence highwater inspections when the "I" Street gage on the Sacramento River measures approximately 25 feet. The Department of Water Resources' Sacramento Maintenance Yard, local maintaining agency for unit 115, commences highwater inspections when the "I" Street gage measures at least 23 feet and the Sacramento River is forecasted to rise. Therefore, to combine the highwater inspections and observation well readings into a more efficient task, the Board recommends that observation well readings begin once the gage at "I" Street reaches 25 feet and readings shall be taken as close to 12-hour intervals as possible. The Board and local maintaining agencies believe the following draft of Item C is reasonable and within their ability to perform:

(c) Highwater monitoring of the observation wells should begin when the river stage at the I Street gage is forecasted to reach an elevation of 25 feet and should continue until the river stage recedes below elevation 25 as conditions permit. Observations should be made as reasonably close to 12-hour intervals as possible.

3/28/94 - Orig sent to
Centr Vy Section for action

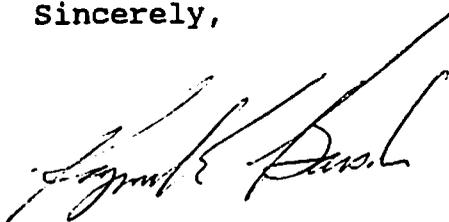
Colonel John N. Reese

FEB 15 1994

Page Two

For further information, please contact me at (916) 653-5434 or have your staff contact Ricardo Pineda at (916) 327-1596 or Victor Pacheco at (916) 327-1532.

Sincerely,



Raymond E. Barsch
General Manager

cc: Mr. John P. Saia
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Mr. Larry Johnson
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

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 the 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.

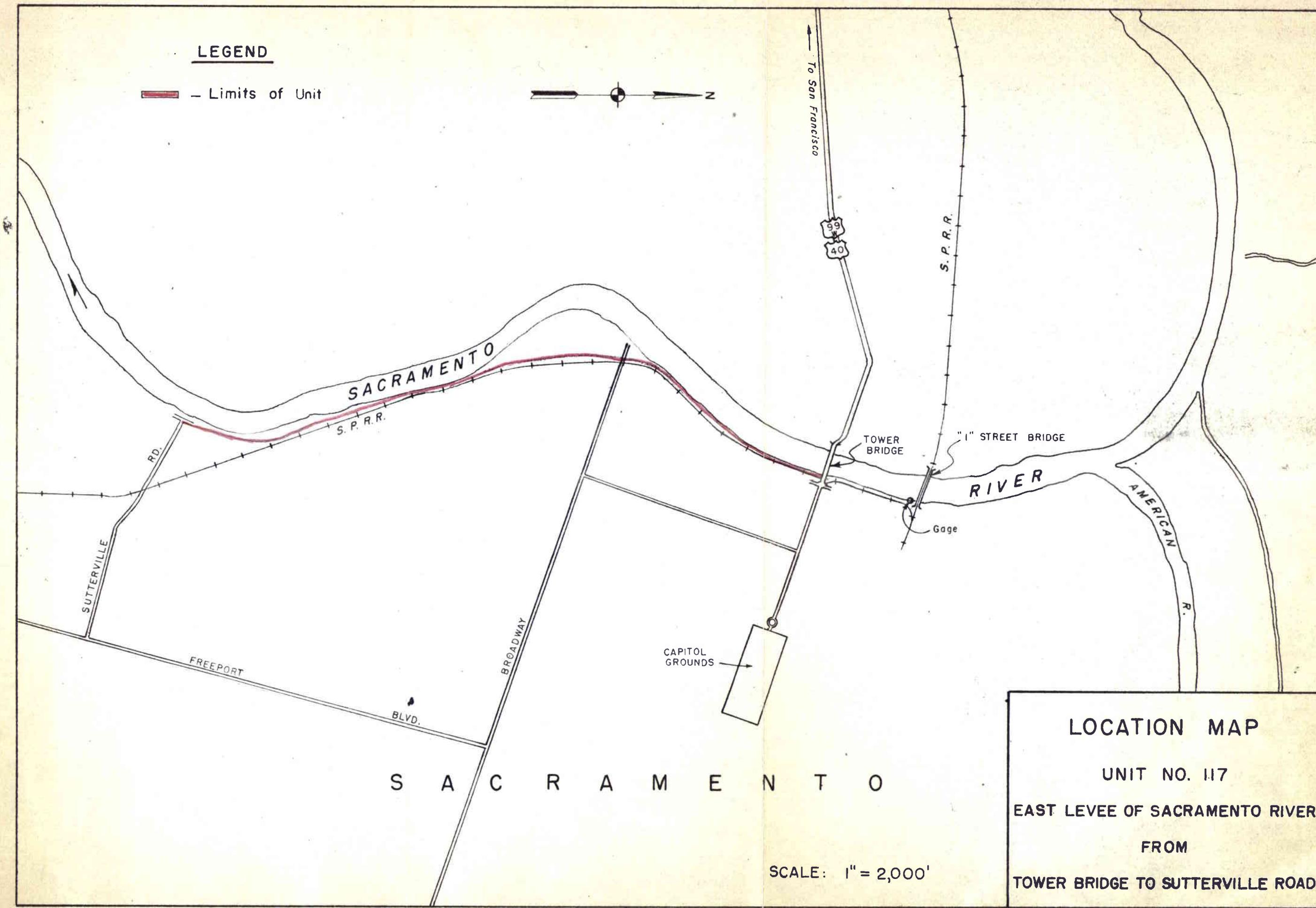
EXHIBIT A

FLOOD CONTROL REGULATIONS

(See Standard Manual)

LEGEND

 - Limits of Unit

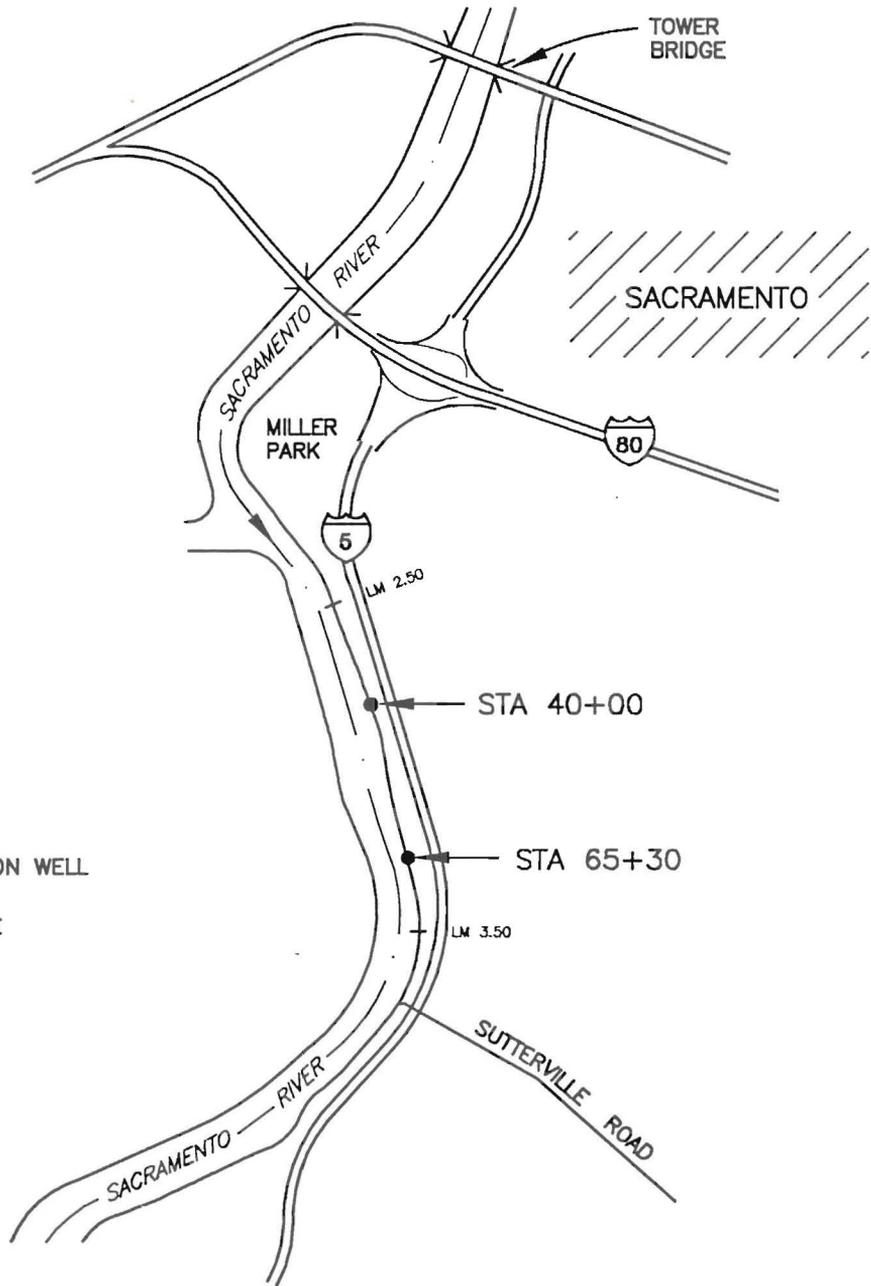


S A C R A M E N T O

LOCATION MAP
UNIT NO. 117
EAST LEVÉE OF SACRAMENTO RIVER
FROM
TOWER BRIDGE TO SUTTERVILLE ROAD

SCALE: 1" = 2,000'

↑
N
NO SCALE



LEGEND

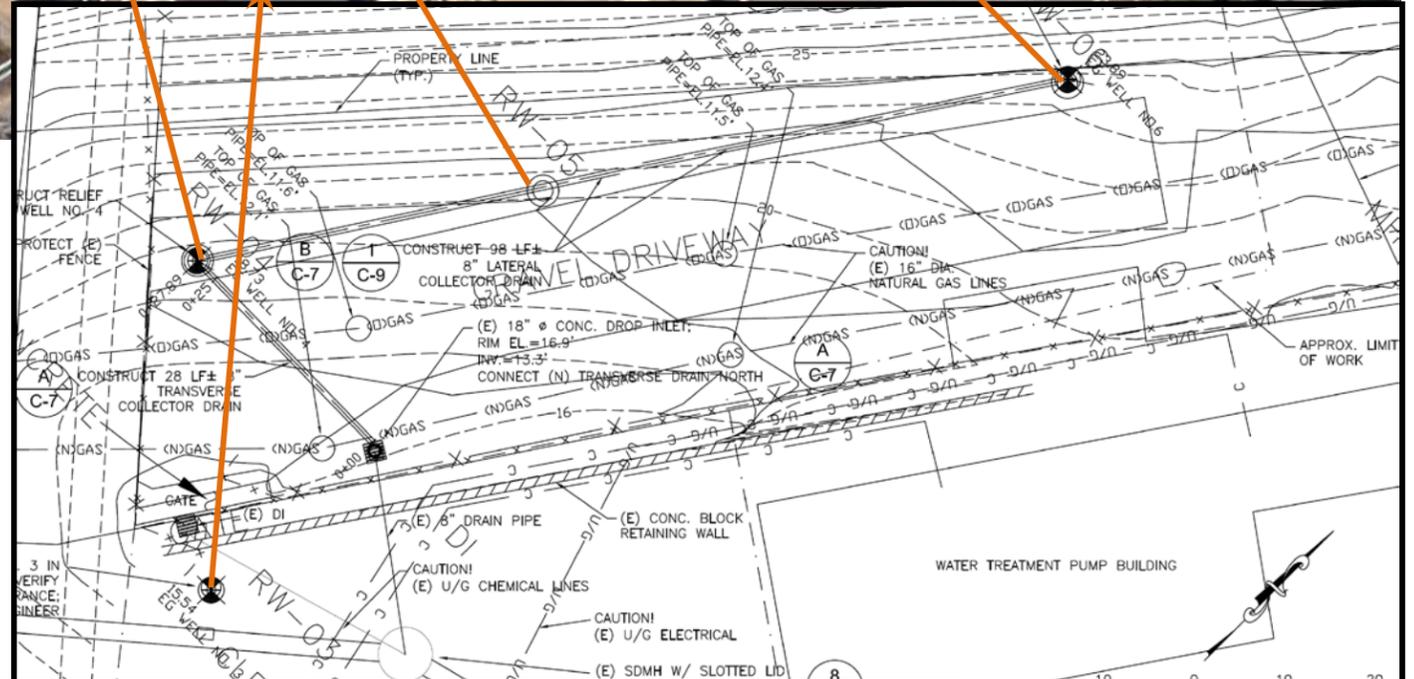
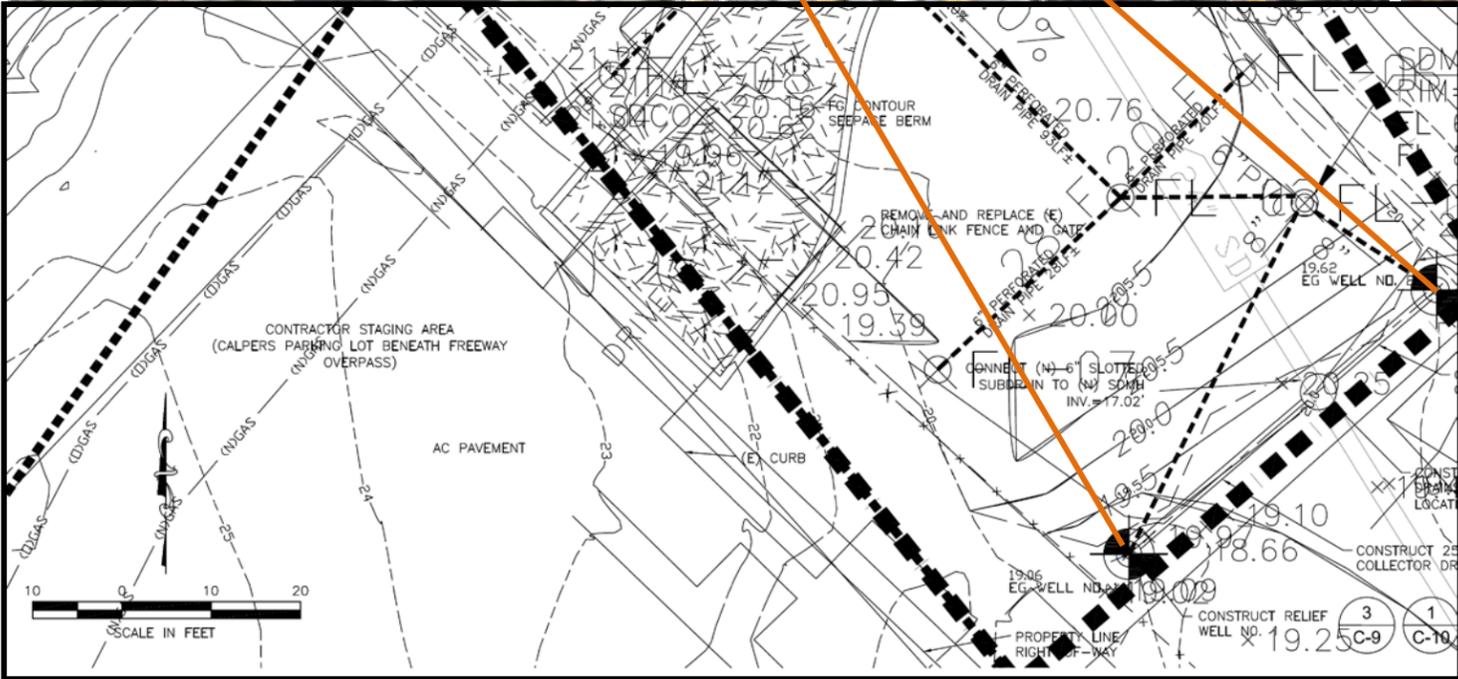
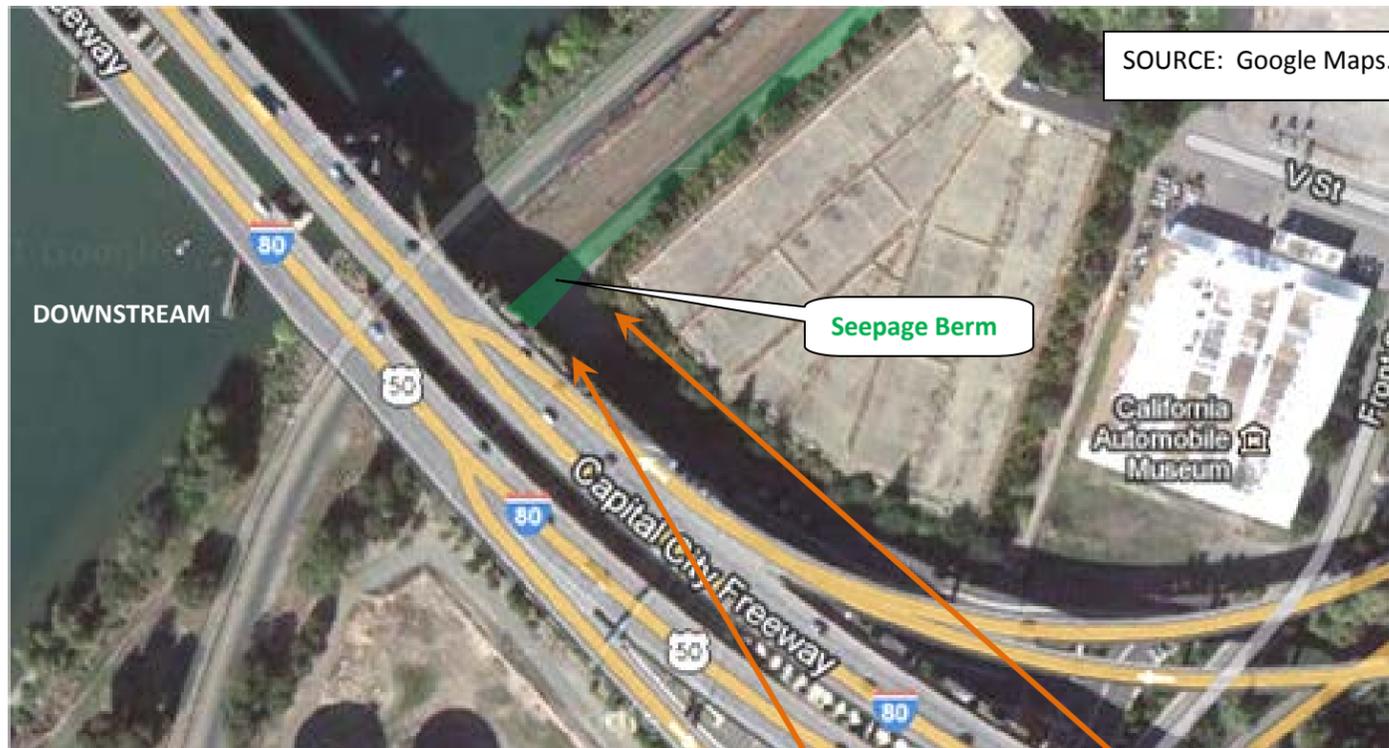
- OBSERVATION WELL
- LM LEVEE MILE

NOTE

Station of Observation Wells
are as per Contract Drawings

SACRAMENTO URBAN AREA
GREENHAVEN-POCKET PHASE II

LOCATION MAP
of
OBSERVATION WELLS



SOURCE: Sheets C-7 & C-8; Sacramento River Levee, Left Bank River Mile 58.5, Pioneer Reservoir Seepage Berm & Relief Well Project; plans by Nichols Consulting Engineers, Chtd., Sacramento, California, for U.S. Army Corps of Engineers, Sacramento District, revised 17 November 2012.



SACRAMENTO RIVER FLOOD CONTROL PROJECT
LEFT BANK RM 58.5 - PIONEER RESERVOIR
SACRAMENTO, CALIFORNIA

RELIEF WELL & SEEPAGE BERM LOCATIONS

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

SACRAMENTO DISTRICT

IN-HOUSE DESIGN

Designed by: R.C. PAYTON	Date: 26FEB13	Rev. 0
Dwn by: R.C.P.	Spec No. --	Design file no. --
Reviewed by: C. BROOKS	Drawing Code:	
Submitted by: /s/ Chief, Geology Section	File name:	Plot date:

Exhibit:
A-3

EXHIBIT B

“AS CONSTRUCTED” DRAWINGS

See separate folder for the following drawings:

<u>File No.</u>	<u>Title</u>
6-13-1100	PLAN – sheets 1, 2, and 3
50-10-2840	PROFILE – 1 sheet
50-10-2839	CROSS SECTIONS – sheets 1, 3, 4, 5, 9, and 10
50-4-5347	Bank Protection, Various Locations, Right and Left Banks, Sacramento River Mile 15.0 to Mile 60.0, in 33 sheets.
50-4-5834	Sacramento Urban Area Levee Reconstruction Project, Greenhaven-Pocket, Phase II in 59 sheets.
50-04-5886	Levee Reconstruction (Old Sacramento Floodwall)
50-04-5862	Bank Protection and Erosion Control

“RECORD” DRAWINGS
(NOT As-Constructed)

50-04-6239	Sacramento River Levee Left Bank River Mile 58.5 Pioneer Reservoir Seepage Berm and Relief Well Project in 12 Sheets
------------	--

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

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 1-04 of this manual

EXHIBIT E

Sheet 1 of 7

UNIT NO. 117

CHECK LIST NO. 2

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 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 gulying of the section has occurred.
- Item (c) If sufficient erosion or gulying of back face of back toe of levee has taken place to be noticeable by visual inspection, indicate area affected and depth.
- Item (d) Note any natural change in any section of roadway or ramps. Indicate any inadequacy in surface drainage system.
- Item (e) Indicate any evidence of seepage through the embankment section.
- Item (f) Indicate the serviceability of all farm gates across the embankments and roadway, and indicate if repainting is required.
- Item (g) Indicate maintenance measures that have been performed since last inspection and their condition at the time of this inspection.
- Item (h) Record opinion, if any, of contributory causes for conditions observed and also any observations not covered under other columns.

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

CHECK LIST NO. 3

CHANNEL AND RIGHT-OF-WAY

UNIT NO. 117

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

v 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	

DRAINAGE AND IRRIGATION STRUCTURES

UNIT NO. 117

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 structures	(g) Repair Measures Taken since last Inspection	(h) Comments
54+48	left						
54+49	"						
54+50	"						
54+51	"						
55+03	"						
55+30	"						
55+30	"						
55+30	"						
56+03	"						
56+13	"						
56+30	"						
151+85	"						
152+00	"						
156+00	"						
156+40	"						
157+80	"						

INSTRUCTIONS FOR COMPLETING SHEET 6, EXHIBIT E

(To be printed on back of sheet 6)

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

EXHIBIT F
LETTER OF ACCEPTANCE
BY STATE RECLAMATION BOARD



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

NOV 29 2016

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

Dear Ms. Gallagher:

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

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

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

Sincerely,

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

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

Enclosures

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

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

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

Standard O&M Manual San Joaquin River

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

June 10, 1998

Central Valley Section

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

Dear Mr. Rabbon:

The Old Sacramento Floodwall work was transferred to the State by letter dated March 17, 1998. Enclosed are two copies of the revisions and additions to the Operation and Maintenance Manual, Unit Number 117, of the Sacramento River Flood Control Project associated with that work.

Copies of the as constructed drawings can be provided by contacting the Project Manager, Mr. John Brown, at (916) 557-7801.

Sincerely,

Brian W. Doyle
Chief, Engineering Division

Enclosure

Copy Furnished:

Mr. Donald Yeoman
Department of Water Resources
State of California
1801 6th Street
Sacramento, California

THE RECLAMATION BOARD
OF THE
STATE OF CALIFORNIA

C
O
P
Y

May 22, 1952

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

Dear Sir:

Reference is made to your letter (1) SPKKO-P 824.3 (Sacramento R. F.C.P.) 13 December 1951, (2) your letter SPKKO-P 824.3 (Sacramento R. F.C.P.) 19 December 1951, and (3) your letter SPKKA 824.3 (Sacramento R.F.C.P.) 13 December 1951, transferring 101 reaches of levee and contiguous banks to the Reclamation Board for flood-control operation and maintenance.

On January 2, 1952, the Reclamation Board accepted the transfer of the reaches of levee listed in first tabulation attached and did not accept those reaches of levee and contiguous bank in the second tabulation.

Yours very truly,

THE RECLAMATION BOARD

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

January 2, 1952

C
O
P
Y

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:

<u>No.</u>	<u>Date of Letter</u>	<u>Levee location</u>	<u>Remarks</u>
1 3	----- 13 Dec. 1951	----- d.(46)East levee Sacra- mento River Mile 56.1 to American River.	----- Constructed and main- tained by City of Sacra- mento.

NOTE: Only item pertaining to Operation and Maintenance Manual No. 117 is included in the above copy.

SPKKO-P 824.3 (Sac. Riv. F.C.P.)

*Prepared
29 Dec. 1953*

*Mailed
31 Dec. 1953*

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

Gentlemen:

Reference is made to District Engineer's letter dated 22 October 1953, suggesting a joint inspection of two sections of levee, pertaining to the Sacramento River Flood Control Project, for the purpose of transferring them to the jurisdiction of the State of California for operation and maintenance. Reference is also made to joint inspection made of these two sections of levee on 4 December 1953.

The levee sections referred to above have been completed recently in accordance with Specifications No. 1704 and drawings No. 50-4-2907, 50-4-2908, and 50-4-2909, under Contract No. DA-04-167-eng-910. They are located along the left bank of the Sacramento River between Mile 45.3 and 56.1, form an integral part of the Sacramento River Flood Control Project, and meet with the requirements of the project. Therefore, said levee sections together with the waterway banks contiguous thereto are hereby transferred to the State of California for operation and maintenance. The location of these sections of levee is further described as follows:

<u>Location</u>	<u>Description</u>	<u>River Mile</u>
1.	Left Bank-Sacramento River	From 45.3 to 55.4
2.	Left Bank-Sacramento River	From 55.5 to 56.1

*Unit No. 376
Unit No. 377*

In this connection your attention is invited to the fact that the section of levee from Mile 55.4 to 55.5, joining these two sections, was transferred to the State of California on 13 December 1951, therefore action by the Board, at this time, should include the acceptance of the levee in this reach of the river continuously from Mile 45.3 to 56.1 to cover all three sections.

Note: See Bardale "Resume of Reclamation Board Meeting" dated 20 January 1954, under Paragraph 11.

Units 15+117

*Posted
Letter No. 49*

376 and 377

DeArrieta
12/29/53

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

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations, inclosed herewith, which have been prescribed by the Secretary of the Army pursuant to Section 3 of the Act of Congress, approved 22 June 1936, as amended and supplemented. As provided under Paragraph 208.10 (10) of these regulations, a maintenance manual covering these sections of levee is in process of preparation and will be furnished to you upon completion.

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

1 Incl

- 1. Flood Control Regulations

Copy Furnished:

State Engineer
Dept. of Public Works
1120 N Street
Sacramento, California

- cc: O.C.E. w/o incl
- So. Pac. Div. w/o incl
- Engr. Div. w/o incl
- Sacto. Proj. Ofc. w/o/ incl
- C. DeArrieta (2)

376 and 377



C
O
P
Y

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

C
O
P
Y

REPLY TO
ATTENTION OF SPKCO-0

19 January 1981

The Reclamation Board
State of California
1416 - 9th Street, Room 335
Sacramento, CA 95814

Gentlemen:

This is in regard to the joint inspection of 15 January 1981 made for the purpose of transferring a portion of the Sacramento River Bank Protection Project (Unit 33), to the State of California for Operation and Maintenance. The flood control work consists of levee bank sloping and placement of stone protection on the Sacramento River right bank at Site Mile 56.9 and left bank at Site Mile 56.6. The sites described in the inclosure were completed on 15 January 1981 in accordance with Contract No. DACW05-77-C-0101, Specification No. 5269 and Drawing No. 50-4-5347.

The work was performed under general authority of the Flood Control Act of 1960, 86th Congress, 2nd Session (PL 86-645, 14 July 1960), and Section 2304 (a), Title 10, 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 15 January 1981 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, Supplements Nos. 116 and 117, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely,

1 Incl
1. Summary Sac Rv Bk
Prot Proj Unit 33

PAUL F. KAVANAUGH
Colonel, CE
District Engineer

Copy furnished:
DWR, ATTN: R. Franson
DWR, ATTN: D. Meixner

EXHIBIT F

April 30, 1993

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 the Greenhaven-Pocket Phase II work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately ten miles of seepage cutoff slurry wall in the City of Sacramento levee between approximately levee mile 2.1 and Sutterville Road and the Maintenance Area 9 levee between Sutterville Road and approximately 2600 feet south of the Freeport Bridge.

The work was completed on March 30, 1993, in accordance with Contract Number DACW05-91-C-0114, Specification Number 8849, and Drawing Number 50-4-5834.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manuals, Supplement Number 115 and 117, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

TAVANA/ms

Sincerely,

KELLY

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HELM

Copies Furnished:

WINTON

Department of Water Resources, ATTN: G. Snow, 3201 S Street,
Sacramento, California 95816-7017

DENNIS

Department of Water Resources, ATTN: G. Qualley, 1416 Ninth
Street, Sacramento, California 95814

CDR, SPD, ATTN: CESPDCO-O
CDR, USACE, ATTN: DAEN-CECW-OM

SAIA

cc:

KASPRISIN

> Central Valley Sec
PM (Childs)
Prog Dev
F&A Br
Valley Res Ofc

SADOFF

LU/T0042.LT

EXHIBIT F

Summary of Sacramento River
Bank Protection Project
Portion of Unit 33
Sacramento River

<u>Site Mile</u>	<u>Stone Protection</u>	<u>L.F.</u>
56.9 Right	7+50 to 13+00	550
56.6 Left	1+55 to 4+60	305

December 17, 1993

Navigation and Flood Control Unit

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

ms

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the repair of levee erosion at four different sites on the left bank of the Sacramento River. The location of this work is just downstream of the Garcia Bend Park between approximate River Miles 48 and 51. The repair work consisted of minor clearing and grubbing, excavation, embankment construction, placement of stone protection, and erosion control revegetation of the slopes.

The work was completed on December 7, 1993, in accordance with Contract Number DACW05-92-C-0087, Specification Number 9219, and Drawing Number 50-04-5862. This work is a follow up repair work that was needed following the completion of the Greenhaven-Pocket Phase II Contract, completed on March 30, 1993, and transferred to your Board with a letter dated April 30, 1993.

The repaired portion of the levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. This work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 115 and 117, Sacramento River Flood Control Project.

Sincerely,

ms
TAVANA/ms
PK
KELLY
HELM
WINTON *F*
DENNIS *D*
JOHNSON *A*
ms
CHILDS
SARA *Stull*
REESE
LU/T0067

of Engineers
r
3201 S Street,
ey, 1416 Ninth

81151117

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge)
2. Restricted Delivery (Extra charge)

3. Article Addressed to: The Reclamation Board State of California 1416-9th Street, Room 455-6 Sacramento, California 95814	4. Article Number 792133 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Pauline Amoro</i>	
7. Date of Delivery DEC 27 1993	

File: Transfer bills;
Sacramento River Flood
Control Project

~~#A~~ # 13d

March 17, 1998

Operations Technical Branch

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

Dear Mr. Rabbon:

You are hereby notified that the Corps of Engineers has completed the Old Sacramento Floodwall work along the left bank of the Sacramento River between River Miles 58.6 and 58.9. The work was accomplished as an essential portion of the Sacramento Urban Levee Reconstruction Project, pursuant to the Sacramento River Flood Control Act of 1917, as amended, and the Local Cooperation Agreement and associated Amendment Number 1 signed June 4, 1990, and September 20, 1995 respectively. The work included the installation of steel reinforcing bars, prestressed concrete expansion anchors, and ground anchors along a 1500-foot segment of the embankment and wall.

The final inspection was completed on March 26, 1997, in accordance with Contract Number DACW05-95-B-0095, Specification Number 9644, and Drawing File Number 50-04-5886. The existing levee embankment and wall along with the new reinforcing bars and anchors will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California. The new work will be added by amendment to the Operation and Maintenance Manual, Unit Number 117, of the Sacramento River Flood Control Project. Copies will be forwarded to your office at a later date.

Sincerely,

Dorothy F. Klasse
Colonel, Corps of Engineers
District Engineer

Unit 117

cc:

CESPK-PPMD (Johnson)

CESPK-ED-D

CESPK-RE

CESPK-CO

CESPK-CO-O

CESPK-CO-RV

[Signature]
TAVANA/dm

[Signature]
SANDNER

WINTON *[Signature]*

[Signature]
NOLAN

[Signature]
WHITNEY

[Signature]
MUNCY

[Signature]
KLASSE

'98 MAR 24 P 3 42

Unit 117



REPLY TO
ATTENTION OF

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

Flood Protection and Navigation Section

MAR 15 2013

Mr. Jay Punia, Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

Dear Mr. Punia:

This letter is to transfer the U.S. Army Corps of Engineers (Corps) recently completed Pioneer Reservoir Seepage Berm and Relief Wells Project performed under the authority of the Water Resources Development Act of 1996 (WRDA 1996).

The Project is located in the City of Sacramento (City) on the Sacramento River Left Bank levee near River Mile 58.5. The project area extends approximately 800 feet upstream from Capital City Freeway Bridge (Business 80/U.S. 50) adjacent to the levee. Project improvements for turnover include a 550 feet long by 50 feet wide seepage berm, six relief wells, collector drains and their appurtenant features along the landside levee toe. Two wells were placed south of the City's 120" outfall between the levee toe and Pioneer Reservoir and four wells were placed north of the City's 120" outfall between the levee and the City's operating facility. The seepage berm will reduce the computed upward hydraulic gradient. Relief wells to the north and south of the seepage berm will relieve excess hydrostatic pressures from under the levee during high river levels.

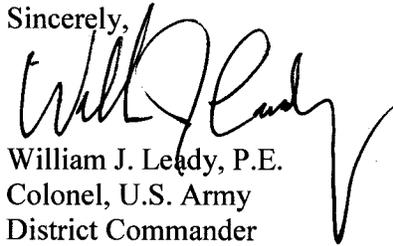
The construction was completed in accordance with American River Common Features WRDA 1996 Section 101(a)(1), Specification Number 1527, Design File Number 50-04-6239, Contract Number W91238-06-C-0029. Record drawings and a revised Operation and Maintenance Manual are enclosed. Also, a copy of the "Written Notice of Acceptance of Completed Work" is included as required by the Project Cooperation Agreement (PCA). Both hard-copy and electronic versions (CD) are provided.

This work meets the requirements of the existing Supplement to Standard Operation and Maintenance Manual Sacramento River Flood Control Project Unit No. 117 – East Levee Sacramento River through the City of Sacramento from Tower Bridge to Sutterville Road therefore, said flood control work is transferred as of the date of this letter to the State of California for operation, maintenance, repair, replacement, and rehabilitation (OMRR&R).

This letter of acceptance into the Federal flood control system should not be construed as an endorsement for inclusion in to the National Flood Insurance Program as outlined in Title 44 of the Code of Federal Regulations Section 65.10 of the National Flood Insurance Regulations (44 CFR 65.10).

If you have any questions regarding this project, please contact the Project Manager, Mr. John Hoge, at (916) 557-5304. If you have any questions regarding this transfer, please contact Mr. Ryan Larson at (916) 557-7568, Flood Protection and Navigation Section. A copy of this letter is being furnished to Mr. Rick Johnson, Sacramento Area Flood Control Agency, 1007 7th Street, 7th Floor, Sacramento, CA 95814.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. Leady". The signature is written in a cursive style with a large, sweeping initial "W".

William J. Leady, P.E.
Colonel, U.S. Army
District Commander

Enclosures

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 Unit No. 117 the east levee of the Sacramento River from Tower Bridge to the Sutterville Road, of the Sacramento River Flood Control Project is as follows:

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

(Superintendent's summary of conditions)

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

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

b. During this report period, major high water stages (water level at 25.0 on the U. S. Weather Bureau recording gage at the "I" Street Bridge) occurred on the following dates:

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

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

(Superintendent's log of flood observations)

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

(See Maintenance Manual _____.)

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

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

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

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

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

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

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

Respectfully submitted,

Superintendent of Works

EXHIBIT H

ARCF PCA and Amendments



DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CECW-AR (1110-2-1150a)

15 July 1998

MEMORANDUM THRU ~~COMMANDER~~, SOUTH PACIFIC DIVISION

FOR COMMANDER, SACRAMENTO DISTRICT, ATTN: CESPCK-PM-C (Mr. Childs)

SUBJECT: American River Watershed, Common Features - Project Cooperation Agreement

1. The subject project cooperation agreement (PCA) and financing plan have been approved by the Assistant Secretary of the Army (Civil Works) (ASA(CW)). Signature authority is delegated to the district commander. A copy of the approval memorandum (enclosure 1) and the approved PCA are enclosed (enclosure 2).
2. Under delegated signature authority, you must ensure that the PCA is executed as approved by OASA(CW), without deviation, not later than 21 calendar days after the date of this memorandum. The Sacramento District should prepare four final PCA originals and have them signed by the sponsor. The district will retain two copies of the PCA upon execution. A copy of the signed PCA and an electronic copy of the PCA should be forwarded to CECW-AR (Mr. James Scott) not later than 14 days after signature.
3. If any deviations to the approved PCA are required, prior to PCA signature by the sponsor, the district will transmit a memorandum notifying CECW-A of the reasons for the deviations and requesting approval of the deviations. Only after receipt of written approval from CECW-A will the deviations be incorporated into the approved PCA.
4. If the 21-day suspense will not be met, prior to PCA signature by the sponsor, the district will transmit a memorandum notifying CECW-A of the reasons for the slip or identifying changed conditions and the recommended course of action.
5. Any questions should be directed to James Scott, Review Manager, 703-428-8373.

FOR THE COMMANDER:

2 Encls
as


DAVID B. SANFORD, JR.
Chief, Policy Division
Directorate of Civil Works



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

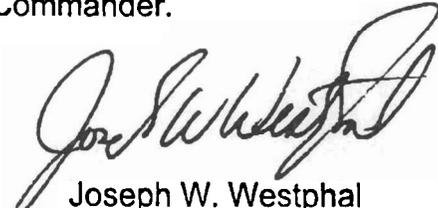
REPLY TO
ATTENTION OF

10 JUL 1998

MEMORANDUM FOR THE DIRECTOR OF CIVIL WORKS

SUBJECT: American River Watershed, Common Features, California - Project
Cooperation Agreement

This is in reply to Mr. Sanford's Memorandum of July 9, 1998, concerning the subject. The financing plan and draft agreement are approved. Execution of the agreement is delegated to the District Commander.



Joseph W. Westphal
Assistant Secretary of the Army
(Civil Works)

Enclosure 1

PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

THIS AGREEMENT is entered into this 13th day of July, 1998, by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"), represented by the District Engineer, U.S. Army Engineer District, Sacramento, and the State of California acting by and through The Reclamation Board (hereinafter the "Non-Federal Sponsor"), as represented by the General Manager of The Reclamation Board.

WITNESSETH, THAT:

WHEREAS, construction of the American River Watershed (Common Features), California Project at Sacramento, California was authorized by the Water Resources Development Act of 1996;

WHEREAS, the Government and the Non-Federal Sponsor desire to enter into a Project Cooperation Agreement for construction of the American River Watershed (Common Features), California Project (hereinafter the "Project", as defined in Article I.A. of this Agreement);

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, specifies the cost-sharing requirements applicable to the Project;

WHEREAS, Section 221 of the Flood Control Act of 1970, Public Law 91-611, as amended, and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, provide that the Secretary of the Army shall not commence construction of any water resources project, or separable element thereof, until each non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

WHEREAS, Section 101(a)(1)(B) of the Water Resources Development Act of 1996, Public Law 104-303 provides that the Non-Federal Sponsor shall receive credit toward its share of project costs for expenses that it incurs for design or construction of the Project which is performed before the date on which Federal funds are made available for construction of the Project, and provides further that the amount of the credit shall be determined by the Government:

WHEREAS, the Non-Federal Sponsor does not qualify for a reduction of the maximum non-Federal cost share pursuant to the guidelines that implement Section 103(m) of the Water Resources Development Act of 1986, Public Law 99-662, as amended;

WHEREAS, Section 902 of Public Law 99-662 establishes the maximum amount of costs for the American River Watershed (Common Features), California Project and sets forth procedures for adjusting such maximum amount; and

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate in cost-sharing and financing of the construction of the Project in accordance with the terms of this Agreement.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree as follows:

ARTICLE I -DEFINITIONS AND GENERAL PROVISIONS

For purposes of this Agreement:

A. The term "Project" shall mean the construction of approximately 24 miles of slurry wall in the existing levees along the American River, modifying and raising approximately 12 miles of levee on the east side of the Sacramento River from Powerline Road to the Natomas Cross Canal, installation of three telemetered stream flow gages upstream of Folsom Dam, and modification of the existing flood warning system that exists at the Bureau of Reclamation's Nimbus Dam as generally described in the Supplemental Information Report, American River Watershed Project, California dated March 1996, and approved by the Chief of Engineers on June 27, 1996, and modified by the August 1997 SIR Addendum, approved on July 10, 1998. The Project includes the Section 101(a)(1)(B) work described in Article I.K of this Agreement.

B. The term "total project costs" shall mean all costs incurred by the Non-Federal Sponsor and the Government in accordance with the terms of this Agreement directly related to construction of the Project. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to: continuing planning and engineering costs incurred after October 1, 1985; advanced engineering and design costs; preconstruction engineering and design costs; engineering and design costs during construction; the costs of investigations to identify the existence and extent of hazardous substances in accordance with Article XV.A. of this Agreement; costs of historic preservation activities in accordance with Article XVIII.A. of this Agreement; actual construction costs, including the costs of alteration, lowering, raising, or replacement and attendant removal of existing railroad bridges and approaches thereto; the credit amount for the Section 101 (a)(1)(B) work performed by the Non-Federal Sponsor afforded in accordance with Article II.D.5. of this Agreement; supervision and administration costs; costs of participation in the Project Coordination Team in accordance with Article V of this Agreement; costs of contract dispute settlements or awards; the value of lands, easements, rights-of-way, relocations, and suitable borrow and dredged

or excavated material disposal areas for which the Government affords credit in accordance with Article IV of this Agreement; and costs of audit in accordance with Article X of this Agreement. The term does not include any costs for operation, maintenance, repair, replacement, or rehabilitation; any costs due to betterments; or any costs of dispute resolution under Article VII of this Agreement.

C. The term "financial obligation for construction" shall mean a financial obligation of the Government or a financial obligation of the Non-Federal Sponsor for Section 101(a)(1)(B) work, other than an obligation pertaining to the provision of lands, easements, rights-of-way, relocations, and borrow and dredged or excavated material disposal areas, that results or would result in a cost that is or would be included in total project costs.

D. The term "non-Federal proportionate share" shall mean the ratio of the Non-Federal Sponsor's total cash contribution required in accordance with Articles II.D.1. and II.D.3. of this Agreement to total financial obligations for construction, as projected by the Government.

E. The term "period of construction" shall mean the time from the date the Government first notifies the Non-Federal Sponsor in writing, in accordance with Article VI.B. of this Agreement, of the scheduled date for issuance of the solicitation for the first construction contract to the date that the U.S. Army Engineer for the Sacramento District (hereinafter the "District Engineer") notifies the Non-Federal Sponsor in writing of the Government's determination that construction of the Project is complete.

F. The term "highway" shall mean any public highway, roadway, street, or way, including any bridge thereof.

G. The term "relocation" shall mean providing a functionally equivalent facility to the owner of an existing utility, cemetery, highway or other public facility, or railroad (excluding existing railroad bridges and approaches thereto) when such action is authorized in accordance with applicable legal principles of just compensation; providing a functionally equivalent facility to the owner of an existing utility, or other public facility that is located in, on, under, or along the existing levee when the owner of such utility or facility is the State of California, or a political subdivision thereof; or as otherwise provided in the authorizing legislation for the Project or any report referenced therein. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, or replacement and attendant removal of the affected facility or part thereof.

H. The term "fiscal year" shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

I. The term "functional portion of the Project" shall mean a portion of the Project that is suitable for tender to the Non-Federal Sponsor to operate and maintain in advance of completion of the entire Project. For a portion of the Project to be suitable for tender, the District Engineer must notify the Non-Federal Sponsor in writing of the Government's determination that the portion of the

Project is complete and can function independently and for a useful purpose, although the balance of the Project is not complete.

J. The term "betterment" shall mean a change in the design and construction of an element of the Project resulting from the application of standards that the Government determines exceed those that the Government would otherwise apply for accomplishing the design and construction of that element.

K. The term "Section 101(a)(1)(B) work" shall mean construction of the three telemetered stream flow gages as described in Supplemental Information Report, American River Watershed Project, California dated March 1996. The Section 101(a)(1)(B) work includes construction of the authorized improvements as well as planning, engineering, design, supervision and administration, and other activities associated with construction, but does not include the construction of betterments or the provision of lands, easements, rights-of-way, relocations, or suitable borrow and dredged or excavated material disposal areas associated with the Section 101(a)(1)(B) work.

ARTICLE II - OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

A. The Government, subject to receiving funds appropriated by the Congress of the United States (hereinafter, the "Congress") and using those funds and funds provided by the Non-Federal Sponsor, shall expeditiously construct the Project (including alteration, lowering, raising, or replacement and attendant removal of existing railroad bridges and approaches thereto), applying those procedures usually applied to Federal projects, pursuant to Federal laws, regulations, and policies.

1. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on the solicitations for all contracts, including relevant plans and specifications, prior to the Government's issuance of such solicitations. The Government shall not issue the solicitation for the first construction contract until the Non-Federal Sponsor has confirmed in writing its willingness to proceed with the Project. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract modifications, including change orders, prior to the issuance to the contractor of a Notice to Proceed. In any instance where providing the Non-Federal Sponsor with notification of a contract modification or change order is not possible prior to issuance of the Notice to Proceed, the Government shall provide such notification in writing at the earliest date possible. To the extent possible, the Government also shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract claims prior to resolution thereof. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the contents of solicitations, award of contracts, execution of contract modifications, issuance of change orders, resolution of contract claims, and performance of all work on the Project (whether the work is performed under contract or by Government personnel), shall be exclusively within the control of the Government.

2. Throughout the period of construction, the District Engineer shall furnish the Non-Federal Sponsor with a copy of the Government's Written Notice of Acceptance of Completed Work for each contract for the Project.

3. Notwithstanding paragraph A.1. of this Article, if, upon the award of any contract for construction of the Project, cumulative financial obligations for construction would exceed \$66,500,000, the Government and the Non-Federal Sponsor agree to defer award of that contract and all subsequent contracts for construction of the Project until such time as the Government and the Non-Federal Sponsor agree to proceed with further contract awards for the Project, but in no event shall the award of contracts be deferred for more than three years. Notwithstanding this general provision for deferral of contract awards, the Government, after consultation with the Non-Federal Sponsor, may award a contract or contracts after the Assistant Secretary of the Army (Civil Works) makes a written determination that the award of such contract or contracts must proceed in order to comply with law or to protect life or property from imminent and substantial harm.

B. The Non-Federal Sponsor may request the Government to accomplish betterments. Such requests shall be in writing and shall describe the betterments requested to be accomplished. If the Government in its sole discretion elects to accomplish the requested betterments or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs due to the requested betterments and shall pay all such costs in accordance with Article VI.C. of this Agreement.

C. When the District Engineer determines that the entire Project is complete or that a portion of the Project has become a functional portion of the Project, the District Engineer shall so notify the Non-Federal Sponsor in writing and furnish the Non-Federal Sponsor with an Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual (hereinafter the "OMRR&R Manual") and with copies of all of the Government's Written Notices of Acceptance of Completed Work for all contracts for the Project or the functional portion of the Project that have not been provided previously. Upon such notification, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project or the functional portion of the Project in accordance with Article VIII of this Agreement.

D. The Non-Federal Sponsor shall contribute a minimum of 25 percent, but not to exceed 50 percent, of total project costs in accordance with the provisions of this paragraph.

1. The Non-Federal Sponsor shall provide a cash contribution equal to 5 percent of total project costs in accordance with Article VI.B. of this Agreement.

2. In accordance with Article III of this Agreement, the Non-Federal Sponsor shall provide all lands, easements, rights-of-way, and suitable borrow and dredged or excavated material

disposal areas that the Government determines the Non-Federal Sponsor must provide for the construction, operation, and maintenance of the Project, and shall perform or ensure performance of all relocations that the Government determines to be necessary for the construction, operation, and maintenance of the Project.

3. If the Government projects that the value of the Non-Federal Sponsor's contributions under paragraphs D.1. and D.2. of this Article and Articles V, X, and XV.A. of this Agreement will be less than 25 percent of total project costs, the Non-Federal Sponsor shall provide an additional cash contribution, in accordance with Article VI.B. of this Agreement, in the amount necessary to make the Non-Federal Sponsor's total contribution equal to 25 percent of total project costs.

4. If the Government determines that the value of the Non-Federal Sponsor's contributions provided under paragraphs D.2. and D.3. of this Article and Articles V, X, and XV.A. of this Agreement has exceeded 45 percent of total project costs, the Government, subject to the availability of funds, shall reimburse the Non-Federal Sponsor for any such value in excess of 45 percent of total project costs. After such a determination, the Government, in its sole discretion, may provide any remaining Project lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas and perform any remaining Project relocations on behalf of the Non-Federal Sponsor.

5. The Section 101(a)(1)(B) work has been determined to be compatible with the Project and has an estimated cost in the amount of \$30,000 for construction of such work by the Non-Federal Sponsor. The Congress, in authorizing the Project, included authority for the Government to afford credit for Section 101(a)(1)(B) work. The Non-Federal Sponsor shall receive credit toward the non-Federal share of project costs for expenses that the Non-Federal Sponsor incurs for design or construction of these features before the date on which Federal funds are made available for construction of the Project. The affording of such credit shall be subject to an on-site inspection by the Government to verify that the work was accomplished in a satisfactory manner and is suitable for inclusion in the Project. The actual amount of credit shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. To afford such credit, the Government shall apply the credit amount toward any additional cash contribution required under paragraph D.3. of this Article. If the credit amount exceeds the amount of such additional cash contribution, the Government, subject to the availability of funds, shall, on behalf of the Non-Federal Sponsor, provide Project lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas, or perform Project relocations, equal in value to such excess credit amount. As an alternative, and in its sole discretion, the Government may make a payment to the Non-Federal Sponsor in an amount equal to such excess credit amount, up to the value of contributions under paragraph D.2. of this Article and Articles V, X, and XV.A. of this Agreement. In no event shall the credit amount afforded exceed the lesser of 45 percent of total project costs or the value of the Non-Federal Sponsor's contributions required under paragraphs D.2. and D.3. of this Article and Articles V, X, and XV.A. of this Agreement.

E. The Non-Federal Sponsor may request the Government to provide lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or perform relocations on behalf of the Non-Federal Sponsor. Such requests shall be in writing and shall describe the services requested to be performed. If in its sole discretion the Government elects to perform the requested services or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs of the requested services and shall pay all such costs in accordance with Article VI.C. of this Agreement. Notwithstanding the provision of lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or performance of relocations by the Government, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response in accordance with Article XV.C. of this Agreement.

F. The Government shall perform a final accounting in accordance with Article VI.D. of this Agreement to determine the contributions provided by the Non-Federal Sponsor in accordance with paragraphs B., D., and E. of this Article and Articles V, X, and XV.A. of this Agreement and to determine whether the Non-Federal Sponsor has met its obligations under paragraphs B., D., and E. of this Article.

G. The Non-Federal Sponsor shall not use Federal funds to meet the Non-Federal Sponsor's share of total project costs under this Agreement unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

H. The Non-Federal Sponsor agrees to participate in and comply with applicable Federal floodplain management and flood insurance programs.

I. The Non-Federal Sponsor shall prevent future encroachments on project lands, easements, and rights-of-way which might interfere with the proper functioning of the project.

J. The Non-Federal Sponsor shall not less than once each year inform affected interests of the limitations of the protection afforded by the Project.

K. The Non-Federal Sponsor shall publicize flood plain information in the area concerned and shall provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the flood plain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the Project.

ARTICLE III -LANDS, RELOCATIONS, DISPOSAL AREAS, AND PUBLIC LAW 91-646 COMPLIANCE

A. The Government, after consultation with the Non-Federal Sponsor, shall determine the lands, easements, and rights-of-way required for the construction, operation, and maintenance of the Project, including those required for relocations, borrow materials, and dredged or excavated material disposal. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of the lands, easements, and rights-of-way that the Government determines the Non-Federal Sponsor must provide, in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with acquisition of such lands, easements, and rights-of-way. Prior to the end of the period of construction, the Non-Federal Sponsor shall acquire all lands, easements, and rights-of-way set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each construction contract, the Non-Federal Sponsor shall provide the Government with authorization for entry to all lands, easements, and rights-of-way the Government determines the Non-Federal Sponsor must provide for that contract. For so long as the Project remains authorized, the Non-Federal Sponsor shall ensure that lands, easements, and rights-of-way that the Government determines to be required for the operation and maintenance of the Project and that were provided by the Non-Federal Sponsor are retained in public ownership for uses compatible with the authorized purposes of the Project.

B. The Government, after consultation with the Non-Federal Sponsor, shall determine the improvements required on lands, easements, and rights-of-way to enable the proper disposal of dredged or excavated material associated with the construction, operation, and maintenance of the Project. Such improvements may include, but are not necessarily limited to, retaining dikes, wasteweirs, bulkheads, embankments, monitoring features, stilling basins, and de-watering pumps and pipes. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions of such improvements in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with construction of such improvements. Prior to the end of the period of construction, the Non-Federal Sponsor shall provide all improvements set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare plans and specifications for all improvements the Government determines to be required for the proper disposal of dredged or excavated material under that contract, submit such plans and specifications to the Government for approval, and provide such improvements in accordance with the approved plans and specifications.

C. The Government, after consultation with the Non-Federal Sponsor, shall determine the relocations necessary for the construction, operation, and maintenance of the Project, including those necessary to enable the removal of borrow materials and the proper disposal of dredged or excavated material. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such relocations in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-

Federal Sponsor with a written notice to proceed with such relocations. Prior to the end of the period of construction, the Non-Federal Sponsor shall perform or ensure the performance of all relocations as set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare or ensure the preparation of plans and specifications for, and perform or ensure the performance of, all relocations the Government determines to be necessary for that contract.

D. The Non-Federal Sponsor in a timely manner shall provide the Government with such documents as are sufficient to enable the Government to determine the value of any contribution provided pursuant to paragraphs A., B., or C. of this Article. Upon receipt of such documents the Government, in accordance with Article IV of this Agreement and in a timely manner, shall determine the value of such contribution, include such value in total project costs, and afford credit for such value toward the Non-Federal Sponsor's share of total project costs.

E. The Non-Federal Sponsor shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring lands, easements, and rights-of-way required for the construction, operation, and maintenance of the Project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and shall inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV -CREDIT FOR VALUE OF LANDS, RELOCATIONS, AND DISPOSAL AREAS

A. The Non-Federal Sponsor shall receive credit toward its share of total project costs for the value of the lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas that the Non-Federal Sponsor must provide pursuant to Article III of this Agreement, and for the value of the relocations that the Non-Federal Sponsor must perform or for which they it must ensure performance pursuant to Article III of this Agreement. However, the Non-Federal Sponsor shall not receive credit for the value of any lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas that have been provided previously as an item of cooperation for another Federal project. The Non-Federal Sponsor also shall not receive credit for the value of lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas to the extent that such items are provided using Federal funds unless the Federal granting agency verifies in writing that such credit is expressly authorized by statute.

B. For the sole purpose of affording credit in accordance with this Agreement, the value of lands, easements, and rights-of-way, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined in accordance with the provisions of this paragraph.

1. Date of Valuation. The fair market value of lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement shall be the fair market value of such real property interests as of the date the Non-Federal Sponsor provide the Government with authorization for entry thereto. However, for lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement that are required for the construction of the Section 101(a)(1)(B) work, fair market value shall be the value of such real property interests as of the date the Non-Federal Sponsor awards the first construction contract for the Section 101(a)(1)(B) work, or, if the Non-Federal Sponsor perform the construction with its own labor, the date that the Non-Federal Sponsor begins construction of the Section 101(a)(1)(B) work. The fair market value of lands, easements, or rights-of-way acquired by the Non-Federal Sponsor after the effective date of this Agreement shall be the fair market value of such real property interests at the time the interests are acquired.

2. General Valuation Procedure. Except as provided in paragraph B.3. of this Article, the fair market value of lands, easements, or rights-of-way shall be determined in accordance with paragraph B.2.a. of this Article, unless thereafter a different amount is determined to represent fair market value in accordance with paragraph B.2.b. of this Article.

a. The Non-Federal Sponsor shall obtain, for each real property interest, an appraisal that is prepared by a qualified appraiser who is acceptable to the Non-Federal Sponsor and the Government. The appraisal must be prepared in accordance with the applicable rules of just compensation, as specified by the Government. The fair market value shall be the amount set forth in the Non-Federal Sponsor's appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's appraisal, the Non-Federal Sponsor may obtain a second appraisal, and the fair market value shall be the amount set forth in the Non-Federal Sponsor's second appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's second appraisal, or the Non-Federal Sponsor chooses not to obtain a second appraisal, the Government shall obtain an appraisal, and the fair market value shall be the amount set forth in the Government's appraisal, if such appraisal is approved by the Non-Federal Sponsor. In the event the Non-Federal Sponsor does not approve the Government's appraisal, the Government, after consultation with the Non-Federal Sponsor, shall consider the Government's and the Non-Federal Sponsor's appraisals and determine an amount based thereon, which shall be deemed to be the fair market value.

b. Where the amount paid or proposed to be paid by the Non-Federal Sponsor for the real property interest exceeds the amount determined pursuant to paragraph B.2.a. of this Article, the Government, at the request of the Non-Federal Sponsor, shall consider all factors

relevant to determining fair market value and, in its sole discretion, after consultation with the Non-Federal Sponsor, may approve in writing an amount greater than the amount determined pursuant to paragraph B.2.a. of this Article, but not to exceed the amount actually paid or proposed to be paid.

If the Government approves such an amount, the fair market value shall be the lesser of the approved amount or the amount paid by the Non-Federal Sponsor, but no less than the amount determined pursuant to paragraph B.2.a. of this Article.

3. Eminent Domain Valuation Procedure. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor shall, prior to instituting such proceedings, submit to the Government notification in writing of its intent to institute such proceedings and an appraisal of the specific real property interests to be acquired in such proceedings. The Government shall have 60 days after receipt of such a notice and appraisal within which to review the appraisal, if not previously approved by the Government in writing.

a. If the Government previously has approved the appraisal in writing, or if the Government provides written approval of, or takes no action on, the appraisal within such 60-day period, the Non-Federal Sponsor shall use the amount set forth in such appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

b. If the Government provides written disapproval of the appraisal, including the reasons for disapproval, within such 60-day period, the Government and the Non-Federal Sponsor shall consult in good faith to promptly resolve the issues or areas of disagreement that are identified in the Government's written disapproval. If, after such good faith consultation, the Government and the Non-Federal Sponsor agree as to an appropriate amount, then the Non-Federal Sponsor shall use that amount as the estimate of just compensation for the purpose of instituting the eminent domain proceeding. If, after such good faith consultation, the Government and the Non-Federal Sponsor cannot agree as to an appropriate amount, then the Non-Federal Sponsor may use the amount set forth in its appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

c. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted in accordance with sub-paragraph B.3. of this Article, fair market value shall be either the amount of the court award for the real property interests taken, to the extent the Government determined such interests are required for the construction, operation, and maintenance of the Project, or the amount of any stipulated settlement or portion thereof that the Government approves in writing.

4. Incidental Costs. For lands, easements, or rights-of-way acquired by the Non-Federal Sponsor within a five-year period preceding the effective date of this Agreement, or at any time after the effective date of this Agreement, the value of the interest shall include the documented incidental costs of acquiring the interest, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and

allowability of costs. Such incidental costs shall include, but not necessarily be limited to, closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, and mapping costs, as well as the actual amounts expended for payment of any Public Law 91-646 relocation assistance benefits provided in accordance with Article III.E. of this Agreement.

C. After consultation with the Non-Federal Sponsor, the Government shall determine the value of relocations in accordance with the provisions of this paragraph.

1. For a relocation other than a highway, the value shall be only that portion of relocation costs incurred by the Non-Federal Sponsor that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items.

2. For a relocation of a highway, the value shall be only that portion of relocation costs that would be necessary to accomplish the relocation in accordance with the design standard that the State of California would apply under similar conditions of geography and traffic load, reduced by the salvage value of any removed items.

3. Relocation costs shall include, but not necessarily be limited to, actual costs of performing the relocation; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with performance of the relocation, but shall not include any costs due to betterments, as determined by the Government, nor any additional cost of using new material when suitable used material is available. Relocation costs shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

D. The value of the improvements made to lands, easements, and rights-of-way for the proper disposal of dredged or excavated material shall be the costs of the improvements, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. Such costs shall include, but not necessarily be limited to, actual costs of providing the improvements; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with providing the improvements, but shall not include any costs due to betterments, as determined by the Government.

ARTICLE V -PROJECT COORDINATION TEAM

A. To provide for consistent and effective communication, the Non-Federal Sponsor and the Government, not later than 30 days after the effective date of this Agreement, shall appoint named senior representatives to a Project Coordination Team. Thereafter, the Project Coordination Team shall meet regularly until the end of the period of construction. The Government's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Project Coordination Team.

B. The Government's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Project Coordination Team informed of the progress of construction and of significant pending issues and actions, and shall seek the views of the Project Coordination Team on matters that the Project Coordination Team generally oversees.

C. Until the end of the period of construction, the Project Coordination Team shall generally oversee the Project, including issues related to design; plans and specifications; scheduling; real property and relocation requirements; real property acquisition; contract awards and modifications; contract costs; the Government's cost projections; final inspection of the entire Project or functional portions of the Project; preparation of the proposed OMRR&R Manual; anticipated requirements and needed capabilities for performance of operation, maintenance, repair, replacement, and rehabilitation of the Project; and other related matters. This oversight shall be consistent with a project management plan developed by the Government after consultation with the Non-Federal Sponsor.

D. The Project Coordination Team may make recommendations that it deems warranted to the District Engineer on matters that the Project Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider the recommendations of the Project Coordination Team. The Government, having the legal authority and responsibility for construction of the Project, has the discretion to accept, reject, or modify the Project Coordination Team's recommendations.

E. The costs of participation in the Project Coordination Team shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE VI -METHOD OF PAYMENT

A. The Government shall maintain current records of contributions provided by the parties and current projections of total project costs and costs due to betterments. By April 1 of each year and at least quarterly thereafter, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of total project costs, of total costs due to betterments, of the maximum amount of total project costs determined in accordance with Article XIX of this Agreement, of the components of total project costs, of each party's share of total project costs, of the Non-Federal Sponsor's total cash contributions required in accordance with Articles II.B., II.D., and II.E. of this Agreement, of the non-Federal proportionate share, and of the funds the Government projects to be required from the Non-Federal Sponsor for the upcoming fiscal year. On the effective date of this Agreement, total project costs are projected to be \$66,500,000, and the Non-Federal Sponsor's cash contribution required under Article II.D. of this Agreement is projected to be \$7,390,000. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall provide the cash contribution required under Articles

II.D.1. and II.D.3. of this Agreement in accordance with the provisions of this paragraph.

1. Not less than 30 calendar days prior to the scheduled date for issuance of the solicitation for the first construction contract, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and the funds the Government, after consideration of any credit afforded pursuant to Article II.D.5. of this Agreement, determines to be required from the Non-Federal Sponsor to meet the non-Federal proportionate share of projected financial obligations for construction through the first fiscal year of construction on a quarterly basis, including the non-Federal proportionate share of financial obligations for construction incurred prior to the commencement of the period of construction. Not later than such scheduled date, the Non-Federal Sponsor shall provide the Government with the full amount of the required funds by delivering a check payable to "FAO, USAED, Sacramento District" to the District Engineer.

2. For the second and subsequent quarters of construction, the Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the beginning of that quarter year, of the funds the Government, after consideration of any credit afforded pursuant to Article II.D.5. of this Agreement, determines to be required from the Non-Federal Sponsor to meet the non-Federal proportionate share of projected financial obligations for construction for that quarter. No later than 30 calendar days prior to the beginning of the quarter, the Non-Federal Sponsor shall make the full amount of the required funds for that quarter available to the Government through the funding mechanism specified in Article VI.B.1. of this Agreement.

3. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government, after consideration of any credit afforded pursuant to Article II.D.5. of this Agreement, deems necessary to cover: (a) the non-Federal proportionate share of financial obligations for construction incurred prior to the commencement of the period of construction; and (b) the non-Federal proportionate share of financial obligations for construction as they are incurred during the period of construction.

4. If at any time during the period of construction the Government determines that additional funds will be needed from the Non-Federal Sponsor to cover the non-Federal proportionate share of projected financial obligations for construction for the current quarter, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required, and the Non-Federal Sponsor, no later than 60 calendar days from receipt of such notice, shall make the additional required funds available through the payment mechanism specified in Article VI.B.1. of this Agreement.

C. In advance of the Government incurring any financial obligation associated with additional work under Article II.B. or II.E. of this Agreement, the Non-Federal Sponsor shall provide the Government with the full amount of the funds required to pay for such additional work on a quarterly basis by delivering a check payable to "FAO, USAED, Sacramento District" to the District Engineer.

The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover the Government's financial obligations for such additional work as they are incurred. In the event the Government determines that the Non-Federal Sponsor

must provide additional funds to meet its cash contribution, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required. Within 30 calendar days thereafter, the Non-Federal Sponsor shall provide the Government with a check for the full amount of the additional required funds for that quarter.

D. Upon completion of the Project or termination of this Agreement, and upon resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with the results of the final accounting. The final accounting shall determine total project costs, each party's contribution provided thereto, and each party's required share thereof. The final accounting also shall determine costs due to betterments and the Non-Federal Sponsor's cash contribution provided pursuant to Article II.B. of this Agreement.

1. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor is less than its required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Non-Federal Sponsor shall, no later than 90 calendar days after receipt of written notice, make a cash payment to the Government of whatever sum is required to meet the Non-Federal Sponsor's required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement.

2. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor exceeds its required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Government shall, subject to the availability of funds, refund the excess to the Non-Federal Sponsor no later than 90 calendar days after the final accounting is complete; however, the Non-Federal Sponsor shall not be entitled to any refund of the 5 percent cash contribution required pursuant to Article II.D.1. of this Agreement. In the event existing funds are not available to refund the excess to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund.

ARTICLE VII -DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VIII - OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION (OMRR&R)

A. Upon notification in accordance with Article II.C. of this Agreement and for so long as the Project remains authorized, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project or the functional portion of the Project, at no cost to the Government, in a manner compatible with the Project's authorized purposes and in accordance with applicable Federal and State laws as provided in Article XI of this Agreement and specific directions prescribed by the Government in the OMRR&R Manual and any subsequent amendments thereto. In the event OMRR&R of the Project pursuant to the manual would adversely affect any Federal endangered or threatened species or result in the destruction or adverse modification of critical habitat, at the request of the Non-Federal Sponsor, the District Engineer shall initiate Section 7 consultation and modify the Manual as necessary.

B. The Non-Federal Sponsor hereby gives the Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor owns or controls for access to the Project for the purpose of inspection and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project. If an inspection shows that the Non-Federal Sponsor for any reason is failing to perform its obligations under this Agreement, the Government shall send a written notice describing the non-performance to the Non-Federal Sponsor. If, after 30 calendar days from receipt of notice, the Non-Federal Sponsor continues to fail to perform, then the Government shall have the right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor own or control for access to the Project for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Government shall operate to relieve the Non-Federal Sponsor of responsibility to meet the Non-Federal Sponsor's obligations as set forth in this Agreement, or to preclude the Government from pursuing any other remedy at law or equity to ensure faithful performance pursuant to this Agreement.

ARTICLE IX -INDEMNIFICATION

The Non-Federal Sponsor shall hold and save the Government free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the Project and any Project-related betterments, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE X -MAINTENANCE OF RECORDS AND AUDIT

A. Not later than 60 calendar days after the effective date of this Agreement, the Government and the Non-Federal Sponsor shall develop procedures for keeping books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative

Agreements to State and Local Governments at 32 C.F.R. Section 33.20. The Government and the Non-Federal Sponsor shall maintain such books, records, documents, and other evidence in accordance with these procedures and for a minimum of three years after the period of construction and resolution of all relevant claims arising therefrom. To the extent permitted under applicable Federal laws and regulations, the Government and the Non-Federal Sponsor shall each allow the other to inspect such books, documents, records, and other evidence.

B. Pursuant to 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act of 1984, 31 U.S.C. Sections 7501-7507, as implemented by Office of Management and Budget (OMB) Circular No. A-133 and Department of Defense Directive 7600.10. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable Federal laws and regulations, the Government shall provide to the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-Federal audits performed in accordance with this paragraph shall be allocated in accordance with the provisions of OMB Circulars A-87 and A-133, and such costs as are allocated to the Project shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. Section 7503; the Government may conduct audits in addition to any audit that the Non-Federal Sponsor is required to conduct under the Single Audit Act. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits performed in accordance with this paragraph shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE XI -FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government agree to comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulations 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army and Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), requiring non-Federal preparation and implementation of flood plain management plans".

ARTICLE XII -RELATIONSHIP OF PARTIES

A. In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other.

B. In the exercise of its rights and obligations under this Agreement, neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights such other party may have to seek relief or redress against such contractor either pursuant to any cause of action that such other party may have or for violation of any law.

ARTICLE XIII -OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE XIV -TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under Article II.B., II.D., II.E., VI, or XVIII.C. of this Agreement, the Assistant Secretary of the Army (Civil Works) shall terminate this Agreement or suspend future performance under this Agreement unless he determines that continuation of work on the Project is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the Project.

B. If the Government fails to receive annual appropriations in amounts sufficient to meet Project expenditures for the then-current or upcoming fiscal year, the Government shall so notify the Non-Federal Sponsor in writing, and 60 calendar days thereafter either party may elect without penalty to terminate this Agreement or to suspend future performance under this Agreement. In the event that either party elects to suspend future performance under this Agreement pursuant to this paragraph, such suspension shall remain in effect until such time as the Government receives sufficient appropriations or until either the Government or the Non-Federal Sponsor elects to terminate this Agreement.

C. In the event that either party elects to terminate this Agreement pursuant to this Article or Article XV of this Agreement, both parties shall conclude their activities relating to the Project and proceed to a final accounting in accordance with Article VI.D. of this Agreement.

D. Any termination of this Agreement or suspension of future performance under this Agreement in accordance with this Article or Article XV of this Agreement shall not relieve the parties of liability for any obligation previously incurred. Any delinquent payment shall be charged

interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13-week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3-month period if the period of delinquency exceeds 3 months.

ARTICLE XV - HAZARDOUS SUBSTANCES

A. After execution of this Agreement and upon direction by the District Engineer, the Non-Federal Sponsor shall perform, or cause to be performed, any investigations for hazardous substances that the Government or the Non-Federal Sponsor determines to be necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"), 42 U.S.C. Sections 9601-9675, that may exist in, on, or under lands, easements, and rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the construction, operation, and maintenance of the Project. However, for lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the District Engineer provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction. All actual costs incurred by the Non-Federal Sponsor for such investigations for hazardous substances shall be included in total project costs and cost shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

B. In the event it is discovered through any investigation for hazardous substances or other means that hazardous substances regulated under CERCLA exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the construction, operation, and maintenance of the Project, the Non-Federal Sponsor and the Government shall provide prompt written notice to each other, and the Non-Federal Sponsor shall not proceed with the acquisition of the real property interests until both parties agree that the Non-Federal Sponsor should proceed.

C. The Government and the Non-Federal Sponsor shall determine whether to initiate construction of the Project, or, if already in construction, whether to continue with work on the Project, suspend future performance under this Agreement, or terminate this Agreement for the convenience of the Government, in any case where hazardous substances regulated under CERCLA are found to exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the construction, operation, and maintenance of the Project. Should the Government and the Non-Federal Sponsor determine to initiate or continue with construction after considering any liability that may arise under CERCLA, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination; Such costs shall not be

considered a part of total project costs. In the event the Non-Federal Sponsor fails to provide any funds necessary to pay for clean up and response costs or to otherwise discharge the Non-Federal Sponsor's responsibilities under this paragraph upon direction by the Government, the Government may, in its sole discretion, either terminate this Agreement for the convenience of the Government, suspend future performance under this Agreement, or continue work on the Project.

D. The Non-Federal Sponsor and the Government shall consult with each other in accordance with Article V of this Agreement in an effort to ensure that responsible parties bear any necessary clean up and response costs as defined in CERCLA. Any decision made pursuant to paragraph C. of this Article shall not relieve any third party from any liability that may arise under CERCLA.

E. Once the Government provides a written notification in accordance with Article II.C. and Article VIII of this Agreement, as between the Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the Project for purposes of CERCLA liability. To the maximum extent practicable, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the Project in a manner that will not cause liability to arise under CERCLA.

ARTICLE XVI -NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and either delivered personally or by telegram or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor:

The Reclamation Board
1416 Ninth Street, Room 1601
Sacramento, California 95814-5594

If to the Government:

US Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California

B. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

C. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

ARTICLE XVII -CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XVIII - HISTORIC PRESERVATION

A. The costs of identification, survey and evaluation of historic properties shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

B. As specified in Section 7(a) of Public Law 93-291 (16 U.S.C. Section 469c(a)), the costs of mitigation and data recovery activities associated with historic preservation shall be borne entirely by the Government and shall not be included in total project costs, up to the statutory limit of one percent of the total amount authorized to be appropriated for the Project.

C. The Government shall not incur costs for mitigation and data recovery that exceed the statutory one percent limit specified in paragraph B. of this Article unless and until the Assistant Secretary of the Army (Civil Works) has waived that limit in accordance with Section 208(3) of Public Law 96-515 (16 U.S.C. Section 469c-2(3)). Any costs of mitigation and data recovery that exceed the one percent limit shall not be included in total project costs but shall be cost shared between the Non-Federal Sponsor and the Government consistent with the minimum non-Federal cost sharing requirements for the underlying flood control purpose, as follows: 25 percent borne by the Non-Federal Sponsor, and 75 percent borne by the Government.

ARTICLE XIX -SECTION 902 PROJECT COST LIMITS

The Non-Federal Sponsor has reviewed the provisions set forth in Section 902 of Public Law 99-662, as amended, and understands that Section 902 establishes the maximum amount of total project costs for the American River Watershed (Common Features), California Project. Notwithstanding any other provision of this Agreement, the Government shall not make a new Project financial obligation, make a Project expenditure, or afford credit toward total project costs for the value of any contribution provided by the Non-Federal Sponsor, if such obligation, expenditure, or credit would result in total project costs exceeding this maximum amount, unless

otherwise authorized by law. On the effective date of this Agreement, this maximum amount is estimated to be \$66,500,000, as calculated in accordance with ER 1105-2-100 using October 1, 1997 price levels and allowances for projected future inflation. The Government shall adjust this maximum amount in accordance with Section 902.

ARTICLE XX -OBLIGATIONS OF FUTURE APPROPRIATIONS

Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the legislature of the State of California.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the ~~Assistant Secretary of the Army (Civil Works)~~ District Engineer, U.S. Army Engineer District, Sacramento

7/13/98

THE DEPARTMENT OF THE ARMY

THE RECLAMATION BOARD

13501

BY: *Douglas R. Gault*
Douglas R. Gault
Lieutenant Colonel,
Corps of Engineers
Acting District Engineer

BY: *Peter D. Rabbon*
Peter D. Rabbon
General Manager
The Reclamation Board

DATE: *13 July 1998*

DATE: *July 9, 1998*

FORM	POLICY	BUDGET
Department of General Services		
APPROVED		
JUL 10 1998		
<i>[Signature]</i>		
BY	Ass't. Chief Counsel	

Approved as to Legal Form and sufficiency for The Reclamation Board

Claire P. LeFlore
Counsel

CERTIFICATE OF AUTHORITY

I, Claire P. LeFlore do hereby certify that I am the principal legal officer of The Reclamation Board, that The Reclamation Board is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and The Reclamation Board in connection with the American River Watershed(Common Features), California, Project and to pay damages in accordance with the terms of this Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Agreement on behalf of The Reclamation Board have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this
9th day of July 1998.



Claire P. LeFlore
Counsel to The Reclamation Board

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



Peter D. Rabbon

General Manager

The Reclamation Board
of the State of California

DATE: July 9, 1998

STATE OF CALIFORNIA
STANDARD AGREEMENT AMENDMENT

SD-312A (Rev. 9/01)

<input checked="" type="checkbox"/> CHECK HERE IF ADDITIONAL PAGES ARE ATTACHED	<u>7</u> Pages	AGREEMENT NUMBER 460000651	AMENDMENT NUMBER 1
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1. This Agreement is entered into between the State Agency and Contractor named below:

STATE AGENCY'S NAME

Department of Water Resources/The Reclamation Board

CONTRACTOR'S NAME

Department of the Army

2. The term of this Agreement is July 10, 1998 through October 30, 2007 This Agreement shall not become effective until approved by the Department of General Services.

3. The maximum amount of this Agreement after this amendment is: \$120,600,000 thousand One hundred and twenty million six hundred dollars and no cents.

4. The parties mutually agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:

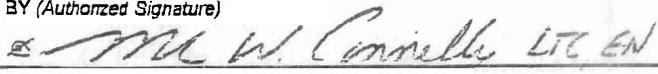
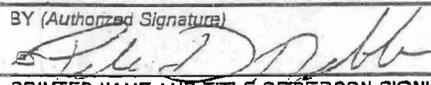
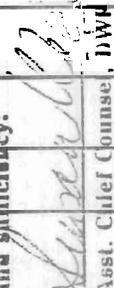
i. The amendment to Agreement No. 460000651 for the American River Watershed (Common Features) California Project updating the current project cost to \$120.6 million is based on a Schedule and Cost Change Request, SACCR No. 077522-02-01, dated October 24, 2001, from the Department of the Army to The Reclamation Board. Cost increases are attributed to the Water Resources Development Act of 1999 authorization, and design and construction changes associated with deep foundation slurry cutoff walls that added additional features to roads, utilities, and bridge crossings using the jet grouting method.

This amendment to the Project Cooperation Agreement adjusts the projected total project costs by \$54,100,000 from \$66,500,000 to \$120,600,000, as reflected in the aforementioned SACCR. This amount is slightly below the federal cap under Section 902 project cost limit. (Nonfederal costs of the project are capped at 50 percent of the Section 902 limit). This adjustment increases the nonfederal project share by \$13,525,000 from \$16,625,000 to \$30,150,000 and increases the Local project share by \$4,057,500 from \$4,987,500 to \$9,045,000. The maximum nonfederal share under the current estimate may not exceed \$60,300,000.

ii. This Agreement is amended as follows:

1. Add Exhibit A to reflect changes in scope and costs due to redesign. The U.S. Army Corps of Engineers' Schedule and Cost Change Request, SACCR No. 077522-02-01, dated October 24, 2001, with the Table is attached as Exhibit A and made a part of this Agreement by this reference.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR		CALIFORNIA Department of General Services Use Only 
CONTRACTOR'S NAME (If other than an individual, state whether a corporation, partnership, etc.)		
Department of the Army		
BY (Authorized Signature)	DATE SIGNED (Do not type)	
 PRINTED NAME AND TITLE OF PERSON SIGNING Colonel Michael J. Conrad, Jr.		
ADDRESS		
1325 J Street Sacramento, California 95814		
STATE OF CALIFORNIA		
AGENCY NAME		
Department of Water Resources		
BY (Authorized Signature)	DATE SIGNED (Do not type)	
 PRINTED NAME AND TITLE OF PERSON SIGNING Peter D. Rabbon	Approved as to legal and sufficiency:  Asst. Chief Counsel, DWR	
ADDRESS		
1416 9 th Street Sacramento, California 95814		

Initial

 Here

AMERICAN RIVER (COMMON FEATURES) CALIFORNIA PROJECT

- II. This Agreement is amended as follows: (continued)
2. Extend the contract termination date from June 30, 2003 of the original contract to October 30, 2007 to coincide with current projected project completion date referenced in the aforementioned SACCR.
 3. Increase the cumulative financial obligation for construction from \$66,500,000 to \$120,600,000. Article II – Obligations of the Government and the Non-Federal Sponsor, Paragraph A. 3, the first sentence on page 5 of 24, of the original agreement is being replaced by the following language and amended to read: Notwithstanding paragraph A.1. of this Article, if, upon the award of any contract for construction of the Project, cumulative financial obligations for construction would exceed \$120,600,000 the Government and the Non-Federal Sponsor agree to defer award of that contract and all subsequent contracts for construction of the Project until such time as the Government and the Non-Federal Sponsor agree to proceed with further contract awards for the Project, but in no event shall the award of contracts be deferred for more than three years.
 4. As original stated in Article VI – Method of Payment, Page 14 of 24, Paragraph A is hereby amended to increase the estimated total project cost by \$54,100,000 from \$66,500,000 to \$120,600,000 and the Non-Federal Sponsor's cash contribution required under Article II.D of this Agreement is projected to be \$23,090,000. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.
 5. Increase the maximum projected total Project cost limit by \$54,100,000 as reflected in the aforementioned SACCR. Article XIX – Section 902 Project Cost Limits, Page 22 of 24, is hereby amended to increase the maximum Project cost limit from \$66,500,000 to \$120,600,000. This increases the projected non-Federal Project share by \$13,525,000 from \$16,625,000 to \$30,150,000 and increases the projected Local Project share by \$4,057,500 from \$4,987,500 to \$9,045,000. The maximum nonfederal share under the current estimate may not exceed \$60,300,000.
 6. Add Exhibit B – Special Terms and Conditions for Department of Water Resources (Department of the Army Corps of Engineers).
 7. All other terms and conditions of Contract No. 4600000651 shall remain the same.

Schedule and Cost Change Request (SACCR)

Alternate Eng. Form 5040-1-R

Project Manager Name Richard Nishio Phone (916) 557 6645
Signature [Signature] Date Oct 28, 2001

From CESPK-PM-C
To CESPK-DD-P

Section I - Request

Description of Change Request:

Request approval to the increase the current project cost to \$120.6 million (fully funded, Oct 01 price level). The sponsor requests that this cost change be compared to the original authorized project cost estimate of \$65.5 million (fully funded, Oct 95 price level) as authorized by WRDA 1996 to justify the sponsor increasing the sponsor's cost ceiling clause in the PCA (Article II A.3.) to the current project cost estimate of \$120.6 million. Subsequent to WRDA 1996 authorization, the sponsor through SAFCA got the authorized project cost increased to \$91.9 million in WRDA 1999 authorization. The project cost estimate change comparison is shown on the attached continuation sheet.

Justification for Change: Cost increases are mainly attributed to construction and engineering & design and are described below. Cost increases for other items are shown on the attached sheet and detailed in the footnotes.

- (1) Adopting a complete cutoff wall closure design requirement and additional geotechnical explorations resulted in construction of deeper slurry walls down to impermeable material and required the more expensive jet grout method of slurry wall construction around bridges and deep utility crossings.
- (2) Adding cement to soil-bentonite slurry wall mixture increased both material cost and construction operation costs.
- (3) Issuance of a number of high cost contract modifications. The more significant modifications resulted from unexpected slurry leaks during construction of the slurry wall that required emergency repair and restoration of the levee and at times extended work hours. Contract modifications to comply with EPA notice of violation and to accelerate Garden Highway slurry wall construction before the flood season were also very costly contract modifications.

Justification for Change (continues):

- (4) Construction of a short 1.5 mile slurry reach from Howe Avenue to Watt Avenue to meet project goal of initiation of slurry wall construction in 1998 resulted in a very costly slurry wall. Also the original project cost estimate assumed all the slurry walls would be constructed under one contract which is generally less costly to construct than multiple contracts. Due to design schedule constraints and the jet grouting requirement, 6 contracts are needed to complete slurry wall construction (4 construction contracts have been completed and 2 more are scheduled for award in 2001 and 2002).
- (5) Engineering and design cost increases are due to increased effort to prepare an additional 5 slurry wall and jet grout construction contracts and added effort required to conduct additional exploration and design work required to refine the for the Sacramento River East Levee and Natomas Cross Canal Levee modifications.
- (6) Price escalation from Oct 95 to Oct 2001 price levels has increased construction and engineering & design costs.

The current project cost estimate of \$120.6 million is under the Federal cost ceiling as calculated in accordance to Section 902 of WRDA 1986 as based on the current authorized project cost of \$91.9 million as authorized by WRDA 1999.

Section II - Impact Assessment

Organization	Description
N/A	No impacts to District team since workload was budgeted for the current project cost estimate of \$120.6 million.

Section III - Project Manager's Evaluation

Category	Impact	Resources Required
Costs (\$000)	None	Current project cost of \$120.6 million is under Sec 902 limit
Schedule	None	Project completion date of Oct 2007 remains unchanged from SACCR #07522-01-01
Manpower	None	Workload was budgeted for the project current cost estimate of \$120.6 million.

Section IV - Coordination with Partner

Partner's Position and Acknowledgement

concur

Signature *Pepe D. Riber*

Date *12/12/01*

Section V - PRB Action & Resolution

CESPK-DE-P Recommendation and Signature

concur

[Handwritten Signature]

15 Jan 02

District PRB Recommendation

- Approval
- Approval with Modifications
- Disapproval
- Returned to PM w/o Action
- Referred to Division

Reason

**AMERICAN RIVER WATERSHED, CA
(COMMON FEATURES)
10/24/01**

**Project Cost Estimate Comparison
(S1000)**

	Past Project Cost Estimate Based WRDA 1996 Authorization (Fully Funded, Oct 95 Price Level) (1)	Estimated Increase	Current Project Cost Estimate Based on WRDA 1999 Authorization (Fully Funded, Oct 01 Price Level) (5)
Federal RE In-house Labor	40	900	940
F&W Mitigation (2)	0	1660	1660
Cultural Resources	430	170	600
Construction (3)	45150	37450	82600
Engineering & Design (4)	6830	14670	21500
Supervision & Admin	6850	-460	6390
LERRDs	6200	710	6910
TOTAL	\$65,500	\$55,100	\$120,600

- (1) - Cost estimates as reported in the (First) Addendum to the 1996 Supplemental Information Report (SIR), dated September 2, 1997.
- (2) - At the time the authorized cost estimate was prepared F&W mitigation costs were not considered since construction would be within the existing project right of way.
- (3) - \$82.6 million reflects actual slurry wall construction contract costs and funds required to complete two jet grout construction contracts along the lower American River as authorized by WRDA 1996. Construction contract expenditures to date amount to approximately \$45 million. Cost increases are due to deeper slurry wall requirement, need for jet grout method of slurry wall construction, adding cement to the slurry wall, significant contract modifications, high cost to construct the Howe to Watt Ave slurry wall contract and price escalation.
- (4) - Engineering and design cost increases are due to increased effort to prepare an additional 5 slurry wall and jet grout construction contracts and added effort required to conduct additional exploration and design work required to refine the plans for the Sacramento River East Levee and Natomas Cross Canal Levee modifications.
- (5) - The current project cost estimate of \$120.6 million is under the Federal cost ceiling as calculated in accordance to Section 902 of WRDA 1986 and based on the current authorized cost of \$91.9 million as authorized by WRDA 1999.

**EXHIBIT B—Special Terms and Conditions for
Department Of Water Resources
(Department of the Army Corps of Engineers)**

1. AVAILABILITY OF FUNDS: Work to be performed under this contract is subject to availability of funds through the State's normal budget process.
2. AUDIT CLAUSE: For contracts in excess of \$10,000, the contracting parties shall be subject to the examination and audit of the State Auditor for a period of three years after final payment under the contract (Government Code Section 8546.7).
3. CONFLICT OF INTEREST:
 - a. Current and Former State Employees: Contractor should be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.
 - (1) Current State Employees: (PCC §10410)
 - (a) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.
 - (b) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.
 - (2) Former State Employees: (PCC §10411)
 - (a) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.
 - (b) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

b. Penalty for Violation:

- (a) If the Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (PCC §10420)

c. Members of Boards and Commissions:

- (a) Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC §10430 (e))

d. Representational Conflicts of Interest:

The Contractor must disclose to the DWR Program Manager any activities by contractor or subcontractor personnel involving representation of parties, or provision of consultation services to parties, who are adversarial to DWR. DWR may immediately terminate this contract if the contractor fails to disclose the information required by this section. DWR may immediately terminate this contract if any conflicts of interest cannot be reconciled with the performance of services under this contract.

e. Financial Interest in Contracts:

Contractor should also be aware of the following provisions of Government Code §1090:

"Members of the Legislature, state, county district, judicial district, and city officers or employees shall not be financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Nor shall state, county, district, judicial district, and city officers or employees be purchasers at any sale or vendors at any purchase made by them in their official capacity."

f. Prohibition on Contracts for End Product of Contract:

Pursuant to the provisions of Public Contract Code §10365.5, the Contractor and subcontractors (except for subcontractors who provide services amounting to 10 percent or less of the contract price) may not submit a bid/SOQ, or be awarded a contract, for the provision of services, procurement of goods or supplies or any other related action which is required, suggested, or otherwise deemed appropriate in the end product of this contract. This prohibition does not apply to contracts pursuant to Government Code Section 4525 et seq., to local assistance or subvention contracts with non-profit entities, or Federal, state and local public entities.



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

REPLY TO
ATTENTION OF

CESPK-PM-C

SEP 05 2006

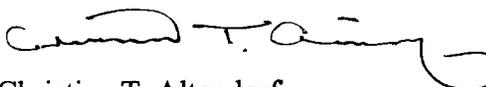
MEMORANDUM FOR Commander, CESPK-DE

me
9/5/06

SUBJECT: American River Watershed (Common Features), California Project, Project Cooperation Agreement Amendment Number 2

1. Purpose: The purpose of this memorandum is to request signature of all four copies of the attached Project Cooperation Agreement (PCA) Amendment Number 2 by the District Engineer (DE).
2. Authority: The American River Watershed (Common Features) Project was authorized by the Water Resources Development Act of 1996, as supplemented by the Water Resources Development Act of 1999 and the Energy and Water Development Appropriations Act of 2004. The project consists of constructing various flood protection improvements along both the Sacramento and American Rivers in the Sacramento Metropolitan Area. A PCA was executed between the Department of the Army and the State of California on 13 July 1998.
3. Project: The primary objective of the PCA Amendment Number 2 is to formally ratify a Schedule and Cost Change Request (SACCR) endorsed by the State on 26 May 2004. This SACCR revises the estimate total project cost from \$120.6M to \$205.0M and the project completion date to 30 October 2008. The scope of this amendment is compliant with all current law, regulations, and policy; and furthermore, the amendment only serves to formally adjust the estimated project cost and the completion date included in the original PCA.
4. Coordination: The enclosed PCA Amendment Number 2 was coordinated and approved for local signature by the enclosed email from CESPD-PD-C (Paul Bowers) dated 20 August 2006, American River Watershed (Common Features) Project, CA – Approval to execute Amend. No. 2.
5. Please feel free to contact the Project Manager, Ms. Veronica Petrovsky, at 557-7245 with any questions or concerns you may have regarding this cost-sharing agreement.

Encls


Christine T. Altendorf
Deputy for Project Management

AMENDMENT NUMBER 2
TO
PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

This amendment is entered into on this 5th day of September, 2006, by and between the Department of the Army (hereinafter the "Government") and The State of California, acting by and through The Reclamation Board (hereinafter the "Non-Federal Sponsor") to amend the Contract B81560/4600000651, a Project Cooperation Agreement (PCA), between the Non-Federal Sponsor and the Government dated July 13, 1998.

RECITALS:

1. The Energy and Water Development Appropriations Act, 2004 increased the authorized project cost to a total of \$205,000,000 for the Project.
2. On May 26, 2004, the Government issued a Schedule and Cost Change Request (SACCR) for the Project and requested the Non-Federal Sponsor's approval to (a) increase the total Project cost to \$205,000,000, (b) delay the Project completion date by one year.
3. The Non-Federal Sponsor desires to approve the Government's request in accordance with the SACCR.

IT IS HEREBY AGREED to amend the PCA as follows:

1. Delete the contract termination date from October 30, 2007 shown in Amendment No. 1 Article II.2 and recognize the Project completion date of October 30, 2008 referenced in the SACCR, included as Exhibit A, Attachment 1.
2. Article II, A.3. shall read as follows:
 - "3. Notwithstanding paragraph A.1. of this Article, if, upon award of any contract for construction of the Project, cumulative financial obligations

for construction would exceed \$205,000,000, the Government and the Non-Federal Sponsor agree to defer award of that contract and all subsequent contracts for construction of the Project until such time as the Government and the Non-Federal Sponsor agree to proceed with further contract awards for the Project, but in no event shall the award of contracts be deferred for more than three years. Notwithstanding this general provision for deferral of contract awards, the Government, after consultation with the Non-Federal Sponsor, may award a contract or contracts after the Assistant Secretary of the Army (Civil Works) makes a written determination that the award of such contract or contracts must proceed in order to comply with law or to protect life or property from imminent and substantial harm.”

3. Article IV.A. shall read as follows:

“A. The Government shall maintain current records of contributions provided by the parties and current projections of total project costs and costs due to betterments. By April 1 of each year and at least quarterly thereafter, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of total project costs, of total costs due to betterments, of the maximum amount of total project costs determined in accordance with Article XIX of this agreement, of the components of total project costs, of each party’s share of total project costs, of the Non-Federal Sponsor’s total cash contributions required in accordance with Articles II.B, II.D., and II.E. of this Agreement, of the Non-Federal proportionate share, and of the funds the Government projects to be required from the Non-Federal Sponsor for the upcoming fiscal year. On the effective date of this Agreement, total project costs are projected to be \$205,000,000, and the Non-Federal Sponsor’s cash contribution required under Article II.D. of this Agreement is projected to be \$47,800,000. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.”

4. Article XIX should read as follows:

“The Non-Federal Sponsor has reviewed the provisions set forth in Section 902 of Public Law 99-662, as amended, and understands that Section 902 establishes the maximum amount of total project costs for the American River Watershed (Common Features), California Project. Notwithstanding any other provision of this Agreement, the Government shall not make a new Project

financial obligation, make a Project expenditure, or afford credit toward total project costs for the value of any contribution provided by the Non-Federal Sponsor, if such obligation, expenditure, or credit would result in total project costs exceeding this maximum amount, unless otherwise authorized by law. On May 26, 2004, this maximum amount is estimated to be \$246,000,000, as calculated in accordance with ER 1105-2-100 using October 2001 price levels and allowances for projected future inflation. The Government shall adjust this maximum amount in accordance with Section 902."

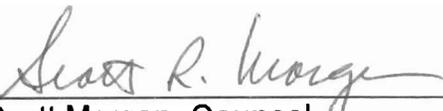
IN WITNESS THEREOF, the Parties hereto have executed this amendment as of the day and year first above written.

THE RECLAMATION BOARD OF THE
STATE OF CALIFORNIA

By 
Benjamin Carter, President

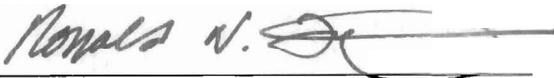
Date: 6/22/06

APPROVED AS TO LEGAL FORM
AND SUFFICIENCY:

By 
Scott Morgan, Counsel

Date: 6/23/06

DEPARTMENT OF THE ARMY

By 
Colonel Ronald N. Light, District Engineer

Date: 9/5/06

Schedule and Cost Change Request (SACCR)

Alternate Eng. Form 5040-1-R

Project: American River Watershed, CA (Common Features)		SACCR #077522-04-01	
		Date: May 26, 2004	
From CESPK-PM-C	To CESPK-DD	Project Manager <u>Mark Ellis</u>	Phone <u>(916) 557-6892</u>
		Signature <u>Mark A. Ellis</u>	Date <u>May 26, 2004</u>

Section I – Request

Description of Change Request:

Change project cost estimate to reflect the current total project cost of \$205 million. The sponsor requests that this cost change be compared to the original authorized project cost estimate of \$56.9 million as authorized by WRDA 1996 (PL 104-303) for partner's use in increasing the sponsor's cost ceiling clause in the PCA (Article II A.3.) to the current project cost estimate of \$205 million. The authorized project cost was increased to \$91.9 million in WRDA 1999 authorization (PL 106-53). The Energy and Water Development Appropriations Act, 2004 (PL108-37) increased the total project cost to \$205 million. The current estimated maximum amount of total project cost under Section 902 of PL99-662 is \$246,000,000 as calculated using October 2001 price levels. The Non-Federal Sponsor's estimated cash contribution under Article II.D. of the PCA is \$47,800,000.

Justification for Change:

The following table summarizes the incremental cost changes to the project cost estimate. Cost increases are primarily attributed to unanticipated use of jet grout technology to meet the design criteria, increases in slurry wall depths, support from Architect Engineer firms, and increased in-house labor.

Common Features	WRDA 99 Cost	Incremental Change	Revised Project Cost
Slurry Wall	40,380	24,280	64,660
Jet Grout	0	55,040	55,040
Flood Warning System	400	60	460
Levee Modifications	7,940	910	8,850
Sac River East Levee	10,050	3,700	13,750
Cross Canal	9,860	1,140	11,000
Planning, Engineering, Design	9,450	25,920	35,370
Supervision and Admin.	7,750	-580	7,170
Fed Lands and Damages	40	810	850
Non Fed LERRDs	5,590	-220	5,370
Fish and Wildlife	0	1,730	1,730
Cultural Resources	440	310	750
Total	91,900	113,100	205,000

Section II - Impact Assessment

Organization	Description
N/A	No overall impact to any specific organizational structure. Engineering division will continue to provide the core technical resources for soils, hydraulics, and civil design. Additional district resources will continue to be provided on an as-needed basis at the request of the project manager.

Section III - Project Manager's Evaluation

Category	Impact	Resources Required
Costs (\$000)	\$113,100	The increased funds will allow full completion of all project tasks previously identified in WRDA 96 and WRDA 99.
Schedule	Minimal	Project completion date has been delayed one year to October 2008.
Manpower	None	The District is committed to provide labor resources to keep this project on schedule.

Section IV - Coordination with Partner

Partner's Position and Acknowledgement

Signature *F. D. Rallo* Date 6/21/04

Section V - PRB Action & Resolution

CESPK-DE-P Recommendation and Signature

Signature *M. W. Connelly* Date 22 Jun 04

- District PRB Recommendation
- Approval
 - Approval with Modifications
 - Disapproval
 - Returned to PM w/o Action
 - Referred to Division

Reason

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



July 19, 2006

Ronald N. Light
Colonel, Corps of Engineers
District Engineer
1325 J Street
Sacramento, California 95814

Dear Mr. Light:

Enclosed you will find four copies of the Standard Agreement number 4600000651, AM-3. Please sign all copies of the attached agreement and return **two copies** to me at the following address:

Department of Water Resources
Contract Services Office
1416 Ninth Street, Room 354
Sacramento, California 95814
Attn: Maria Gomez

Inquiries concerning the processing of this agreement should be directed to me at the number listed below.

Sincerely,

A handwritten signature in black ink that reads "Maria Gomez". The signature is written in a cursive style and is underlined with a single horizontal line.

Maria Gomez
Contracts Analyst
Contract Services Office
(916) 653-7201

Enclosures

AMENDMENT NUMBER 3
TO THE
PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA, THE RECLAMATION BOARD
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

THIS AMENDMENT is entered into this 20th day of JULY, 2006, by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"), represented by the U.S. Army Engineer, Sacramento District, and the STATE OF CALIFORNIA, represented by the President of THE RECLAMATION BOARD (hereinafter the "Non-Federal Sponsor").

WITNESSETH, THAT:

WHEREAS, construction of the American River Watershed (Common Features), California Project was authorized by the Water Resources Development Act of 1996, Public Law 104-303, as amended (hereinafter the "Project");

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, specifies the cost-sharing requirements applicable to the Project;

WHEREAS, the Government and the Non-Federal Sponsor entered into a Project Cooperation Agreement on July 13, 1998 (hereinafter referred to as the "Agreement") for construction of the Project;

WHEREAS, the Government's engineering documentation for the Project describes work urgently needed to assure the flood control benefits of the Project up to a 100-year level of protection;

WHEREAS, the Non-Federal Sponsor proposes to accelerate its provision of funds to the Government in an amount not to exceed the current estimate of the Non-

Federal Sponsor's required cash contribution for the Project, less any funds previously contributed, for the immediate use by the Government for construction of the Project;

WHEREAS, the parties agree that such acceptance shall not represent or give rise to an obligation of the United States, including any obligation to provide reimbursement of the funds the Non-Federal Sponsor elects to provide or any obligation to request future funds to match the amount the Non-Federal Sponsor elects to provide, and that such funds will be credited against the Non-Federal Sponsor's future cost share only if additional Federal funds are appropriated.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree that the Agreement is hereby amended in the following particulars but in no others:

1. ARTICLE II – OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

Article II is amended by adding the following paragraphs at the end thereof:

"L. The Non-Federal Sponsor may offer in writing to accelerate a portion or all of its required cash contribution pursuant to Article II. D. of this Agreement during the period of construction for immediate use by the Government. This offer shall be limited to an amount that does not exceed the most current estimate of the total of the Non-Federal Sponsor's required cash contribution pursuant to Article II. D. of this Agreement, as determined by the Government in coordination with the Non-Federal Sponsor, less any funds previously contributed by the Non-Federal Sponsor. Upon receipt of such offer or offers, the Government, subject to receiving such approvals and concurrences as customarily are required to accept such funds, may accept the funds, or such portion thereof as the Government determines to be necessary to meet the costs of construction of the Project. If the Government elects to accept such funds, it shall notify the Non-Federal Sponsor of such acceptance in a writing that sets forth any applicable terms and conditions. In the event of a conflict between this Agreement and any such writing, this Agreement shall control. Such funds shall be used by the Government for construction of the Project.

M. As Federal appropriations are made available to pay the Federal share of construction of the Project, the Government shall afford credit for funds provided during the period of construction in accordance with Article II L. of this Agreement. The Government shall credit this amount, provided during the period of construction, toward the Non-Federal Sponsor's cash contribution required by Article II. D. of this Agreement. If after the final accounting at the end of the period of construction, it is

determined that the Non-Federal Sponsor has provided funds in excess of its required cash contribution pursuant to Article II.D. of this Agreement, the Government shall proceed in accordance with Article VI.D.2. of this Agreement to determine whether a refund is applicable. However, if in the event of a final accounting due to termination pursuant to Article XIV.C. of this Agreement prior to the end of the period of construction, it is determined that the Non-Federal Sponsor has provided funds in excess of its required cash contribution pursuant to Article II.D. of this Agreement, the Government shall not reimburse the Non-Federal Sponsor for any such excess funds, except that any such excess funds which have not been obligated by the Government on the Project shall be refunded to the Non-Federal Sponsor, subject to the availability of funds.”

2. ARTICLE VI – METHOD OF PAYMENT

a. The second sentence of Article VI.A. is amended by inserting the phrase: “of the credit to be afforded in accordance with Article II.M. of this Agreement,” after “of the non-Federal proportionate share,” and before “and of the funds the Government projects to be required from the Non-Federal Sponsor for the upcoming fiscal year.”

b. The first sentence of Article VI.B.2. is amended by inserting the phrase: “after consideration of any credit afforded pursuant to Article II.M..of this Agreement,” after “of construction,” and before “the Government.”

c. Article VI.B.3. is amended by adding at the end thereof: “; and (c) to the extent of funds accepted in accordance with Article II. L. of this Agreement, any other financial obligations for construction in excess of the non-Federal proportionate share as they are incurred during the period of construction.”

d. Article VI.B.4. is amended by adding a comma after “the Government” in the first line and inserting the phrase: “after consideration of any credit afforded pursuant to Article II. M. of this Agreement,” before “determines that additional funds will be needed from the Non-Federal Sponsor.”

e. The first sentence of Article VI.D.2. is amended by adding the following phrase at the end thereof: “, and, if the final accounting results from termination pursuant to Article XIV.C. of this Agreement, the amount of excess contribution that was provided in accordance with Article II. L. of this Agreement and for which credit was not afforded pursuant to Article II.M. of this Agreement shall not be reimbursed.” The second sentence of Article VI.D.2. is amended by adding the parenthesis: “(not including the non-reimbursable amounts referenced in the preceding sentence)” after “refund the excess.”

IN WITNESS WHEREOF, the parties hereto have executed this amendment to the Agreement, which shall become effective upon the date it is signed by the authorized representative of the Government.

THE DEPARTMENT OF THE ARMY

THE STATE OF CALIFORNIA
Represented by The Reclamation Board

BY:



Ronald N. Light
Colonel, Corps of Engineers
District Engineer

BY:



Benjamin F. Carter
President
The Reclamation Board

DATE:

7/20/06

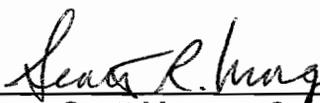
DATE:

6/22/06

CERTIFICATE OF AUTHORITY

I, _____, do hereby certify that I am the principal legal officer of The Reclamation Board of the State of California, that The Reclamation Board is a legally constituted public body with full authority and legal capability to perform, on behalf of the State of California, the terms of the Agreement between the Department of the Army and the State of California, as amended by Amendment Number 3 to the Agreement, in connection with the American River Watershed (Common Features), California, Project, and to pay damages in accordance with the terms of the amended Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Agreement on behalf of the State of California, acting by and through its Reclamation Board, have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification on this
23 day of June 2006.



Scott Morgan, Counsel
The Reclamation Board

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

BY: Dan A. Fua
Dan Fua
Acting General Manager
The Reclamation Board

DATE: 6/23/06

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



June 21, 2007

Col. Ronald N. Light, Colonel, Corps of Engineers
District Engineer
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814

Dear Mr. Light:

Enclosed you will find four copies of the Standard Agreement number 4600000651, Am-4. Please sign all copies of the attached agreement and return **two copies and the original executed agreement** to me at the following address:

Department of Water Resources
Contract Services Office
1416 Ninth Street, Room 354
Sacramento, California 95814

Inquiries concerning the processing of this agreement should be directed to me at the number listed below.

Sincerely,

A handwritten signature in cursive script that reads "Maria Gomez".

Maria Gomez
Contracts Analyst
Contract Services Office
(916) 653-7201

Enclosures

STATE OF CALIFORNIA
STANDARD AGREEMENT AMENDMENT
 STD. 213 A (Rev 6/03)

CHECK HERE IF ADDITIONAL PAGES ARE ATTACHED 5 Pages

AGREEMENT NUMBER	AMENDMENT NUMBER
4600000651	4
REGISTRATION NUMBER	

1. This Agreement is entered into between the State Agency and Contractor named below:
 STATE AGENCY'S NAME
Department of Water Resources
 CONTRACTOR'S NAME
Department of the Army
2. The term of this Agreement is July 10, 1998 through Upon Completion of the Project This Agreement shall not become effective until approved by the Department of the Army Corps of Engineers.
3. The maximum amount of this Agreement after this amendment is: \$246,000,000.00 Two hundred and forty-six Million Dollars and No Cents.
4. The parties mutually agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:
 - A. Amending the Project Cooperation Agreement for the American River Watershed (Common Features) Project expands the Agreement's definition of "Project" and clarifies the scope of work to include certain improvements authorized in Section 366 of the Water Resources Development Act of 1999, Public Law 106-53. Article I.A under the Definitions and General Provisions is amended to add (1) Mayhew Drain, Raise Levee; (2) Mayhew Drain, Install Closure Structure; (3) Howe Avenue, Raise Levee; (4) Jacob Lane, Strengthen Levee; and (5) Lower American River near Natomas East Main Drainage Canal, Strengthen Levee.
 - B. All other terms and conditions of contract # 4600000651, including Amendments 1, 2, and 3 shall remain the same.

Signatures appear on pages 3 of 5 of the Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR		CALIFORNIA Department of General Services Use Only <div style="border: 1px solid black; padding: 5px; text-align: center;"> APPROVED JUN 18 2007 IF GENERAL SERVICE </div> Keyates
CONTRACTOR'S NAME (If other than an individual, state whether a corporation, partnership, etc.)		
BY (Authorized Signature) 	DATE SIGNED (Do not type)	
PRINTED NAME AND TITLE OF PERSON SIGNING		
ADDRESS		
STATE OF CALIFORNIA		
AGENCY NAME		
BY (Authorized Signature) 	DATE SIGNED (Do not type)	
PRINTED NAME AND TITLE OF PERSON SIGNING		

AMENDMENT NUMBER 4
TO THE
PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE STATE OF CALIFORNIA, THE RECLAMATION BOARD
FOR CONSTRUCTION OF THE
AMERICAN RIVER WATERSHED (COMMON FEATURES), CALIFORNIA PROJECT

THIS AMENDMENT is entered into this 21st day of June, 2007, by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"), represented by the Assistant Secretary of the Army (Civil Works), and the STATE OF CALIFORNIA, represented by the President of THE RECLAMATION BOARD (hereinafter the "Non-Federal Sponsor").

WITNESSETH, THAT:

WHEREAS, construction of the American River Watershed (Common Features), California Project (hereinafter the "Project") was authorized by Section 101(a)(1) of the Water Resources Development Act of 1996, Public Law 104-303, at a total cost of \$56,900,000;

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, specifies the cost-sharing requirements applicable to the Project;

WHEREAS, the Government and the Non-Federal Sponsor entered into a Project Cooperation Agreement on July 13, 1998 (hereinafter the "Agreement") for construction of the Project;

WHEREAS, the Project authorization was modified by Section 366 of the Water Resources Development Act of 1999, Public Law 106-53, to include certain improvements as part of the overall Project, and was amended by Section 366 to increase the total cost of the Project to \$91,900,000;

WHEREAS, the Government and the Non-Federal Sponsor entered into Amendment Number 1 to the Agreement on June 13, 2003, to update the project cost to

\$120.6 million to accommodate the design and construction changes associated with deep foundation slurry cutoff walls required for the Project;

WHEREAS, the Project authorization was further modified by Section 129 of Public Law 108-137, the Energy and Water Development Appropriations Act, 2004, to increase the total cost of the Project to \$205,000,000, and the Government and the Non-Federal Sponsor entered into Amendment Number 2 to the Agreement on September 5, 2006 to update the project cost to \$205,000,000;

WHEREAS, the Government and the Non-Federal Sponsor entered into Amendment Number 3 to the Agreement on July 20, 2006 to allow for the Non-Federal Sponsor to accelerate its provision of funds to the Government; and

WHEREAS, the Government and the Non-Federal Sponsor wish to amend the Agreement's definition of "Project" to include certain improvements authorized in Section 366 of the Water Resources Development Act of 1999, Public Law 106-53.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree that the Agreement is hereby amended in the following particulars but in no others:

1. ARTICLE I – DEFINITIONS AND GENERAL PROVISIONS

Article I.A. is amended by adding the following paragraph at the end thereof.:

"The term Project shall also mean the following improvements: (1) Mayhew Drain, Raise Levee: raising the left bank of the non-federal levee upstream of the Mayhew Drain for a distance of 4,300 feet by an average of 2.5 feet; (2) Mayhew Drain, Install Closure Structure: constructing a closure structure with gates near mouth of Mayhew Drain; (3) Howe Avenue, Raise Levee: raising the right bank of the American River levee from 1,500 feet upstream to Howe Avenue to 12,000 feet downstream of Howe Avenue bridge (to Northrop Avenue) by an average of 1 foot; (4) Jacob Lane, Strengthen Levee: constructing a 4-foot-deep toe drain along the landside levee toe to control excessive exit gradient--repair work extending from 300 feet west of Jacob Lane to Harrington Way and from 800 feet upstream of River Walk Way to 700 feet downstream of Arden Way; (5) Lower American River near Natomas East Main Drainage Canal, Strengthen Levee: reshaping right bank landside levee side slope to provide a 2H to 1V slope from 500 feet upstream to 1,300 feet upstream of State Highway 160; as generally described in the American River Watershed Project (Common Features), California, Second Addendum to the Supplemental Information Report (SIR), dated March 2002 (revised July 2002), and approved by the Director of Civil Works on 21 October 2002.

IN WITNESS WHEREOF, the parties hereto have executed this amendment to the Agreement, which shall become effective upon the date it is signed by the authorized representative of the Government.

THE DEPARTMENT OF THE ARMY

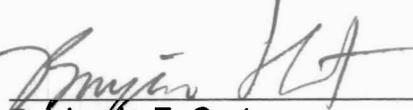
THE STATE OF CALIFORNIA
Represented by the Reclamation Board

BY:



Ronald N. Light
Colonel, Corps of Engineers
District Engineer

BY:



Benjamin F. Carter
President
The Reclamation Board

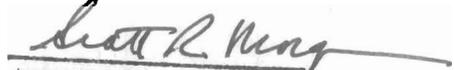
DATE:

6/20/07

DATE:

5/30/07

Approved as to legal form
and sufficiency:



Asst Chief Counsel, BWR
Re Bd.

CERTIFICATE OF AUTHORITY

I, Scott R. Morgan, do hereby certify that I am the principal legal officer of the Reclamation Board of the State of California, that the Reclamation Board is a legally constituted public body with full authority and legal capability to perform, on behalf of the State of California, the terms of the Agreement between the Department of the Army and the State of California, as amended by Amendment Number 4 to the Agreement, in connection with the American River Watershed (Common Features), California, Project, and to pay damages in accordance with the terms of the amended Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Agreement on behalf of the State of California, acting by and through its Reclamation Board, have acted within their statutory authority.

21 IN WITNESS WHEREOF, I have made and executed this certification on this
day of May 2007.

Scott R. Morgan
Scott R. Morgan, Counsel
The Reclamation Board

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BY: Jay S. Punia
Jay S. Punia
General Manager
The Reclamation Board

DATE: 5/29/07