MINUTE ITEM
This Calendar Item No. 17
was approved as Minute Item
No. 17 by the State Lands
Commission by a vote of 2
to 0 at its 5-9-88
meeting.

CALENDAR ITEM

A 1, 3, 4, 8, 10

S 1, 2, 4, 5, 6

17

05/09/88 WP 6697
W 22143 PRC 7203
Valentine
Louie
Sanders

APPROVAL OF A GENERAL PERMIT - PUBLIC AGENCY USE

APPLICANT: State Reclamation Board
1416 Ninth Street
Sacramento, California 95814

AREA, TYPE LAND AND LOCATION:
Tidelands, submerged land, and land lying between Collinsville, Solano County, and Chico Landing, Butte County.

LAND USE:

1. Maintenance of bank protective structures which are in place on May 1, 1988, and constructed as a part of Phase I, Phase II, Part 1 and portions of Phase II, Part 2, of the Sacramento River Bank Protection Project, and specifically Contract Unit 41A, approved by the Reclamation Board on April 17, 1987. Maintenance includes only the placement of bank protective structures to replace those which are worn or displaced, and the control or removal of vegetation, only when such control or removal is required by a maintenance agreement entered into between the Reclamation Board and the United States Army Corps of Engineers.

2. Construction of new bank protection devices, subject to Paragraph 3 below, on any sovereign lands between those points referred to above. Construction includes the movement and/or removal of earth and vegetation and the placement of rock

(ADDED 05/05/88)



CALENDAR PAGE 65
MINUTE PAGE 1406

riprap, palisades, or other bank protection structures.

3. Because specific work sites for future construction will only become known on an annual basis, the Reclamation Board must, prior to issuing assurances of adequate title for any contract unit or portion thereof, apply to the Commission for an amendment to the master lease authorized by this item to include the additional specific work sites within the lease.

4. Construction of bank protection under Contract Unit 40B at three sites.

TERMS OF PROPOSED PERMIT:

1. For maintenance activities, the term will be 30 years beginning May 1, 1988 and ending April 30, 2018, unless sooner terminated as provided in the lease.

2. For new construction activities the term shall be five (5) years beginning May 1, 1988 and ending April 30, 1993, or upon completion of Phase II, Part 2 (Contract Units 41B - 47) of the Sacramento River Bank Protection Project, whichever is longer, unless sooner terminated as provided in the lease. The lease authorizes Construction of Contract Unit 40B at three sites.

3. Special terms: Amendment to Include Specific Sites for Construction of Future Work. As a condition precedent to issuing formal assurances of adequate title, the Reclamation Board shall apply to and receive from State Lands Commission approval for amendment of the Master Lease to include specific sites for construction of additional bank protection work pursuant to Phase II Part 2 of the SRBPP Units 41B-47.

(ADDED 05/05/88)



CALENDAR PAGE 65.1
MINUTE PAGE 1407

For Contract Units 41B, 42 and 43, the Reclamation Board shall apply to and receive from State Lands Commission approval for amendment of the Lease to include specific sites for construction of further bank protection work. Such completed application for Units 41B, 42 and 43, shall be considered by State Lands Commission at its next regularly scheduled meeting following its submittal by the Reclamation Board. The Reclamation Board agrees not to cause the advertising of contracts until it has received authorization from the State Lands Commission. Should State Lands Commission fail to consider such amendment request as to Units 41B, 42 and 43, within the time limits described immediately above, the site(s) shall be deemed approved and the Master Lease amended to include those sites.

For Contract Units 44-47, should the Reclamation Board submit a completed application to State Lands Commission for amendment of the Master Lease, and should the Commission fail to consider such amendment request as to Units 44-47, within 45 days following receipt of the completed application, then the sites applied for shall be deemed approved and the Master Lease amended to include those sites.

CONSIDERATION: Public benefit, with the Commission reserving the right to set a monetary rental if the Commission determines such action is in the State's best interest.

BASIS FOR CONSIDERATION:
Pursuant to 2 Cal. Adm. Code 2003.

APPLICANT STATUS:
The lease will be conditioned on the Reclamation Board having title to or other entitlement to use the adjacent upland for access to the property subject to lease if such access is required.

(ADDED 05/05/88)



CAL. VOL. PAGE 65.2
MINUTE PAGE 1408

PREREQUISITE CONDITIONS, FEES AND EXPENSES:
Filing fee and processing costs have been received.

STATUTORY AND OTHER REFERENCES:
A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Adm. Code: Title 2, Div. 3; Title 14, Div. 6.

AB 884: N/A.

OTHER PERTINENT INFORMATION:
1. The Applicant proposes to maintain existing bank protection structures along the stated reach of the Sacramento River and adjoining sloughs. Maintenance of protective structure includes the control and/or removal of vegetation from these structures if required by a maintenance agreement between the Applicant and the Corps of Engineers. The lease also requires the Applicant to use its best efforts to implement techniques which diminish the amount and type of vegetation removed to maintain existing bank protection structures.

The Applicant also proposes to construct new bank protective devices on the same reach of the Sacramento River. As the sites for the new construction work are known, the proposed lease requires the Applicant to seek amendment of the lease to include these new sites. The lease also requires the Applicant to use its best efforts to implement techniques for the construction of bank protection structures which lessen the amount and type of significant environmental impact caused by the structures.

Currently, Applicant is proposing construction of Contract Unit 408, and has applied for three sites under that unit.

(ADDED 05/05/88)



CALENDAR PAGE 65.3
MINUTE PAGE 1409

2. This activity involves lands identified pursuant to P.R.C. 6370 et seq, as possessing significant environmental values. It is staff's opinion that the project, as proposed, is consistent with its use classification.

3. Pursuant to the guidelines to the California Environmental Quality Act (CEQA), staff has concluded that the maintenance activities subject to the lease are categorically exempt from the requirements of CEQA under Class 1 (Maintenance of Existing Structures). P.R.C. 21084, 14 Cal. Adm. Code 15300, 2905. The new construction contemplated by the lease was the subject of environmental impact report/statements (EIRs) under California and Federal environmental laws. Those EIRs have been certified as final by the lessee, and litigation challenging EIR/SEIS IV has been filed by several conservation and planning organizations. No injunction or stay has been granted in the lawsuit. Therefore, staff is of the opinion that the Commission must assume the EIR complies with CEQA and has processed the application accordingly. CEQA Guidelines 15233; P.R.C. 21167.3

EXHIBITS:

A-1 Land Description - Master Lease.
A-2 Land Description - Unit 40B, Sacramento River Bank Protection Project.
B-1 Location Map - Master Lease.
B-2 Location Map - Unit 40B.
C. EIR/SEIS IV CEQA Finding.
D. EIR/SEIS III CEQA Finding.

IT IS RECOMMENDED THAT THE COMMISSION:

1. FIND THAT THE MAINTENANCE OF EXISTING FLOOD CONTROL STRUCTURES IS CATEGORICALLY EXEMPT FOR THE REQUIREMENTS OF CEQA PURSUANT TO 14 CAL. ADM. CODE 15061, CLASS 1, EXISTING FACILITIES.

(ADDED 05/05/88)



CALENDAR PAGE 65.4
MINUTE PAGE 1410

2. FIND THAT, ALTHOUGH LITIGATION CHALLENGING THE PROJECT EIR IS PENDING, NO INJUNCTION PROHIBITING THE PROJECT HAS BEEN GRANTED.

3. FIND THAT EIRS WERE PREPARED AND ADOPTED FOR THIS PROJECT BY THE RECLAMATION BOARD AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION THEREIN.

4. ADOPT THE FINDINGS MADE BY THE RECLAMATION BOARD FOR THE PROGRAM EIR/SEIS IV, AND THOSE MADE PURSUANT TO THE EIR/SEIS III FOR UNIT 40B AS CONTAINED IN EXHIBITS "C" AND "D", RESPECTIVELY.

5. AUTHORIZE ISSUANCE TO THE STATE RECLAMATION BOARD OF A GENERAL PERMIT-PUBLIC AGENCY USE FOR A 30-YEAR TERM BEGINNING MAY 1, 1988 FOR MAINTENANCE AND REPAIR OF EXISTING BANK PROTECTION STRUCTURES AND CONSTRUCTED AS A PART OF PHASE I, PHASE II, PART 1 AND PORTIONS OF PHASE II, PART 2 OF THE SACRAMENTO RIVER BANK PROTECTION PROJECT, AND SPECIFICALLY CONTRACT UNIT 41A, APPROVED BY THE RECLAMATION BOARD ON APRIL 17, 1987, ON THE LAND DESCRIBED IN EXHIBIT "A-1".

6. AUTHORIZE ISSUANCE TO THE STATE RECLAMATION BOARD OF A GENERAL PERMIT-PUBLIC AGENCY USE FOR A TERM BEGINNING MAY 1, 1988 AND ENDING APRIL 30, 1993 OR UPON COMPLETION OF PHASE II, PART 2 (CONTRACT UNITS 41B - 47) OF THE SACRAMENTO RIVER BANK PROTECTION PROJECT, WHICHEVER IS LONGER, FOR CONSTRUCTION OF NEW BANK PROTECTION STRUCTURES ON THE LAND DESCRIBED IN EXHIBIT "A-1".

7. AUTHORIZE THE CONSTRUCTION OF THREE SITES UNDER CONTRACT UNIT 40B, ON THE LAND DESCRIBED IN EXHIBIT "A-2".

8. FIND THAT THIS AUTHORIZATION FOR NEW CONSTRUCTION ACTIVITIES IS IN THE NATURE OF A MASTER PERMIT AND THAT, AS THE ACTUAL CONSTRUCTION SITES BECOME KNOWN, THE PROGRAM AS MASTER PERMIT AUTHORIZED HEREIN MUST BE AMENDED TO REFLECT THE LOCATION, PRECISE NATURE OF WORK, AND ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES.

9. AUTHORIZE THE TERMINATION OF LEASE PRC 6697, EFFECTIVE UPON THE EXECUTION BY THE STATE RECLAMATION BOARD AND THE STATE LANDS COMMISSION OF A MASTER PERMIT, AS PROVIDED ABOVE.

(ADDED 05/05/88)

EXHIBIT "A-1"

LAND DESCRIPTION W 22143

All the State owned lands in the bed of the Sacramento River and adjoining sloughs between Collinsville, Solano County, California (USCE Mile 0) and Chico Landing, Butte County, California (USCE Mile 194).

END OF DESCRIPTION

REVISED APRIL 1, 1988 BY BIU 1.

0763b

CALENDAR PAGE 65.6
MINUTE PAGE 1412

EXHIBIT "A-2"

LAND DESCRIPTION W 22143

UNIT 40 B

SACRAMENTO RIVER BANK PROTECTION PROJECT

All the State-owned land in the bed of the Sacramento River in Butte and Glenn Counties, California, lying immediately beneath proposed bank protection at the following sites:

| River Site Mile | Approx. Length (Linear feet) |
|---|---|
| 182.2L | 670 ft. |
| 190.7L | 5,500 ft. |
| 191.6R | 4,500 ft. |

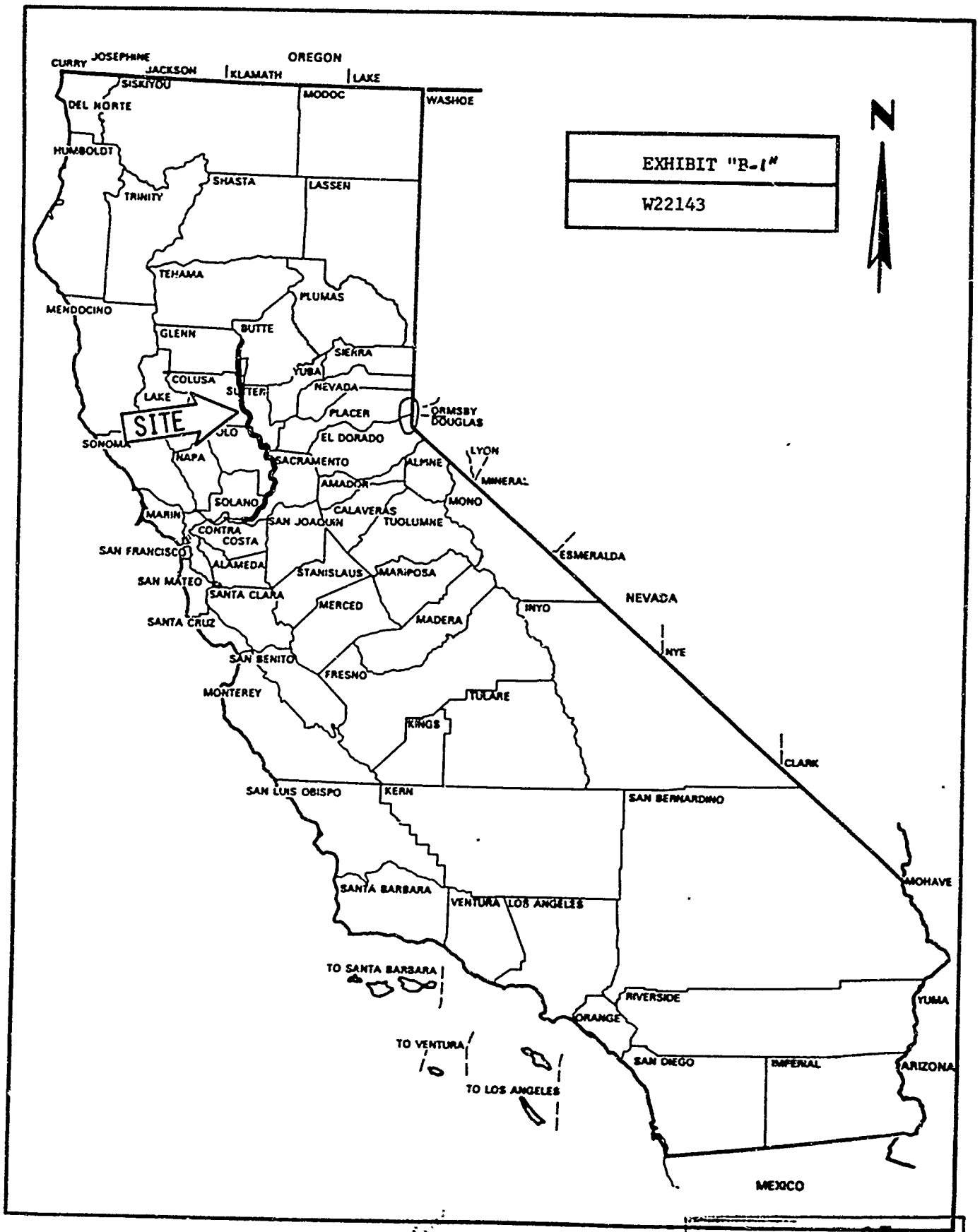
as shown on Department of the Army Sacramento District, Corps of Engineers plans for Bank Protection -Contract 40B, Spec. 8366, File No. 50-4-5803, on file with the State Lands Commission.

END OF DESCRIPTION

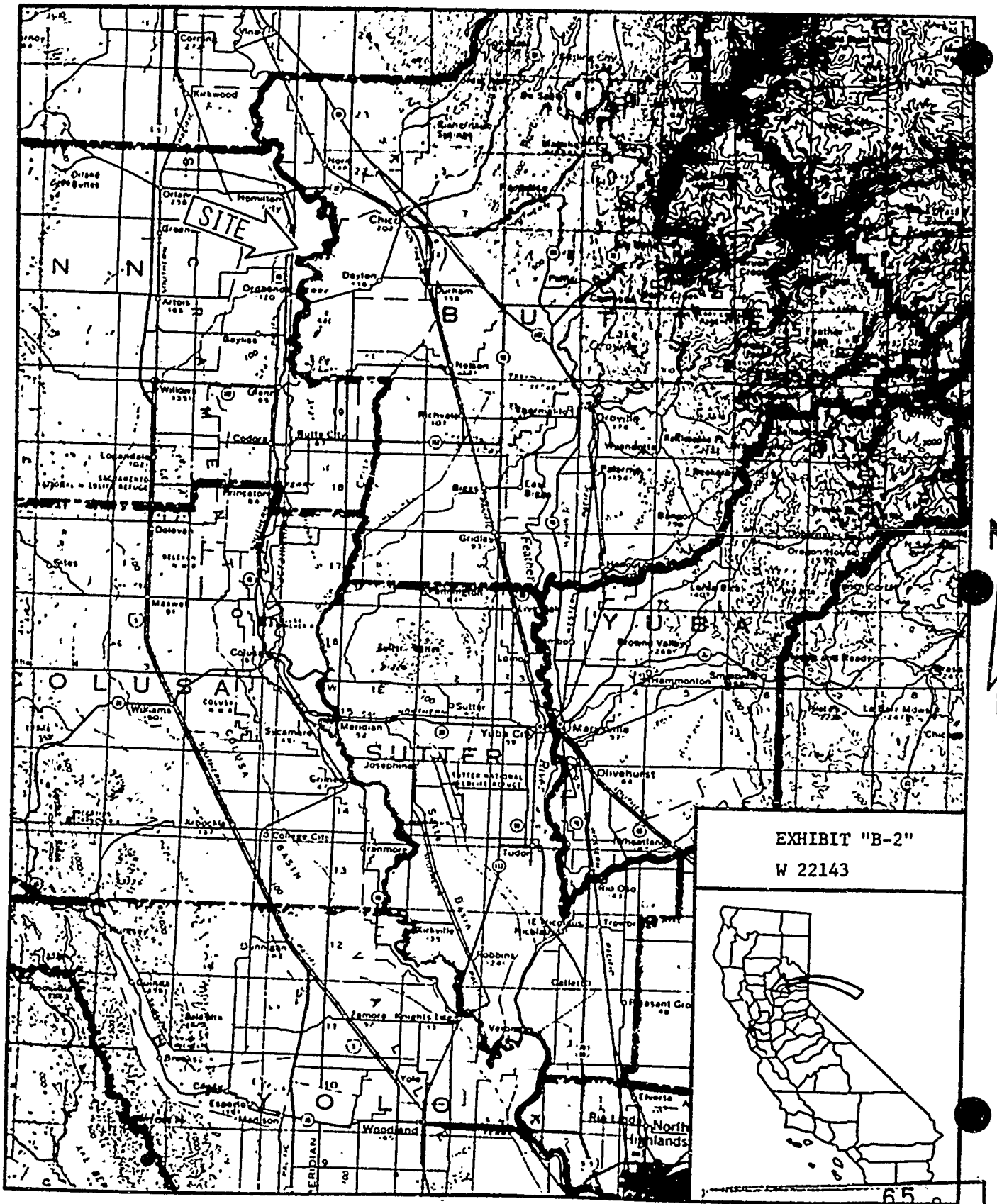
REVIEWED MAY 2, 1988 BY BIU 1.

0836b

CALENDAR PAGE 657
MINUTE PAGE 1413




CALENDAR PAGE 65.8
MINUTE PAGE 1414




MINUTE PAGE 1415

EXHIBIT "C"

NOTICE OF DETERMINATION

TO: x Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

FROM: The Reclamation Board
1416 Ninth Street
Sacramento, California 95814

x County Clerk
Counties of Solano, Sacramento, Yolo, Sutter, Colusa, Glenn, and Butte

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

Final EIR and SEIS IV - Sacramento River Bank Protection Project
Project Title

| 86092321 | George Qualley | (916) 445-8984 |
|---|---|---|
| State Clearinghouse Number | Contact Person | Telephone Number |

Various Sites at project levees along the Sacramento River and tributaries in Solano, Yolo, Sacramento, Sutter, Colusa, Glenn, and Butte Counties.
Project Location

Protection of levees of the Sacramento River Flood Control Project from erosion along the Sacramento River from Collinsville to Chico Landing, Yolo and Sutter Bypasses, Colusa Basin Drain, and lower Feather River.
Project Description

This is to advise that The Reclamation Board has approved the above-described project on 1-15-88 and has made the following determinations regarding the above-described project:

1. The project x will, ___ will not have a significant effect on the environment.

2. x An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.

___ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.

3. Mitigation measures x were, ___ were not made a condition of the approval of the project.

4. A Statement of Overriding Considerations x was, ___ was not adopted for this project. A copy of the Findings and Statement of Overriding Considerations is attached.

This is to certify that the final EIR with comments and responses and record of project approval is available to the General Public at: The Reclamation Board, 1416 Ninth Street, Room 455-6, Sacramento, CA 95814-4794.

Date Received for Filing and Posting at OPR _____

Raymond E. Barsch

Raymond E. Barsch, General Manager
The Reclamation Board

FILED AND POSTED BY
Governor's Office of
Planning and Research

JAN 20 1988

MINUTE PAGE 1416

# FINDINGS CONCERNING THE SIGNIFICANT ENVIRONMENTAL EFFECTS IDENTIFIED IN THE PROGRAM EIR/SEIS IV ON THE SACRAMENTO RIVER BANK PROTECTION PROJECT

The Environmental Impact Report (EIR) and Supplemental Environmental Impact Statement IV on the Sacramento River Bank Protection Project is a program EIR. Work proposed to complete the second phase of the program may occur at more than 100 tentatively identified sites on about 130,000 linear feet of river bank during the period 1988-1991, although actual construction sites will not be finally selected until the winter before construction. The program will involve a series of individual activities carried out under the same authority and will have similar environmental effects which can be mitigated in similar ways. Although the environmental resources vary in character and value from site to site along the project reach, the EIR describes appropriate mitigation measures to cover the probable range of anticipated impacts, even for construction sites identified several years hence. As a result, these findings must be stated in general terms. The program EIR approach will rely on use of the written checklist provided in Appendix A of the EIR. The checklist will be used to document the evaluation of sites of future activities, implement policy articulated in the EIR regarding choice of bank protection methods and mitigation measures, and determine whether environmental impacts of the activities are within the range encompassed by the EIR.

CALENDAR PAGE
MINUTE PAGE

THE RECLAMATION BOARD MAKES THE FOLLOWING FINDINGS CONCERNING THE SIGNIFICANT ENVIRONMENTAL EFFECTS IDENTIFIED IN THE EIR:

Riparian Vegetation and Wildlife Habitat

The loss of woody riparian habitat and shaded aquatic habitat is considered significant along the Sacramento River system. Prevention of the development of early successional habitat is also significant because sites for regeneration of the early-successional riparian tree species are diminishing in the face of ongoing losses to bank erosion and bank protection.

Changes or alterations have been required in or incorporated into the project which substantially lessen the significant effect on riparian vegetation.

The mitigation goals for all woody riparian and shaded aquatic habitats are: no net loss of in-kind habitat value, maintenance of the existing linear distribution along the waterways, and restoration of the linear distribution where it is lacking or absent. Where heavily shaded riverine aquatic habitat occurs below Sacramento, and a threat to levee integrity is not immediate, a goal of no loss of existing habitat will be adopted. Scarcity thresholds will be those defined in the EIR.



1418

These goals will be achieved in two steps. First, impacts will be avoided or minimized if possible by using suitable bank-fill methods appropriate to erosion conditions and the value of riparian habitat present, and by establishing a select clearing zone. Second, the unavoidable losses will be rectified onsite or compensated for at nearby sites.

To achieve the vegetation mitigation goals over the long term, all of the efforts will be accompanied by the acquisition and exercise of suitable land rights to protect the environmental investments. The measures will be implemented according to objective mitigation formulae of the U. S. Fish and Wildlife Service (USFWS) using a full or modified Habitat Evaluation Procedure (HEP), as defined in Chapter 7 (under "Vegetation", Mitigation Techniques for Vegetation Impacts"). Specific mitigation measures, acreages, and sites will be determined by U. S. Army Corps of Engineers (COE) in consultation with USFWS, and Department of Fish and Game (DFG) and will include a finding that measures are justifiable (i.e., tangible and intangible values gained outweigh tangible and intangible costs). Accordingly, the significance of all riparian habitat losses, except the loss of heavily shaded riverine aquatic habitat downstream from Sacramento, can be reduced to less-than-significant levels.



MINUTE PAGE 419

Special-Status Plant Species

All bank protection methods suitable for the lower and middle river would require removal of Suisun Marsh aster, California hibiscus, and Mason's lilaeopsis if currently unknown populations are present at work sites. The loss of any population would be considered significant.

Delta tule pea populations along the lower and middle river, such as the two known populations near the river's mouth, may also require removal if located at work sites. If situated on higher ground within any reach, they will be avoided through use of bank-fill riprap methods if feasible. Populations at the water's edge along the upper river could be avoided through flow modification methods. The loss of Delta tule pea populations is potentially significant, pending verification of the potential special status as a distinct subspecies.

The removal of unoccupied habitat for special status species is a less-than-significant impact because of the widespread occurrence of such habitat.

Changes or alterations have been incorporated into the project which substantially lessen the significant effect of possible population loss.

Where avoidance is not possible, losses will be compensated by enhancing existing populations or by planting and cultivating new



CALENDAR PAGE 65
MINUTE PAGE 420

populations in nearby suitable habitats; these actions will be accompanied by provisions for monitoring and permanent protection. Successful implementation of these measures can reduce impacts to less-than-significant levels, but measurement of success will require monitoring over the reestablishment or response period.

Mason's lilaeopsis is a state-listed rare species (see Table 6-1 of EIR/SEIS IV) requiring special mitigation efforts. If this species is found at any future work site in the Delta, a botanical search for the species will be conducted upstream and downstream of the work site at least one mile on both sides of the river. This search will determine the regional extent and importance of the population found at the work site. Based on this determination, appropriate mitigation measures (e.g., avoidance, compensation) for the work site impacts will be determined by COE after consultation with DFG and USFWS.

Swainson's Hawk

Changes or alterations have been incorporated into the project which substantially lessen the significant effect on the Swainson's hawk. Where potential habitat is encountered, a survey will be conducted to determine if the habitat is occupied. California Department of Fish and Game Biological Opinion dated May 27 1987, on Butte Basin states disturbances within 1/2 mile of the nest site will be allowed only outside the nesting season of April 15 to July 15. DFG, USFWS, COE, and The Reclamation



65
42
MINUTE PAGE

Board have adopted modified criteria for protecting Swainson's hawk and Yellow-billed cuckoo in the Butte Basin Reach which would also apply to the project levee system. Conflicts with the Swainson's hawk will be avoided or resolved by the following. Surveys will be conducted prior to beginning construction to identify any potential nest sites on the construction site or nest sites within 1/2 mile of the construction site. Where nest sites have been identified prior to contract award, the work sites will be scheduled for construction outside the nesting season if possible. Where it is not possible to avoid construction during the nesting season or a new nest site is identified after contract award, the Corps and The Reclamation Board will consult with DFG and USFWS to choose a course of action from these alternatives:

1. Determine that the construction activity is not in conflict due to buffers that are found to exist, such as tree screens or other factors that ameliorate the conflict even though it is closer to a nest tree than 1/2 mile;

2. Determine that there is a conflict and agree on additional measures which could be employed to avoid, offset, or mitigate it. An example would be monitoring the situation to obtain useful data on how the birds react to project activity and utilize this to clarify or refine conditions to be imposed where conflicts arise in future activities;



EXHIBIT PAGE 1422

3. Determine that there is a conflict and determine to proceed with work as provided by law.

As potential methods for avoiding the removal of habitat, bank-fill riprap using barge access and/or select clearing will be evaluted for feasibility. If construction requires removal of documented or occupied nest trees after the nesting season, or of potential nesting habitat, tall-growing and fast-growing riparian trees will be planted at a nearby site. If nest trees are occupied and must be removed, The Reclamation Board shall contract with the U. C. Davis Raptor Center or an equivalent facility to remove the eggs and/or young from the nest and to rear and fledge those birds.

Yellow-billed cuckoo

Changes or alterations have been incorporated into the project which will substantially lessen the significant effect on the yellow-billed cuckoo. There are fewer sites which could conflict with the bank protection work during the nesting season, but the procedure outlined above for the Swainson's hawk will be followed for this species.

To minimize the loss of potential or occupied habitat, flow modification or bank-fill riprap may be used. Alternatively, mitigation may involve immediate revegetation of contiguous sites with cottonwoods and willows or the protection of threatened offsite habitats. As potential methods for avoiding the impact

to the habitat, bank-fill riprap and flow modification structures such as palisades will be evaluated for feasibility.

Bank swallow

Changes or alterations have been incorporated into the project which substantially lessen the significant effect on the bank swallow. Where construction would cause loss of occupied nesting habitat or disturbance to occupied nesting colonies adjacent to work sites, construction will be avoided within 1/4 mile of the occupied colony during the nesting season. To minimize the loss of potential nesting habitat, the site characteristics will be evaluated in more detail to determine if the sites are actually suitable for colonies. If they are suitable, work will be done to improve a nearby bank or to create an artificial bank.

Valley elderberry longhorn beetle

Changes or alterations have been incorporated into the project which substantially lessen the significant effect on the valley elderberry longhorn beetle. Where construction would cause the loss of habitat -- elderberry shrubs with stems more than three inches in diameter -- shrubs will be transplanted to onsite or adjacent unvegetated sites. Consultation with the USFWS will be reinitiated in the unlikely event of more than 100 plants being removed during the remaining second phase authorization. Transplanted and newly planted elderberries will be jointly monitored by DWR and USFWS staff to determine survival and any necessary alteration of horticultural methods. Replanting will



EXHIBIT
MINUTE PAGE 424

be conducted where necessary to meet revegetation objectives prescribed by USFWS. As potential methods for avoiding the impact, bank-fill riprap and flow modification structures such as palisades will be evaluated for feasibility on a site-by-site basis.

Chinook Salmon Rearing and Migration

Changes or alterations have been incorporated into the project which substantially lessen the significant effect on chinook salmon rearing and migration, but the residual impact will still be significant.

Through reduction of shading canopy, instream cover, and laminar nearshore streamflow, all riprap configurations may significantly decrease habitat quality for juvenile salmon. If riprap is employed at a substantial number of sites, the numbers of chinook salmon escaping to the ocean and returning upriver to spawn may be significantly reduced, although data are not now available to quantify this effect.

The following measures will be used, where justifiable, to mitigate adverse effects of riprap on salmon-rearing habitat:

- for loss of suitable rearing substrate, place 1-4 inch diameter rock over portions of riprap; construct rearing benches (sloping both laterally and longitudinally to assure suitable water depths over a range of flows); construct fish



CALEN[illegible]GE 65
MINUTE PAGE

groins (small rock jetties); or apply some other techniques to provide habitable substrate in reaches of habitat scarcity where effectiveness is probable, if recommended by USFWS; and

- for loss of shade, use low bank-fill riprap where suitable, or interplant higher riprap configurations with woody riparian vegetation if current studies show it not to be detrimental to the integrity of the riprap.

The two measures identified above could possibly mitigate significant losses of shading canopy and modification of substrate conditions to less-than-significant levels where their use is suitable. Provision of instream cover (e.g., by tethering dead trees in riprap), however, has no demonstrated feasibility in the Sacramento River system. Therefore, the loss of instream cover in reaches of habitat scarcity is considered to be an unavoidable adverse effect of riprap bank protection under present conditions.

Four additional mitigation measures will be adopted, although they do not directly reduce identified significant impacts:

- monitor effects of environmentally superior bank protection methods on chinook salmon rearing and migration;



65
1426

- limit construction upstream of the project levees to the nonspawning season, terminating operations after November 1 of each year;

- continue financial support for USFWS studies aimed at documenting and quantifying impacts resulting from the loss of salmon-rearing habitat impacts; and

- pursue funding for a COE research and development program aimed at a fuller understanding of project impacts and effective mitigation measures for the loss of rearing habitat. (The Chief of Engineers with the assistance of COE's Waterways Experiment Station, is reviewing such a proposal from the South Pacific Division office. Additional information has been requested to justify sufficient priority for action.)

The palisades method, if approved, will preserve instream cover, canopy shading, and nearshore laminar streamflow. It may, in fact, enhance habitat for chinook salmon rearing and migration. This method will be examined for feasibility as additional information becomes available.

Land Use

All bank protection methods at some of the tentatively identified sites may induce the conversion of an estimated 15-20 acres of woody riparian habitat to agricultural use. As with all losses

of woody riparian habitat along the Sacramento River system, this would be a significant adverse effect. This impact will be avoided by acquisition from willing sellers of environmental easements and enforcement of easement provisions to protect any significant riparian vegetation deemed reasonably subject to potential conversion.

Where landowners are not willing to sell, environmental easements will be acquired over compensating acreages determined by a full or modified Habital Evaluation Procedure (HEP) as defined in Chapter 7 (under "Vegetation", "Mitigation Techniques for Vegetation Impacts").

Recreation and Aesthetics

Because recreational activity is associated with woody riparian habitat and shaded aquatic habitat, the loss of these habitats would concentrate recreation activity at remaining similar areas and incrementally diminish recreation use or quality of use. This is a significant cumulative effect of bank-cut and the higher bank-fill riprap methods. An exception is where fishermen use the riprap for shoreline access formerly unavailable due to eroding banks or thick vegetation. Overall, recreational fishing access would probably not be significantly changed by use of riprap for the remaining authorization, although the mix of species caught at riprapped sites would be expected to change.



MINUTEPAGE 1428

Riprap methods would also incrementally degrade the visual experience of boaters and adjacent roadway travelers, including users of some state and county-designated scenic roads. The aesthetic impact would be less than significant for low bank-fill riprap. For the higher bank-fill riprap, the visual effect would be significant. The bank-cut riprap method, where woody riparian vegetation is removed, would always entail a highly significant reduction in visual quality.

These recreational and visual impacts may be partially or wholly mitigated by use of the environmentally superior bank protection methods, but no measures are otherwise feasible to further reduce or eliminate these impacts.

Visible flow modification methods such as palisades would be expected to have a less-than-significant effect on recreation activity but a significant effect on aesthetic quality. Over the long-term, however, sediment deposition and vegetation growth within palisades would gradually reduce the aesthetic impact.

Cumulative Impacts

Changes or alterations have been incorporated into the project which substantially lessen the significant cumulative effects of the project.

Significant unmitigated impacts on riparian vegetation and wildlife habitat remain from past bank protection work under the



EXHIBIT NO. 1
APPLICATION NO. 4-00-0

SRBPP First Phase. The Reclamation Board and COE are committed to acquiring and developing riparian vegetation on First Phase mitigation lands are authorized by Congress in 1986. Adequate State and Federal funding will be available in 1988 and 1989; acquisition of First Phase mitigation lands is getting underway in 1988.

Although mitigation was implemented for Second Phase Part 1 work, woody riparian habitat values on most of the environmental easements acquired were substantially less than their potentials although not necessarily less than that present prior to construction. COE and The Reclamation Board have agreed on and are pursuing USFWS recommendations to improve habitat values on these lands.

To implement USFWS's specific mitigation recommendations, 92 acres of environmental easements were acquired in two parcels. Mitigation for Work Units 39 and 40 in the Butte Basin Reach is currently being implemented by acquisition of 227 acres. Likewise, mitigation for work in the Delta is currently being implemented with replanting of 9.2 acres of berm including 7,800 feet of water's edge. This effort includes mitigation of losses of shaded aquatic habitat.

Continuing implementation of mitigation measures for past work in conjunction with mitigation for future work (see Chapter 4) will reduce the cumulative impacts of the overall SRBPP on woody

riparian vegetation to less-than-significant levels. This conclusion is based on The Reclamation Board's and COE's commitment to implement full mitigation for past work, subject to legislative appropriations, and to implement the mitigation policy and process for future work described in Chapter 4. Cumulative impacts on shaded aquatic habitat along the river's banks will continue to be significant and possibly unmitigable because of the present lack of knowledge about suitable compensation measures for losses of this habitat; studies of this mitigation problem will continue, however.

STATEMENT OF OVERRIDING CONSIDERATIONS
FOR THE PROGRAM EIR/SEIS IV ON THE
SACRAMENTO RIVER BANK PROTECTION PROJECT

Although the approval of the Sacramento River Bank Protection Project includes many mitigation measures and ongoing activities to lessen the significant environmental effects of the project, the project will have residual significant environmental effects. The effects at some worksites will include one or more of the following:

1. loss of heavily shaded riverine aquatic habitat along the lower river and sloughs;

2. reduction in the linear continuity of riparian habitat in reaches of habitat scarcity where environmentally superior methods cannot be utilized;

3. loss of a documented or occupied Swainson's hawk or Yellow-billed cuckoo nest tree where bank-cut riprap must be used; disturbance of one or more nesting pairs of these species may also be necessary in order to complete the required work within one construction season;

4. loss of an active bank swallow colony site where riprap must be used;

5. reduction in the quantity and quality of instream cover serving as rearing and migratory habitat for juvenile salmo virtually, wherever riprap must be used in reaches of habitat scarcity;

6. loss of habitat substrate for juvenile salmon in reaches of habitat scarcity where the mitigation alternatives prove ineffectual; and

7. reduction in the quality of recreational and aesthetic resources along the Sacramento River.

These significant effects must be regarded as the environmental cost of providing flood protection to people and their property in the low-lying areas of the Sacramento Valley.

However, it must be remembered that the purpose of the bank protection work is to correct erosion problems on levees and immediately adjacent banks that could otherwise lead to levee breaks and resulting losses of life and property. In the upper reaches in the Butte Basin the project has a purpose of controlling channel migration near overflow areas and structures so as to maintain flood flows in the bypass system and thereby protect downstream levees from higher than design flows that could lead to levee failures and resulting floods.

During the next few years, bank protection work will involve mitigation measures but will cause some residual significant effects. As research and experimental management proceeds, however, new techniques may become available to lessen the significant effects even more. Protection of the levees cannot be simply deferred until all results are in. Work must continue to protect the flood control facilities.

The U. S. Army Corps of Engineers and The Reclamation Board attempt to identify erosion problem sites before they become so critical as to require emergency repair. Prompt action at problem sites allows effective planning and implementation of construction activities with environmental protection and mitigation measures. For example, if levee erosion has progressed to completely eliminate a streamside berm and/or encroached into a levee, a larger disturbance will be required to restore the required levee slope. This in turn may cause greater environmental impact as well as greater maintenance cost. Thus, early identification of erosion sites may minimize the extent and severity of bank protection work and thus allow retention of valuable riparian vegetation before it is removed by erosion.



65
14

EXHIBIT "D"

# NOTICE OF DETERMINATION

TO: x Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

FROM: The Reclamation Board
1416 Ninth Street
Sacramento, California 95814

x County Clerk
Counties of Glenn and Butte

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

SEIS III and Final EIR - Sacramento River Bank Protection Project - Butte Basin
Project Title

| 87020309 | George Qualley | (916) 445-8984 |
|---|---|---|
| State Clearinghouse Number | Contact Person | Telephone Number |

Various sites along the Sacramento River in Glenn and Butte Counties
Project Location

Construction will consist of shaping the riverbank and placing bank protection in the Butte Basin reach (River Miles 176 to 194) in order to maintain the division of floodflows between Butte Basin and the Sacramento River levee system.
Project Description

This is to advise that The Reclamation Board has approved the above-described project on 2-19-88 and has made the following determinations regarding the above-described project:

1. The project x will, ___ will not have a significant effect on the environment.

2. x An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.

   ___ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.

3. Mitigation measures x were, ___ were not made a condition of the approval of the project.

4. A Statement of Overriding Considerations x was, ___ was not adopted for this project. A copy of the Findings and Statement of Overriding Considerations is attached.

This is to certify that the final EIR with comments and responses and record of project approval is available to the General Public at: The Reclamation Board, 1416 Ninth Street, Room 455-6, Sacramento, CA 95814-4794.

Date Received for Filing and Posting at OPR _____

Raymond E. Barsch, General Manager
The Reclamation Board

FILED AND POSTED BY
Governor's Office of
Planning and Research
FEB 25 1988

65.29
1435

STATEMENT OF FINDINGS
SEIS III/EIR

The Reclamation Board makes the following findings with regard to the significant and potentially significant effects identified in the Supplemental EIS III/EIR for the Sacramento River Bank Protection Project, Unit 40B (Butte Basin):

1. Riparian Vegetation - The project (13,700 linear feet of bank protection plus the 16,000 linear feet constructed in 1984 and 1985) includes removal of 12 acres of riparian vegetation due to direct construction. In addition, the project will cause a 20-percent reduction in erosion rates, which will prevent 79 acres of riparian vegetation from developing as a result of sedimentation/accretion in other locations. The net impact to riparian habitat at the end of the study period is 91 acres.

   Changes or alterations have been required in, or incorporated into, the project which substantially lessen the significant effect on riparian vegetation.

   To date, 71 acres of riparian vegetation have been acquired by The Reclamation Board in the Butte Basin reach to provide partial mitigation for the 91 acres being impacted. In addition, The Reclamation Board is acquiring 94 acres of grassland/agriculture and 62 acres of riparian vegetation



65.30
1436

for mitigation for this project. Thus, a total of 227 acres will be acquired to provide mitigation of project impacts for the preferred plan of 5 rock riprap sites.

The SEIS III/EIR discusses the preferred plan of 5 rock riprap sites as a worst-case scenario. At the present time, only 3 sites are contemplated to be constructed as rock riprap; one site has been deferred; and one is under serious consideration for a palisades-type installation. The Corps is proceeding to develop a palisades-type design at River Mile 192.4 Left. Construction would likely occur in late 1988 or early 1989.

2. Bank swallows - Changes or alternatives have been incorporated into the project which will substantially lessen the potentially significant impact on bank swallows. These swallows construct nest holes in vertical eroding banks where bank protection is commonly placed. Two bank swallow colonies identified in a 1986 survey would be affected by the proposed construction at River Mile 190.7 Left and River Mile 192.4 Left. Construction at River Mile 192.4 Left will be delayed for one year to allow for design of the palisade system of bank protection unless emergency conditions necessitate stabilization of the site by riprap. Construction at River Mile 190.7 Left will be delayed until after August 1, 1988 when nesting is completed. Portions of



65.31
1437

the other two sites scheduled for 1988 construction, River Mile 191.6 Right and River Mile 187.2 Left, will be draped with plastic to prevent establishment of new colonies and avoid construction impact on nesting birds. It is noted that these two sites have not had bank swallow colonies in the past, and the draping of the plastic is simply a precautionary measure to assure that construction can proceed this summer. The final decision on the extent of draping at these sites will be left to Fish and Wildlife Service and Department of Fish and Game specifications. In addition, mitigation techniques of artificial bank construction and rehabilitation of natural banks for bank swallow nesting are continuing as described in the SEIS III/EIR.

3. Juvenile salmon-rearing habitat - The impact on juvenile salmon-rearing habitat will be less than significant. U. S. Fish and Wildlife Service studies of young salmon-rearing habitat show that riprap sites contained 70 to 90 percent less salmon than similarly situated naturally-eroding vegetated outside banks. To what degree the reduced habitat caused by riprap may be affecting juvenile salmon survival is unknown. Quality of salmon-rearing habitat and survival do not necessarily correlate. Neither the Fish and Wildlife Service nor the Department of Fish and Game are able to estimate the numbers of fish actually affected in



65.32
1438

relation to the total population of juveniles or returning adults. An indication that this effect is less than significant is that the Fish and Wilflife Service concurred in the proposal to conduct research and development studies while continuing with project construction. Field studies by the Fish and Wildlife Service will be continued to obtain further data and attempt to determine habitat losses and to evaluate mitigation measures already implemented. Studies on experimental mitigation of juvenile salmon-rearing habitat by the Fish and Wildlife Service are continuing. The Fish and Wildlife Service and the Corps' Sacramento District Office have recommended to Corps' higher authority a research and development program to identify resource losses and potential mitigation strategies that would be desirable. As an interim mitigation measure, the Fish and Wildlife Service has recommended that experimental fish groins (rounded piles of rock) be constructed along bank slopes within areas to be riprapped. This proposal is being evaluated by the Corps and is expected to be employed on a trial basis.

4. Valley elderberry longhorn beetle - This Federally listed threatened beetle will be adversely impacted by a loss of 12 acres of mature riparian vegetation due to construction of the project and the indirect loss of an additional 79 acres in the Butte Basin reach over the life of the project.



65 33
1439

While the projected loss of habitat may be significant, the long-term loss/impact will be reduced to a less-than-significant level through implementation of reasonable and prudent alternatives suggested by the Endangered Species Office of the Fish and Wildlife Service and agreed to by the Corps. These reasonable and prudent alternatives are described in detail in the final SEIS III/EIR. Further, a mitigation plan will be implemented pursuant to the Endangered Species Act and Fish and Wildlife Coordination Act. The proposed bank protection work will also beneficially affect the species by stabilizing the bank, resulting in less erosion at sites where elderberry plants now exist. This will preserve about 230 existing elderberry plants on 37 acres that would be lost in the absence of the project due to continued erosion.

5. Swainson's hawk - This hawk is a Federal candidate species and a State threatened species. It would suffer a loss of 3 percent of the suitable habitat available for it in the Butte Basin reach. A known Swainson's hawk territory is located at Golden State Island, adjacent to three proposed construction sites. The project may have a significant adverse effect on this species if nesting and roosting trees are eliminated. The Department of Fish and Game Biological Opinion required no construction activity within 1/2 mile of an active nest from April 15 to July 15. The procedures and



65.34
1440

mitigation described in paragraphs 5.6 and 6.3 of the Final SEIS III/EIR and for riparian vegetation in paragraph 5.2 will reduce this potential impact to a less-than-significant level unless a nesting pair is found so close to the work area that distrubance cannot be avoided, the pair continues to nest there after July 15, and detailed consultation with the Department of Fish and Game and the Fish and Wildlife Service is unable to produce additional feasible mitigation.

6. Western yellow-billed cuckoo - This Federal candidate species is dependent on large blocks of 25 acres or more of mature riparian vegetation. The Butte Basin project area hosts one of the major populations of western yellow-billed cuckoos in the State. The loss of habitat due to the project is 3 percent of the habitat available for western yellow-billed cuckoos in the Butte Basin reach. Therefore, the project would have significant adverse impacts on the cuckoo since its habitat is already severely reduced. Such impacts would be reduced to insignificance through implementation of mitigation as described in the section of the SEIS III/EIR on mitigation for riparian habitat. The procedures and mitigation described in paragraphs 5.6 and 6.3 of the final SEIS III/EIR and for riparian vegetation in paragraph 5.2 will reduce this potential impact to less than significant level unless a nesting pair is found so close to the work area that disturbance cannot be avoided, the pair



65 35
1441

continues to nest there after July 15, and detailed consultation with the Department of Fish and Game and Fish and Wildlife Service is unable to produce additional feasible mitigation.

7. Esthetics - The change in esthetic values due to construction of rock revetment will be significant and cannot be mitigated. Specific economic, social or other considerations make infeasible the mitigation measures or project alternatives identified in the final SEIS III/EIR. Periodic maintenance of the rock restricts invading vegetation and prevents a return of the area to its natural appearance. Maintenance of the rock work is necessary to continue the bank protection.

The main purpose of this reach of the project is to maintain the split in the flows of the river between the waters going into the Butte Basin during flood stages and those proceeding downstream to the areas protected by the Sacramento River levees. A secondary purpose is to prevent the river from meandering away from its present location and establishing a new channel into the Butte Basin. The river needs to be kept in its present location in order to prevent serious economic losses to people living and carrying out economic activities in the general area. Likewise, the split in flows must be maintained in order to keep the



65.36
1442

portion of the river flows going downstream into the area protected by the levee system from becoming so large that the flows would overwhelm and break the levee system. A failure of the levees resulting from high flows could cause loss of human life and would cause high economic damages.

The no-action alternative is not feasible because it cannot guarantee that the river would not change its course or that the present split of flows will be maintained. The no-action alternative would simply abandon the comprehensive, planned approach to controlling the river flows. Emergency assistance by the Federal or State Government may still be required. Local agencies or private landowners might still construct bank protection.

The palisade method of bank protection is being considered for installation at one site, River Mile 192.4 Left for additional testing on the new approach. The method will be tried to determine if it is effective in stabilizing the river in the high-energy upper Sacramento River system. Construction at the other proposed bank protection site, River Mile 188.8 Right will be deferred pending further review and analysis of using additional palisades. Work on the remaining three sites, however, is too urgent and cannot be deferred.



65 37
1443

The meander-belt alternative is not feasible for the Butte Basin reach of the Sacramento River because it could allow the river to change course into the Butte Basin or allow erosion to change the stream profile so that too much water would flow into the reach protected by the levees and endanger the levee system.

The alternative of selective clearing of channel debris is also infeasible. Selective clearing of channel debris would result in the removal of vegetative growth and island bars from the channel when such obstructions are considered to have an adverse impact on bank erosion and subsequent channel movement. This alternative would provide only temporary, localized reductions in bank erosion. This alternative does not address meandering or sudden changes of the channel resulting from other influences. This alternative would not achieve the project purposes.

The alternative of selective lengthening of the channel would consist of re-establishing old channel bends, preventing future channel bend cutoffs and lengthening river reaches by such means as channel clearing, excavation, training devices, levees and dikes. This approach could involve greater environmental distrubance and economic costs than the project being approved. The effects of this alternative on river flows and erosion are speculative at



65.38
1444

this time. Due to its extremely experimental nature, this alternative was judged to be infeasible at this time.

The secondary conveyance alternative would divert a portion of the flow from river reaches in which significant bank erosion is occurring. This alternative is designed to reduce bank erosion by reducing peak flows. This alternative was dismissed as infeasible because it would require construction of new weirs, bypasses or other types of conduits to divert and carry water around this reach of the river. The economic costs and environmental disturbances were expected to be much greater than those with the approved project.

The upstream storage alternative would consist either of obtaining additonal flood storage space in existing upstream reservoirs or of constructing additional reservoirs to store surface runoff and then to release waters in such a way as to reduce the frequency and magnitude of peak flows in the channel system. This alternative was dismissed as infeasible due to its extremely high economic cost.

Other methods in the channel stabilization alternative were also examined and found to be infeasible for the Butte Basin reach of the Sacramento River.



65.39
1445

Gabions and similar protection methods offer some environmental benefits over those offered by rock riprap. However, special precautions will likely be needed to prevent excessive vegetation in gabions which would shorten their useful life. The environmental impacts of treatments using concrete mattresses, rock gabions, and synthetic matting are comparable initially to those accompanying rock riprap because extensive site preparation and grading is required--eliminating habitat. Regrowth of vegetation is difficult. From a flood-control perspective, concrete mattresses, rock gabions, and synthetic matting are roughly comparable to rock riprap in controlling erosion. However, both methods have drawbacks in terms of labor and complexity of installation and maintenance which increases cost.

Biotechnical bank protection techniques, while having environmental benefits, also result in the distrubance of existing vegetation. Due to the nature of Butte Basin erosion sites, considerable grading and disturbance to bank vegetation would be required if biotechnical methods were used. For these reasons, biotechnical alternatives were not considered further.

Several permeable and impermeable jetties and retards have been constructed on the Sacramento River over the years with varying degrees of success. Rock and timber jetties



65.40
1446

placed in the river downstream of Verona to maintain navigational depth, have aided in defining the main channel and have deflected flows away from the rocked levee. A system of embedded concrete pile groins installed on the upper Sacramento River at RM 179.5 was ineffective and was ultimately removed from the river. In the summer of 1986, a permeable jetty system consisting of steel piles and heavy synthetic netting known as the Palisades System was installed at Woodson Bridge State Recreation Area. The Palisades System and Iowa Vanes retard structures are being field tested, but they are not yet ready for protection work that needs to be constructed this year. They will be evaluated for future use as data from field tests come in.

Rock revetment (riprap) is a method of bank protection that has been used along the Sacramento River system for fifty years as well as along most rivers across the country. Three types or configurations of riprap have been used in the past: (1) top of bank placement; (2) sustained high water plus 3 feet placement; and (3) low berm placement.

Top of bank placement of revetment is used where high flows are expected to overtop the bank. The bank is protected with rock up to the top of the bank, and frequently a rollover or cap of varying width (depending on site conditions) is placed at the top of the bank to prevent back



65.41
1447

scour from eroding the bank behind the rock. Because the areas to be protected are subject to frequent inundation with high velocities, this is the method chosen for use in the Butte Basin area.

High water plus 3 feet of revetment protects the bank up to an elevation three feet higher than the elevation that floodflows are expected to reach 90 percent of the years. This method has been used in those reaches of the river where the high flows are not expected to overtop the bank or levees and where velocities are not severe from an erosion standpoint. In the Butte Basin reach, high flows will overflow the sites to be protected. For this reason, this form of bank protection is not feasible for use in the Butte Basin.

Low rock berms which extend 3 to 4 feet above summer water levels have been used successfully to treat bank and levee erosion on the Sacramento River in the Delta. However, erosion above the level of the rock may continue to be a problem especially after periods of sustained high flows. Vegetative cover can be used on the upper slope to protect it from damaging scour while preserving habitat and esthetics. This method of revetment protects the bank from the erosive effects of low flows and wave wash action from boating operations in the river but does not offer



65.42
1448

sufficient protection during higher flows and will erode those bank areas that have not been protected to the top of bank. Once the upperbanks begin to erode, erosion can be expected to continue down behind the rock protected areas of the bank undermining the rock's support, causing its collapse and defeating the purpose of the bank protection. Accordingly, this method would not be suitable for bank protection in the higher velocity Butte Basin reach.



65-43
1449

STATEMENT OF OVERRIDING CONSIDERATIONS
SEIS III/EIR

The SEIS III/EIR is a site specific environmental document for bank protection in the Butte Basin reach of the Sacramento River. Although the Sacramento River Bank Protection Project has been modified to include many mitigation measures and prudent alternatives to greatly reduce the significant effects on the environment, the project being approved would still have a residual significant effect on the environment. The greatest of these effects is the impact on esthetics. The degradation of the natural scenic appearance of portions of the riverbank where protection work will be carried out is regarded as a necessary cost of providing the flood protection that this project will yield. The project is necessary to prevent shifts in the river channel which would either cause increased flooding in the Butte Basin with greater increased economic losses or increased flows into the reach of the river where the levee system has been constructed. These increased flows could threaten to overwhelm the levee system and cause its failure. The failure and the resulting flood would threaten lives and property in the areas currently receiving protection.

It is possible that the project may have a significant effect on nesting pairs of Swainson's hawk or western yellow-billed cuckoo despite the mitigation measures added to the project. This



65.44
1450

adverse effect could occur if the nests are located close to the sites of the work, and if the pairs continue nesting after July 15. Disturbance of one or more nesting pairs under these circumstances may be necessary in order to complete the required construction within one construction season. If construction were not completed within one season, the disturbed bank could be subject to increased erosion from high flows during the winter.

Prior to construction, detailed and good faith consultation with the California Department of Fish and Game and the U. S. Fish and Wildlife Service will attempt to produce agreement on measures to avoid, offset, or mitigate the impact on the nesting pairs. Construction would then proceed, possibly in a way that would disturb the nesting pairs (if the environmental consultation is not successful); construction under such circumstances would proceed concurrently with continued consultation to seek ways of minimizing the unavoidable impacts.



65.45
1451