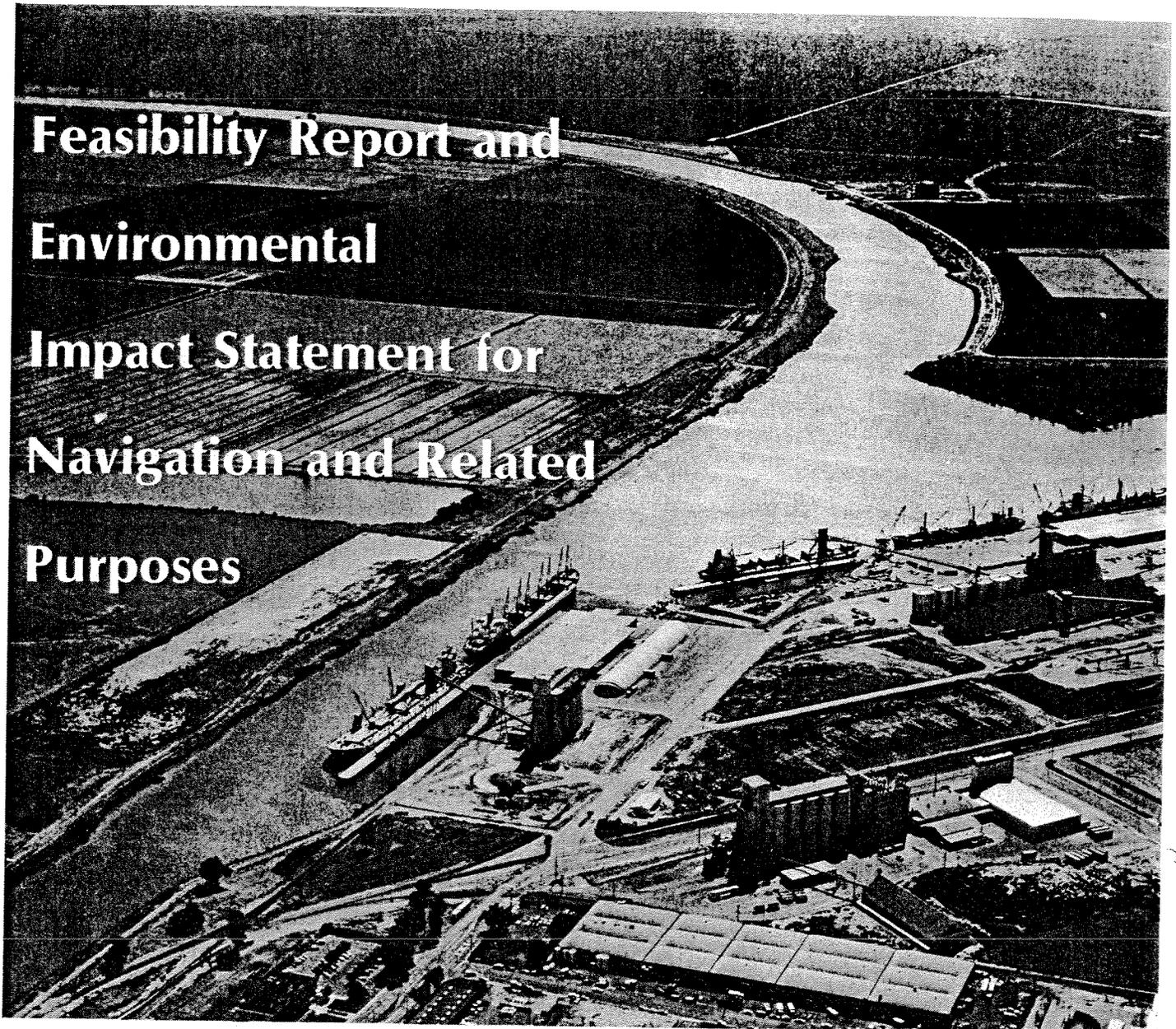


APPENDIX A
COVERS AND RECORDS OF DECISION
FROM PAST EIS AND SEIS (1980, 1986)



SACRAMENTO RIVER DEEP WATER SHIP CHANNEL, CALIFORNIA



**Feasibility Report and
Environmental
Impact Statement for
Navigation and Related
Purposes**



RECORD OF DECISION
SACRAMENTO RIVER DEEP WATER SHIP CHANNEL
CALIFORNIA

Decision

Based on a review of the Final Feasibility Report and Environmental Impact Statement for navigation and related purposes, Sacramento River Deep Water Ship Channel, California, and correspondence received in response to coordination of this document, I have decided to recommend to the Congress that the recommended plan be authorized for implementation.

The recommended plan consists of: deepening the Sacramento River Deep Water Ship Channel, between New York Slough and the Port of Sacramento, from the existing 30 feet to 35 feet; widening the channel as necessary to maintain navigation safety; a water quality monitoring program; authority to construct a submerged sill or other measure if future studies indicate that such a measure is needed to mitigate for salinity intrusion; mitigation of 45 acres of wetland habitat and 156 acres of upland habitat; and provision of recreation facilities. The Suisun Bay Channel between Avon and New York Slough, which is authorized for deepening from 30 feet to 35 feet under the San Francisco Bay to Stockton project (John F. Baldwin and Stockton Ship Channels), would also be deepened to 35 feet if not implemented as a part of the authorized project. The plan would result in direct savings in transportation costs by existing and future channel users, and provide recreational opportunities for day-use activities, camping and boating.

Alternatives and Considerations Balanced in Making the Decision

In arriving at the decision to recommend this plan, the following alternatives were studied in detail:

No action alternative, which would provide for no new channel improvements but continuation of normal channel maintenance. This alternative's significant effects would be a continuation of current shipping practices to partially offset existing channel depth constraints, resulting in increases in the unit cost of moving oceangoing cargoes; low regional growth related to commercial navigation; and effects on air and water quality due to changes in truck, rail and waterborne traffic.

Increased use of LASH (Lighter Aboard Ship), which would consist of carrying cargo aboard large, oceangoing ships in lighters (barges). In the case of imports, lighters would be loaded on a larger ship at a foreign port for ocean transport, unloaded at the deepwater Port of San Francisco, and barged through the shallow-water channel to the Port of Sacramento. The reverse process would be used for exports from Sacramento. This alternative's significant effects would be increased economic costs to expand the LASH fleet and an increase in health and safety hazards due to the greater number of vessels using the channel.

Intermodal transportation of cargo to alternative ports, which would consist of increasing truck and rail traffic to carry commodities between Sacramento and San Francisco Bay area ports; and topping-off oceangoing vessels originating at, and lightening oceangoing vessels destined for, Sacramento at terminal facilities in the Bay area. New marine terminal and bulk storage facilities would be required to accommodate these operations. This alternative's significant effects would be a decrease in the economic efficiency in handling existing and future cargo movements, and adverse effects on air quality due to increased truck and rail traffic.

Deepening the channel, which would consist of enlarging the existing navigation channels between deeper water in Suisun Bay and Sacramento. Various combinations of channel depths and channel widths were analyzed to formulate the following three deepening plans that were studied in detail:

Deepening to a 40-foot channel from Avon to the Collinsville-Montezuma Hills area, and a 35-foot channel from the northern end of the Collinsville-Montezuma Hills area to Sacramento; recreational development; a submerged sill in Carquinez Strait, or an acceptable alternative, to control salinity intrusion if needed; and 45 acres of wetland mitigation land and up to 156 acres of upland habitat mitigation land. This alternative's significant effects would be direct savings in transportation costs, provision of recreational opportunities, possibly unmitigable salinity intrusion through the 40-foot channel to Collinsville, and mitigated losses of about 45 acres of wetland habitat and about 156 acres of upland habitat. This is the designated National Economic Development (NED) plan.

Deepening to a 35-foot channel from Avon to Sacramento recreational development; a submerged sill in Carquinez Strait, or an acceptable alternative, to control salinity intrusion if needed; acquisition of land for habitat improvements and environmental easements; and creation of new habitat areas, including wetlands. This alternative's significant effects would be direct savings in transportation costs, provision of recreational opportunities, and increases in upland habitat, riparian vegetation and wetlands. This is the designated Environmental Quality (EQ) plan, as well as the environmentally preferable alternative.

Deepening to a 35-foot channel from Avon to Sacramento and water quality, salinity intrusion, wetland habitat, upland habitat mitigation, and recreational features previously described as the recommended plan. This alternative's significant effects would be direct savings in transportation costs, provision of recreational opportunities, and mitigated losses of about 45 acres of wetland habitat and about 156 acres of upland habitat.

Detailed evaluations and comparisons of these alternatives resulted in the selection of the last-described plan as the recommended plan. The no action alternative was eliminated because it would not permit the Port of Sacramento to receive larger, more economical ships. Increased LASH service was eliminated because it was recently discontinued due to a conversion to container ships. Intermodal transportation was eliminated because it would increase tonnage costs and limit production from local industries that rely on ocean transportation

to ship bulk cargoes. While the NED plan would maximize net economic benefits, it was not selected because of its possibly unmitigable, and therefore unacceptable, effects on salinity intrusion; and although the EQ plan would improve the environment, it would result in less economic benefits than the recommended plan. The recommended plan is the best overall combination of the NED and EQ plans' features, reflects the expressed desires of local interests and concerned agencies, would minimize adverse environmental effects, and would provide net economic benefits almost equivalent to the NED plan. Overall, the recommended plan is the preferable plan considering the balance among economic and environmental factors and public acceptability.

Means to Avoid or Minimize Adverse Environmental Effects

All practicable means to avoid or minimize adverse environmental effects have been incorporated into the recommended plan. Mitigation included in the recommended plan consists of conversion of 56 acres of former dredged material disposal area to wetland habitat to offset the loss of such habitat, and development of 156 acres of dredged material disposal areas as upland habitat to offset the loss of such habitat. Model tests indicate that the recommended plan will not result in a measurable change in the Sacramento-San Joaquin Delta salinity distribution. However, because of the seriousness of this issue, the recommended plan includes authorization for a submerged sill or alternative features in the Delta to control potential salinity intrusion, the implementation of which is predicated upon the results of further preconstruction model tests. Recommendations of the State of California and concerned Federal and local agencies will continue to be sought and fully considered in formulating and conducting future model tests and at arriving at a decision regarding the advisability of constructing a submerged sill or other mitigative device. The recommended plan also includes a program for monitoring water quality before, during, and after channel deepening to aid in making decisions about salinity intrusion.

Compliance with Environmental Requirements

The recommended plan is in compliance with applicable environmental requirements. Recommendations in the U. S. Fish and Wildlife Service report prepared pursuant to the Fish and Wildlife Coordination Act of 1958, as amended, which had been reviewed by the California Department of Fish and Game and the National Marine Fisheries Service, have been incorporated into the recommended plan. No effects on threatened and endangered species, designated pursuant to the Endangered Species Act of 1973, as amended, are anticipated. Water quality effects have been evaluated in accordance with the Section 404(b)(1) Guidelines; the evaluation is included in the report. Coordination with the California State Historic Preservation Officer and the Heritage Conservation and Recreation Service was initiated pursuant to the National Historic Preservation Act of 1966, as amended. Based on this coordination and a culture resources survey, it has been determined that no sites listed on the National Register of Historic Places will be affected by the recommended plan. The plan complies with Executive Order 11990, Protection

of Wetlands, and Executive Order 11988, Flood Plain Management, because it minimizes disruption of the flood plain and provides for reestablishment of 45 acres of wetland habitat that would be unavoidably affected. The requirements of the Coastal Zone Management Act of 1972, as amended, are not applicable since the recommended plan would not be located in a coastal area.

Summary

In summary, I find that the recommended plan represents the course of action that, on balance, best serves the overall public interest.

Date

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

**FINAL
SUPPLEMENTAL
ENVIRONMENTAL IMPACT
STATEMENT**

**SACRAMENTO RIVER DEEP WATER
SHIP CHANNEL PROJECT**

**PREPARED BY
U.S. ARMY CORPS OF ENGINEERS
SACRAMENTO DISTRICT
SACRAMENTO, CALIFORNIA
MARCH 1986**



DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS

630 Sansome Street, Room 720
San Francisco, California 94111-2206

REPLY TO
ATTENTION OF:

RECORD OF DECISION

Sacramento River Deep Water Ship Channel, California

I have reviewed the March 1987 General Design Memorandum, the Final Supplemental Environmental Impact Statement (FSEIS), noted in the Federal Register on January 2, 1987, and associated correspondence received in response to these documents. Based on this review and on the views of interested agencies and the concerned public, I find the project to be economically justified and in the public interest and approve its construction.

The selected plan includes the following main features:

- Deepening from 30 to 35 feet and widening 46.5 miles of channel from New York Slough to Sacramento.
- Dredging of 21.5 million cubic yards of material and disposing on approximately 4,500 acres of land.
- Deferring any recreation development until a local cost-sharing sponsor is available.
- Mitigating fish and wildlife losses by developing 63 acres of wetlands and upland habitat.
- Enhancing fish and wildlife habitat by developing additional wetlands and shallow water habitat.
- Monitoring, including dredging effluent, and salinity before, during, and after construction.
- Mitigating salinity intrusion if needed.

The FSEIS analyzes two alternatives: the No Action Plan and the Selected Plan. The Selected Plan provides transportation cost savings as a result of movement of cargo via larger vessels and movement of project-induced tonnage.

All practicable means to avoid or minimize adverse environmental effects have been incorporated into the Selected Plan. Wetland/riparian habitat will be established on 63 acres of Prospect Island as recommended by the Fish and Wildlife Service (FWS) to compensate for project-induced impacts. Plans are also being coordinated to develop Lower Sherman Island as an enhancement feature for fish and wildlife resources.

Twelve letters of comment were received on the final supplemental EIS. The major remaining concern was the potential for salinity increases. Reviewers also suggested the possible use of temporary salinity barrier sills during drought years.

Studies completed in response to concerns over salinity impacts have not identified any clearly definable impact due to channel deepening. However, the Corps and the project local sponsor have agreed to: (1) conduct a salinity monitoring program designed to measure actual pre- and post-project salinity levels in the Sacramento River; and (2) in conjunction with the monitoring program, construct temporary sand sills in the deepened portion of the ship channel so as to re-establish pre-project channel grades during periods of drought. These sills would be installed downstream of Decker Island from mid-May through August during drought years, with the purpose of offsetting any potential for salinity impact due to the channel deepening. A separate environmental assessment or EIS will be prepared to cover the temporary sills. If the salinity monitoring program shows that adverse salinity impacts result from the channel deepening, appropriate long-term mitigation measures will be implemented.

Studies have not indicated that any significant water quality impacts can be anticipated. However, additional sediment sampling and chemical analysis are being conducted and appropriate actions to maintain water quality will be coordinated with the State Regional Water Quality Control Board as required by the Clean Water Act. Effluent from dredged material disposal areas will be monitored during construction so as to maintain effluent discharge within established water quality standards.

All applicable environmental laws, executive orders, regulations, and local plans were addressed in the planning for the project. The mitigation plan worked out with close cooperation between FWS, the Port of Sacramento, and the Corps of Engineers will reach the goal of full mitigation for the project.

In summary, I find the Selected Plan represents the course of action which best serves the overall public interest.

14 May 1987



Samuel P. Collins
Colonel, Corps of Engineers
Acting Division Engineer