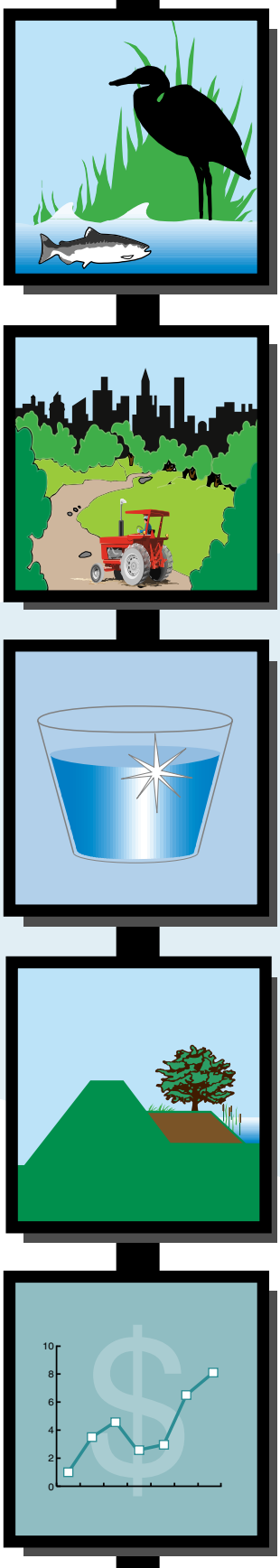


CALFED
BAY-DELTA
PROGRAM

Attachment 4
Clean Water Act Section 404
Memorandum of Understanding

August 28, 2000

MEMORANDUM OF UNDERSTANDING
ON CLEAN WATER ACT SECTION 404(b)(1)
FOR THE CALFED BAY-DELTA PROGRAM

RECITALS

These recitals provide background and context for the Memorandum of Understanding that follows.

A. In 1994, the Governor's Water Policy Council of the State of California and the Federal Ecosystem Directorate entered into a Framework Agreement to establish a comprehensive program for coordination and communication with respect to environmental protection and water supply dependability in the Bay-Delta Estuary. This Framework Agreement served as the basis for the CALFED Bay-Delta Program.

B. The mission of the CALFED Bay-Delta Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. The CALFED Bay-Delta Program is also guided by solution principles adopted by CALFED agencies. According to the solution principles, a successful Bay-Delta solution must reduce conflicts in the system, be equitable, be affordable, be durable, be implementable, and have no significant redirected impacts.

C. To achieve its purposes, the CALFED Bay-Delta Program has developed eight broad programs as elements of the CALFED preferred program alternative. These program elements are:

1. Ecosystem Restoration Program
2. Levee System Integrity Program
3. Storage Program
4. Conveyance Program
5. Water Use Efficiency Program
6. Water Quality Program
7. Water Transfers Program
8. Watershed Program

D. The CALFED Bay-Delta Program seeks to initiate implementation of its preferred alternative after execution of a Record of Decision and Certification pursuant to the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). The 30-year implementation period following the Record of Decision and Certification is referred to as Phase III of the Program. The CALFED Bay-Delta Program has defined the first seven years after execution of a Record of Decision and Certification as Stage 1 of Phase III.

E. The CALFED Program elements will include actions that involve discharges of dredged or fill material, as defined by regulations promulgated under the Clean Water Act.

F. The Clean Water Act (Act) establishes a goal of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters. Under Section 404(a) of the Act, the United States Army Corps of Engineers (USACE) issues permits for the discharge of dredged or fill material into waters of the United States, in compliance with Guidelines developed by the United States Environmental Protection Agency (EPA) under Section 404(b)(1) of the Act (Guidelines). These Guidelines impose a high standard of protection, requiring that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, which would achieve the project purpose, so long as the alternative does not have other significant adverse environmental consequences. In addition, the Guidelines prohibit any discharge of dredged or fill material that would cause or contribute to a violation of State water quality standards, jeopardize the continued existence of a threatened or endangered species, violate toxic effluent standards, violate marine sanctuary requirements, or cause or contribute to significant degradation of waters of the United States. Moreover, the Guidelines require that unavoidable impacts be offset through appropriate and practicable mitigation. Before issuing a permit the USACE must also determine that the project is not contrary to the public interest.

G. USACE permits are not required for the selection of the preferred program alternative, but will be required prior to implementing individual components of the preferred alternative. Before issuing a permit, the USACE must document, in compliance with the Guidelines requirements:

1. that no practicable alternative to the proposed discharge exists that would have less adverse impacts on the aquatic ecosystem; and

2. when the proposed activity is not water-dependent, a less-damaging practicable alternative is presumed to exist onsite or offsite. The practicability of an alternative is a function of cost, technical and logistical factors in light of overall project purposes. The applicant bears the burden of demonstrating that no practicable alternative exists that will meet the project purpose.

H. Planning efforts and feasibility studies may take many years to complete. Nothing in this Understanding is intended to prevent these studies from proceeding.

I. DEFINITIONS

Decision Documents are the Record of Decision and Certification of the Final Programmatic Environmental Impact Statement and Environmental Impact Report for the CALFED Bay-Delta Program.

Guidelines are the guidelines promulgated by EPA under Clean Water Act Section 404(b)(1) and published at 40 CFR Section 230.

PEIS/EIR is the final Programmatic Environmental Impact Statement and Environmental Impact Report prepared by the CALFED agencies for the CALFED Bay-Delta Program.

Phase II is the period of time during which the CALFED agencies developed a preferred program alternative, conducted comprehensive environmental review, and developed a plan for implementing the preferred alternative. Phase II concludes with the filing of a Record of Decision and Certification of the Final Programmatic EIS/EIR.

Phase III refers to the period of time following the Record of Decision and Certification through the 30-year planning horizon used in developing the CALFED plan. Phase III will include site-specific environmental review and permitting.

Signatories are CALFED agencies that have executed this Understanding. Signatories include the U.S. Army Corps of Engineers, the U.S. Bureau of Reclamation, the U.S. Environmental Protection Agency, and the California Department of Water Resources.

Stage 1 Actions are those CALFED Actions that have been designated by the CALFED agencies to begin implementation during the seven-year period immediately following execution of the Record of Decision and Certification of the Final Programmatic Environmental Impact Statement and Environmental Impact Report for the CALFED Bay-Delta Program.

II. UNDERSTANDING

A. The Signatories recognize the integrated nature of the CALFED Program and will evaluate individual actions in the context of the overall Program.

B. The Signatories recognize that this Understanding makes no conclusions about the nature of, or extent of, mitigation requirements for unavoidable site-specific adverse impacts to resources identified in site-specific evaluations.

C. The Signatories agree that the program purpose, incorporated by reference as Appendix A, is an acceptable statement of the purpose and need for the CALFED Program.

D. The Signatories, as co-lead CALFED agencies, worked to ensure that the purpose and need statement and the alternatives screening analysis developed during Phase II of the Program and contained in the PEIS/EIR meet the requirements of the Guidelines for discharge activities proposed in Phase III. The Signatories have reviewed the programs and commitments contained in the Decision Documents. Although no USACE permit is required in Phase II, the alternatives analysis for the PEIS/EIR generally follows the requirements of the Guidelines.

E. The Signatories intend to rely on the information developed at the programmatic level, will not require additional review of programmatic alternatives beyond the scope of the programs and commitments described in the Decision Documents, and will focus on project-level alternatives that are consistent with the Decision Documents in selecting the least environmentally damaging practicable alternative at the time of the permit decision unless new information is submitted at the time of the

Section 404 permit process indicating that the programmatic level information is incorrect or incomplete in some material manner. USACE is responsible for assessing whether new information or circumstances warrant additional review of programmatic alternatives and program commitments, after consultation with the relevant agencies and interested stakeholders.

III. ADDITIONAL PROVISIONS

A. **Applicability of this Understanding**. This Understanding was developed in response to a unique circumstance, namely the CALFED Bay-Delta Program, and does not have broader applicability beyond the CALFED Program.

B. **Limitations on this Understanding.** This Understanding does not provide a determination of compliance for individual CALFED activities involving the discharge of dredged or fill material into waters of the United States.

C. **Reservation of Authorities.** This Understanding does not modify existing agency authorities by reducing, expanding or transferring any of the statutory or regulatory authorities and responsibilities of any of the Signatories.

D. **Reservation of Agency Position**. No Signatory to this Understanding waives any administrative claims, positions, or interpretations it may have with respect to the applicability or enforceability of any law or regulation.

E. **Obligation of Funds, Commitment of Resources**. Nothing in this Understanding shall be construed as obligating any of the Signatories to the expenditure of funds in excess of appropriations authorized by law or otherwise commit any of the Signatories to actions for which it lacks statutory authority.

F. **Nature of Understanding.** This Understanding is not intended to, and does not, create any other right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, the State of California, any agencies thereof, any officers or employees thereof, or any other person.

G. **Relationship to Decision Documents.** This Understanding applies only to the programs and related commitments of the CALFED Bay-Delta Program as described in the Decision Documents. This Understanding is conditioned on the programs and related commitments of the CALFED Bay-Delta Program, including those related to water use efficiency, water transfers, and the Ecosystem Restoration Program, being implemented in the same manner as described in the Decision Documents.

ATTACHMENT

Appendix A. CALFED Bay-Delta Program Purpose Statement.

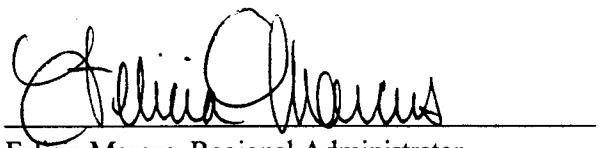
Having considered the contents of this document, its attachments and the documents supporting this decision, we hereby adopt this Clean Water Act, Section 404 Memorandum of Understanding. By signing this document together, we exercise our respective authorities over only those portions relevant to our authority.

Signed and dated:

United States of America

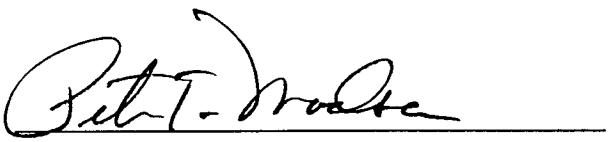
Lester A. Snow, Director, Mid-Pacific Region
U.S. Bureau of Reclamation

8/28/00
Date



Felicia Marcus, Regional Administrator
U.S. Environmental Protection Agency

8/28/00
Date



Brigadier General Peter T. Madsen, Commander
South Pacific Division
U.S. Army Corps of Engineers

28 Aug 00
Date

State of California

Thomas M. Hannigan, Director
California Department of Water Resources

8/28/2000
Date

Appendix A. CALFED Bay-Delta Program Purpose Statement

The purpose of the Program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay- Delta system. To practicably achieve this program purpose, CALFED will concurrently and comprehensively address problems of the Bay-Delta system within each of four resource categories: ecosystem quality, water quality, water supply reliability, and levee system integrity. Important physical, ecological, and socioeconomic linkages exist between the problems and possible solutions in each of these categories. Accordingly, a solution to problems in one resource category cannot be pursued without addressing problems in the other resource categories.

Because of the complexity of the problems and solutions being considered, the following goals and objectives are described to explain how the Program intends to achieve the purpose within each of these four critical resource categories.

Ecosystem Quality. The goal for ecosystem quality is to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species. This can be accomplished by addressing the objectives, which collectively improve and increase aquatic and wetland habitats so that they can support the sustainable production and survival of estuarine and anadromous fish and wildlife species, and increase population health and population size to levels that assure sustained survival. The objectives in summary form are:

1. Increase the amount of shallow riverine, shaded riverine, tidal slough, and estuary entrapment and null zone habitats for aquatic species.

2. Improve the in-Delta, upstream, and downstream movement of larval, juvenile, and adult life stages of aquatic species.

3. Reduce water quality degradation.

4. Increase the amount of brackish tidal marsh, fresh-water marsh, riparian woodland, waterfowl breeding habitat, wintering range for wildlife, managed permanent pasture and floodplains, and associated riparian habitats for wildlife species.

5. Contribute to the recovery of threatened or endangered species and species of special concern.

Water Supply Reliability. The goal for water supply reliability is to reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system. This can be accomplished by addressing the objectives, which collectively reduce the conflict among beneficial water users, improve the ability to transport water through the Bay-Delta system, and reduce the uncertainty of supplies from the Bay-Delta system. These objectives in summary form are:

1. Maintain an adequate water supply to meet expected in-Delta beneficial use needs.

2. Improve export water supplies to help meet beneficial use needs.

3. Improve the adequacy of Bay-Delta water to meet Delta outflow needs.

4. Reduce the vulnerability of Bay-Delta levees.

5. Improve the predictability of the water supply available from the Bay-Delta system for beneficial use needs.

Water Quality. The goal for water quality in the Bay-Delta system is to provide good-quality water for all beneficial uses, including drinking water, agricultural uses (both in-Delta and exported), industrial uses, recreational in-Delta uses, and Delta aquatic habitats. This can be accomplished by addressing the objectives, which collectively provide for the improvement of water quality for all beneficial uses. The objectives in summary form are:

1. Improve the reliability and quality of raw water for drinking water needs.

2. Reduce constituents in agricultural water that affect operations and crop productivity.

3. Improve the reliability and quality of water for industrial needs.

4. Improve the quality of raw water for recreational uses including consumption of aquatic resources.

5. Improve the quality of water for environmental needs.

Levee System Integrity. The goal for levee system integrity is to reduce the risk to land uses and associated agricultural and other economic activities, water supply, infrastructure, and the Bay- Delta ecosystem from catastrophic breaching of Delta levees. This can be accomplished by addressing the objectives, which collectively provide management of the risk resulting from gradual deterioration of Delta conveyance and catastrophic breaching of the Delta levees. The objectives in summary form are:

1. Reduce the risk to land use from seepage and overtopping of the levees, subsidence of peat soils, and catastrophic inundation of Delta islands.

2. Reduce the risk to in-Delta and export water supply from sudden catastrophic island inundation and the resultant salinity intrusion.

3. Reduce the risk to in-Delta and export water supply facilities from sudden catastrophic island inundation.

4. Reduce the risk to the existing Delta ecosystem from seepage, erosion, and overtopping of levees; from peat soils; and from catastrophic island inundation and the resultant salinity intrusion.

The purpose statement responds to the following needs.

Ecosystem Quality. The health of the Bay-Delta system has declined as a result of a number of factors, including degradation and the loss of habitats that support various life stages of aquatic and terrestrial biota. Further, the decline in health has resulted from activities within and upstream of the Bay-Delta system. One early human-induced event was hydraulic mining in the river drainages along the eastern edge of the Central Valley. The mining degraded habitat in Central Valley streams as channel beds and shallow areas filled with sediment. In addition, the reduced capacity of the sediment-filled channels increased the frequency and extent of periodic flooding, accelerating the need for flood control measures to protect adjacent agricultural, industrial, and urban lands. Levees constructed to protect these lands eliminated fish access to shallow overflow areas, and dredging to construct levees eliminated the tule bed habitat along the river channels.

Since the 1850s, 700,000 acres of overflow and seasonally inundated lands in the Bay-Delta system have been converted to agricultural, industrial, and urban uses. Many of the remaining stream sections have been dredged or channelized to improve navigation and to increase stream conveyance capacity in order to accommodate flood flows and facilitate water export.

Upstream water development and use, depletion of natural flows by local diverters, and the export of water from the Bay-Delta system have changed seasonal patterns of the inflow, reduced the outflow, and diminished the natural variability of flows into and through the Bay-Delta system. Facilities constructed to support water diversions (upstream, in-Delta, and export facilities) cause straying or direct losses of fish (for example, through unscreened diversions) and can increase exposure of juvenile fish to predation. Entrainment and removal of substantial quantities of food-web organisms, eggs, larvae, and young fish further exacerbate the impacts of overall habitat decline.

Habitat alteration and water diversions are not the only factors that have affected ecosystem health. Water quality degradation caused by pollutants and increased concentrations of sub stances also may have contributed to the overall decline in the health and productivity of the Bay- Delta system. In addition, undesirable introduced species may compete for available space and food supplies, sometimes to the detriment of native species or economically important introduced species.

Water Supply Reliability. The Bay-Delta system provides the water supply for a wide range of in-stream, riparian, and other beneficial uses—such as drinking water for millions of Californians and irrigation water for agricultural land. While some beneficial water uses depend on the Bay- Delta system for only a portion of their water needs, others are highly or totally dependent on Bay-Delta water supplies. As water use and competition among uses has increased during the past several decades, conflicts have increased among users of Bay-Delta water. Heightened competition for the water during certain seasons or during water-short years has magnified the conflicts.

Water flow and timing requirements have been established for certain fish and wildlife species with critical life stages that depend on fresh-water flows. These requirements have reduced water supplies and flexibility to meet the quantity and timing of water delivered from the Bay-Delta system. Water suppliers and users are concerned that additional restrictions that may be needed to protect species

would increase the uncertainty and further reduce the availability of Bay-Delta system water for agricultural, industrial, and urban purposes.

Delta levees and channels may fail. Water users are concerned that such failures could result in an interruption of water supply for both urban and agricultural purposes, and degradation of water quality and aquatic habitats.

Water Quality. Good-quality water is required to sustain the high-quality habitat needed in the Bay-Delta system to support a diversity of fish and wildlife populations. In addition, the Bay- Delta system is a source of drinking water for millions of Californians and is critical to the state's agricultural sector. The potential for increasingly stringent drinking water requirements that require new treatment technologies is spurring water providers to seek higher quality source waters and to address pollution in source waters. Pollutants enter the Bay-Delta system through a variety of sources, including sewage treatment plants, industrial facilities, forests, farm fields, mines, residential landscaping, urban streets, ships, and natural sources. The pollutants, pathogens, natural organics, and salts in the Bay-Delta system affect, in varying degrees, existing fish and wildlife, as well as human and agricultural uses of these waters. The salts entering the Bay-Delta system from the ocean and from return flows upstream and within the Delta decrease the utility of Bay-Delta system waters for many purposes, including the ecosystem, agriculture, and drinking water. The level of natural organics in the water (resulting primarily from the natural process of plant decay on many of the Delta peat soil islands) is of concern because of by-products formed from natural organics reacting with disinfection chemicals commonly used to meet public health requirements in water treatment.

Levee System Integrity. Levees were first constructed in the Delta during the late 1800s, when settlers began to turn tidal marshes into agricultural land. Over time, both natural settling of the levees and shallow subsidence (oxidation, which lowers the level of the land over time) of the Delta island soils resulted in a need to increase levee heights to maintain protection. There is a growing concern that this increased height, coupled with poor levee construction and inadequate maintenance, make Delta levees vulnerable to failure, especially during earthquakes or floods. Failure of Delta levees can result in flooding of Delta farmland and wildlife habitat. If a flooded island is not repaired and drained, the resulting large body of open water can expose adjacent islands to increased wave action and possible levee erosion. Levee failure on specific islands can affect water supply distribution systems, such as the Mokelumne Aqueduct. Similarly, levee failure on key Delta islands can draw salty water up into the Delta, as water from downstream rushes to fill the breached island. This is of particular concern in low-water years when less fresh water is available to repel the incoming salt water. Such a failure could interrupt the water supply for urban, agricultural, and environmental uses, and degrade water quality and aquatic habitats.