



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CEMP-SPD (1105-10-2a)

NOV 29 2004

SUBJECT: Middle Creek, Lake County, California

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of ecosystem restoration and incidental flood damage reduction at Middle Creek, Lake County, California. It is accompanied by the report of the district and division engineers. These reports respond in part to the Flood Control Act of 1962. The act authorizes the Secretary of the Army to complete surveys, to be directed by the Chief of Engineers, in various drainage areas of the United States including the Sacramento River Basin, California. Preconstruction engineering and design activities for this project will be continued under this authority.
2. The U.S. Army Corps of Engineers completed the Middle Creek Flood Control Project in 1966. This project, which included 14.4 miles of levees, diversion structures, and a pumping station, separated the historic Robinson Lake wetlands area (about 1,600 acres) and a shallow bay of the Upper Arm of Clear Lake from Rodman Slough located upstream of Clear Lake. The project included levees and channel improvements along seven miles of Middle Creek (including Rodman Slough), a channel to divert Clover Creek overflow around the town of Upper Lake, levees along lower Scotts Creek, and pumps to discharge drainage. Although these flood damage reduction efforts were intended to provide a high level of protection, the current level of protection no longer meets the original project design level. The existing flood control system in the project area has been identified as an ongoing problem. Channelizing Middle Creek and Rodman Slough and converting wetlands to agriculture and other uses impacted the natural functions and values of the Middle Creek watershed and the Clear Lake ecosystem.
3. The reporting officers recommend an ecosystem restoration plan for the entire Robinson Lake floodplain. The recommended ecosystem restoration plan focuses on reconnecting the floodplain of Middle Creek to the historic Robinson Lake wetland area. The plan calls for breaching the existing levee system to create inlets that direct flows into the study area. The plan would provide incidental flood damage reduction by relocating residents from the flood plain. The project encompasses about 1,600 acres, extending from the current shoreline of Clear Lake to the 100-year flood plain boundary. Implementing this plan would both reestablish ecosystem functions and values in the area by restoring fish and

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wildlife habitat, and reduce potential flood damages. To accomplish these objectives, a portion of the existing Middle Creek project levee, from the confluence of Scotts and Middle Creeks to Clear Lake, would be deauthorized and breached. The breaches would be 200 feet wide and deep enough to permit fish passage. A total of 22 residences and associated infrastructure would be removed from the project area. A 3,700-foot-long ring levee would be constructed to maintain the existing level of flood protection on adjacent tribal lands. The levee would be from 10 to 17 feet high, depending on ground elevation. A pumping station would provide interior drainage. If required to mitigate project-induced flooding, a new 350-foot-long bridge on the Nice-Lucerne Cut Off Road would be constructed 750 feet east of the present bridge. A final determination will be made based on detailed analyses during preconstruction engineering and design.

4. The recommended plan features would restore wetland functions and values for much of the 1,600 acres of the lower Robinson Lake floodplain that has become degraded due to significant changes in water quality and loss of habitat since the Middle Creek Flood Control project was constructed. Implementing the plan would restore 765 acres of wetlands, 230 acres of riparian habitat, 405 acres of open water, and 250 acres of upland habitat. The recommended plan would also provide for incidental flood damage reduction within this same area. The plan includes cost-shared monitoring and minor modifications as may be required to ensure success of the project, as identified and described in the Monitoring and Adaptive Management Plan of the reporting officers.

5. All project costs are allocated to the ecosystem restoration project purpose. Based on October 2003 price levels, the estimated total first cost for construction of the recommended plan is \$38,690,000. Following the cost sharing provisions of the Water Resources Development Act (WRDA) of 1986, as amended by Section 210 of WRDA 1996, the Federal share of total project cost would be about \$25,233,000 and the non-Federal share would be about \$13,457,000. The Lake County Flood Control & Water Conservation District (LCFCWCD) is the non-Federal sponsor for the recommended plan. The LCFCWCD would also be responsible for the operation, maintenance, repair, rehabilitation, and replacement (OMRR&R) of the project after construction, a cost currently estimated at \$104,000 per year. Equivalent annual costs, including initial construction and OMRR&R, are \$2,692,000 based on a discount rate of 5.625 percent and a 50-year period of analysis.

6. To ensure recommendation of an efficient ecosystem restoration plan, cost effectiveness, incremental cost analysis techniques, and trade-off analysis techniques were used to evaluate the alternative ecosystem restoration and flood damage reduction outputs. The cost of the recommended ecosystem restoration features is justified by providing 869 average annual habitat units and \$30,000 net national economic development benefits. The restored habitats are considered especially valuable due to scarcity of certain species and

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their dependence on these resources. The habitats of particular concern in Clear Lake and Middle Creek are the wetlands habitat that was endemic to the area.

7. During the State and Agency review period, the Robinson Rancheria Tribe suggested, and the Bureau of Indian Affairs endorsed, an alternative hydraulic mitigation measure that would replace the ring levee around the tribal property. This mitigation measure was evaluated and determined to be beneficial but is not within the authority of the Corps of Engineers to recommend. However, if circumstances arise that would provide for the transfer of trust status from the tribal lands to another acceptable parcel of land, I recommend that the alternative mitigation measure, as described in the response to agency comments, be substituted for the ring levee in the recommended plan. Appropriate documentation would be completed at that time.

8. I concur in the findings, conclusions and recommendations of the reporting officers. Accordingly, I recommend that the plan described herein for ecosystem restoration and incidental flood damage reduction be authorized for implementation as a Federal project, with such modifications as in the discretion of the Chief of Engineers may be advisable. This recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including WRDA 1986, as amended. Federal implementation of the authorized project would be subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies, including but not limited to:

a. Provide 35 percent of the total project costs as further specified below:

(1) Enter into an agreement that provides, prior to execution of a project cooperation agreement for the project, 25 percent of design costs;

(2) Provide, during construction, any additional funds needed to cover the non-federal share of design costs;

(3) Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations determined by the Government to be necessary for the construction, operation, and maintenance of the project;

(4) Provide or pay to the Government the cost of providing all retaining dikes, wasteweirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged or excavated material disposal areas required for the construction, operation, and maintenance of the project; and



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a. Provide 35 percent of the total project costs as further specified below:

(1) Enter into an agreement that provides, prior to execution of a project cooperation agreement for the project, 25 percent of design costs;

(2) Provide, during construction, any additional funds needed to cover the non-federal share of design costs;

(3) Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations determined by the Government to be necessary for the construction, operation, and maintenance of the project;

(4) Provide or pay to the Government the cost of providing all retaining dikes, wasteweirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged or excavated material disposal areas required for the construction, operation, and maintenance of the project; and

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(5) Provide, during construction, any additional costs as necessary to make its total contribution equal to 35 percent of the total project costs.

b. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land which the local sponsor owns or controls for access to the project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project.

c. Assume responsibility of operating, maintaining, replacing, repairing, and rehabilitating (OMRR&R) the project or completed functional portions of the project, including mitigation features and the desilting basin without cost to the Government, in a manner compatible with the project's authorized purpose and in accordance with applicable Federal and State laws and specific directions prescribed by the Government in the OMRR&R manual and any subsequent amendments thereto.

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

e. Hold and save the Government free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project and any project-related betterments, except for damages due to the fault or negligence of the Government or the Government's contractors.

f. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project to the extent and in such detail as will properly reflect total project costs.

g. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601-9675, that may exist in, on, or under lands, easements or rights-of-way necessary for the construction, operation, and maintenance of the project; except that the non-Federal sponsor shall not perform such investigations on lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government.

h. Assume complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or

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rights-of-way that the Government determines necessary for the construction, operation, or maintenance of the project.

i. Agree that, as between the Federal Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and, to the maximum extent practicable, operate, maintain, repair, replace, and rehabilitate the project in a manner that will not cause liability to arise under CERCLA.

j. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) which might reduce the ecosystem restoration, hinder its operation and maintenance, or interfere with its proper function, such as any new development on project lands or the addition of facilities which would degrade the benefits of the project.

k. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public law 91-646, as amended by title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, operation, and maintenance of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

l. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)).

m. Provide the non-Federal cost share of that portion of the costs of archeological data recovery activities associated with historic preservation, that are in excess of one percent of the total amount authorized to be appropriated for the project, in accordance with the cost sharing provisions of the agreement.

n. Not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized.

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9. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to the Congress, the sponsor, the State of California, interested Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.



CARL A. STROCK
Lieutenant General, U.S. Army
Chief of Engineers