



**DEPARTMENT OF THE ARMY**  
**CHIEF OF ENGINEERS**  
**2600 ARMY PENTAGON**  
**WASHINGTON, D.C. 20310-2600**

DAEN

JUN 21 2021

SUBJECT: Lower Cache Creek, Yolo County, Woodland and Vicinity, California

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on Lower Cache Creek, Yolo County, Woodland and Vicinity, California. It is accompanied by the report of the Sacramento District Engineer. This interim report is in partial response to the study authority. The general authority to study flood control in the Sacramento River Basin was granted in Section 209 of the Flood Control Act of 1962, Public Law 87-874. In addition, Section 202(a)(11) of Water Resource Development Act of 2020, Division AA of Public Law 116-260, directs the Secretary of the Army to expedite the completion of a feasibility study for Lower Cache Creek, California, and authorizes proceeding directly to preconstruction planning, engineering, and design of the project if the Secretary determines that the project is justified in a completed report.

2. The reporting officers recommend authorization of the National Economic Development Plan that reduces flood risk in the City of Woodland, California. The principal features of the recommended plan include:

- a. Construct 5.6 miles of new levee and seepage berms;
- b. Improve and construct cutoff walls to 2.3 miles of existing levees;
- c. Construct up to 5.6 miles of drainage channel;
- d. Install 3,000 foot inlet weir and degrade adjacent 3,000 foot training levee;
- e. Install an estimated four closure structures across roads and railways.

3. The recommended plan would reduce Expected Annual Damages (EAD) within the City of Woodland and adjacent areas by \$28 million (90 percent reduction), with residual EAD of \$2.8 million. The recommended plan would not have significant long-term effects on environmental resources. Potential adverse environmental effects would be reduced to a less than significant level or mitigated through project design, construction practices, preconstruction surveys and analysis, regulatory requirements, and best management practices. Remaining adverse effects, including approximately 8 acres of wetland impact, would be compensated by purchasing credits at a mitigation bank. The recommended plan includes a mitigation plan to offset unavoidable habitat losses and an associated monitoring and adaptive management plan.

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4. Based on FY21 (October 2020) price levels, the estimated total project first cost is \$320,893,000. The federal share of the first cost is currently estimated at \$208,580,000. The estimated non-federal share of the first cost is \$112,313,000. The Central Valley Flood Protection Board and the City of Woodland would be responsible for operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction at an estimated average annual cost of \$180,000.

5. Based on a 2.5-percent interest rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$12,072,000, including OMRR&R. The recommended plan would reduce average annual flood damages by about 90 percent and would leave average annual residual damages estimated at \$2,800,000. Average annual economic benefits are estimated to be \$25,245,000; net average annual benefits are \$13,173,000. The benefit-to-cost ratio is 2.1 to 1.

6. In accordance with the U.S. Army Corps of Engineers guidance on review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and rigorous review process to ensure technical quality. This included District Quality Control, Agency Technical Review, USACE Headquarters policy and legal compliance review, and Independent External Peer Review (IEPR). All concerns from these reviews have been addressed and incorporated into the final report. Overall, the reviews from the aforementioned process resulted in report improvements. Incorporation of review recommendations resulted in expanded narratives and plan evaluation. Recommended improvements better support the decision-making process in the plan selection process. A safety assurance review (Type II IEPR) will be conducted during the design phase of the project.

7. Washington-level review indicated that the project recommended by the reporting officers is technically sound, environmentally and socially acceptable, and economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies. The recommended plan complies with other administrative and legislative policies and guidelines. The views of interested parties, including federal, state, and local agencies have been considered.

8. I concur with the findings, conclusions, and recommendations of the reporting officers. I recommend that the NED plan for Lower Cache Creek, California, be authorized at an estimated first cost of \$320,893,000 with such modifications thereof as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of federal laws and policies. The cost of the plan recommended in this report would be cost shared in accordance with Section 103 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 2213), with a minimum non-federal share of 35 percent, not to exceed 50 percent, of total NED costs. Applying these requirements, the federal portion of the estimated total first cost is \$208,580,000 and the non-federal portion is \$112,313,000. Federal implementation of the selected plan is subject to the non-federal sponsors agreeing to perform, in accordance with applicable federal laws, regulations, and policies, the required items of local cooperation for the project, including but not limited to the following:

a. Provide a minimum of 35 percent, up to a maximum of 50 percent, of construction costs, as further specified below:

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(1) Provide, during design, 35 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

(2) Pay, during construction, a contribution of funds equal to 5 percent of construction costs;

(3) Provide all real property interests, including placement area improvements, and perform all relocations determined by the Government to be required for the project;

(4) Provide, during construction, any additional contribution necessary to make its total contribution equal to at least 35 percent of construction costs;

b. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) that might reduce the level of flood risk reduction the project affords, hinder operation and maintenance of the project, or interfere with the project's proper function;

c. Inform affected interests, at least yearly, of the extent of risk reduction afforded by the flood risk management features; participate in and comply with applicable federal floodplain management and flood insurance programs; prepare a floodplain management plan for the project to be implemented not later than one year after completion of construction of the project; and publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in adopting regulations, or taking other actions, to prevent unwise future development and to ensure compatibility with the project;

d. Operate, maintain, repair, rehabilitate, and replace the project or functional portion thereof at no cost to the Government, in a manner compatible with the project's authorized purposes and in accordance with applicable federal laws and regulations and any specific directions prescribed by the Government;

e. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-federal sponsor owns or controls for access to the project to inspect the project, and, if necessary, to undertake work necessary to the proper functioning of the project for its authorized purpose;

f. Hold and save the Government free from all damages arising from design, construction, operation, maintenance, repair, rehabilitation, and replacement of the project, except for damages due to the fault or negligence of the Government or its contractors;

g. Perform, or ensure performance of, 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 U.S.C. 9601-9675, that may exist in, on, or under real property interests that the Federal government determines to be necessary for construction, operation and maintenance of the project;

h. Assume, as between the Government and the non-federal sponsor, complete performance and financial responsibility for all necessary cleanup and response actions and costs of any hazardous substances regulated under CERCLA that are located in, on, or under

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real property interests required for construction, operation, maintenance, repair, rehabilitation, or replacement of the project;

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

j. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, (42 U.S.C. 4630 and 4655) and the Uniform Regulations contained in 49 C.F.R Part 24, in acquiring real property interests necessary for construction, operation, and maintenance of the project including those necessary for relocations, and placement area improvements; and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

9. The recommendations 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 nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before they are transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the non-federal sponsors, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.



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