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

DAEN

JUN 20 2019

SUBJECT: Yuba River Ecosystem Restoration Feasibility Report, California

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my interim report on the Yuba River Ecosystem Restoration Feasibility Study, California. It is accompanied by the reports of the Sacramento District Engineer and the South Pacific Division Engineer. The general authority to study flood control and allied purposes in the Sacramento River Basin was granted in Section 209 of the Rivers and Harbors Act of 1962, P.L. 87-874. Further studies of the river system were requested in a resolution of the Senate Committee on Environment and Public Works adopted 28 April, 2016, specifically investigation of "ecosystem restoration opportunities in the Sacramento River Basin and streams in northern California draining into the Pacific Ocean, including the Yuba River watershed." Pre-construction engineering and design activities would be continued under these authorities.

2. The reporting officers recommend authorizing a plan to restore approximately 179 acres of aquatic and riparian habitat in the Yuba River watershed, specifically along the lower Yuba River. During the late nineteenth and early twentieth centuries, the Yuba River watershed experienced significant changes in its geomorphic processes resulting from hydraulic mining and water resources development. Hundreds of millions of cubic yards of mining debris filled the river channel, which caused flooding, destroyed habitat, and obstructed navigation. In response, the Federal California Debris Commission built two major debris control projects on the lower Yuba River, which further impacted the aquatic ecosystem. The recommended plan would restore degraded ecosystem structure, function, and dynamic processes along the lower Yuba River to a less degraded, more natural condition and is supported by the non-federal sponsor, the Yuba County Water Agency.

3. The recommended plan is the National Ecosystem Restoration (NER) plan. Implementation of nature-based features would restore over four increments approximately 43 acres of aquatic habitat, including side channels, backwater areas, bank scallops, and bank stabilization measures. Additionally, 136 acres of riparian habitat would be restored through floodplain lowering and grading and native vegetation plantings. Suitable environments for aquatic species, including ESA-listed fish, would be established through strategic placement of natural materials and creation of shallow, low velocity riverine habitat. Floodplain lowering, grading, and vegetation plantings would improve habitat quality and quantity, reconnect the river to its floodplain, and address habitat fragmentation. Native riparian trees would be planted in the floodplain to improve the habitat value for aquatic species. The restored riparian habitat would also benefit many species of migratory birds as they travel through the Yuba River watershed on the Pacific Flyway.

4. Based on October 2018 price levels, the estimated total project first cost is $97,219,000, with each of the four increments ranging approximately in cost from $10,000,000 to $35,000,000. The federal share of the first cost is currently estimated at $63,192,000. The estimated non-federal share of the first cost is $34,027,000. The Yuba County Water Agency would be responsible for operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction at an estimated average annual cost of $15,000.

5. Based on a 2.875-percent interest rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be $3,907,000, including OMRR&R. Ecosystem restoration benefits for the recommended plan include generating an estimated 72.86 average annual habitat units and restoring 179 acres of aquatic and riparian habitat.

6. The goals and objectives included in the Environmental Operating Principles and Campaign Plan of the U.S. Army Corps of Engineers have been integrated into the Yuba River Ecosystem Restoration Feasibility Study process. The recommended plan has been designed to avoid or minimize environmental impacts while maximizing the ecosystem benefits relative to costs.

7. In accordance with the Corps 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, and a USACE Headquarters policy and legal review. All concerns from these reviews have been addressed and incorporated into the final report. USACE Headquarters determined an Independent External Peer Review (IEPR) was not necessary for this feasibility study. After conducting a deliberate, risk-informed assessment, none of the triggers required for an IEPR were met nor were any study risks identified that would be resolved by issuing an IEPR.

8. 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.

9. I concur with the findings, conclusions, and recommendations of the reporting officers. I recommend that the NER plan in the Yuba River watershed, California, be authorized at an estimated first cost of $97,219,000 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 and state 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 non-federal share of 35 percent of total NER costs. Applying these requirements, the federal portion of the estimated total first cost is $63,192,000 and the non-federal portion is $34,027,000, or a federal share of 65 percent and a non-federal share of 35 percent. Federal implementation of the selected plan

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 total ecosystem restoration costs as further specified below:

(1) Provide 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) Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations and provide relocation assistance, as determined by the Federal Government to be required for the initial construction or the operation and maintenance of the project, all in compliance with applicable provisions of the Uniform Relocation and Assistance and real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601-4655) and the regulations contained in 49 C.F.R. Part 24; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material all as determined by the Federal Government to be required or to be necessary for the construction, operation, and maintenance of the project;

(3) Provide, during construction, any additional funds necessary to make its total contribution equal to 35 percent of total project costs;

b. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the ecosystem restoration features, hinder operation and maintenance of the project, or interfere with the project's proper function;

c. Shall not use the ecosystem restoration features or lands, easements, and rights-of-way required for such features as a wetlands bank or mitigation credit for any other project;

d. For so long as the project remains authorized, the non-federal sponsor would be responsible for OMRR&R of the project at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable federal and state laws and regulations and any specific directions prescribed by the Federal Government; except that 10 years after ecological success has been determined by the division commander, the responsibility of the non-federal sponsor to operate, maintain, repair, replace, and rehabilitate nonstructural and nonmechanical elements of the project would cease;

e. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, rehabilitation, and replacement of the project and any betterments, except for damages due to the fault or negligence of the United States or its contractors;

f. 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), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-federal sponsor with prior specific written direction, in which case the non-federal sponsor shall perform such investigations in accordance with such written direction;

g. Assume, as between the Federal Government and the non-federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project;

h. Agree, as between the Federal Government and the non-federal sponsor, that 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, rehabilitate, and replace the project in a manner that will not cause liability to arise under CERCLA.

10. 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 nor 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 Congress, the non-federal sponsor, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

Great Project!
Proud to be contributing to the restoration of critical fish habitat for nationally significant aquatic species!!

TODD T. SEMONITE
Lieutenant General, USA
Chief of Engineers