



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

DEC 12 2019

CECW-SPD

MEMORANDUM FOR Assistant Secretary of the Army (Civil Works)

SUBJECT: Director's Report for the Pajaro River Flood Risk Management Study, Santa Cruz and Monterey Counties, California

1. Purpose. The purpose of this Director's Report is to request support for the recommendations provided in the Final Integrated General Reevaluation Report (GRR) and Environmental Assessment (EA) as revised in the Addendum of December 2019 for the Pajaro River Flood Risk Management, Santa Cruz and Monterey Counties, California project. This report was prepared pursuant to the Flood Control Act of 1966, Section 203, Public Law 89-789, which authorized this project substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 491, 89th Congress, second session (1966). The purpose of this project is to increase the level of flood protection being provided by the flood risk management project completed in 1949 by the Corps of Engineers (Corps) pursuant to Section 10 of the Flood Control Act of 1944, Public Law 78-534. The Chief's Report in House Document No. 491, dated 27 August 1965, recommended the improvement "subject to such modification as within the discretionary authority of the Chief of Engineers may be advisable at the time of construction". The Final Integrated GRR and EA evaluated updates and engineering enhancements to the plan authorized in 1966. The Water Resources Development Act (WRDA) of 1990 (Public Law 101-640), Section 107, "Continuation of Authorization of Certain Projects", provided a continuance of the 1966 project authorization.

2. Background. The recommended plan is the National Economic Development Plan. The proposed project would reduce the flood risk to the City of Watsonville and the Town of Pajaro and adjacent agricultural areas. The proposed project reduces expected annual damages (EAD) by approximately \$16,500,000 with a residual EAD of approximately \$9,000,000. A significant portion of the residual EAD results from impacts to agricultural lands which did not receive additional flood risk reduction beyond that provided by the original 1946 project.

a. The structural features of the recommended plan on the Pajaro River mainstem include: 0.85 miles of floodwalls on existing levees, 5.75 miles of new levees of which 5.10 miles is setback levees, 0.3 miles of levee improvements, 66 acres of floodplain between setback levees and the river, and 5.10 miles of existing levee demolition. These features provide for a 1% annual chance exceedance (ACE) project performance for the City of Watsonville and the Town of Pajaro, and adjacent agricultural areas.

CECW-SPD

SUBJECT: Director's Report for the Pajaro River Flood Risk Management Study, Santa Cruz and Monterey Counties, California

b. The structural features of the recommended plan on the tributaries include: 1 mile of floodwall, 0.6 miles of floodwall on existing levee, 4.1 miles of new levee of which 1.5 miles is setback levees, 0.5 miles of existing levee improvements, 37.2 acres of floodplain between setback levee and creek, 1.5 miles of existing levee demolition, and two bridges raised. These features provide 1% ACE project performance for the City of Watsonville (including adjacent agricultural areas) and 4% ACE project performance for the Orchard Park and Interlaken neighborhoods (including adjacent agricultural areas).

3. Discussion. Santa Cruz County Flood Control and Water Conservation District (Santa Cruz County) and the Monterey County Water Resources Agency (Monterey County) are the non-federal cost sharing sponsors. Based on Fiscal Year 2020 (FY20) price levels, the estimated project total cost is \$393,667,000. The estimated federal and non-federal shares of the project cost are \$246,321,000 and \$147,346,000 respectively, which equates to 62.6 percent federal and 37.4 percent non-federal, as apportioned in accordance with the cost sharing provisions of Section 103(d) of WRDA 1986. Based on FY20 price levels, a 2.75-percent discount rate, and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$16,181,000. The average annual equivalent benefits are estimated to be \$16,538,000. The average annual net benefits are approximately \$357,000. The cost of lands, easements, rights-of-way, relocations and dredged or excavated material disposal areas (LERRD) is estimated at \$88,550,000 (FY20). The federal administrative costs include project real estate planning, review, and incidental costs between the project sponsors and the Corps. Accordingly, the federal and non-federal shares of the administrative costs are estimated to be \$4,225,000 and \$3,236,000, respectively. The annual economic cost of the project includes costs associated with operations, maintenance, repair, replacement, and rehabilitation of the project (OMRR&R). The annual OMRR&R cost is estimated to be \$400,000 per year. The benefit-to-cost ratio for the recommended plan is 1.02.

a. Environmental and Cultural Resources Considerations. The recommended plan would have insignificant effects to the human and natural environment. Therefore, a Finding of No Significant Impact (FONSI) has been prepared. The project was developed to avoid and minimize adverse effects on federally listed species and designated critical habitat to the extent feasible and consistent with the project purpose and authority. Endangered Species Act (ESA) compliance is still ongoing, as the project has not yet received a Biological Opinion (BO) or letter of concurrence from the U.S. Fish and Wildlife Services (USFWS) and the National Oceanic and Atmospheric Administration (NOAA). The ESA requires the project to receive either a concurrence letter or BO from the USFWS and NOAA prior to construction because there are listed species in the area that may be affected by the project.

CECW-SPD

SUBJECT: Director's Report for the Pajaro River Flood Risk Management Study, Santa Cruz and Monterey Counties, California

Consultation with USFWS, National Marine Fisheries Service, and the California Department of Fish and Wildlife were conducted informally throughout the study; however, the agencies have required a greater level of design information before finalizing their BOs. Full ESA compliance will be achieved during Preconstruction Engineering and Design (PED) once detailed designs are coordinated with these agencies. Their views and recommendations will be considered in finalizing the designs and in identifying any additional avoidance and minimization measures needed to conserve listed species during construction and operation of the new project features. The resource agencies generally support the plan because the decision to setback project levees that restore natural hydrologic processes was based on USFWS and NOAA input during the development of the recommended plan.

b. Risk and Uncertainty During the Planning Phase. Risk and uncertainty was factored into the recommended plan during project development. The engineering uncertainties include in-channel discharge uncertainty, which was computed in the certified flood damage reduction analysis model using equivalent record length information provided by Corps engineers; and uncertainty in stages (in-channel) was captured in the hydraulic rating curves that may require updates to the economics. The recommended plan may undergo further refinement during the PED phase to address the engineering uncertainty and the consequences of potentially induced flooding just northeast of the confluence of Salsipuedes Creek and Pajaro River and in the Orchard Park area. Additional NEPA analysis may be necessary pursuant to 40 C.F.R. § 1502.9(c).

c. Public, Technical, and Policy/Legal Review. In accordance with Engineering Circular 1165-2-217, Review Policy for Civil Works, dated 20 February 2018, all technical, engineering, and scientific work underwent an open, dynamic, and vigorous review process to ensure technical quality. This included District Quality Control, Agency Technical Review (ATR), Major Subordinate Command review, Cost Engineering Mandatory Center of Expertise for Civil Works Review and Certification, and Headquarters Policy and Legal Compliance Review. The requirement to perform Independent External Peer Review was waived by the South Pacific Division Commander. All comments from the above reviews have been addressed and incorporated into the final documents. The documentation of review findings and a draft transmittal letter to the Office of Management and Budget are provided as enclosures. Overall, the reviews resulted in improvements to the technical quality of the report. A safety assurance review (Type II IEPR) will be conducted during the design phase of the project. In accordance with Engineer Regulation 1105-2-100, Planning Guidance Notebook, Appendix G, paragraph G-13.b., I approve the recommended changes to the plan for improvement authorized by Section 203 of the Flood Control Act of 1966, as within the modification authority granted by that authorization.

CECW-SPD

SUBJECT: Director's Report for the Pajaro River Flood Risk Management Study, Santa Cruz and Monterey Counties, California

4. Findings, Approval, and Recommendation. I have reviewed and concur with the conclusions and recommendations in the Final Integrated GRR and EA as revised in the Addendum of December 2019. Based on this review I find that the proposed plan is technically and environmentally sound, justified based on the monetary and non-monetary benefits it provides, and is socially acceptable. The proposed project complies with applicable Corps planning procedures and regulations. Also, the views of interested parties, including federal, state, and local agencies, have been considered. Therefore, I approve the report and request that you support and assist in budgeting of the recommended plan.



JAMES C. DALTON, P.E.
Director of Civil Works

- 10 Encls
- 1. Report Summary
- 2. Project Map
- 3. Peer and Legal Review Certifications
- 4. Sponsor Letter of Support and Financial Self Certification
- 5. Policy Review – Documentation of Review Findings
- 6. Transmittal to House, Senate, and Office of Management and Budget
- 7. Independent External Peer Review
- 8. Draft Finding of No Significant Impact
- 9. Office of Management and Budget Briefing Slides
- 10. Final Integrated GRR and EA (December 2019)