



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

REPLY TO  
ATTENTION OF:

23 DEC 1999

CECW-PE (10-1-7a)

SUBJECT: Wrangell, Alaska

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on navigation improvements for Wrangell, Alaska. It is accompanied by the report of the district and division engineers. These reports are in partial response to a resolution passed by the Committee on Public Works of the House of Representatives on 2 December 1970. This resolution requested review of the reports of the Chief of Engineers on the Rivers and Harbors in Alaska, published as House Document 414, 83<sup>rd</sup> Congress, and other pertinent reports with a view to determining whether any modifications of the recommendations contained therein are advisable at this time. Preconstruction engineering and design activities for Wrangell, Alaska, will be continued under the authority provided by the resolution cited above.
2. Section 101(b)(1) of the Water Resources Development Act of 1999 (WRDA 1999) authorized construction of the Heritage Harbor, Wrangell, Alaska, project for navigation improvements subject to completion of a favorable report of the Chief of Engineers not later than 31 December 1999 and subject to the conditions recommended in that final report. The authorizing language for the Heritage Harbor, Wrangell, Alaska, project reflects an earlier project cost estimate of \$24,556,000. The cost estimate for the project has been refined to reflect current information on the project conditionally authorized by section 101(b)(1) of WRDA 1999.
3. The reporting officers recommend constructing a new harbor at Wrangell, Alaska. The recommended plan includes the construction of two rubblemound breakwaters to enclose a 13.3-acre dredged mooring basin, accommodating 271 vessels ranging in size from 27 feet to 59 feet. A 535-foot-long rubblemound breakwater would extend from the northwest and west, protecting the basin from waves from the northwest and west. A second rubblemound breakwater, 1,816 feet long, would be constructed from shore and extend northwest and north in depths up to -65 feet mean lower low water (MLLW). The basin would be dredged to a depth of -12 feet MLLW in areas that are not already naturally that deep. A 120-foot-wide entrance channel would make a 45-degree approach into the harbor and the maneuvering area. The entrance channel would remain unchanged, as the natural depth range from -20 to -65 feet MLLW in that area. The harbor would be designed to avoid impacts to the cemetery located along the southern perimeter of the site, and no compensatory mitigation would be required.

CECW-PE (10-1-7a)  
SUBJECT: Wrangell, Alaska

4. Project costs are allocated to the commercial navigation project purpose. Based on January 1999 prices, the estimated cost of the general navigation features (GNF) of the recommended plan is \$16,050,000. The GNF costs include construction of breakwaters and dredging and disposal of materials for a maneuvering area. In accordance with Section 101 of WRDA 1986, as amended by Section 201 of WRDA 1996, the Federal and non-Federal share of the GNF are estimated to be \$12,856,000 and \$3,194,000, respectively. In addition, the Federal government would incur the costs of navigational aids currently estimated to be \$5,000. The non-Federal portion includes a repayment of 10 percent of the construction costs of the GNF over a period not to exceed 30 years less allowable credits for the value of lands, easements, rights-of way and relocation (LERR) necessary for the Federal project, currently estimated as \$16,000. The non-Federal interests would also be responsible for all the costs of local service facilities (LSF) including dredging and disposal of materials for the berthing and mooring areas, construction of a float system for 271 vessels and removal of private utilities. Total estimated costs for the additional non-Federal LSF responsibilities are \$8,494,000. Total implementation costs of all features necessary to obtain the claimed navigation benefits are estimated to be \$24,565,000 including all GNF, LERR, and LSF of which \$12,861,000 would be Federal and \$11,704,000 would be non-Federal. The annual cost for operation and maintenance of the recommended plan is estimated to be \$78,000, including \$24,000 for U.S. Army Corps of Engineers maintenance of the breakwaters and \$54,000 for the non-Federal sponsor to maintain inner harbor facilities, depths within the harbor, and required additional harbor staffing. Total average annual charges, based on a discount rate of 6.875 percent and a 50-year period of economic analysis, are \$1,940,000. The report indicates that average annual benefits are estimated at \$2,585,000, for a benefit-to-cost ratio of 1.3 to 1. The report indicates that the plan developed by the district engineer is the national economic development plan.

5. Washington level review has been completed, and the views of Federal, State and local agencies have been considered. Based on the reporting officers' findings and the findings of Washington level review, and considering the intent of Congress expressed in passage of WRDA 99, the project is economically feasible, engineeringly and environmentally sound. I concur in the findings, conclusions, and recommendation of the reporting officers. Accordingly, I recommend that improvements for navigation for Wrangell, Alaska, be authorized, with such modifications as in the discretion of the Chief of Engineers may be advisable, and subject to applicable cost-sharing and financing requirements. My recommendation is made with the provision that, prior to implementation of the recommended improvements, the non-Federal sponsor shall enter into a binding agreement with the Federal Government to comply with the following requirements:

- a. Provide, prior to construction, 25 percent of design costs;
- b. Provide, during construction, any additional funds needed to cover the non-Federal share of design costs;
- c. Provide, during the period of construction, a cash contribution equal to 10 percent of the costs of construction of the general navigation features, which include the construction of land-based and aquatic dredged material disposal facilities that are necessary for the disposal of dredged material

CECW-PE (10-1-7a)  
SUBJECT: Wrangell, Alaska

required for Federal project construction, operation, or maintenance and for which a contract for the Federal facility's construction or improvement was not awarded on or before 12 October 1996;

d. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the project, up to an additional 10 percent of the total cost of construction of general navigation features. The value of lands, easements, rights-of-way, and relocations provided by the non-Federal sponsor for the general navigation features, described below, may be credited toward this required payment. If the amount of credit exceeds 10 percent of the total cost of construction of the general navigation features, the non-Federal sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of lands, easements, rights-of-way, and relocations in excess of 10 percent of the total cost of construction of the GNF;

e. Provide all lands, easements, and rights-of-way, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the GNF (including all lands, easements, and rights-of-way, and relocations necessary for dredged material disposal facilities);

f. Provide, operate, maintain, repair, replace, and rehabilitate, at its own expense, the local service facilities in a manner compatible with the project authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

g. Accomplish all removals determined necessary by the Federal Government other than those removals specifically assigned to the Federal Government;

h. Give the Federal 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 GNF for the purpose of inspection, and, if necessary, for the purpose of operating, maintaining, repairing, replacing, and rehabilitating the GNF;

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

j. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of 3 years after completion of the accounting for which such books, records, documents, and other evidence are required, to the extent and in such detail as will properly reflect total cost of construction of the GNF, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and local governments at 32 CFR, Section 33.20;

k. Perform, or cause to be performed, any investigations as 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 lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, or rehabilitation of

CECW-PE (10-1-7a)

SUBJECT: Wrangell, Alaska

the GNF. However, for lands that the Government determines to be subject to the navigation servitude, only the 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;

l. Assume complete financial responsibility, as between the Federal Government and the non-Federal sponsor, for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the GNF;

m. To the maximum extent practicable, perform its obligations in a manner that will not cause liability to arise under CERCLA;

n. 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, and the Uniform Regulations contained in 49 CFR, Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, maintenance, repair, replacement, and rehabilitation of the GNF, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

o. 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, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army;"

p. Provide a cash contribution equal to the non-Federal cost share of the project total historic preservation mitigation and data recovery costs attributable to commercial navigation that are in excess of 1 percent of the total amount authorized to be appropriated for commercial navigation; and

q. Do 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.



JOE N. BALLARD  
Lieutenant General, U.S. Army  
Chief of Engineers



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OFFICE OF THE CHIEF OF ENGINEERS  
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REPLY TO  
ATTENTION OF:

CECW-PE (10-1-7a)

25 November 1998

SUBJECT: Yuba River Basin, California

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of flood damage reduction improvements in the Yuba River Basin, California. It is accompanied by the report of the district and division engineers. These reports have been prepared in partial response to the authority given in Section 209 of the River and Harbor Act of 1962 for surveys for flood control and allied purposes in the Sacramento River Basin and streams in northern California draining into the Pacific Ocean. The Yuba River is a tributary of the Sacramento River. Preconstruction engineering and design activities for the Yuba River Basin, California, project will be continued under this authority.

2. The reporting officers recommend authorization of a plan to provide flood protection from the Yuba and Feather Rivers. The recommended plan would provide protection from a flood having 1 chance in 200 of occurring in any given year along the Yuba and Feather Rivers in reach 1, the area around and including the communities of Linda and Olivehurst, and reach 2, the area around Best Slough/Lower Reclamation District No. 784. The plan would also provide protection from a flood having 1 chance in 300 of occurring in any given year in reach 3, the city of Marysville. In reaches 1 and 2, the major features of the recommended plan include constructing a combination of new and deeper slurry walls for a distance of 6.7 miles, deepening 9 miles of interior toe drains, and constructing or modifying 9.5 miles of berms along sections of the Yuba and Feather Rivers. The levee will be raised slightly in reach 1 from 0.5 foot to 0.8 foot in 3 sections for a total length of about 1.5 miles. In reach 3, the major feature of the recommended plan includes constructing about 5 miles of slurry walls and berms along the ring levee protecting the city of Marysville. Mitigation for project construction includes 2.98 acres for the loss of woodland habitat and 0.37 acre for threatened and endangered species. Mitigation for this project would utilize credit at the existing preservation banks established for the Sacramento River Flood Control, Phase II, Project.

CECW-PE

SUBJECT: Yuba River Basin, California

3. The first cost of the recommended plan, based on October 1997 prices, is estimated at \$25,850,000, of which \$16,861,000 would be Federal and \$8,989,000 would be non-Federal. Based on an interest rate of 7 1/8 percent, amortized over 50 years, average annual benefits and costs are estimated at \$5,379,000 and \$2,066,000, respectively, with a resulting overall benefit-cost ratio of 2.6. Reaches 1 and 2 are hydraulically linked and, therefore, are not separable elements. Reach 3 could be constructed as a separable project. The first cost and benefit-cost ratio for recommended work in reaches 1 and 2 is \$15,460,000 and 1.5, respectively. The first cost and benefit-cost ratio for recommended work in reach 3 is \$10,390,000 and 4.3, respectively.

4. The recommended plan differs from the National Economic Development (NED) plan in that the recommended plan provides a lower level of protection to reach 1 and is less costly. The recommended plan provides protection from a flood having 1 chance in 200 of occurring in any given year in reach 1, whereas the NED plan provides protection from a flood having 1 chance in 250 of occurring in any given year in reach 1.

5. As provided in Section 104 of the Water Resources Development Act (WRDA) of 1986, the reporting officers recommend that the non-Federal sponsor for flood control, State of California Reclamation Board, receive credit for work carried out which is integral to the plan recommended for authorization. This credit was approved in concept by the Assistant Secretary of the Army for Civil Works on 4 October 1996, contingent upon the requirements of section 104 and project authorization. In advance of the completion of the feasibility study, the State of California Reclamation Board with assistance from the Yuba County Water Agency provided funds to the Army Corps of Engineers to construct slurry walls and berms in reaches 1 and 2 in conjunction with the Sacramento River Flood Control, Phase II, Project. This advance work in reaches 1 and 2 is integral to the recommended plan and, therefore, would be eligible for credit against the non-Federal share of project costs. The advance work consists of approximately: 2.37 miles of new and deeper slurry walls in reach 1; 4.23 miles of berms in reaches 1 and 2; and 2.43 miles of new and deeper slurry walls in reach 2. Since the non-Federal sponsor made the decision to implement the advanced work before the NED plan was fully developed in the feasibility study, the design depth of the slurry walls was based on preliminary data. As a result, the slurry walls were constructed to a depth less than required by the NED plan in reach 1, thus precluding the NED plan in reach 1 from being an economically viable alternative. With the advance slurry wall work in place in reach 1, additional slurry wall deepening required to support the NED plan in reach 1 is economically unjustified. Consequently, the recommended plan provides the highest attainable level of flood control protection consistent with the decision to do advanced work. The estimated section 104 credit of \$2,700,000 is reflected in cost sharing shown above for the

CECW-PE

SUBJECT: Yuba River Basin, California

recommended plan. The amount of credit will be the actual cost of the work the Government constructed for which the non-Federal sponsor provided funds.

6. Washington level review indicates that the plan developed is technically sound, economically justified, and environmentally and socially acceptable. The plan conforms with essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other Administration and legislative policies and guidelines. Also, the views of interested parties, including Federal, State, and local agencies have been considered.

7. I generally concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the proposed improvements for flood damage reduction for the Yuba River Basin, California, project be authorized subject to cost sharing as required by Section 103(a) of WRDA 1986, as amended by Section 202(a) of WRDA 1996. I further recommend that the non-Federal sponsor for flood control receive credit under Section 104 of WRDA 1986, subject to an audit of the sponsor's actual expenditures. My recommendation is subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies, including the following requirements:

a. Provide a minimum of 35 percent, but not to exceed 50 percent of total project costs allocated to structural flood control as further specified below:

(1) Enter into an agreement which provides, prior to construction, 25 percent of design costs;

(2) Provide, during construction, funds needed to cover the non-Federal share of preconstruction engineering and design costs;

(3) Provide, during construction, a cash contribution equal to 5 percent of total project structural flood control costs;

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

(5) Provide or pay to the Federal Government the cost of providing all retaining dikes, wasteweirs, bulkheads, and embankments, including all monitoring features

CECW-PE

SUBJECT: Yuba River Basin, California

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

(6) Provide, during construction, any additional funds as necessary to make its total contribution equal to 35 percent of total project costs allocated to structural flood control;

b. For so long as the project remains authorized, operate, maintain, repair, replace, and rehabilitate the project or completed functional portion of the project, including mitigation features at no cost to the Federal Government, in accordance with applicable Federal and State laws and any specific directions prescribed by the Government;

c. Give the Federal 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;

d. Comply with Section 221 of Public Law 91-611, as amended, and Section 103 of 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 United States free from all damages arising for 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 in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR), Section 33.20;

g. Perform, or cause to be performed, any investigations for hazardous substances as 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 lands, easements, or rights-of-way that the Federal Government determines to be required for the operation, maintenance, repair, replacement, and rehabilitation of the project. However, for lands that

CECW-PE

SUBJECT: Yuba River Basin, California

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;

h. Assume complete financial responsibility, as between the Federal Government and the non-Federal sponsor, for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the operation, maintenance, repair, replacement, or rehabilitation of the project;

i. 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. 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. 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 required for the construction, operation, and maintenance of the project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act;

k. Comply with all applicable Federal and State laws and regulations, including Section 601 of the Civil Rights Act of 1964, and Department of Defense Directive 5500.11 issued pursuant thereto, as well as 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 Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), requiring non-Federal preparation and implementation of floodplain management plans.

l. Provide 35 percent of that portion of total cultural resource preservation, mitigation, and data recovery costs attributable to structural flood control that are in excess of 1 percent of the total amount authorized to be appropriated for structural flood control;

CECW-PE

SUBJECT: Yuba River Basin, California

m. Participate in and comply with applicable Federal floodplain management and flood insurance programs;

n. Prescribe and enforce regulations to prevent future obstruction of or encroachment on project lands, easements, and rights-of-way which might interfere with the proper functioning of the project;

o. Not less than once each year, inform affected interests of the limitations of the protection afforded by the project; and

p. Publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the floodplain, and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the project.

8. 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 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.



JOE N. BALLARD  
Lieutenant General, U.S. Army  
Chief of Engineers