



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

DAEN

SUBJECT: Rahway River Basin, New Jersey Coastal Storm Risk Management Feasibility Study Final Integrated Feasibility Report & Environmental Assessment

THE SECRETARY OF THE ARMY

1. I submit, for transmission to Congress, the final integrated feasibility report and environmental assessment (FIFR/EA) for the Rahway River Basin, New Jersey, coastal storm risk management feasibility study. It is accompanied by the report of the District and Division Engineers. The report was prepared in response to a March 24, 1998 resolution of the U.S. House of Representatives Committee on Transportation and Infrastructure. The Disaster Relief Appropriations Act of 2013 (P.L. 113-2), enacted in response to Hurricane Sandy (October 29-30, 2012), authorizes the Rahway Tidal Study. This report addresses frequent and significant flooding in the Rahway River Basin. The authorization requested that the Secretary of the Army review existing reports with a view to identify cost effective measures for coastal storm damage reduction and reduce future flood risk in ways that will support the long-term sustainability of the communities and reduce the economic costs and risks associated with large-scale flood and storm events. This is also an interim response to P.L. 113-2, which provided "[f]or an additional amount for "Investigations" for necessary expenses related to the consequences of Hurricane Sandy, \$50,000,000, to remain available until expended to expedite at full Federal expense studies of flood and storm damage reduction: Provided, That using \$29,500,000 of the funds provided herein, the Secretary of the Army shall expedite and complete ongoing flood and storm damage reduction studies in areas that were impacted by Hurricane Sandy in the North Atlantic Division of the United States Army Corps of Engineers." I am recommending that the Congress authorize initial construction.

2. The reporting officers recommended authorizing a plan to reduce the risk of damages from flooding to the portions of northeastern New Jersey, within the New York City metropolitan area. The principle features of the plan include:

a. nonstructural measures for 110 structures (106 residential, 4 non-residential) in the 10% ACE (10-yr) floodplain. Nonstructural measures were designed to the future conditions 1% ACE (100-yr) water surface elevation plus one foot to account for water surface perturbations in the "intermediate" relative sea level change scenario.

b. a 2,520 feet long levee and 1,968 feet long floodwall designed to an elevation of 14.2 feet North American Vertical Datum of 1988 (NAVD88). The levee/floodwall is located next to the right bank of the Rahway River, approximately 1.2 miles downstream of the confluence with the South Branch. The upstream end is located at the

¹ This report contains the proposed recommendation of the Chief of Engineers. The recommendation is subject to change to reflect Washington-level review and comments from federal and state agencies.

DAEN

SUBJECT: Rahway Tidal River Basin, New Jersey Coastal Storm Risk Management Feasibility Study Final Integrated Feasibility Report & Environmental Assessment

industrial/commercial area in Woodbridge Township, and the structure continues downstream to Joseph Medwick Park in the Borough of Carteret.

3. The New Jersey State Department of Environmental Protection (NJDEP) is the non-federal sponsor for the study. In accordance with the cost share provisions of Section 103 of the Water Resources Development Act of 1986, as amended (33 U.S. Code 2213), the federal share of the project first cost is estimated to be \$46,754,000 and the non-federal share is estimated to be \$25,175,000, which equates to 65 percent federal and 35 percent non-federal (October 2019 price levels). The non-federal costs include the value of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas estimated to be \$10,550,000 (October 2019 price levels). The non-federal study sponsor, NJDEP, has indicated its support for the Recommended Plan and is willing to enter into a Project Partnership Agreement with the federal government for the implementation of the plan.

4. Based on October 2019 price levels, the estimated total first cost of the recommended plan is \$71,929,000. The non-federal sponsor is responsible for the annual operation, maintenance, repair, replacement, and rehabilitation of the project after construction, estimated at \$232,000 per year. Based on a 2.75 percent discount rate, October 2019 price levels and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$2,986,000, the total equivalent average annual benefits are \$7,262,000 with a net benefit of \$4,276,000 and a benefit to cost ratio of 2.4:1.

5. In accordance with the Corps of Engineers Circular (EC 1165-2-217) on the 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 Review, Agency Technical Review, an Independent External Peer Review (IEPR) (Type I), and policy and legal compliance review. All comments from the above referenced reviews have been addressed and incorporated into the final documents. Overall, the reviews have resulted in improvements to the quality of the feasibility analyses supporting the Recommended Plan and expanded narratives. Recommended improvements better support the decision-making process in the plan selection process.

6. Washington-level review indicated that the project recommended by the reporting officers is technically feasible, environmentally and socially acceptable, and economically justified. The plan complies with all essential elements of the 1983 U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies and complies with other administrative and legislative policies and guidelines. Also, the views of interested parties, including federal, state, and local agencies have been considered. The recommended plan is not expected to have significant adverse environmental impacts.

DAEN

SUBJECT: Rahway Tidal River Basin, New Jersey Coastal Storm Risk Management Feasibility Study Final Integrated Feasibility Report & Environmental Assessment

Mitigation measures to avoid or minimize adverse environmental effects of the recommended plan were analyzed and will be implemented with the plan.

7. I concur in the findings, conclusions, and recommendations of the reporting officers. This recommendation is subject to the non-federal sponsor agreeing to comply with applicable federal laws and policies, including but not limited to:

c. Provide 35 percent of the total nonstructural flood damage reduction costs and a minimum of 35 percent, but not to exceed 50 percent, of the total structural flood damage reduction costs and, as further specified below:

(1) Provide, during design, 35 percent of design costs allocated to nonstructural flood damage reduction and 35 percent of design costs allocated to structural flood damage reduction 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 five percent of total structural flood damage reduction costs;

(3) 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 construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material as determined by the federal government to be required or to be necessary for the construction, operation, and maintenance of the project;

(4) Pay, during construction, any additional funds necessary to make its total contribution equal to 35 percent of total nonstructural flood damage reduction costs and at least 35 percent of total structural flood damage reduction costs;

d. 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 project, hinder operation and maintenance of the project, or interfere with the project's proper function;

e. Inform affected interests, at least annually, of the extent of risk management afforded by the structural flood damage reduction features;

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

DAEN

SUBJECT: Rahway Tidal River Basin, New Jersey Coastal Storm Risk Management Feasibility Study Final Integrated Feasibility Report & Environmental Assessment

g. Comply with Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12);

h. 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 performance levels provided by the flood damage reduction features;

i. Not use the project lands, easements, and rights-of-way required for the project as a wetlands bank or mitigation credit for any other project;

j. Operate, maintain, repair, replace, and rehabilitate the completed project, or function portion 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;

k. 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 project for the purpose of completing, inspecting, operating, maintaining, repairing, rehabilitating, or replacing the project;

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

m. Keep, and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three 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 the project, 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;

n. 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 lands, easements, or rights-of-way that the federal government determines to be necessary for the initial construction, periodic nourishment, operation and maintenance of the project;

DAEN

SUBJECT: Rahway Tidal River Basin, New Jersey Coastal Storm Risk Management Feasibility Study Final Integrated Feasibility Report & Environmental Assessment

o. 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 required for the initial construction, periodic nourishment, or operation and maintenance of the project;

p. 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, replace, and rehabilitate the project in a manner that will not cause liability to arise under CERCLA;

q. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, (42 U.S.C. §§ 1962d-5b) and Section 101(e) of the Water Resources Development Act (WRDA) 86, Public Law 99-662, as amended, (33 U.S.C. § 2211(e)) which provide 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;

r. 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. §§ 4601-4655) and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way necessary for construction, operation, and maintenance of the project including those necessary for relocations, the borrowing of material, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

s. 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)); and

t. Not use funds from other federal programs, including any non-federal contribution required as a matching share therefore, to meet any of the non-federal sponsor's obligations for the project unless the federal agency providing the funds verifies in writing that such funds are authorized to be used to carry out the project.

DAEN

SUBJECT: Rahway Tidal River Basin, New Jersey Coastal Storm Risk Management Feasibility Study Final Integrated Feasibility Report & Environmental Assessment

8. The recommendations contained herein reflect the information available at this time and current departmental policies governing formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of a national Civil Works construction program nor the perspective of highest review levels within the Executive Branch. Consequently, the recommendations may be modified (by the Chief of Engineers) before they are transmitted to the Congress as proposals for authorization and implementing funding. However, prior to transmittal to Congress, the partner, the state, interested federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.

TODD T. SEMONITE
Lieutenant General, USA
Chief of Engineers