



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
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WASHINGTON, DC 20314-1000

AUG 16 2019

CECW-NAD

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Director's Report for the Passaic River Tidal Protection Area, New Jersey, Coastal Storm Risk Management Project

1. Purpose: To provide for your review and concurrence, the recommendations detailed in the Final Integrated Hurricane Sandy General Reevaluation Report and Environmental Assessment for the Passaic River Tidal Protection Area, New Jersey, Coastal Storm Risk Management Project (enclosed). The report was prepared in response to Section 101(a)(18) of the Water Resources Development Act (WRDA) of 1990, as amended. The Disaster Relief Appropriations Act of 2013 (P.L. 113-2), enacted in response to Hurricane Sandy October 2012, authorizes construction of this project, subject to a determination by the Secretary that the coastal storm risk management plan is feasible. This report addresses the most critical and vulnerable portion of the authorized study area, the City of Newark, which was heavily impacted by Hurricane Sandy. Hurricane Sandy was one of the largest Atlantic hurricanes on record to reach the United States and resulted in devastation along the Atlantic coast, particularly in the New York metropolitan area. Two people in the City of Newark died as a result of Hurricane Sandy.

2. Recommendation: That the Assistant Secretary of the Army for Civil Works (ASA(CW)) concur in the findings of the Passaic River Tidal Protection Area, New Jersey plan to manage the risk of coastal storm damages by construction of six floodwall segments, one levee segment, eight gates (project alignment), and associated interior drainage features. The project alignment includes seven segments totaling 4,850 linear feet, which would tie into existing topography and infrastructure to an elevation of 14 feet North American Vertical Datum of 1988 (NAVD88).

3. Background: The Recommended Plan is the Locally Preferred Plan and will reduce the risk of flooding to 15,000 people and 2,300 structures, and would provide approximately \$4.2 million in annualized benefits. The Recommended Plan is estimated to have average annual residual damages of \$93.6 million under the low historic sea level change scenario. The Recommended Plan has a Benefit Cost Ratio of 2.2 under the historic low sea level change scenario, 3.9 under the USACE intermediate scenario, and 8.4 under the USACE high scenario. The ultimate design of the project will be determined during Preconstruction Engineering and Design based on site-specific information. The implementation of the Recommended Plan will not eliminate the potential for loss of life. However, with a floodwall/levee elevation 2 feet

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higher than storm surge water levels recorded during Hurricane Sandy, the Recommended Plan could reduce the risk of life loss and property damage during a large-scale flood event.

4. Discussion: The New Jersey Department of Environmental Protection (NJDEP) is the non-federal cost-sharing sponsor for the authorized project. Based on an October 2018 price level, the estimated total first costs of the recommended plan is \$45,371,000. The federal share of the estimated first cost of initial construction is currently estimated at \$29,491,000 and a non-federal share of \$15,880,000. The cost of lands, easements, rights-of-way, relocations, and disposal is estimated at \$4,630,000. The state of New Jersey would be responsible for the operation, maintenance, repair, replacement and rehabilitation (OMRR&R) of the project after construction, a cost currently estimated at \$132,000 per year. Based on a 2.875% discount rate for Fiscal Year 2019 and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$1,876,000, including OMRR&R. The plan has primary outputs based on coastal storm risk management and damage reduction. With equivalent average annual benefits estimated at \$4,155,000 and the net average annual benefits of approximately \$2,279,000, the benefit-to-cost ratio is 2.2 to 1.

a. The recommended plan would have unavoidable temporary adverse impacts to 0.08 acres of wetlands and 0.18 acres of unavoidable permanent adverse impacts to wetlands. To mitigate for these unavoidable adverse impacts, the U.S. Army Corps of Engineers will mitigate through a NJDEP approved Wetland Bank. Additionally, these impacts will be mitigated through project design, construction practices, and best management practices (BMPs). The potential adverse environmental effects on other resources would be reduced to a less significant level through project design, construction practices, preconstruction surveys and analysis, regulatory requirements, and BMPs. With these BMPs (such as native vegetation planting and tree replacements) in place, no significant adverse impacts to trees or vegetation are anticipated as a result of construction. Taken as a whole, the recommended plan would produce a net significant positive impact on wetland habitats and the quality of wetlands in the project area. Because the recommended plan would not have any significant adverse effects, no mitigation measures (beyond best management practices and avoidance) or compensation measures would be required.

b. The goals and objectives included in the Campaign Plan of the U.S. Army Corps of Engineers (USACE) have been fully integrated into the Passaic River Tidal Protection Area, Coastal Storm Risk Management study process. The proposed plan has been designed to avoid or minimize environmental impacts while maximizing future safety and economic benefits to the community. The study team organized and participated in stakeholder and public meetings throughout the process and worked with local groups to achieve a balance of project goals and public concerns. The study

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report fully describes flood risk associated with the coastal storm surge from the mouth of the Passaic River and risks that will not be reduced; these residual risks have been communicated to the State of New Jersey, City of Newark, Town of Harrison, Town of Kearny, and their residents.

c. In accordance with EC 1165-2-214, Civil Works Review, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included an Agency Technical Review (ATR), a Type I Independent External Peer Review (IEPR), and a Headquarters USACE policy and legal review. All concerns of the ATR have been addressed and incorporated in the final report. The IEPR was managed by Battelle Memorial Institute. The IEPR comments helped to more clearly communicate the information that was provided in the report. The reviews have resulted in the improvement of the technical quality of the report. A safety assurance review, Type II IEPR, will be conducted during the Preconstruction Engineering and Design phase of the project.

5. Conclusion: I have reviewed and concur with the conclusions and recommendations in the Final Integrated Hurricane Sandy General Reevaluation Report and Environmental Assessment. Based upon this review, I find the recommended 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 USACE planning procedures and regulations. Also, the views of interested parties, including federal, state and local agencies have been considered.



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

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