



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

REPLY TO
ATTENTION OF:

CECW-PC (1105-2-10a)

AUG 24 2009

SUBJECT: Topeka Flood Risk Management Project, Topeka, Kansas

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on flood risk management improvements on the Kansas River in the vicinity of Topeka, Kansas. It is accompanied by the report of the district and division engineer. These reports are submitted pursuant to Section 216 of the Flood Control Act of 1970, authorizing me to determine whether any modifications to the local flood risk management projects are advisable in order to improve the reliability and performance of the existing levee system. The existing units were originally authorized by the Flood Control Acts of 1936 and 1954. Project construction of the levee system was completed in 1974. The study was requested by the local sponsors and the Congress of the United States. Preconstruction engineering and design activities, if funded, would be continued under the authority provided by the act cited above.

2. The reporting officers recommend authorizing a plan to reduce flood damages by construction of modifications to significantly improve reliability and performance of the levee system in the vicinity of Topeka, Kansas. The recommendation is supported by the non-Federal Sponsors, the City of Topeka, Kansas, and the North Topeka Drainage District. The recommended plan is the National Economic Development (NED) plan. All features are located in the State of Kansas. The plan includes recommendations for modifications to four existing levee units within the Topeka Flood Risk Management Project: the South Topeka Unit, the Oakland Unit, the North Topeka Unit, and the Waterworks Unit.

a. South Topeka Unit. Levee under-seepage concerns will be addressed by installation of a control berm. Structural strength and uplift concerns will be improved by modifications of the Kansas Avenue Pump Station and three manholes. Approximately 2,000 linear feet of existing concrete floodwall on timber-pile foundations will be removed and replaced with a new floodwall on concrete piles following the same alignment and to the same height as the existing floodwall. The work in this unit will result in the removal of 7.5 acres of woodland habitat and appropriate mitigation measures are included in the Recommended Plan.

b. Oakland Unit. An area of under-seepage concern will be controlled with a berm and a stability berm will be installed to improve the stability factor of safety of the existing floodwall. Structural modification of the East Oakland Pump Station will be implemented to address uplift failure concerns.

c. North Topeka Unit: Two areas of low under-seepage reliability will be improved by installation of an under-seepage control berm and a series of pumped relief wells, respectively. One pump station that is no longer required, and currently poses an uplift failure risk, will be removed.

d. Waterworks Unit: Landside stability berms will be installed to increase the reliability of an existing concrete floodwall protecting the primary water source for the City of Topeka and surrounding communities.

3. Project costs are allocated to the Flood Risk Management purpose. Based on the October 2008 price levels, the estimated first cost to the plan is \$21,157,000. In accordance with the cost sharing provisions of Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended by Section 202 of WRDA 1996, the Federal share of the total project cost would be \$13,752,000 (65 percent) and the non-Federal share would be \$7,405,000. The non-Federal costs include the costs of lands, easements, rights-of-way, relocations, and dredged (LERRD) or excavated material disposal areas, estimated at \$1,279,000.

4. Based on a 4.625 percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project, including operation, maintenance, repair, replacement, and rehabilitation (OMRR&R), are estimated to be \$1,168,000. The selected plan is estimated to be approximately 95 percent reliable in protecting the study area from the flood with a one percent chance of occurrence in any year (formerly referred to as the "100-year flood"). The selected plan would reduce average annual flood damages by about 67 percent and would leave average annual residual damages estimated at \$7,438,000. Annual average economic benefits are estimated to be \$15,428,000; net average annual benefits are \$14,260,000. The system-wide benefit-to-cost ratio is 13.2 to 1. The selected plan is composed of three separable elements: South Topeka/Oakland, North Topeka, and Waterworks Units. Although South Topeka and Oakland are separate units, they are linked hydrologically and therefore combine to form a single, separable element. The South Topeka/Oakland Units would provide \$4,014,000 in annual benefits with an annual cost of \$996,000 for a benefit-to-cost ratio of 4.0. The North Topeka Unit would provide \$11,408,000 in annual benefits with an annual cost of \$169,000 for a benefit-to-cost ratio of 67.4. The Waterworks Unit would provide \$6,000 in annual benefits with an annual cost of \$3,000 for a benefit-to-cost ratio of 2.0.

5. The goals and objectives included in the Campaign Plan of the U.S. Army Corps of Engineers have been full integrated into the study process. The project effectively implements a comprehensive systems approach with full stakeholder participation. The project study has undergone rigorous quality control reviews in accordance with recent USACE guidance. These reviews included technical review of the engineering, economic, and environmental analyses by another USACE district. These reviews strengthened the recommendations of the reporting officers. The study report describes existing risks to the community, risks that will be reduced by the Recommended Plan, and residual risks that will remain from large, infrequent, flood events. In accordance with EC 1105-2-410, Appendix D, and future guidance that may be developed, a Safety Assurance Review (SAR) will be conducted prior to initiation of physical construction and periodically thereafter until construction activities are completed. The SAR

will be conducted by an independent (outside of the Corps of Engineers) panel. Establishment of the panel will be in accordance with applicable guidance at the time of project construction.

6. The levee system consist of six separately authorized units and is a component of a larger system of levees and reservoirs that provides flood damage reduction benefits to the Kansas River basin. There are no significant direct or cumulative environmental impacts associated with the recommended plan, primarily because it sustains the existing levee rather than encumbering additional resources for a "new" project. The long-term environmental and cultural consequences of plan implementation are positive as the increased reliability of the units act to guard the social and environmental fabric that has developed within the study area. The plan also contributes to regional economic development.

7. Washington level review indicates 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 Economic and Environmental Principles and Guidelines for Water and Land Related 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. Agency Technical Review was conducted for the study and all issues were satisfactorily resolved. This study was not required to conduct an Independent External Peer Review (IEPR). A safety assurance review (TYPE II IEPR) will be conducted during the design phase of the project.

8. I generally concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan to reduce flood damages for Topeka, Kansas, is authorized in accordance with the reporting officers' recommended plan at an estimated cost of \$21,157,000 with such modifications 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, including Section 103 of WRDA 1986, as amended, and in accordance with the following required items of cooperation that the non-Federal sponsor shall, prior to project implementation, agree to perform:

- a. Provide a minimum of 35 percent, but not to exceed 50 percent of total project costs as further specified below:
 1. Provide 25 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, during the first year of construction, any additional funds necessary to pay the full non-Federal share of design costs;
 3. Provide, during construction, a contribution of funds equal to 5 percent of total project costs;

4. 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 all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of the project;
 5. Provide, during construction, any additional funds necessary to make its total contribution equal to at least 35 percent of total project costs;
- b. Shall 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 obligations for the project unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is authorized;
 - c. Not less than once each year, inform affected interests of the extent of protection afforded by the project;
 - d. Agree to participate in and comply with applicable Federal floodplain management and flood insurance programs;
 - e. Comply with Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), which requires a non-Federal interest to prepare a floodplain management plan within one year after the date of signing a project cooperation agreement, and to implement such plan not later than one year after completion of construction of the project;
 - f. 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 protection levels provided by the project;
 - g. 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 level of protection the project affords, hinder operation and maintenance of the project, or interfere with the project's proper function;
 - h. Comply with all 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 required for construction, operation, and maintenance of the project, including those necessary for relocations, the borrowing of materials, or the disposal of dredged or excavated material; and inform all affected

- persons of applicable benefits, policies, and procedures in connection with said Act;
- i. For so long as the project remains authorized, operate, maintain, repair, rehabilitate, and replace the project, or functional portions of the project, including any mitigation features, 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;
 - j. 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;
 - k. 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;
 - l. Keep and maintain books, records, documents, or 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, or other evidence are required, to the extent and in such detail as will properly reflect total project costs, 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 Code of Federal Regulations (CFR) Section 33.20;
 - m. 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 substantial 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 *et seq.*);
 - 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), 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;

- 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 that the Federal Government determines to be required for construction, 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, rehabilitate, and replace the project in a manner that will not cause liability to arise under CERCLA; and
- 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 103(j) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j)), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project or separable element.

9. 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 or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before they are transmitted to the Congress as proposals for authorization and implementation funding. However, prior to transmittal to the Congress, the sponsors, the State, interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.



R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers