US Army Corps of Engineers ®
Kansas City District

Little Blue River Flood Risk Management Study

Authority: Resolution of the Senate Committee on Environment and Public Works for the Little Blue River Basin, Missouri, 108th Congress, 2nd Session, June 23, 2004.

Local flooding along the Little Blue River (Grandview, Missouri)

Study Description:
Congress has authorized USACE NWK to conduct the Little Blue River Watershed General Investigation Study to analyze whether changing conditions within the basin are increasing flood risk. It has also authorized an analysis of where environmental restoration is desired and could be implemented. NWK-USACE will lead the participating communities in identifying challenges but also looking for opportunities to apply best management practices that will lower flood risk, restore ecosystem services, and promote sustainable development and other beneficial uses into the future. The result will be a recommended plan that will lead to Congressional authorization for construction under the Corps of Engineers General Investigations Program.

Problem & Need: Dramatic changes in basin conditions related to urbanization and other factors are causing increased frequency of flooding and rapid erosion that threatens the large federal investment and other significant public infrastructure, as well as the protected communities and installations. The flood of record was a ten-inch rainfall on August 12-13, 1982, which caused four fatalities and over $30 million in damages. There have been four flood events in the last 24 years that have exceeded the 2 percent Annual Exceedance Probability (50-year) flood. If continued unchecked, the adverse effects of the transforming watershed will cause significant deterioration to the federal flood-protection projects, increasing damage to critical infrastructure, wildlife habitat, and public recreation investment. A comprehensive watershed study is required to unite the communities and agencies in the leveraging of resources for the protection of federal investments, infrastructure, habitat conservation, and storm water management allowing for increased economic benefits to the area.

Study Partners: Mid-America Regional Council, Jackson County, , the City of Blue Springs, the City of Grandview, the City of Independence, the City of Kansas City, Missouri, the City of Lee's Summit, and the City of Raytown.

Financial Data	
Estimated Study Cost	$3,000,000
Cost Share	50/50

What the Study will do?

- The objective is to select a plan for USACE implementation that addresses flood risk management and ecosystem restoration. USACE criteria require that the national economic output must be greater than the cost to implement.
- Investigation or planning studies conducted by the Corps of Engineers are distinguished by the breadth and depth of technical analyses and modeling that is conducted to document existing conditions and to compare future without project conditions to future with project conditions for proposed implementation alternatives.

- The current study will assess the full scope of current conditions and, through modeling, develop planning assumptions for a 50-year time horizon that can be used to inform future decision making by political jurisdictions throughout the basin. The District will share the models developed through the study with the partners for their on-going use once the study is completed.
- More than fifty years have passed since the last USACE planning study. Following the 1966 study, municipalities and Jackson County discussed the creation of a coordination committee because there was a recognition of the need to collectively manage the watershed's benefits. This study will provide an opportunity for further collaboration among the municipalities and County.

What the Study will not do?

- Completion of the study does not guarantee a construction authorization or funding for design and implementation. As noted above, recommendations must meet a strict economic cost to benefit ratio (BCR), which requires economic outputs (the monetary value of reduced flood risk) to be greater than project costs. Studies that result in a BCR below unity are typically not prioritized for future design and implementation funding.
- While the study will provide valuable insight into broader floodplain and watershed management issues, the study will not prescribe local actions. However, it should also be noted that certain USACE recommendations, if accepted, authorized, and appropriated, to require participating communities to adopt floodplain management plans.

What will happen after the study is completed?

- Based on the final selected plan, recommendations in the plan that meet cost-benefit criteria would move on to design and implementation with additional Congressional authorization and appropriation of funding.
- Using existing authorities, the Corps can provide technical assistance to address issues relating to flood risk management, ecosystem restoration, recreation, streambank stabilization.
- By sharing the 50-year future with project assumptions and associated modeling, local governments will be equipped for making informed community-based decisions. They will also be equipped to work collectively to build a more resilient Little Blue River Watershed basin.
- When this study ends, communities and organizations within the basin will have a roadmap for future action.

STUDY OBJECTIVES

Study analysis will include formulation and consideration of solutions that will address issues related to flood risk, ecosystem services, and other local and regional issues present within the watershed.

Flood risk management
- Lowering of flood profiles/damages due to flooding

Ecosystem restoration
- Habitat connectivity
- Reintroduction of wetland/aquatic habitat
- Address issue of erosion & sediment deposition

Other ancillary benefits
- Life safety
- Environmental justice
- Recreation
- Water quality
- Quality of life