

# CEDAR RIVER, CEDAR RAPIDS, IOWA, FLOOD RISK MANAGEMENT PROJECT

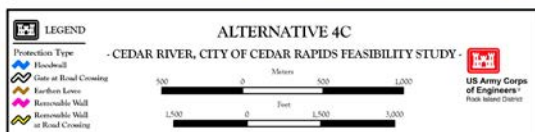
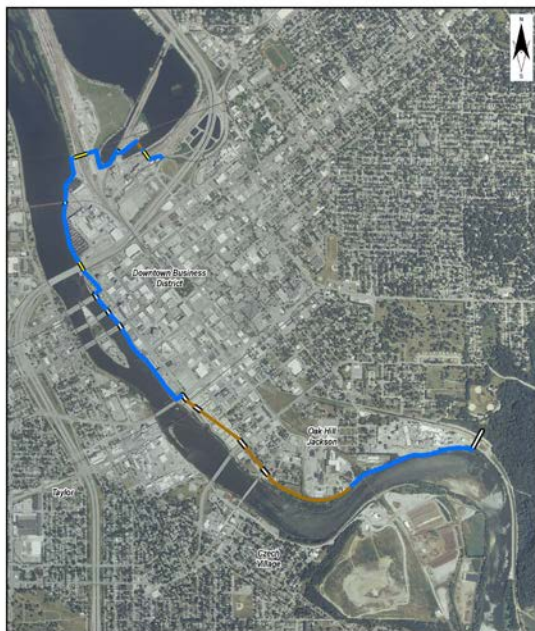
18 November 2010

**ABSTRACT:** The purpose of the Project is to provide cost effective, environmentally-sensitive, and technically feasible flood risk management (FRM) for the City of Cedar Rapids, Iowa. The project consists of a floodwall and levee system to reduce the existing and future flood risk and damages to public and private infrastructure on the east bank of the City. The City is the non-Federal sponsor.



Much of downtown Cedar Rapids lies within the 100-year floodplain. Historically, major floods have resulted from a combination of rainfall and snowmelt or from heavy rainfall alone. In June 2008, the City experienced a record flood event that led to the expansion of an ongoing Corps study to include the entire Cedar River-Cedar Rapids corridor.

The record flooding of June 2008 reached a flood stage of 31.1 feet (measured at the 8<sup>th</sup> Avenue gage ), over 11 feet higher than the previous record, inundating over 1,300 city blocks. The flooding displaced more than 18,000 residents, 14,000 employees, and 1,300 students, and damaged more than 5,000 homes, 900 businesses and 310 public facilities. Nearly 10 square miles and 1,300 city blocks were impacted, displacing approximately 25,000 people. The total estimated annual damages for the study area are \$12,200,000.



The Recommended Plan, Alternative 4C, includes FRM features for the east side of downtown Cedar Rapids consisting of concrete floodwalls, earthen levees, closure structures and pump stations. The design height of the system would correspond to an elevation of 733.7 feet, 1988 NAVD, at the USGS gage just upstream of the 8th Avenue Bridge. The Alternative 4C system would be constructed at a height approximately equivalent to a river stage of 32.4 feet, which is approximately 1.3 feet higher than the June 2008 flood crest, providing a substantial

degree of risk reduction. Concrete floodwalls comprise approximately two thirds of the total alignment length totaling 2.17 miles. The remainder of the alignment length includes 0.75 mile of earthen levee and a total length of 0.23 mile for all closure structures. All major components were developed as standard designs in order to minimize estimated construction cost.

The estimated total cost for the Recommended Plan is \$98,788,000 (July 2010 price level), for which the Federal share is approximately \$64,212,200 and the non-Federal share is approximately \$34,575,800. The yearly operation, maintenance, repair, rehabilitation, and replacement costs are \$12,900. Average annual flood risk reduction benefits are estimated at \$6,144,000. The Recommended Plan has an overall benefit-to-cost ratio of 1.15.

**REPORT DOCUMENTATION:** Pertinent documentation on the project, the results of the CWRB, and subsequent Washington-Level Review Actions, are linked below:

- [CWRB Agenda](#)
- [Project Summary](#)
- [CWRB Briefing Slides](#)
- [CWRB Lessons Learned](#)
- [CWRB Meeting Record](#)
- [State & Agency Review Comment Letters](#)
- [Documentation of Review Findings](#)
- [Signed Chief of Engineers Report – 27 January 2011](#)
- [Advance Copy to Congressional Committees](#)
- [ASA \(CW\) Memo to OMB](#)
- [OMB Response](#)
- [ASA \(CW\) Transmittal to Congress](#)
- [Signed Finding of No Significant Impact](#)
- Authorization

**ADDITIONAL INFORMATION:**

[Mississippi Valley Division](#)

[Rock Island District - Cedar Rapids Project](#)