

Iowa Flood Mitigation Program (FMP) Flood Mitigation Project Application

I. Applicant Information

A. Applicant/Community Name	B. Address	City, State, Zip Code	
City of Cedar Rapids	101 First Street SE	Cedar Rapids, IA, 52401	
C. Point of Contact (POC) Name for Project	POC Title	POC Agency	POC Email
Adam Lindenlaub	Planner III	City of Cedar Rapids	a.lindenlaub@cedar-rapids.org
POC PO Box and Zip Code	POC Street Address	POC City, State, Zip Code	POC Phone
52401	101 First Street SE	Cedar Rapids, IA 52401	319-286-5064
Alternate POC Name or Authorized Representative	Alt POC Title	Alt POC Agency	Alternate POC Email
Joe O'Hern	Executive Administrator of Development Services	City of Cedar Rapids	j.ohern@cedar-rapids.org
Alt POC PO Box and Zip Code	Alt POC Street Address	Alt POC City, State, Zip Code	Alt POC Phone
52401	101 First Street SE	Cedar Rapids, IA 52401	319-286-5292
D. Federal Tax ID # / FEIN	E. County Name	F. US Congressional District(s)	State Legislative Districts
	Linn	2	Senate: 33,34,35 House: 65,66,67,69,70
G. Is the Applicant/Community participating in the National Flood Insurance Program (NFIP)?		Community's CID Number	
Yes		190187	

III. Project Plan Summary

A. Provide a brief description of the project. Identify separately each component of construction or reconstruction included in the project. This is a summary of Tab B - Project Plan. Code of Iowa section 418.4, subsection 2

The proposed project includes three miles of flood protection on each side of the river, constructed to the height of the 2008 Flood plus three feet. The system includes a combination of flood protection features:

- Levees where there is adequate space (10,028 feet West Side; 3,827 feet East Side);
- Floodwalls where space is limited (2,942 feet West Side; 10,301 feet East Side);
- Demountable Floodwalls where access and view of the river is desired (2,160 feet West Side; 575 feet East Side);
- Slide gates or swing gates to close streets and railroads (1,811 feet West Side; 1,305 feet East Side); and
- Stormwater pump stations (6 on West Side; 5 on East Side) to provide drainage within the protected area when the storm sewers are blocked by river flooding.

The project also includes raising the southern and northern approaches to the Edgewood Road bridge and on the north side of the City. This will provide an additional crossing point and address the traffic flow and emergency response capability for extreme flood events.

TAB A Supplemental Information provides more detail, including locations of floodwalls, levees, removable floodwalls and gates on the east and west sides of the river. The USACE has conducted a risk assessment for their eastside project that determined the City has the ability to successfully install planned removable floodwalls and gate closures as part of their flood mitigation project. This risk assessment evaluation was based on flood warning time, available City resources, and the City's plan to construct removable floodwalls and closure gates on both sides of the Cedar River.

B. How will the project mitigate future flooding of property that has sustained significant flood damage and is likely to sustain significant flood damage in the future? Code of Iowa, section 418.9, subsection 10, 2a Explain:

The US Army Corps of Engineers (USACE) conducted an extensive feasibility study in the aftermath of the 2008 flood, to determine the benefits and the costs of reducing the risk of flooding in Cedar Rapids. The study, which was completed in 2011, concluded that the annualized cost of not constructing a flood protection system is \$3,526,000 on the West Side, \$6,732,000 on the East Side, for a total of \$10,257,000. This includes \$8,048,000 per year Commercial and Industrial damage, \$674,000 per year damage to Public structures, and \$1,535,000 damage per year to residences.

That study also quantified the cost of Public Damage from the 2008 Flood - \$317,000,000. Hospitals, schools, libraries, offices and public transit were damaged or destroyed. The \$317 million price tag includes debris removal, emergency flood fighting measures, and damage to infrastructure such as streets, bridges and utilities.

The 2008 Flood caused extensive damage to more than 4,000 public and private structures. Businesses sustained millions of dollars in damages. Nearly 10 square miles and 1,300 City blocks were impacted. Approximately 18,000 people were displaced.

TAB A Supplemental Information includes a graph of the annual mean discharge for the Cedar River over the past 100 years. The trend line clearly indicates increasing discharge, while the higher peaks and lower valleys indicate a progression toward more extreme high flow and low flow seasons.

C. How does the project address the impact of flooding both upstream and downstream from the project area? Code of Iowa, section 418.9, subsection 10, 2b Explain:

The Corps of Engineers and others have numerically modeled the effect of this project on river stages. Although the backwater effects raise the water level upstream for floods greater than the 1% probability of exceedance, the Iowa Department of Natural Resources and the Corps of Engineers are in agreement that the benefits of the project far outweigh the upstream and downstream impacts. The proposed improvements do not encroach upon the regulated floodway and are in compliance with regulatory standards.

D. Describe how the project conforms to any applicable floodplain ordinance and identify the ordinance. Code of Iowa, section 418.9, subsection 10, 2b

The project exceeds the City's Floodplain Management Ordinance requirements as stated in Section 32 of the Municipal Code. The most pertinent element of the code is found in Section 32B.05(h): "Flood control structural works such as levees, flood walls, etc. shall provide, at a minimum, protection from a 100-year flood with a minimum of 3 feet of design freeboard and shall provide for adequate interior drainage. In addition, structural flood control works shall be approved by the Iowa Department of Natural Resources."

E. Describe how the project is sufficiently valuable to the economic viability of the state or is of sufficient historic value. Code of Iowa, section 418.9, subsection 10, 2c

The 2008 Flood constituted the worst natural disaster in the history of Cedar Rapids. Floodwater penetrated 10 square miles or 14 percent of the city. This historic flood impacted 7,198 parcels, including 5,390 houses, dislocated more than 18,000 residents and damaged 310 City facilities. The impact to Cedar Rapids was over \$5.4 billion. In addition to the damage within Cedar Rapids, impacts to business and industries within the City reverberate to many others within the State of Iowa. When the major grain processors in Cedar Rapids cannot function, the impacts are widely felt among agribusiness and food suppliers. The grain processing industries such as Quaker Oats, Cargill, and Penford, were directly impacted by flooding, and also indirectly affected by the loss of critical infrastructure. As Cedar Rapids is the hub of employment for Linn County and beyond, the impact to employment due to business disruptions are felt well beyond the areas directly affected by the flood. The construction of floodwalls and levies to protect the City from this massive damage will eliminate the staggering and long lasting costs of recovery.

F. How is this project essential to meet the necessary expenses or serious needs of the governmental entity related to the flood mitigation? *Code of Iowa, section 418.9, subsection 10, 2h Explain:*

City officials have spent \$307 million in federal, state and local money to redevelop flood-affected public facilities. In the last fiscal year, the city spent more than \$150 million on capital projects related to the flood and has allotted another \$136 million for such projects in the current budget. There is a multi-million dollar plan to build levees and flood walls on both sides of the river, but the cost is beyond the City's ability to fund even with federal funds for the USACE project. The Flood Mitigation Program funds are essential to fund this project.

G. Provide the extent of nonfinancial support committed to the project from public and nonpublic sources. *Code of Iowa, section 418.9, subsection 10, 2e*

The development of this plan, including redevelopment of flood impacted areas, involved the input of 4,000 people over three open houses and 8 workshops. Recent redevelopment plans adopted in 2013 (Downtown Area Plan, Kingston Village Plan, Ellis Boulevard Area Plan) for areas along the river and the downtown included property owner and neighborhood association involvement and have reaffirmed the City's commitment to flood protection. Letters of support are also included at the end of Tab A Supplemental Information.

H. Describe the coordination with other watershed management measures as applicable. *Code of Iowa, section 418.9, subsection 10, 2f*

Indian Creek Watershed Management Authority (ICWMA): The City of Cedar Rapids was one of the initiators of the creation of an authority to conduct watershed planning and management. The ICWMA is currently working on development of a comprehensive watershed management plan with a grant it received in 2012 from the Iowa Economic Development Authority and the Iowa DNR. Iowa & Cedar Rivers Comprehensive Plan: On an even larger regional level, the City is also participating in the Iowa-Cedar Watershed Interagency Coordination Team. This multi-agency watershed team is collaborating on the development of a watershed based plan that will coordinate on-going watershed planning efforts in the Iowa-Cedar Rivers Basin. This planning effort will focus on creating a collaborative process that will identify resource problems and identify which entity is best suited to address this concern through their authority or charter. Within this collaborative framework entities may study a single aspect of a larger watershed plan without being dependent on other entities funding mechanisms.

I. Describe how this project is consistent with applicable comprehensive, countywide emergency operations plan in effect and other applicable local hazard mitigation plans. *Code of Iowa, section 418.9, subsection 10, 2g*

The Linn County Emergency Management Office is located in Cedar Rapids. Its stated mission is to assure the coordination of the activities of City and County government, State and Federal entities, citizens, businesses, adjacent jurisdictions, and other disaster partners, to prepare for, respond to, recover from and mitigate major emergencies and disasters within Linn County. Their website is <http://www.linncounty-ema.org/>. The city of Cedar Rapids participates in hazard mitigation planning through the Corridor Metropolitan Planning Organization (MPO). The Corridor MPO is an organization made up of elected officials and appointed representative of Cedar Rapids, Linn County, Marion, Hiawatha, Robins, Ely and Fairfax. The Metro-Area Hazard Mitigation Plan was adopted by the Corridor MPO in the fall of 2007 and amended on January 20, 2011. The Hazard Mitigation Plan (HMP) identifies constructing and maintaining floodwalls or levies as Goals 1 and 2 in the technical category for the City of Cedar Rapids. This plan will be replaced by a countywide plan that is currently in development by Linn County.

J. Description of Project Location (i.e. Latitude and Longitude (minimum 6 digits after the decimal), Neighborhood, Subdivision, Geographic Boundaries, Driving Directions, etc.)

The Project is located on both sides of the Cedar River within the boundaries of the City of Cedar Rapids. The project would provide new levels of flood protection to neighborhoods such as Ellis Park, Time Check, Kingston, Taylor, and Czech Village on the west, and Cedar Lake, Downtown, Oakhill-Jackson and Otis Road on the east side of the river. The project would protect major industrial sites and critical infrastructure, such as the Quaker Oats, Penford, and Cargill grain processing plants, and the municipal water treatment plant. The latitude and longitude of Cedar Rapids is 41.977881 Degrees North, 91.665622 Degrees West. Interstate I-380, part of the "Avenue of the Saints" between St Louis, Missouri and St Paul, Minnesota, crosses the Cedar River at the center of Cedar Rapids. The northern river crossing, at Edgewood Road, is 2.8 miles northwest of downtown. The proposed southern crossing, at C Street SE is 2.8 miles southeast of downtown.

K. Number of people and properties protected as a result of the completion of the entire proposed project:

# of People	10,592	173,786	# of People (served by city water and/or sewer)
# of Residential Properties	3,097	3,097	# of Residential Properties
# of Commercial Properties	681	681	# of Commercial Properties
# of Public Properties	802	802	# of Public Properties
# of Critical Facilities	13	13	# of Critical Facilities
Total # of Properties:	15,185	178,379	

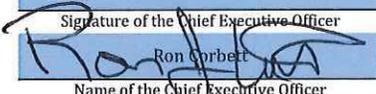
IV. Work Schedule

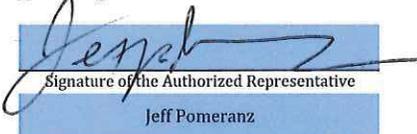
A. List the major milestones for this project.

Task	Months/Years from Award		Responsible Party
	Start	Complete	
Reach 1	2013	2015	USACE/City
Kingston	2014	2017	City
Reach 2	2015	2018	USACE/City
Time Check	2015	2020	City
Reach 3	2016	2022	USACE/City
Czech Villiage	2018	2024	City
Reach 4	2022	2024	USACE/City
Gates and Pump Stations	2024	2026	City
Edgewood Rd Bridge Approaches	2025	2032	City
Total Project Duration:	20 years		

V. Certifications

To the best of my knowledge and belief, I certify that all data in this application packet is complete, true and correct. The governing body of the applicant has duly authorized this document and hereby applies for assistance as documented in this application. The applicant understands that the project shall not proceed until Flood Mitigation Board approval is granted.

Signature of the Chief Executive Officer

 Name of the Chief Executive Officer
 Ron Corbett
 Mayor
 Title
 City of Cedar Rapids
 Organization
 November 19, 2013
 Date
 319-286-5051
 Phone Number

Signature of the Authorized Representative

 Name of Authorized Representative
 Jeff Pomeranz
 City Manager
 Title
 City of Cedar Rapids
 Organization
 November 19, 2013
 Date
 101 First Street SE
 PO Box / Street Address
 Cedar Rapids, IA 52401
 City, State and Zip Code
 319-286-5080
 Phone Number
Citymanager@cedar-rapids.org
 Email Address