

Flooding in Cedar Rapids, Iowa

CAUSES

- Excessive rainfall
- Urbanization
 - Reduces surface permeability
 - Increases runoff
 - Loss of natural vegetation
- Downstream location
 - Worsens flood vulnerability
- Climate change
 - Intensifies weather (droughts/rain)

SOLUTIONS

(HR Green, 2024)



SHORT-TERM

- Sandbags
- Blockage clearing
- Evacuation plans

LONG-TERM

- Flood walls
- Reintroduce native vegetation
- Urban green spaces/infrastructure
- Educate on sustainable prevention

EFFECTS

- Displacement
 - Residents/native species
- Destruction
 - Buildings/homes
- Debris and toxins in river
- Disruption
 - habitats/aquatic ecosystems
 - Changes in water quality
- Economic/social strain on community

HISTORICAL CASE: June, 2008

- 9 inches of rainfall
 - Following drought of 2006
- Reach = 10 sq miles/ 30 ft.
- 10,000 residents displaced
- \$5.4 billion in damage
- 41,771 tons of debris



(USACE Rock Island District, 2008)



2008 flood zone

100 & 500 year FEMA flood zones

(CR Tourism, 2018)

Effects on the Cedar River

- Increased:
 - Turbidity, phosphorus, & salinity levels
 - Debris/runoff
- Decreased:
 - Aquatic species/habitats
 - Water clarity

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