

**Memorandum**  
**Community Economic Development Department**



**To:** Randall Tweet, Interim City Manager  
**Subject:** Hazard Mitigation Plan  
**Date:** October 20, 2016

In 2009 the City of Rock Island approved a County wide Local Hazard Mitigation Plan. The Plan dealt primarily with natural disasters and the area’s strategies for responding to them. Rock Island County recently received a Hazard Mitigation planning funds to update the document.

While new goals and objectives exist within the updated plan there are no new priorities and actions specifically for the City of Rock Island. These are:

Priority	Action	Hazard Addressed	2009 Plan	Status	New for 2009
1	Update levee certification	Levee Failure	Yes	ongoing	No
2	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements and adopt new model codes are they are issued. Current require 2 feet of freeboard	River Flood	Yes	ongoing	No
3	Enforce and update building codes to current International Code Series	All Hazards	Yes	Will be updating to 2015 soon	No
4	Seek funding to undertake rehabilitation or reconstruction of levees as needed to maintain certification	Levee Failure	Yes	As needed	No
5	Identify critical facilities such as lift stations where backup generators should be installed and purchase as necessary.	All Hazards	Yes	Not completed	No
6	Research options to protect sewer systems to the 100-year flood level.	Flash Flood; River Flood	Yes	Not completed	No

In order for the County and Bi-State to submit the Plan to FEMA for final approval, the attached resolution must be approved. After approval the plan will be updated every 5 years. Further information can be found within the attached executive summary and pages related specifically to Rock Island.

**RECOMMENDATION:**

That the Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan resolution be adopted and forwarded to Rock Island County.

**Submitted by:** Ryan Berger, Interim Planning & Redevelopment Administrator  
 Tom Ayers, Interim Community Development Director

**Approved by:** Randall Tweet, Interim City Manager

**A RESOLUTION OF THE CITY OF ROCK ISLAND IN SUPPORT OF THE  
APPROVAL AND ADOPTION OF THE ROCK ISLAND COUNTY MULTI-  
JURISDICTION LOCAL HAZARD MITIGATION PLAN UPDATE**

**WHEREAS**, Rock Island County applied for and was awarded funding from the Hazard Mitigation Grant Program (HMGP) administered by the Federal Emergency Management Agency (FEMA) and through the Illinois Emergency Management Agency (IEMA) for developing an updated multi-jurisdictional local hazard mitigation plan; and

**WHEREAS**, the County contracted with the Bi-State Regional Commission (BSRC) for assistance in preparing the Plan update; and

**WHEREAS**, the City of Rock Island, with the assistance from Rock Island County and BSRC has gathered information and prepared the Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan update; and

**WHEREAS**, the Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan update has been prepared in accordance with FEMA requirements at 44 CFR 201.6; and

**WHEREAS**, the Plan process has been subject to public review and comment during its development; and

**WHEREAS**, the Mayor and the City Council of the City of Rock Island has reviewed the Plan; and

***NOW, THEREFORE BE IT RESOLVED*** by the Mayor and the City Council of the City of Rock Island that the City of Rock Island hereby approves and adopts the Rock Island County Multi-Jurisdiction Local Hazard Mitigation Plan update as this jurisdiction's Multi-Hazard Mitigation Plan pending FEMA approval of the Plan.

Adopted this \_\_\_ day of \_\_\_\_\_, 2016 at the meeting of the Mayor and City Council for the City of Rock Island.

\_\_\_\_\_  
\_\_\_\_\_, Mayor

Attest:

\_\_\_\_\_  
\_\_\_\_\_, Clerk

## EXECUTIVE SUMMARY

The *Rock Island County Multi-Jurisdiction Local Hazard Mitigation Plan* was developed to meet the requirements of the Disaster Mitigation Act of 2000, also known as DMA 2000. DMA 2000 places increased emphasis on local mitigation planning. It requires local governments to develop and submit mitigation plans as a condition of receiving Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Program (HMGP) project funds from the Federal Emergency Management Agency (FEMA). In addition to supporting ongoing mitigation actions, the plan assesses the vulnerability of the planning area to all natural hazards and, in this initial plan, some human-caused hazards. The plan identifies priority mitigation actions and establishes a process for implementation and maintenance of the plan.

Rock Island County received Hazard Mitigation Grant Program (HMGP) planning funds to update the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan* from 2009. All but one of the incorporated municipalities in Rock Island County and two school districts agreed to participate in order to make it a county-wide multi-jurisdictional plan. The active participation of all these jurisdictions is recorded within the plan document. Each jurisdiction that adopts the plan update receives eligibility to apply for and receive FEMA Hazard Mitigation Assistance funds.

Requirements for FEMA approval of the plan document include adoption of the plan by the local governing body. Chapter 2 of the plan documents the planning process used and public participation. The process included a Planning Committee made up of representatives of the participating jurisdictions who assisted in reviewing and refining plan draft sections. Each participating jurisdiction designated one contact to receive information and to respond to requests for data pertinent to that jurisdiction. Although other representatives may have been called on to attend meetings or respond to data requests, the primary contact structure established some continuity in the flow of information for each jurisdiction. In addition, an extended Advisory Committee was invited to represent a broader range of community interests and expertise. A list of those who received notices or attended meetings during the planning process is included in Appendix 2-3 to the document.

Chapter 3 of the plan deals with hazard analysis and risk assessment. Sixteen natural and/or human-caused hazard were identified for the planning area and profiled. A scoring methodology was agreed upon by the Planning Committee and was used as an objective means of establishing an initial priority ranking of the hazards. With review and consultation of the Planning Committee, the hazards identified as a first priority for the county-wide planning area as a whole include:

- Severe Storms Combined
  - Includes Hail, Lightning, Thunderstorm, Tornadoes, and Wind
- Severe Winter Storms
- Extreme Heat
- Influenza Pandemic
- River Flooding

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- Hazardous Materials Incident
  - Flash Flooding
  - Levee Failure

As a requirement of a multi-jurisdictional plan, each individual jurisdiction has its own risk assessment section in the plan. These highlight where local conditions differ from the county-wide planning area as a whole and reflect local hazard priorities.

Chapter 4 develops the mitigation strategy. First, local hazard mitigation goals and objectives were reviewed and updated for the county-wide planning area. The Planning Committee identified mitigation actions to address a comprehensive range of categories including prevention, property protection, public education and awareness, natural resource protection, and structural projects. Using FEMA guidance, all mitigation actions considered were analyzed under STAPLEE criteria (STAPLEE is an acronym for Social, Technical, Administrative, Political, Legal, Economic, and Environmental criteria). Mitigation actions were selected to address first priority hazards with an emphasis on flood mitigation. Each jurisdiction was required to develop at least one mitigation action specific to that jurisdiction's local priorities. The tables of priority mitigation actions provide justification for future funding requests and grant applications. The tables also provide information on the progress of previous mitigation actions. Mitigation actions that are not being carried forward are listed in a separate table with an explanation for its removal.

Chapter 5 describes existing planning mechanisms that will assist participating jurisdictions in implementation of priority actions. This part also outlines procedures for monitoring, evaluating, and updating the local hazard mitigation plan. Based on federal requirements, once FEMA has reviewed and approved the plan document, it must be reviewed and updated every five years or in the event of a federal Presidential Disaster Declaration, whichever comes first. Chapter 5 also provides the schedule of continued plan maintenance and continued public input.

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## Rock Island

### *Population:*

2000: 39,675                      2014: 38,876                      2019: 38,787 (Projected)

Current County Rank in Population: 2

Land Area: 16.85 SQ MI

County Rank in Land Area: 2

### *Land Use & Geography:*

The City of Rock Island is the second largest jurisdiction in Rock Island County in population; however, the city is the largest municipality in land area after the unincorporated county. The older developed areas of the city occupy the toe of the peninsula between the Mississippi and Rock Rivers. In addition, the city has annexed a sizable area southwest of the Rock River. The geology of the peninsula includes blufflines from both rivers. Bluff areas also are present in the southwest area starting at about 85th Avenue West along the old Rock River flood plain basin. In addition to features that pose natural hazards, Rock Island has both highway and freight rail infrastructure that increases the potential for hazardous materials incidents from truck traffic and rail shipment of ethanol.

### *Government Structure:*

- Mayor-Council structure, home rule
- Seven elected city council representatives elected by wards
- Mayor serves a 4-year term, City Council serves 4-year, staggered terms
- City Departments:
  - Administration
  - City Clerk/Treasurer
  - Community & Economic Development
  - Human Resources
  - Fire
- Boards and Commissions
  - Advanced Tech & Sustainability Consortium
  - Arts Advisory Committee
  - Beautification Commission
  - Board of Zoning Appeals
  - Building Code Board of Appeals
  - Citizens' Advisory Committee
  - Commercial/Industrial Revolving Loan Fund
  - Electrical Code Board of Appeals
  - Fire Pension Board of Trustees
  - Fire and Police Commissioners Board
  - Health Code Board of Appeals
  - Human Rights Commission

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Legal	King, Jr.
Library	Community Center Board
Parks & Recreation	Mechanical Bode Board of Appeals
Police	Neighborhood Partners
Public Works	Parks & Recreation Board
	Planning Commission
Labor Day Parade Advisory Board	Plumbing Code Board of Appeals
Library Board of Directors	Police Pension Board of Trustees
Liquor Control Commission	Martin Luther Preservation Commission

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Property Maintenance Board of Appeals  
Sunset Marina Boaters Advisory Committee

Water Pollution Control Commission  
Water Resource Committee

The City of Rock Island participates in the National Flood Insurance Program and has a floodplain management ordinance that is enforced by the city's Floodplain Manager. The city has a building code that is enforced by the Building Inspector, as well as a stormwater management ordinance enforced by the city's Public Works Department.

*Financial Capabilities:*

The city has a comprehensive 5-year Capital Improvement Plan. Hazard mitigation projects, especially those related to stormwater management could be incorporated into the CIP. The city is a taxing body and receives revenue from property and sales taxes and fee-based revenue. The city has and is capable of receiving and managing grants and can issue bonds for large projects.

*Critical Facilities:*

The City of Rock Island's critical facilities list remains mostly unchanged from the 2009 plan. The City of Rock Island listed 78 facilities in its list of community assets. Ten of these are for city operation and infrastructure, including City Hall, fire and police departments, water, and wastewater treatment facilities. The most significant change in the critical facilities list is the relocation of the Police Department building. A new building is currently under construction with completion scheduled for December 2015. Five structures listed are related to Rock Island County administration and operations. Federal facilities include a Federal Building and U.S. Post Office. Fourteen of the facilities listed may include vulnerable populations, including child day care and senior, disabled, and low-income housing. In addition, 16 school or training facilities are listed with an additional 16 directly related to the Augustana College campus. Large gathering areas, such as stadiums, arenas, or theaters are listed. The city has included communications facilities, such as radio, television, or telecommunications. Several businesses are included that handle sensitive materials, such as fuel or other hazardous materials.

*Development Trends:*

The city's comprehensive planning focuses on neighborhoods. There are two parallel strategies being pursued by the City of Rock Island for development and redevelopment. They are: 1) to promote infill development in the older areas of the city north of the Rock River and 2) to promote new development south of the Rock River. The infill in older developed areas is represented by the *New Old Chicago Plan* (July 2006) and the *Columbia Park Plan* (December 2004). The *Southwest Area Plan* (December 2000) promotes residential, commercial, and industrial development that is sensitive to the natural features of the area such as slopes, ravines, trees, drainage areas, and creeks. All development is contemplated to reflect the City Council's goals of sustainability and energy conservation. The city sees the *New Old Chicago Plan* implementation occurring over the next 10 years, with Columbia Park being a 20-year time frame. The Southwest Area is expected to be the city's long-range growth area over the next 20 to 50 years.

Rock Island provided the following estimates for the *2045 Quad Cities Long-Range Transportation Plan*: by 2025, there is a predicted increase of 515 additional housing units, 1188 additional school enrolled students, 310 additional industrial employees, 445 additional retail employees, and 165 additional "other" employees. By 2045, development in Rock Island will incur an additional 75 housing units, 1214 school enrolled children, 105 additional industrial employees, 175 additional retail employees, and 120 "other" employees.

*Hazard Priorities:*

2015	2009
1. Hazardous Materials Incident	1. Severe Storms (Combined)
2. Severe Storms Combined	2. Severe Winter Storms
3. Levee Failure	3. Hazardous Materials Incident
4. Severe Winter Storm	4. River Flood
5. Extreme Heat	5. Tornado

The City of Rock Island ranked Hazardous Materials Incident higher than the planning area. With considerable movement of materials by highway and freight rail in a largely developed area, there is greater historical occurrence, vulnerability, and probability of a hazardous materials incident than in less populated portions of the planning area. Severe Storms Combined and Severe Winter Storm remain in the top priority hazards. Two new hazards have entered the City's top hazard priorities, replacing River Flooding and Tornado, which was added to Severe Storms Combined. Levee Failure, since receiving its own hazard profile, jumped up in the city's priorities. This is because a great majority of the city's floodplain is protected by certified levees. The result of a levee failure would be immense. Because levees protect most of the floodplain in the city, River Flooding is not a large hazard.

**Rock Island County (Unincorporated)**

*Population:*

2000: 19,466                      2014: 17,460                      2019: 17,449 (Projected)

Current County Rank in Population: 4

Land Area: 354.64 SQ MI

County Rank in Land Area: 1

*Land Use & Geography:*

Rock Island County is the lead jurisdiction in this multi-jurisdictional plan. The unincorporated land area is the largest of all the jurisdictions in the planning area. While having the fourth largest population of all the jurisdictions, with such a large land area, it is the least densely developed. Undeveloped and agricultural land makes up a large part of the unincorporated area. Rock Island County also has the most river frontage of all the jurisdictions, with the Rock and Mississippi Rivers making up a good portion of its borders. Also because of its large land area, Rock Island County has a sample of more of the different geographic features of the county

## 4. MITIGATION STRATEGY

### *Local Hazard Mitigation Goals*

This chapter presents the mitigation strategy developed by the Planning Committee based on the risk assessment. The mitigation strategy was developed through a collaborative group process. The Steering Committee reviewed the Goals and Objectives from the 2009 plan and made several changes, as discussed below.

### Goals

Goals are general guidelines that explain desired achievements. They are usually long-term, broad, policy-type statements.

#### 2009 Plan Goals

- Goal 1: Protect human life and health.
- Goal2: Minimize the need for rescue and relief efforts associated with all hazards.
- Goal3: Minimize damage and displacement of private property, including both residential and commercial.
- Goal 4: Minimize expenditure of community resources for response and recovery resulting from all hazards.
- Goal 5: Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; bridges, and roads.
- Goal6: Ensure that the public is adequately informed of the potential for all hazards to occur and of the means of warning, mitigation, and recovery available within the county-wide planning area.

At the February 19, 2015 Planning Committee meeting, the goals were review and discussed. Goal 1 remained very similar, but was clarified. Goals 2 and 3 were combined and reworded to reflect overall vulnerabilities. Goal 4 was eliminated as it is more directly related to emergency response. Goal 5 was reworded, and Goal 6 was reworded to be broader. A new goal was brought in to emphasize the intergovernmental collaboration that is needed to help mitigate hazards. This also helps recognize collaboration has been occurring the planning area and region. Following the meeting, the Planning Committee agreed to revise the goals to the following:

#### 2015 Plan Goals

- Goal1: Protect human life and public health from the effects of hazards.
- Goal2: Minimize vulnerability of property from the effects of hazards.
- Goal 3: Minimize damage to critical facilities, infrastructure, and other community assets from the effects of hazards.
- Goal4: Improve public communication, education, and awareness of hazards and their risks.

- **Goal 5:** Strengthen intergovernmental coordination among jurisdictions within Rock Island County and the Region.

## Objectives

Objectives are defined as strategies or implementation steps to attain stated goals. The Planning Committee reviewed the objectives from the 2009 plan at their April 16, 2015 Planning Committee meeting. It was agreed that the objectives from the 2009 plan were no longer relevant with the new goals. The Planning Committee utilized FEMA guidance documents that describe a range of mitigation measures as the basis of the objectives in the plan and agreed on the following objectives:

- **Objective 1:** Develop and implement government administrative or regulatory actions or processes to influence the way land and buildings are developed and built. (Preventative Measure)
- **Objective 2:** Protect buildings and structures from hazards by modifying or removing them from hazard areas. (Property Protection)
- **Objective 3:** Inform and educate citizens, elected officials, and property owners about hazards and ways of mitigating. (Public Education and Awareness)
- **Objective 4:** Preserve or restore functions of natural systems while minimizing hazard losses. (Natural Resource Protections)
- **Objective 5:** Construct and maintain structural projects to reduce or redirect the impact of hazards away from at-risk populations and facilities. (Structural Projects)
- **Objective 6:** Protect people and property during and after a disaster event in order to minimize its impact and preserve the community's health and safety. (Emergency Services)

As described in Chapter 3, the Planning Committee determined that the focus of the mitigation actions would be on hazards identified as a first priority for the planning area. The first priority hazards are:

- Severe Storms Combined
- Severe Winter Storms
- Extreme Heat
- Influenza Pandemic
- River Flooding
- Hazardous Materials Incident
- Flash Flooding
- Levee Failure

The identified hazards and their ranking may differ for individual jurisdictions based on their unique conditions within Rock Island County; however, jurisdictions include most of the planning area hazards. The overall prioritization was agreed upon by the Planning Committee.

### *Review and Evaluation of Mitigation Actions*

In the 2009 plan, the Steering Committee brainstormed possible mitigation actions to address the First Priority Hazards. These were sorted by the six categories within the comprehensive range of mitigation action to identify where other actions might be considered. The original action concepts were edited into consistent language of actionable items. Next, the actions were assigned to appropriate goals and objectives and numbered accordingly. During the process of developing hazard mitigation actions, a number of suggestions were added to the original list. These are noted as appropriate in the evaluation. For the 2015 update, the Planning Committee reviewed existing mitigation actions and updated as necessary.

Due to the format utilized in the 2009 plan, it was hard to determine definitively which actions belonged to each jurisdiction. Any actions that possibly related to a jurisdiction were given to that jurisdiction to review and evaluate. Mitigation actions are listed under each jurisdiction. Updates on each jurisdiction's actions are included in Tables 4-1 and 4-2.

Actions were evaluated according to the STAPLEE method recommended by FEMA guidance for local hazard mitigation planning. This method provides a systematic way of evaluating the opportunities and constraints of implementing a particular mitigation action in the local jurisdiction. STAPLEE is an acronym for evaluating each action in terms of Social, Technical, Administrative, Political, Legal, Economic, and Environmental (STAPLEE) factors for implementation. A more detailed explanation of the STAPLEE evaluation method is in Appendix 4-1. A sample of the STAPLEE worksheet is included as Appendix 4-2.

Because of the extensive detail of the STAPLEE analysis, that information is included as a separate Appendix 4-3. This appendix contains the list of all actions considered: benefit, costs and/or funding source if available, person responsible for leading the action by title of position, timeframe for completion, and priority.

### *Multi-Jurisdiction Mitigation Actions*

In addition to the priority actions identified for the planning area as a whole, each participating jurisdiction identified at least one of its own actions to carry out. Staff assisted with the STAPLEE evaluation of these actions as shown in Appendix 4-3. The evaluations were reviewed by the jurisdictions, and the actions were identified as priorities. The individual jurisdiction priority actions are summarized in Table 4-1. Following the evaluation of the mitigation actions, some of the jurisdictions decided to remove actions from their list. Reasons for doing so included completion of mitigation actions, no jurisdiction over the action, and fiscally infeasible. Table 4-2 lists mitigation actions that are not carried forward and the reason why.