Rock Island County

Multi-Jurisdictional

Hazard Mitigation Plan

2021

This document was prepared by:

Rock Island County

Bi-State Regional Commission

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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 2016. All but one of the incorporated municipalities in Rock Island County and five 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 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 in included in Appendix 2-3.

Chapter 3 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
- Hazardous Materials Incident

- Pandemic Disease
- River Flooding
- Drought
- Earthquake

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. All mitigation actions considered were analyzed by evaluating and prioritizing mitigation actions based on a simplified review of the potential benefits and costs, as these seemed to be the determining factors as to which actions were implemented. 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.

1. PREREQUISITES

Adoption by the Local Governing Body

Rock Island County is multi-jurisdictional plan process for the county and its constituent municipalities. Rock Island County adopted the *Rock Island County Multi-Jurisdictional Hazard Mitigation Plan* updated on July 20, 2021. A copy of the signed resolution as adopted can be found in Appendix 1.1.

Multi-Jurisdictional Plan Adoption

The following 15 incorporated municipalities and five school districts have participated in the Local Hazard Mitigation Plan process with Rock Island County in order to receive individual approval of the plan. Each jurisdiction that has passed a resolution of adoption is shown below. A copy of each signed resolution is included in Appendix 1.1. The Village of Oak Grove elected not to participate in the plan update. Both the Moline-Coal Valley and Orion Community School districts are new participating jurisdictions in the plan update.

Participating Jurisdiction	Date of Plan Adoption
Village of Andalusia	TBD
Village of Carbon Cliff	TBD
Village of Coal Valley	TBD
Village of Cordova	TBD
Eagle Ridge Carbon Cliff-Barstow Community School District	TBD
City of East Moline	TBD
Village of Hampton	TBD
Hampton Community School District	TBD
Village of Hillsdale	TBD
Village of Milan	TBD
City of Moline	TBD
Moline-Coal Valley Community School District	TBD
Orion Community School District	TBD
Village of Port Byron	TBD
Village of Rapids City	TBD
Village of Reynolds	TBD
City of Rock Island	TBD
Rock Island County	7/20/21
Rock Island-Milan Community School District	TBD
City of Silvis	TBD

Multi-Jurisdictional Planning Participation

In addition to Rock Island County, the participating jurisdictions took part in the planning process as more fully described in Chapter 2. Each jurisdiction designated a primary contact and assigned staff to attend meetings as part of the planning committee. The planning committee was responsible for directing staff research, reviewing document drafts, and approving the plan process and final document. In addition to attendance at meetings, local jurisdictions responded to requests for data and provided information when conditions in an individual jurisdiction varied from the entire county-wide planning area.

At the initial kick-off meeting held on October 22, 2020, the planning committee discussed what would constitute satisfactory participation. The following was agreed upon: designate a primary contact; attend planning committee meetings; submit required information such as critical facilities, development trends, or any changes to the jurisdiction since the last plan; review scores for identified hazards from the jurisdiction's perspective and explain any changes from the previous plan; provide input and review of jurisdiction's risk assessment; report on progress toward previous mitigation actions; set up necessary community based meetings; review and comment on the plan draft; and adopt the plan upon FEMA's approval of the plan. All of the jurisdictions listed above met the necessary requirements to be considered a participating jurisdiction.

2. PLANNING PROCESS

Rock Island County was awarded a grant from the Federal Emergency Management Agency (FEMA) to update the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan* that has since been approved by FEMA on May 17, 2016. The grant was administered through the Illinois Emergency Management Agency (IEMA). In 2020, Rock Island County worked with Bi-State Regional Commission to guide the update of the plan to meet the requirements of the Disaster Mitigation Act of 2000. To ensure compliance with the process for updating the plan document, the 2016 plan's *Local Mitigation Plan Review Guide* from FEMA dated October 2011 was used for guidance in meeting the required revisions of the plan.

Who Was Involved

Rock Island County designated project management to Rock Island County Emergency Management staff and county zoning staff acting as the Steering Committee in coordination with Bi-State Regional Commission. Each interested jurisdiction submitted a Statement of Intent as part of the application process. Jurisdictions were contacted, and each one designated a primary contact. This follows the direct representation model. This primary contact, or another designated official or staff person, attended meetings and formed the Planning Committee. The Planning Committee was responsible for guiding decisions about the contents of the plan in relation to FEMA guidance and for reviewing draft documents. Since Planning Committee members represented communities looking for individual FEMA approval of the multi-jurisdictional plan, they also were responsible for noting any variation from the overall planning area for their community as well as working with other officials on hazard scoring, prioritization, mitigation actions, and providing additional information.

Jurisdiction	Name	Position
Municipalities		
Rock Island County EMA	Sheriff Gerald Bustos	EMA Director
Rock Island County EMA	Mindy Meyers	EMA Coordinator
Rock Island County EMA	Jerry Shirk	EMA Assistant Coordinator
Rock Island County EMA	Randy Heisch	EMA
Rock Island County	Greg Thorpe	Director of Zoning
Andalusia	Shelly Hoffman	Village Clerk
Andalusia	Curtis Morrow	Village President
Andalusia	Justin Parchert	Public Works Director
Carbon Cliff	Nick Gottwalt	Village Director
Carbon Cliff	Carly Neblungh	Village Clerk
Coal Valley	Penny Mullen	Director of Finance/Assistant Village Administrator
Coal Valley	Mike Bartels	Mayor
Cordova	Jim Boone	Village President
Cordova	Melissa Bowman	Village Clerk
East Moline	Doug Maxeiner	City Administrator
East Moline	Tim Kammler	City Engineer

Jurisdiction	Name	Position
East Moline	Robert DeFrance	Fire Chief
East Moline	John Showalter	Emergency Management Coordinator
Hampton	Ryan Tone	Police Chief
Hillsdale	Thomas Francis	Village President
Hillsdale	Jane Lindquist	Village Clerk
Milan	Steve Seiver	Village Administrator
Moline	Rodd Schick	Public Works Director
Moline	Jeff Snyder	Chief
Port Byron	Kristie Guardia	Deputy Clerk
Port Byron	Eric Sikkema	Emergency Coordinator
Rapids City	Missy Housenga	Village Clerk
Rapids City	Harold Mire	Village President
Reynolds	Ben Rowe	Water/Sewer
Rock Island	Jeff Yerkey	Fire Chief
Rock Island	Michelle Martin	Floodplain Manager
Silvis	Nevada Lemke	City Administrator
Community School Districts		
Carbon Cliff-Barstow Elementary School District	Eric Lawson	Superintendent
Carbon Cliff-Barstow Elementary School District	Carri Anderson	Administrative Assistant
East Moline Elementary School District	Dr. Kristin Humphries	Superintendent
Erie School District	Marty Felesena	Superintendent
Hampton Elementary School District	Scott McKissick	Superintendent
Moline- Coal Valley School District	Dr. Rachel Savage	Superintendent
Moline- Coal Valley School District	David McDermott	Chief Financial Officer
Moline- Coal Valley School District	Dan Smith	Director of Operations
Orion School District	Joe Blessman	Director of Operations
Riverdale School District	Josh Temple	Superintendent
Rock Island-Milan School District	Dr. Reginald Lawrence	Superintendent
Rock Island-Milan School District	Leslie Fonseca	Executive Assistant to the Superintendent
Sherrard School District	Alan Boucher	Superintendent
Silvis Elementary School District	Dr. Terri Vandewiele	Superintendent
United Township High School District	Dr. Jay Morrow	Superintendent

The Planning Committee list can also be found in Appendix 2-1.

After the responsibilities of the participating jurisdictions were outlined, 14 of 15 of the incorporated municipalities in Rock Island County agreed to participate in the multi-jurisdictional planning process. All of the school districts were also invited to participate in the plan. Five school districts elected to participate in the plan process. In addition to Rock Island County, participating jurisdictions include:

Village of Andalusia
Village of Carbon Cliff
Village of Coal Valley
Village of Cordova
Eagle Ridge Carbon Cliff-Barstow Community School District
City of East Moline
Village of Hampton
Hampton Community School District
Village of Hillsdale
Village of Milan
City of Moline
Moline-Coal Valley Community School District
Orion Community School District
Village of Port Byron
Village of Rapids City
Village of Reynolds
City of Rock Island
Rock Island-Milan Community School District
City of Silvis

The first meeting of the Planning Committee was held on October 22, 2020. Bi-State staff presented slides on the plan update requirements as outlined in FEMA guidance noting multi-jurisdictional requirements for individual participating communities in particular. This introduction included reference to the 2018 *Illinois Natural Hazard Mitigation Plan* and the natural hazards that might be considered in the hazard assessment portion of the plan. A copy of the PowerPoint presentation is included as Appendix 2-2. All meetings were open to the public. Owing to the fact that COVID-19 limited the ability to hold meetings, much of the information was reviewed independently by participating jurisdictions who were encouraged to share information with elected officials and the public as it was received.

Planning Area and Map

The planning area includes all of Rock Island County with participation of constituent jurisdictions as described above. A base map of the planning area was developed (Map 2-1 on page 11), showing jurisdictional boundaries and indicating which jurisdictions are participating in the plan process. The base map includes rivers and bodies of water and highways, major

roadways, and railroads. This map was used to overlay identified hazards areas, venerable facilities, and other features with a geographic reference in the risk assessment part of the plan. Because the Orion Community School District and the Village of Reynolds extend outside of Rock Island County, their respective boundaries outside of the county were considered on the individual jurisdictional level, but not when discussing Rock Island County.

Advisory Committee

In addition to the Planning Committee, a broader list of community groups and agencies was developed by staff using FEMA guidance to add more participation and expertise to the planning process as well as the Advisory Committee List from the 2016 plan. Media contacts were included in the Advisory Group invitation, which provided another opportunity for public information and participation.

Organizations	Contact Name
American Red Cross	Amber MacGrath
Black Hawk College	District Office
Black Hawk Fire Protection District	Todd Fitzpatrick
Community Foundation of the Great River Bend	Kelly Thompson
Exelon Corporation	Mike Muth
Henry County EMA	Mr. Mathew Schnepple
Henry County Administrator	Erin Knackstedt
IEMA	Steve Builta
IL NFIP Coordinator	Marilyn Sucoe
IL State Climatologist	Dr. Jim Angel
IL State Geologist	Bob Bauer
Illinois State Patrol	Jason Dickey
Illinois State Patrol	Ron Salier
Illinois State Patrol	Brett Tucker
KWQC-TV 6	Sue Ramsett (General Manager)
Mercer County EMA	Angie Litterst
MidAmerican Energy	Shane Emmert
MidAmerican	Greg Theis
Muscatine County Administrator	Nancy Schreiber
Muscatine County EMA	Brian Wright
National Weather Service	Rich Kinney
QC Airport	Cathie Rochau
QC Airport	Jeff Swan
QC Chamber of Commerce	Paul Rumler
QC Hispanic Chamber of Commerce	Janessa Calderon
Red Cross	Brooke Mehaffey
REDEEM	Tim Kinanishu
RICO Soil & Water Conservation District	Rich Stewart

Organizations	Contact Name
Riverfront Council	Steve Clark
Rock Island Arsenal	Nicholas Seibert
Rock Island County EMA	Mindy Meyers
Rock Island County EMA	Jerry Shirk
Rock Island County Health Department	Nita Ludwig
Rock Island County Highway Engineer	John Massa
Rock Island County Sheriff	Gerald Bustos
Rock Island Regional Office of Education	Tammy Muerhoff
Scott County Administrator	Mahesh Sharma
Scott County EMA	Dave Donovan
United Way of the Quad Cities	Karrie Abbott
USACE	Christopher Haring
USACE	Allan Tamm
USACE	Jerry Skalak
WHBF-TV 4	Pat Baldwin (General Manager)
Whiteside County Administrator	Joel Horn
Whiteside County EMA	Cory Law
WQAD-TV 8	Jim Kizer
Rock River Valley Association	Doug Riel

The Advisory Committee list can also be found in Appendix 2-3. Representatives were invited to participate in the planning process in an advisory capacity. Their role was to be available to staff as resources in their respective areas of interest and provide an additional layer of review in development of document drafts. The Advisory Group was invited to a meeting on November 19, 2020 and included an invitation to the public. A copy of the invitation letter is included as Appendix 2-4. Additionally, the advisory committee was directly invited by email to comment on the final draft of the document prior to adoption.

Steering Committee

The steering committee was comprised of representatives from both Rock Island County EMA as well as Rock Island County Zoning and Building Safety Department. In previous plan updates, the Department of Zoning and Building Safety had been the lead entity in the update process, but that responsibility has been shifted to the EMA. Steering committee meetings were held throughout the planning process to help guide the work of Bi-State Regional Commission Staff.

Public Participation

It was determined early on to make the planning process open to public participation. Rock Island County would make use of its website for draft sections of the plan. A public notice was posted in the paper on 11/15/2020 to make the public aware of the plan update. A section for the *Rock Island County Multi-Jurisdictional Hazard Mitigation Plan* process exists from the planning process for the plan update. As plan document drafts were developed and reviewed,

these were also posted to this section of the website. A formal public hearing on the plan document was held July 14, 2021, prior to Rock Island County's initial adoption. Additionally, the plan update was discussed at the county's Public Works Committee meeting on July 12, 2021 and again at the county's Committee of the Whole meeting on July 14, 2021. The plan adoption will be reaffirmed following approval from FEMA and IEMA.

A copy of the notices and certificates of publication for these meetings are included as Appendix 2-5. The July 14, 2021 meeting was part of the County Board's Committee of the Whole meeting. These meetings are posted on their website as well as other public spaces. Formal comments received at the hearing and any responses are included in Appendix 2-6.

In addition to the typical public process observed by the county, a press release was issued on July 9 announcing the plan's consideration at the then upcoming Committee of the Whole and County Board Meetings. The press release also solicited public comment for a 30-day period. A copy of the press release can be found in Appendix 2-5.

Other Opportunities for Involvement

Information on the Rock Island County Hazard Mitigation Plan Update was also communicated with two other groups. One being the Quad Cities Local Emergency Planning Committee (LEPC) which meets monthly and is open to the public. Agendas and Minutes for QCEPC can be found on Scott County's website:

(https://www.scottcountyiowa.gov/ema/qc-emergency-planning-committee/meetings?folder=ema-qcepc-meetings/2021) .

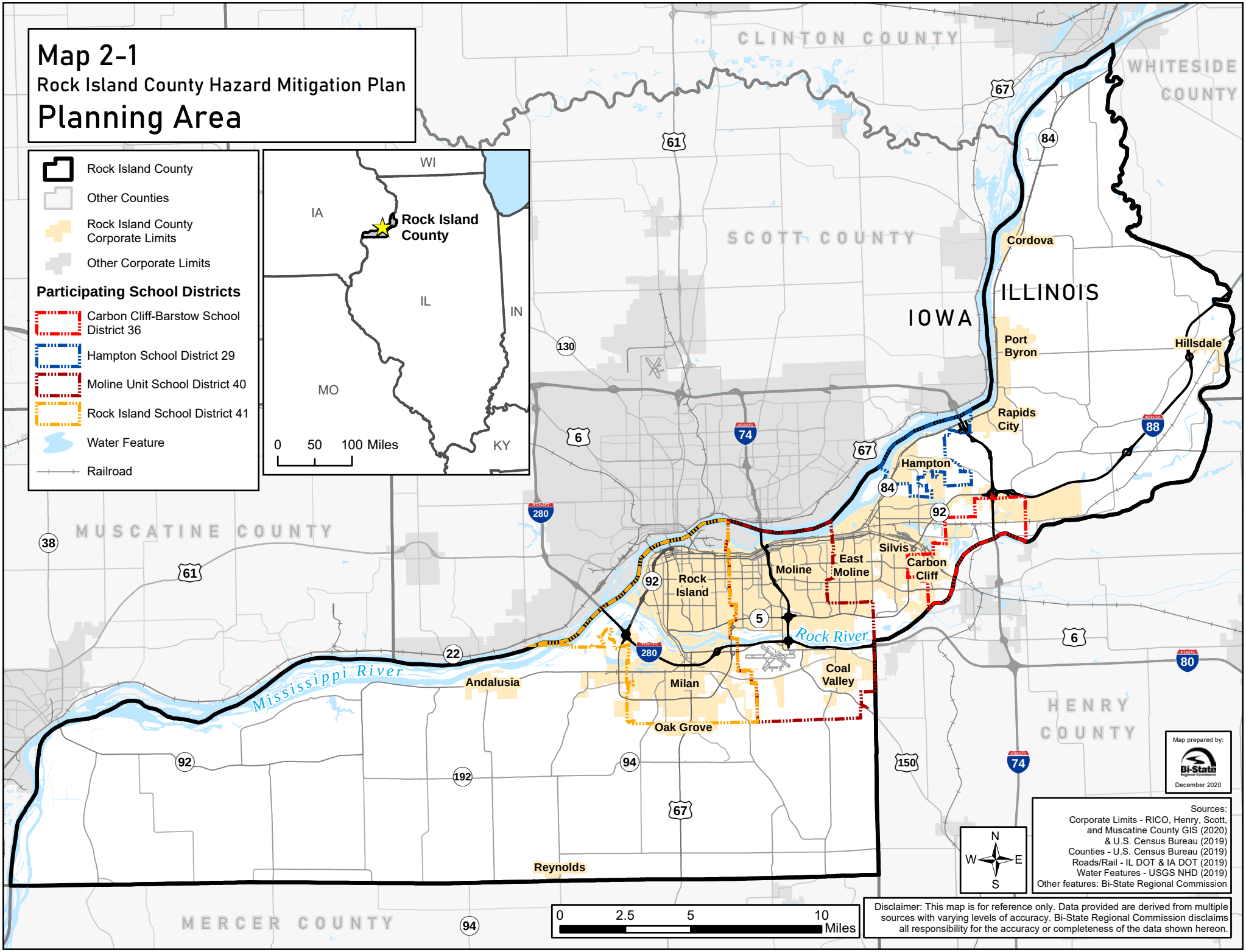
Status updates were provided regularly under the Other Public/Private Sector/COAD Reports topic. A list of members can be found in Appendix 2-5.

The other group is the Disaster Ready Quad Cities/Quad Cities Community Organization Active in Disasters (COAD). The Quad City COAD is a bi-state, multi-county organization that meets quarterly to plan for response and recovery from disasters in the Quad City Area. An agenda for this group is included in Appendix 2-5 for reference.

Each of these groups met regularly through the planning process.

Review of Existing Plans, Studies, Reports, and Technical Information

In addition to the persons included in the planning process, many written resources, existing plans, studies, reports, and technical information were reviewed and incorporated into the plan process as appropriate. Existing planning mechanisms were inventoried and reviewed for each participating jurisdiction. These are summarized in Appendix 2-7. Technical resources used to develop the hazard profiles are referenced after each hazard profile in Chapter 3. Planning and other documents from the Rock Island County Emergency Management Agency (EMA) were not made available for general review because of security considerations. However, the EMA director was on the steering committee and attended Planning Committee meetings.


Map 2-1
Rock Island County Hazard Mitigation Plan
Planning Area
Rock Island County
Other Counties
Rock Island County Corporate Limits
Other Corporate Limits
Participating School Districts
Carbon Cliff-Barstow School District 36
Hampton School District 29
Moline Unit School District 40
Rock Island School District 41
Water Feature
Railroad
WI
IA
IL
IN
MO
KY
Rock Island County
0 50 100 Miles
CLINTON COUNTY
WHITESIDE COUNTY
SCOTT COUNTY
MUSCATINE COUNTY
HENRY COUNTY
MERCER COUNTY
IOWA
ILLINOIS
Cordova
Port Byron
Hillsdale
Rapids City
Hampton
Silvis
Carbon Cliff
East Moline
Moline
Rock Island
Milan
Coal Valley
Oak Grove
Andalusia
Reynolds
Rock River
Mississippi River
61
67
84
130
6
74
88
92
280
38
22
5
80
192
94
150
N
W
E
S
0 2.5 5 10 Miles
Map prepared by:
Bi-State Regional Commission
December 2020
Sources:
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

3. RISK ASSESSMENT

Identifying hazards

At the first meeting of the Planning Committee, participants reviewed the list of hazards from the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016* and the hazards listed in the *Illinois Natural Hazard Mitigation Plan, 2018*. Influenza Pandemic was updated to a more inclusive terminology "Pandemic Disease." The hazards addressed in this plan compared to the 2016 plan are shown in Table 3-1.

Table 3-1
Hazards Addressed in Plan

2016 Hazards	Updated Plan Hazards
Dam Failure	Dam Failure
Drought	Drought
Earthquake	Earthquake
Expansive Soils	Expansive Soils
Extreme Heat	Extreme Heat
Flash Flooding	Flash Flooding
Grass, Field or Woodland Fire	Grass, Field or Woodland Fire
Hazardous Materials Incident	Hazardous Materials Incident
Influenza Pandemic	Landslides
Landslides	Land Subsidence
Land Subsidence	Levee Failure
Levee Failure	Radiological Incident
Radiological Incident	River Flooding
River Flooding	Severe Storms Combined (Includes Tornado)
Severe Storms Combined (Includes Tornado)	Severe Winter Storms
Severe Winter Storms	Pandemic Disease

Hazards of Avalanche, Coastal Erosion, Coastal Storm, Hurricane, Tsunami, and Volcano are not considered in the plan because of local geography and weather conditions.

Profiling Hazards

The hazard profiles were restructured to reflect the structure in the *Illinois Hazard Mitigation Plan, 2018* as part of the plan update. Each hazard profile contains information required under FEMA regulations and includes a definition, general description of how the hazard may occur within the planning area, historical occurrences, probability of future events/occurrences, the vulnerability of the planning area in future occurrences, severity of effects, warning time, and the duration of an event and recovery time when applicable. The hazard profiles are provided for the entire Rock Island County planning area. Effects of hazards to specific jurisdictions may

vary depending on the hazard, and those effects are addressed generally within the hazard profile with any information specific to the jurisdiction discussed in their jurisdictional profile.

Prioritizing Hazards

Following review of the hazard profiles, the Planning Committee utilized the *Illinois Natural Hazard Mitigation Plan, 2018* rating process to prioritize hazards for each jurisdiction and the planning area. This method scores historical occurrence, vulnerability, severity of impact, current population, and projected population growth to 2025 in low, medium, and high values. Historical Occurrence/Probability, Vulnerability, and Severity of Impact had higher point values (Low = 6, Medium = 12, High = 18) than current and projected populations (Low = 1, Medium = 2, High = 3). ESRI Community Analyst projects were used for 2020 population estimates and 2025 population projections for each community. The hazard scoring definitions can be found in Appendix 3-1. While this scoring methodology is not new in this plan, more accurate data sources were used, which may explain changes in scores and priority order from the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*.

Representatives of the participating jurisdictions on the Planning Committee were asked to review the score all of the profiled hazards from the perspective of their own communities. The total scores for each hazard for each participating jurisdictions are in Table 3-2. Each jurisdiction's hazard scores can be found in Appendix 3-2.

Table 3-2
Jurisdictional Hazard Profile Scores

Participants	Dam Failure	Drought	Earthquake	Expansive Soils	Extreme Heat	Flash Flood	Grass, Field, or Woodland Fire	Hazardous Materials	Pandemic Disease	Landslides	Land Subsidence	Levee Failure	Radiological Incident	River Flooding	Severe Storms Combined	Severe Winter Storm
Rock Island County (Unincorporated)	21	33	27	21	33	33	27	33	45	21	33	33	39	45	45	45
Andalusia	21	39	33	21	33	27	33	21	45	21	21	45	21	51	51	51
Carbon Cliff	21	39	33	21	33	27	27	21	45	21	39	21	27	39	45	51
Coal Valley	21	39	39	21	33	21	27	33	45	27	33	21	21	33	51	51
Cordova	20	38	32	20	38	20	32	44	44	20	20	20	44	32	50	44
East Moline	28	40	34	22	34	28	22	46	46	22	22	40	22	34	40	46
Hampton	27	39	33	27	33	27	21	27	45	21	21	27	33	39	45	51
Hillsdale	20	38	32	20	32	26	20	26	44	20	20	32	26	50	38	50
Milan	21	39	33	21	33	27	21	45	45	21	21	45	21	33	51	45
Moline	22	40	34	22	34	28	22	34	46	22	28	22	22	28	46	46
Port Byron	21	39	39	21	33	21	33	21	45	21	21	27	45	33	39	45
Rapids City	32	38	32	20	32	26	26	26	44	20	32	20	20	32	44	44
Reynolds	20	38	32	20	32	20	20	20	44	32	20	20	20	26	44	50
Rock Island	22	40	34	22	34	22	22	46	46	22	22	40	22	28	46	46
Silvis	21	39	33	21	33	21	21	27	45	21	33	21	21	27	51	57

A similar score was calculated for the planning area (entirety of Rock Island County) as well (Table 3-3). These scored give a broad picture of which hazards are most prevalent in general and satisfies the State of Illinois's request that each plan include scores for entire counties.

Table 3-3
Planning Area Hazard Scores

	Dam Failure	Drought	Earthquake	Expansive Soils	Extreme Heat	Flash Flood	Grass, Field, or Woodland Fire	Hazardous Materials	Pandemic Disease	Landslides	Land Subsidence	Levee Failure	Radiological Incident	River Flooding	Severe Storms Combined	Severe Winter Storm
Historical/ Probability	6	12	6	6	18	12	6	18	6	6	6	6	6	18	18	18
Vulnerability	6	18	18	6	18	6	6	6	18	6	6	6	6	6	18	18
Severity of Impact	18	6	12	6	12	12	6	18	18	18	12	18	18	18	18	18
Population	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Population Growth	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	33	39	39	21	51	33	21	45	45	33	27	33	33	45	57	57

Since a more data-driven approach was used in the 2021 plan update, the scores between the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016* and the update do not present a fair comparison; however, the results of the ranking between the 2016 plan and the update place the hazards in a similar priority order.

Table 3-4
Planning Area Hazard Scores Comparisons

	2016 Scores	2021 Scores	2016 Rank	2021 Rank
Dam Failure	21	33	11	9
Drought	27	39	9	7
Earthquake	21	39	11	7
Expansive Soils	21	21	11	15
Extreme Heat	39	51	3	3
Flash Flooding	33	33	5	9
Grass, Field or Woodland Fire	21	21	11	15
Hazardous Materials	33	45	5	4
Pandemic Disease*	39	45	3	4
Landslides	21	33	11	9
Land Subsidence	21	27	11	14
Levee Failure	33	33	5	9
Radiological Incident	27	33	9	9
River Flooding	33	45	5	4
Severe Storms Combined	51	57	1	1
Severe Winter Storms	51	57	1	1

*2016 plan referred to “pandemic influenza.” The new hazard encompasses all potential pandemic diseases.

Descriptions of priority groupings from the 2016 plan were reviewed and kept:

- **High Priority** – Hazards with a higher likelihood of occurrence and unacceptable consequences. They are candidates for immediate focus in mitigation and for eliminating unacceptable risk factors.
- **Medium Priority** – Hazards that should be addressed, but have a lower priority or are longer term in focus. For the Medium Priority, emphasis is on risk reduction.
- **Low Priority** – Hazards that have a less significant level of risk, for which baseline protection is adequate, or are considered to be largely beyond the scope of local mitigation efforts.

Using these priority definitions, the Planning Committee agreed on the following priority rankings for the planning area as a whole:

Table 3-5
Adjusted Rankings Based on Priority Definitions

2016 Plan		Updated Plan	
High		**High**	
1	Severe Storms Combined	1	Severe Storms Combined
1	Severe Winter Storms	1	Severe Winter Storms
3	Extreme Heat	3	Extreme Heat
3	Influenza Pandemic	4	Hazardous Materials Incident
5	River Flooding	4	Pandemic Disease
5	Hazardous Materials Incident	4	River Flooding
5	Flash Flooding	**Medium**	
5	Levee Failure	7	Drought
Medium		7	Earthquake
9	Drought	9	Dam Failure
9	Radiological Incident	9	Flash Flood
Low		9	Landslide
11	Land Subsidence	9	Levee Failure
11	Landslide	9	Radiological Incident
11	Earthquake	**Low**	
11	Dam Failure	14	Land Subsidence
11	Grass, Field or Woodland Fire	15	Expansive Soils
11	Expansive Soils	15	Grass, Field, or Woodland Fire

These final priority rankings and the hazard scores for the planning area are repeated on the hazard profile worksheets.

Pandemic Disease, due to the number of people potentially affected, was scored and remains a High Priority Hazard. Due to the number of High Priority hazards and the potential threat they pose, the Planning Committee chose to focus mitigation on High Priority Hazards. However, individual participating jurisdictions may have scored the hazards differently from the planning area averages based on local knowledge of community characteristics and vulnerabilities. This will be analyzed further in the Multi-Jurisdictional Risk Assessment section beginning on page 117.

Hazard Profiles

Dam Failure

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	6	18	2	1	33

A dam is a barrier constructed across a watercourse in order to store, control, or divert water. Dams are usually constructed of earth, rock, concrete, or mine tailings. The water impounded behind a dam is referred to as the reservoir and is measured in acre-feet, with one acre-foot being the volume of water that covers one acre of land to a depth of one foot. Due to topography, even a small dam may have a reservoir containing many acre-feet of water. A dam failure is the collapse, breach, or other failure of a dam that causes downstream flooding. Another type of failure occurs when erosion through the dam foundation occurs. Both overtopping and erosion dam failure result in a high velocity or debris-heavy water that rushes downstream, causing damage within its path. In addition to natural events causing dam failure, improper design, improper maintenance, negligent operation, or failure of upstream dams may also lead to dam failures.

The United States Army Corps of Engineers National Inventory of Dams consists of dams that meet any of the following criteria: high or significant hazard classification; equal to or exceed 25 feet in height and exceed 15 acre-feet in storage; or equal to or exceed 50 acre-feet storage and exceed 6 feet in height. Dams are classified into three categories based on the potential risk to people and property should a failure occur. The classification may change over time because of development downstream from the dam since its construction. Older dams may not have been built to the standards of its new classification. Below are the hazard classifications defined by Illinois Department of Natural Resources.

High Hazard (Class I) – Located where failure has a high probability for causing loss of life or substantial economic loss in excess of that which would naturally occur downstream of the dam if the dam had not failed.

Significant Hazard (Class II) – Located where failure has a moderate probability for causing loss of life or may cause substantial economic loss in excess of that which would naturally occur downstream of the dam if the dam had not failed.

Low Hazard (Class III) – Located where failure has a low probability for causing loss of life or may cause substantial economic loss in excess of that which would naturally occur downstream of the dam if the dam had not failed.

Dam hazard potential classifications have nothing to do with the material condition of a dam, only the potential for death or destruction due to the size of the dam, the size of the impoundment, and the characteristics of the area downstream of the dam. The Illinois Department of Natural Resources Office of Water Resources oversees the state's dam safety

program through permitting and inspection of dams. According to the *IDNR Dam Safety Program 2018 Report Card for Illinois Infrastructure*, a review of a representative sample of dam inspection reports indicated that permitted and inspected dams are in generally good condition, receiving a "C" as a grade.

According to the Illinois Department of Natural Resources (DNR) Water Resources Department, Rock Island County has 14 dams and two Mississippi River dams shared with Iowa. The state of Illinois uses a dam classification system of Class I, II, or III based on their hazard level of high, significant, or low, respectively. The Lake George Dam and Tom Steele Dam are considered Class I hazards, the two Iowa dams (Mississippi River Dams 15 and 16) are considered Class II hazards, and the remaining 12 are considered Class III hazards.

Dam Name	Tributary	Hazard	EAP
Lake George Dam	Trib. Mississippi River	I	Y
Stanrick Dam	Trib. Mill Creek	III	N
Donnelly Pond Dam	Trib. Coppers Creek	III	N
McLaughlin Pond Dam	Trib. Mississippi River	III	N
Turkey Hollow Reservoir Dam	Fancy Creek	III	N
Arsenal Power Dam	Mississippi River	III	N
Moline Power Dam	Mississippi River	III	N
Sears Dam	Rock	III	N
Steel Dam	Rock	III	N
Valley Friends Dam	Trib. – Mississippi	III	NR
Tom Steele Dam	Trib. – Turkey Hollow Creek	I	Y
Meyers Pond Dam	Trib. – Mississippi River	III	NR
Lock and Dam 14	Mississippi River	III	N
Lock and Dam 15	Mississippi River	III	N
Mississippi River Dam 15	Mississippi River	II	NR
Mississippi River Dam 16	Mississippi River	II	N

I = Class I/High Hazard, II = Class II/Significant Hazard, III = Class III/Low Hazard
Y = Yes, N = No, NR = Not Required

Source: Illinois Department of Natural Resources – Water Resources Department

The National Inventory of Dams (NID) also shows 14 dams in Rock Island County and two in Iowa that affect the Illinois side of the Mississippi River. However, the NID does not use the same hazard classification as the State of Illinois. The NID also includes the Hidden Lake Dam and only counts the Mississippi River Dam 15 once. From this assessment, Rock Island County has three high hazard dams (Lake George Dam, Hidden Lake Dam, and Tom Steele Dam), two significant hazard dams, and 11 low hazard dams.. The Hidden Lake Dam was intentionally breached in 2000 with permission granted by Illinois Department of Natural Resources and no longer holds water. Map 3-1 displays the dams with their hazard classifications.

Dam Name	Tributary	Hazard	EAP
Lake George Dam	Trib. Mississippi River	H	Y
Stanrick Dam	Trib. Mill Creek	L	N
Donnelly Pond Dam	Trib. Coppers Creek	L	N
McLaughlin Pond Dam	Trib. Mississippi River	L	N
Turkey Hollow Reservoir Dam	Fancy Creek	L	N

Dam Name	Tributary	Hazard	EAP
Arsenal Power Dam	Mississippi River	L	Y
Moline Power Dam	Mississippi River	L	Y
Sears Dam	Rock	L	NR
Steel Dam	Rock	L	NR
Valley Friends Lake Dam	Trib. – Mississippi	L	N
Hidden Lake Dam**	Trib. – Hills Creek	H	N
Tom Steele Dam	Trib. – Turkey Hollow Creek	H	Y
Meyer S Dam #1	Trib. – Mississippi River	L	NR
Lock And Dam 14	Mississippi River	S	Y
Lock And Dam 15	Mississippi River	S	Y
Lock And Dam 16	Mississippi River	L	N

** Intentionally breached 2000 Permit DS2000035
H = High Hazard, S = Significant Hazard, L = Low Hazard
Y = Yes, N = No, NR = Not Required

Source: USACE National Inventory of Dams

Probability. There has been one recorded dam failure within Rock Island County at Hidden Lake Dam, which was intentionally done with IL DNR permitting. With increased attention to sound design, quality construction, and continued maintenance and inspection, dam failure probability can be reduced. According to the 2017 National Infrastructure Report Card, the average age of dams in the United States is 56 years, and by 2025, 70% of all dams will be over 50 years old, which is considered the design life of a dam. While there is a brief, generalized risk assessment for dam failure in the *Illinois Natural Hazard Mitigation Plan, 2018,* there is no way to determine or evaluate the probability of dam failure in the state.

Magnitude and Severity. People and property along streams are most vulnerable. Even facilities and lives considerable distances from the actual impoundment are not immune from the hazard. Depending on the size and volume of the impoundment as well as the channel characteristics, a flash flood can travel a significant distance.

The area affected following a dam failure would be limited to those areas in and near floodplain downstream of dam facilities. People and property outside the floodplain could also be affected depending on the proximity to the dam and the height above the normal stream level. There is a very limited risk to critical facilities that depends upon the downstream property, facilities, and infrastructure. For the federal dams listed, failure would primarily result in the loss of navigation pool and disruption to the navigation industry. Due to locations in the county and the low risk of hazard, services would not be severely affected. Scouring and erosion could have an immediate impact should a dam fail. Crop flooding, severe scouring, and erosion around bridges could take place (similar to flash flooding) and could have agricultural and economic effects if damage would be extensive. Disruption to the navigation industry would also occur if a federal dam failed.

Low Hazard Dams

As indicated above dams classified as Low Hazard (III) are located where failure has a low probability for causing loss of life or may cause substantial economic loss in excess of that

which would naturally occur downstream of the dam if the dam had not failed. For this reason, the property near these structures is not examined.

Significant Hazard Dams

Mississippi River Dams 14 and 15 are classified as Significant Hazard (II) dams. As the dams are located on the river, the impact of a dam failure would be similar to that of a river flooding event. A failure could cause disruption to the navigation industry and result in significant economic impact. The severity of the impact would largely depend on the extent of dam failure and the river flow conditions at the time. As an example, at or above flood stage, the dam gates are typically open for free flow-up water, so dam failure would be equivalent to the flooding at or above flood stage.

High Hazard Dams

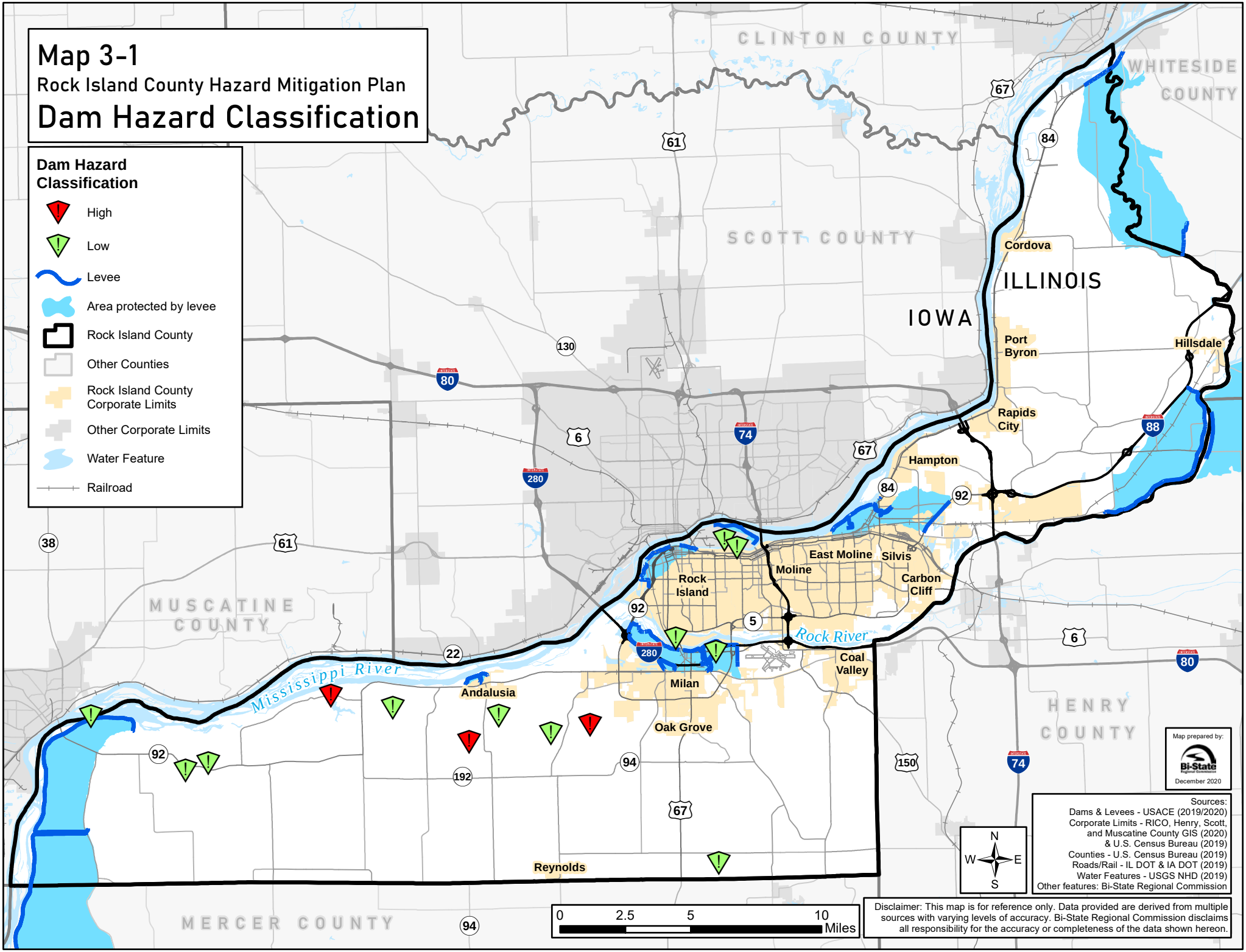
As indicated above dams classified as High Hazard (I) are located where failure has a high probability for causing loss of life or substantial economic loss in excess of that which would naturally occur downstream of the dam if the dam had not failed.

- The Lake George Dam has an Emergency Action Plan (EAP) in place. Regarding potential impacted area, the EAP indicates: "There are NO homes or businesses directly downstream. The Forest Preserve has a boat dock and the *Riverview Area* campground facilities approximately 1,500 feet downstream of the dam. Navigation on the Mississippi River will be impacted adjacent to the outlet of Big Branch Creek."
- The Tom Steele Dam drains into an unnamed creek which flows north to join with Turkey Hollow Creek just south of Turkey Hollow Road. Based on analysis of topographic maps, land use, and parcel data, a failure of the dam would have the potential to impact three non-agricultural properties. Of those properties, two are residential properties assessed at a total value of $134,816 the other is a commercial property with an assessed value of $5,510,476. The remaining affected properties would be agricultural and may experience crop loss, soil erosion or deposition of debris. Transportation facilities potentially impacted are Turkey Hollow Road, 85th Ave. W., and IL 92, however alternative routes are available in the case these facilities are disrupted. A detailed analysis of the Tom Steele Dam is not available at this time but could be incorporated in future plan updates.

Warning Time. A dam failure can be immediate and catastrophic leaving little or no time to warn those downstream of the imminent hazard. With maintenance and monitoring, weak areas and possible failure points can be identified allowing time for evacuation and securing of the dam. Most dams are only inspected periodically, thus allowing problems to go undetected until a failure occurs. Due to the lack of advanced warning, failures from natural events such as earthquakes or landslides may be more severe than failures due to flood waters or rainfall. Dam failures most commonly occur when the spillway capacity is inadequate for the current flood or rainfall, and the water overtops the dam.

Duration. Response to the effects of a dam failure is extensive and requires wide-ranging recovery efforts for reconstruction of the original flood control structures.

Sources:	
2018 Report Card for Illinois Infrastructure Illinois Dam Safety Program: https://www.infrastructurereportcard.org/wp-content/uploads/2016/10/FINAL-REPORT-CARD-FOR-2018-IL-Infrastucture.pdf	USACE National Inventory of Dams: https://nid.sec.usace.army.mil/ords/f?p=105:1::::::
Illinois Natural Hazard Mitigation Plan, 2018	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
Association of State Dam Safety Officials	FEMA Multi-Hazard Identification and Risk Assessment 1997
Illinois Department of Natural Resources	Water Resources Department


Map 3-1
Rock Island County Hazard Mitigation Plan
Dam Hazard Classification
Dam Hazard Classification
High
Low
Levee
Area protected by levee
Rock Island County
Other Counties
Rock Island County Corporate Limits
Other Corporate Limits
Water Feature
Railroad
CLINTON COUNTY
WHITESIDE COUNTY
SCOTT COUNTY
MUSCATINE COUNTY
HENRY COUNTY
MERCER COUNTY
ILLINOIS
IOWA
Cordova
Port Byron
Hillsdale
Rapids City
Hampton
East Moline
Silvis
Moline
Rock Island
Carbon Cliff
Coal Valley
Milan
Andalusia
Oak Grove
Reynolds
Mississippi River
Rock River
61
67
84
130
80
6
74
280
88
92
38
22
5
94
192
150
Map prepared by:
Bi-State
December 2020
Sources:
Dams & Levees - USACE (2019/2020)
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission
N
W
E
S
0 2.5 5 10 Miles
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Drought

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
12	18	6	2	1	39

A drought is period of prolonged lack of precipitation for weeks, months, and/or years at a time that produces severe dry conditions.

There are three types of drought conditions:

Meteorological drought – Refers to precipitation deficiency

Hydrological drought – Refers to declining surface and groundwater supplies

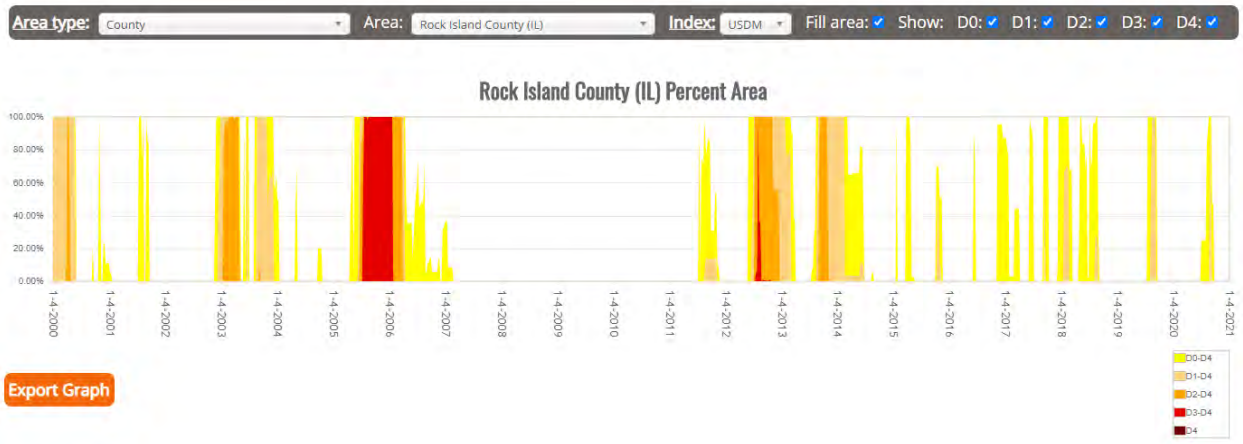
Agricultural drought – Refers to soil moisture deficiencies

Droughts can be spotty or widespread and last from weeks to a period of years. A prolonged drought can have a serious economic impact on a community. Increased demand for water and electricity may result in shortages of resources. Food shortages may occur if agricultural production is damaged or destroyed by a loss of crops or livestock. While droughts are generally associated with extreme heat, droughts can and do occur during cooler months. One measure of the magnitude of drought conditions is provided by the Palmer Drought Severity Index (PDSI), which provides a scale of differences from standard soil moisture conditions as follows:

Palmer Classifications	
4.0 or more	Extremely
3.0 to 3.99	Very wet
2.0 to 2.99	Moderately wet
1.0 to 1.99	Slightly wet
0.5 to 0.99	Incipient wet spell
0.49 to -0.49	Near normal
-0.5 to -0.99	Mild drought
-1.0 to -1.99	Mild drought
-2.0 to -2.99	Moderate drought
-3.0 to -3.99	Severe drought
-4.0 or less	Extreme drought

The National Drought Mitigation Center has a Drought Severity Classification system that takes into account the Palmer Drought Index, soil moisture, streamflow, and the Standardized Precipitation Index. It also looks at droughts as both short-term and long-term. Following is a table explaining the classification system and a graph showing droughts from 2000 until September 2020.

Figure 3-1
U.S. Drought Monitor



			Ranges				
Category	Description	Possible Impacts	Palmer Drought Severity Index (PDSI)	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index (SPI)	Objective Drought Indicator Blends (Percentiles)
D0	Abnormally Dry	Going into drought: ▪ short-term dryness slowing planting, growth of crops or pastures Coming out of drought: ▪ some lingering water deficits ▪ pastures or crops not fully recovered	-1.0 to -1.9	21 to 30	21 to 30	-0.5 to -0.7	21 to 30
D1	Moderate Drought	▪ Some damage to crops, pastures ▪ Streams, reservoirs, or wells low, some water shortages developing or imminent ▪ Voluntary water-use restrictions requested	-2.0 to -2.9	11 to 20	11 to 20	-0.8 to -1.2	11 to 20
D2	Severe Drought	▪ Crop or pasture losses likely ▪ Water shortages common ▪ Water restrictions imposed	-3.0 to -3.9	6 to 10	6 to 10	-1.3 to -1.5	6 to 10
D3	Extreme Drought	▪ Major crop/pasture losses ▪ Widespread water shortages or restrictions	-4.0 to -4.9	3 to 5	3 to 5	-1.6 to -1.9	3 to 5
D4	Exceptional Drought	▪ Exceptional and widespread crop/pasture losses ▪ Shortages of water in reservoirs, streams, and wells creating water emergencies	-5.0 or less	0 to 2	0 to 2	-2.0 or less	0 to 2

Historical Occurrence. According to the National Centers for Environmental Information (formerly known as the NCDC), there have been 15 drought events in Rock Island County since 1990. One recent drought event affecting Rock Island County began in June 2005 and continued through March 2006. The drought became severe to extreme in Northwest Illinois through July and into August, equaling or exceeding the dry conditions during the drought of 1988. By late July, much of the state was declared an agricultural disaster area. Agricultural yield reductions of 25-30% were reported along the Mississippi River Valley.

In 2012, another severe drought occurred in Illinois, affecting a large majority of the state. The drought conditions intensified throughout the summer months and into early fall. Agricultural effects became evident in late July as hydrologic conditions continued to deteriorate. The statewide average precipitation total from June 21 to July 3 was 0.5 inches, only 28 percent of normal average precipitation. It was the eighth driest June on record.

Probability. Drought is part of normal climate fluctuations. According to the National Drought Mitigation Center, periods of severe to extreme drought in the Upper Mississippi Basin occur cyclically, about once every ten years. Research and observations of the El Nino/La Nina climatic events are resulting in more predictable climatic forecasts. The National Weather Service (NWS) provides the U.S. Seasonal Drought Outlook by week, month, or quarter for individual regions across the U.S. Currently as of November 19, 2020 through February 2021, there is no prediction for drought in the Midwest region, according to the U.S. Seasonal Drought Outlook. The most severe drought in recent years was 1988, when rainfall was 88% of normal. Droughts of this magnitude occur about once every 21 years. Historically, moderate to severe droughts occur about 17% of the time in Illinois.

Magnitude and Severity. Farmers are usually the first to feel the effects of drought due to effects on crops and livestock. Farmers also rely on wells for their water supply. Wells are vulnerable to droughts and may cause farmers to have limited water supplies or to dig deeper wells. Public water supplies are typically more robust to the effects of droughts, but are not immune to long-term drought conditions.

The *Illinois Natural Hazard Mitigation Plan, 2018* rated Rock Island County as Medium in their hazard scoring process. Few, if any, health effects to people occurred in the affected area because of secondary sources of water. Drought in the U.S. seldom results directly in the loss of life. Health effects would be more significant on livestock without auxiliary water supplies. Property losses would be limited to livestock and crops to the agricultural community. According to the *Illinois Natural Hazard Mitigation Plan, 2018*, the estimated annual loss from drought events from 1957 to 2017 is $139,545 for Rock Island County with total recorded losses of $9,210,000.

Warning Time. Drought warning is based on a complex interaction of many different variables, water uses, and consumer needs. Drought warning is directly related to the ability to predict the occurrence of atmospheric conditions that produce the physical aspects of drought, primarily precipitation, and temperature. There are so many variables that can affect the outcome of climatic interactions that it is difficult to predict a drought in advance. In fact, an area may already be in a drought before it is even recognized. While warning of the drought may not come until the drought is already occurring, the secondary effects of a drought may be predicted and warned against weeks in advance.

Duration. Generally, drought is associated with a sustained period (which differs for each drought impact) of significant below average water or moisture supply. Climatic variability can bring dry conditions to the region for up to years at a time.

Sources:	
National Centers for Environmental Information	http://www.ncdc.noaa.gov/stormevents/
National Drought Mitigation Center	http://drought.unl.edu/Home.aspx
National Weather Service	https://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php
Rock Island County, Bi-State Regional Commission	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
State of Illinois, IEMA	*Illinois Natural Hazard Mitigation Plan, 2018*

Earthquake

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	18	12	2	1	39

An earthquake is any shaking or vibration of the earth caused by the sudden release of energy from the breaking and shifting of rock beneath the Earth's surface that may impose a direct threat on life and property. This shaking can cause damage to buildings and bridges and may lead to collapse; disrupt gas, electric, and phone service; and sometimes trigger landslides, flash floods, and fires. The three general classes of earthquakes now recognized are tectonic, volcanic, and artificially produced.

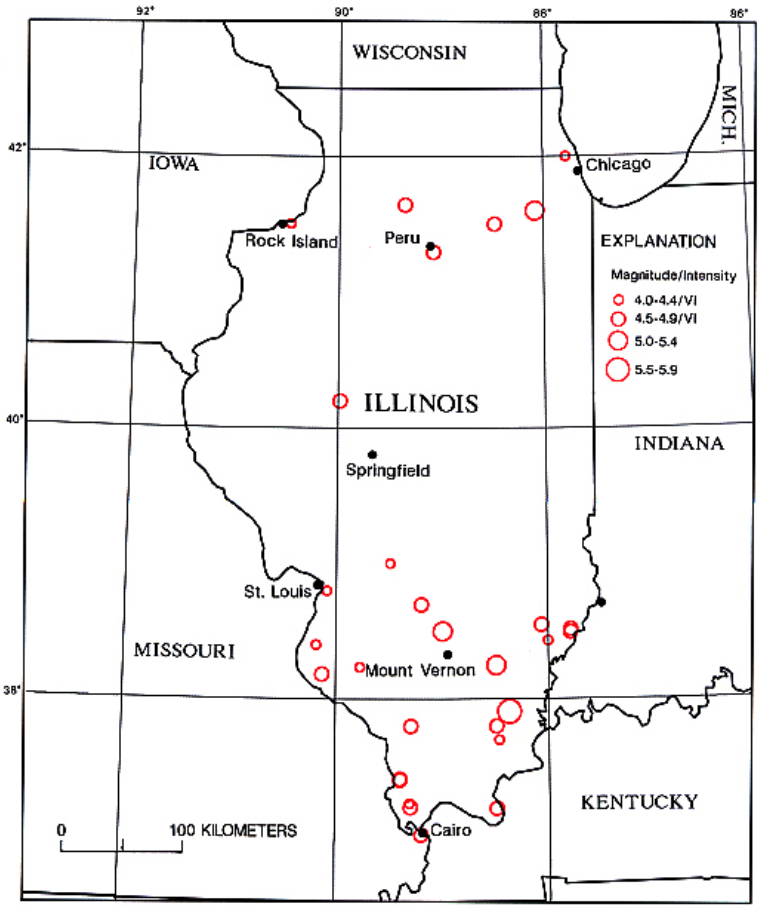
The effect of an earthquake on the surface of the Earth is called the intensity. The intensity scale takes into consideration responses such as people awakening, movement of furniture, and destruction. The scale that is currently used in the United States is the Modified Mercalli Intensity Scale, which was developed in 1931, and contains 12 levels of increasing intensity, ranked by observed effects.

Modified Mercalli Intensity Scale	
LEVEL	DEFINITION
I	Not felt except by a very few under especially favorable conditions.
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects swing.
III	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Vibrations similar to the passing of a truck.
IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed, walls make cracking sound. Sensation like heavy truck striking building.
V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned.
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster and cracked chimneys. Damage slight.
VII	Difficult to stand. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Damage slight in specially-designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Damage considerable in specially-designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent slightly.
XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.

Source: *Illinois Natural Hazard Mitigation Plan, 2018*

Historical Occurrence. Over 360 small to moderate earthquakes are known to have occurred in Illinois during the past two centuries. Of these, 32 caused at least some damage. Rock Island County has had two instances of earthquakes, both with a magnitude between 3 and 3.9. The majority of the epicenters of these earthquakes have been located in the southern portions of Illinois and Missouri in an area known as the New Madrid Seismic Zone. The largest earthquakes occurring in Northern Illinois occurred in 1909 on May 26 and again on July 18. These were recorded at Intensity VII (MMI) with very strong perceived shaking and moderate damage. This was reported to be strong enough to knock down chimneys in Davenport, Iowa. Another earthquake was reported near Rock Island, Illinois November 12, 1934 with a 4.0 Richter magnitude or Intensity VI MMI (strong perceived shaking). According to historic information from the U.S. Geological Survey (USGS), bricks fell from chimneys and pendulum clocks stopped in Rock Island, Moline, and Davenport, Iowa. In Rock Island, a stucco cornice was dislodged from St. Joseph's School; some loose plaster was shaken from ceilings in the men's dormitory at Augustana College, and loose bricks were shaken from a few buildings. Since then, the state's most severe earthquake occurred in November 1968 with a Richter magnitude of 5.3, which produced some moderate damage in southern Illinois and St. Louis, Missouri 110 miles away.

Figure 3-2
Illinois State Geological Survey Earthquake Map of Illinois

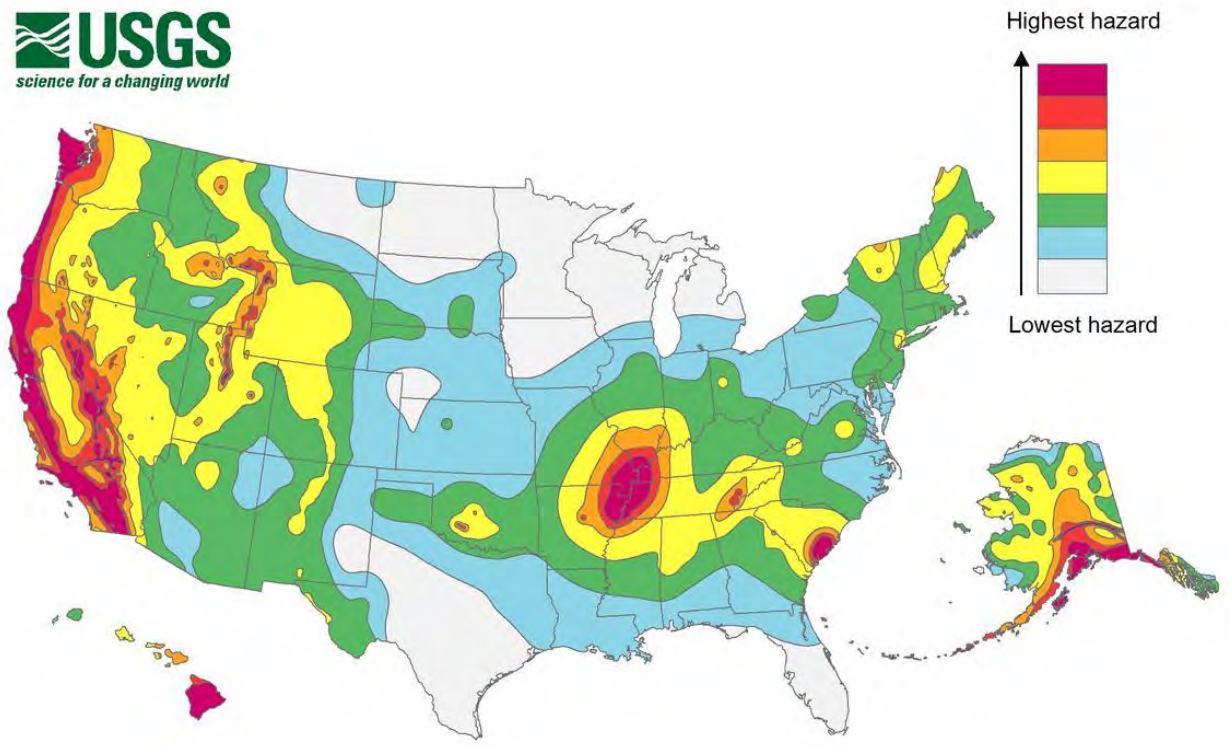


Source: Illinois State Geological Survey. Earthquake Maps.

Probability. According to the Illinois State Geological Survey's 1990 *Seismicity of Illinois*, seismologists attempt to forecast earthquake size and frequency based on data from previous events. In the New Madrid Seismic Zone, which is outside of the State of Illinois in Missouri, the forecast is based on a network of seismographs that have been monitoring events in the area for about 30+ years. But major (> magnitude 7) earthquakes have left evidence of four 1811-1812 New Madrid type earthquake events in the past 2,000 years, and the last strong event (6+) was in 1895. New probabilities from USGS suggest there is a 7 to 10% chance of a repeat of 1811-1812 type events in the next 50 years and a 25 to 40% chance of events greater than magnitude 6 in the next 50 years. A magnitude 6.5 in New Madrid would create an Intensity 4 effect in northern Illinois and Iowa resulting in little or no damage.

Magnitude and Severity. Estimated effects of a 6.5 Richter magnitude earthquake in the New Madrid Seismic Zone suggest the county could possibly experience trembling buildings, some broken dishes, and cracked windows; however, the more likely possibility is to experience vibrations similar to the passing of a heavy truck, rattling of dishes, creaking of walls, and swinging of suspended objects. The *Illinois Natural Hazard Mitigation Plan, 2018* rated Rock Island County at an Elevated level.

Figure 3-3
U.S. Geological Survey 2018 Hazard Map



Source: U.S. Geological Survey. Seismic Hazard Maps and Data. 2018 Hazard Map.

Warning Time. Earthquake forecasting is an inexact science, even in areas that are well monitored with instruments; such as California's San Andreas Fault Zone. Scientists are only able to present probabilities of ranges of magnitudes over a span of decades.

Duration. Due to the limited effects to Illinois, response to the occurrence of an earthquake would likely be in support of nearby states utilizing mutual aid agreements; in-state response would likely be very limited.

Sources:	
Illinois State Geological Survey	Illinois State Geological Survey. Earthquake Maps Seismicity of Illinois: https://www.ideals.illinois.edu/bitstream/handle/2142/78950/seismicityofilli133heig.pdf?sequence=1
National Centers for Environmental Information	http://www.ncdc.noaa.gov/stormevents/
Rock Island County, Bi-State Regional Commission	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
State of Illinois, IEMA	*Illinois Natural Hazard Mitigation Plan, 2018*
U.S. Geological Survey	Seismic Hazard Maps and Data

Expansive Soils

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	6	6	2	1	21

Expansive Soils are soil and soft rock that tend to swell or shrink excessively due to changes in moisture content. Expansive soils contain fine minerals such as clays that are capable of absorbing water. When they absorb water, they increase in volume. The more water they absorb the more their volume increases. These soils may expand or contract 10% or more. These changes in volume can exert excessive force on a structure or remove the support needed by the structure.

The shrink or swell potential of soils containing clay may be a factor in water main breaks that occur in Rock Island County, especially when accompanied by cycles of freezing and thawing. No data has been collected on specific occurrences of damage or hazard to buildings attributed to expansive soils for the county.

Probability. Probability and frequency analyses have not been prepared because of the nature of occurrence of this hazard. This is consistent with other geologic hazards that occur slowly over time. According to information from the Illinois State Geological Survey, the expansive soils are not immensely hazardous, but end up being the most damaging hazard to structures in the United States long term.

Magnitude and Severity. Bowing or collapse of building walls, upheaval of concrete slabs, or building subsidence may occur after repetitive shrink-swell stress. "The amount of soil expansion is inversely proportional to the weight that a structure places on the soil. Thus, heavy structures generally are less impacted by expansive soils than are lighter structures such as pavements, building slabs, and canal liners." 2009 American Geological Institute - *Living with Unstable Ground* by Thomas L. Holzer

Soils types in Illinois are generally less than 50% clay with slight to moderate swelling potential. The *2019 Rock Island County Web Soil Survey* categorizes soils based on their linear extensibility. Linear extensibility refers to the change in length of an unconfined clod of soil as moisture is decreased from a moist to dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change. For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used. See Map 3-2 on page **Error! Bookmark not defined.** for expansive soil locations in Rock Island County.

The shrink-swell potential is low if it is less than 3%, moderate at 3 to 6%, high at 6 to 9%, and very high if greater than 9%. The 2019 Rock Island County Web Soil Survey shows about 128,600 acres or 44.6% of the soils in the county have a linear extensibility that is greater than or equal to 3% for dwellings with basements. These soils are in the moderate to high category, and the survey indicates that the structures in these soils should have accommodations.

Soils in upper Rock Island County north of the Rock River tend to have more sand and even less clay content, so expansive soils are much less of a hazard. Those planning for future development should take into consideration expansive soils in combination with areas of steep slope, floodplains, and hydric soils, and consider the suitability and limitations of soils, especially for dwellings with basements.

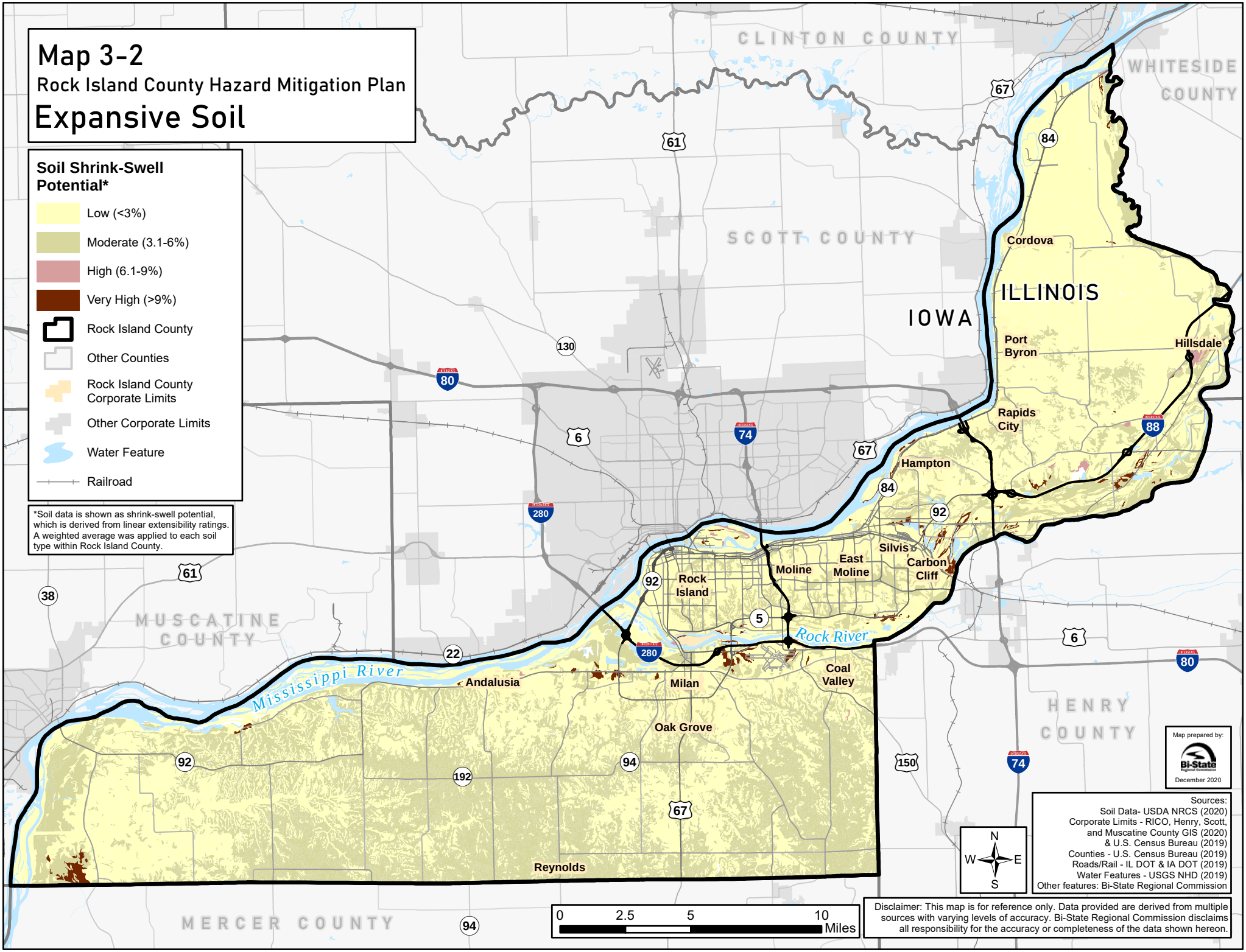
There is little, if any, direct human impact or impact to the health and safety of persons in the affected area. Effects commonly involve swelling clays beneath areas covered by buildings and slabs of concrete and asphalt, such as those used in construction of highways, walkways, and airport runways. However, these soils in combination with other factors may pose limitations on development, especially for dwellings with basements. These factors include depth to water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The most extensive damage from expansive soils occurs to highways and streets. Houses and one-story commercial buildings are more apt to be damaged by the expansion of swelling than are multi-story buildings, which usually are heavy enough to counter swelling pressures. The most obvious manifestations of damage to buildings are to basements. Use of a facility, road, or driveway may be affected while repairs are being made.

Warning time. Due to this being a gradual event, most issues related to expansive soils happen over a long time.

Duration. The response tied to damage that occurs due to expansive soils depends largely on the extent of the damage and when the damage is first noticed. Damage can be mitigated on new construction with proper building technique for the soil type and moisture level. Damage can be mitigated on existing buildings by incorporating some of the same types of techniques used in new construction. This may take longer and cost more than new construction.

Sources:	
U.S. Department of Agriculture Natural Resource Conservation Service, 2019 Web Soil Survey of Rock Island County	2009 American Geological Institute – *Living with Unstable Ground* by Thomas L. Holzer
Illinois Natural Hazard Mitigation Plan, 2018	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
National Homebuilders Association	


Map 3-2
Rock Island County Hazard Mitigation Plan
Expansive Soil
Soil Shrink-Swell Potential*
Low (<3%)
Moderate (3.1-6%)
High (6.1-9%)
Very High (>9%)
Rock Island County
Other Counties
Rock Island County Corporate Limits
Other Corporate Limits
Water Feature
Railroad
*Soil data is shown as shrink-swell potential, which is derived from linear extensibility ratings. A weighted average was applied to each soil type within Rock Island County.
CLINTON COUNTY
WHITESIDE COUNTY
SCOTT COUNTY
MUSCATINE COUNTY
HENRY COUNTY
MERCER COUNTY
IOWA
ILLINOIS
Cordova
Port Byron
Hillsdale
Rapids City
Hampton
Silvis
Carbon Cliff
East Moline
Moline
Rock Island
Milan
Coal Valley
Andalusia
Oak Grove
Reynolds
Mississippi River
Rock River
61
67
84
130
80
6
74
88
280
92
38
22
5
192
94
150
Map prepared by:
Bi-State Regional Commission
December 2020
Sources:
Soil Data- USDA NRCS (2020)
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission
N
W
E
S
0
2.5
5
10
Miles
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Extreme Heat

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
18	18	12	2	1	51

Extreme Heat occurs when there are temperatures (including heat index) in excess of 100 degrees Fahrenheit (F) or 3 successive days of 90+ degrees Fahrenheit. A heat advisory is issued when temperatures reach 105 degrees, and a warning is issued at 115 degrees.

The heat index is a number in degrees Fahrenheit that tells how hot it really feels when relative humidity is added to the actual air temperature. Exposure to full sunshine can increase the heat index by at least 15 degrees. Extreme heat can impose stress on humans and animals. Heatstroke, sunstroke, cramps, exhaustion, and fatigue are possible with prolonged exposure and/or physical activity due to the body's inability to dissipate the heat. Urban areas are particularly at risk because of air stagnation and large quantities of heat-absorbing materials such as streets and buildings. Extreme heat can also result in distortion and failure of structures and surfaces such as roadways and railroad tracks.

Historical Occurrence. The record high temperature for Rock Island County recorded for the summer season at Moline is 111° F on July 14, 1936. During the last two weeks of July 1999, the Midwest experienced a lengthy series of days with temperatures higher than 90° F. Before it was over, some 127 deaths were attributed to heat in Illinois. Another extreme heat event occurred during mid-July 1995 that also resulted in a severe loss of life, predominately in the larger urban areas of Illinois. Rock Island County has experienced extended periods during the summer where temperatures can exceed 90° F combined with high humidity. According to the National Centers for Environmental Information, the most recent extreme heat event was July 4-7, 2012. During this period, temperatures ranged from the upper 90s to lower 100s. The Heat Index values were 105-115° F during the afternoon and evening. The hottest day was July 7 with reported highs between 100-105° F. Genesis hospitals in the Quad Cities treated 14 people for heat-related illnesses on July 4.

Probability. Based on historical information, Illinois will likely experience around 26 days a year with temperatures above 90° F. Rock Island County will experience an average of 20 days per year above 90° F.

Magnitude and Severity. According to the *Illinois Natural Hazard Mitigation Plan, 2018*, Rock Island County has an elevated rating. Certain populations, including the elderly, small children, chronic invalids, and others with medical problems, are particularly susceptible to heat reactions. While property damage is relatively low compared to other natural hazards, the loss resulting from human life is high. *The New York Times* article "Most Deadly of the Natural Disasters: The Heat Wave" states that heat waves kill more people in the United States than all other natural disasters combined. The article references a University of Delaware study indicating that 1,500 American city dwellers die each year because of heat compared with 200

from tornadoes, earthquakes, and floods combined. Extreme heat has been overlooked because there is not visible damage like in a tornado, and its impact is greatly understated in terms of human toll because not all heat-related deaths are recorded.

Warning Time. Periods of extreme heat are predictable within a few degrees within 3 days or so. Variations in the local conditions can affect the actual temperature within a matter of hours or even minutes. The National Weather Service will initiate alert procedures when the heat index is expected to exceed 105° F for at least two consecutive days.

Duration. There is a very good chance that there will also be a period of 3 consecutive days or more with temperatures in the 90s. It is also common for the temperature to hit 100° F or more once every three years during the summer months.

Sources:	
National Centers for Environmental Information	http://www.ncdc.noaa.gov/stormevents/
Rock Island County, Bi-State Regional Commission	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
State of Illinois, IEMA	*Illinois Natural Hazard Mitigation Plan, 2018*
New York Times	*"Most Deadly of the Natural Disasters: The Heat Wave"* by Tara Bahrampour, Aug. 31, 2002.

Flash Flooding

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
12	6	12	2	1	33

A flash flood is an event occurring with little to no warning where water levels rise at an extremely fast rate. Flash flooding results from intense rainfall over a brief period, sometimes combined with rapid snow melt, ice jam release, frozen ground, saturated soil, or impermeable surfaces. Most flash flooding is caused by slow-moving thunderstorms or thunderstorms repeatedly moving over the same area. Flash flooding is an extremely dangerous form of flooding that can reach full peak in only a few minutes and allows little time or no time for protective measures to be taken by those in its path. Flash flood waters move at very fast speeds and can roll boulders, tear out trees, scour channels, destroy buildings, and obliterate bridges. Flash flooding often results in higher loss of life, both human and animal, than slower-developing river and stream flooding.

Floods are the most common and widespread of all natural disasters except fire. Magnitude of flash flooding varies by watershed based on the effects of amounts of rain over time. The following available information from the National Centers for Environmental Information gives an indication of the magnitude of such events:

The National Centers for Environmental Information identifies 35 events in Rock Island County between 01/1/1997 and 07/31/2020 as flash flooding due to periods of intense rainfall. Most of the flash flooding events were from major rain events throughout the county with localized areas affected. The most frequent locations with reported flash floods were Milan, Moline, and Rock Island. Additional reports were rural Rock Island County, Andalusia, Carbon Cliff, and Coal Valley where effects range from minor street flooding to roads being impassable. Notable events in the county include:

October 17-18, 1998: Rain developed during the early morning hours and fell across much of eastern Iowa and Northwest Illinois dumping two to four inches of rain by late afternoon. An additional half to two inches of rainfall during the evening sent several creeks and rivers near or slightly above their banks. Heavy rain in parts of Rock Island County knocked out power and filled back yards and farm fields with water. At southwest Rock Island's Lake View Estates, at least 100 people were stranded after rapidly rising water submerged the access roads. High water forced the closing of U.S. Highway 150 near Coal Valley and shut down several access roads at the Quad City Airport, hampering airport operations.

April 3, 1999: Two to three inches of rain fell in one hour causing localized flooding to streets and houses at 9th Street and 17th Avenue in Rock Island. A fatality occurred when a 39-year-old male drove from dry ground into the flooded intersection at 5th Avenue and 40th Street in Rock Island. The victim's car began floating and became

lodged underneath a railroad viaduct, at which time he left his vehicle and was swept away. The water depth underneath the railroad viaduct was estimated at six to seven feet.

March 12, 2006: Thunderstorms across the Quad Cities metro area produced rainfall rates exceeding 1 inch per 30 minutes. Spotters, amateur radio, and the media reported numerous roads flooded out or cars floating in Rock Island at 11th Street and 14th Avenue.

June 12-13, 2008: A strong cold front moved through eastern Iowa, northeast Missouri, and northern Illinois bringing one to five inches of rain causing flash flooding. In Andalusia, ten inches of water covered all the streets in town. In Moline, flash flood waters about two feet deep stranded some concert goers in the parking lot of iWireless Center. The 500 block of 1st Street and the 500 to 1100 blocks of 4th Street were closed due to sink holes. In downtown Rock Island, most of the streets were flooded about one foot deep. Near Illinois City, County Road 59 was washed out downhill from Load Thunder Forest Preserve. In Milan, flash flooding caused closure of numerous roads including Route 67 and 4th Street West between 1st and 10th Avenue.

June 30, 2014: A strong cold front pushed into a very warm, unstable air mass as a significant upper level storm system tracked into the northern Great Lakes. A major severe weather and flash flood event unfolded across the area. This event resulted in the indirect death of one person in Moline who died of electrocution while wading through water in his basement. Life-threatening flash flooding due to 4 to 6 inches of rainfall was reported. The fire department reported Argyle Creek was flooding into about 20 houses in Carbon Cliff, and the bridge over 1st Avenue sustained structural damage from the flooding and was closed to traffic. Bridge replacement was estimated at $350,000. A pump failure at a levee on Sugar Creek in East Moline resulted in damage to 40-50 properties.

May 27-29, 2019: Showers and thunderstorms tracked eastward across parts of eastern Iowa and northern Illinois on Memorial Day 2019 as a low pressure system lifted a warm front through the region. Some of the storms produced tornadoes during the early to mid-afternoon hours. Very heavy rain also fell in a short amount of time in areas. Flash flooding occurred in the Quad Cities metro, with several feet of water on many streets. Six inches of flowing water covered 16th Street between 13th and 14th Streets in Moline. A frontal boundary settled across northern Kansas, northern Missouri, and central Illinois. Additionally, prolonged torrential rainfall over already saturated grounds lead to numerous reports of flash flooding across the area. Flash flooding occurred along River Drive in the vicinity of the TaxSlayer Center/Quad City Convention Center. Water was deep enough to cause vehicles to stall and float slightly. The storm complex then expanded on May 29th and produced heavy rain. These heavy rains fell on completely saturated soils, and produced a round of significant flash flooding, which closed many roads. Significant street flooding on 41st Street in Moline in front of the Genesis Health complex was reported.

March 27, 2020: Several rounds of showers and thunderstorms dropped 1 to 4 inches of rain quickly across parts of Rock Island and Whiteside Counties during the evening of the 27th into the early morning hours of the 28th. Most of the rain fell in a one-hour period and brought flash flooding to the Quad Cities Metro Area and Prophetstown in southwest Whiteside County.

Probability. As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization increases runoff two to six times over what would occur on natural terrain. Portions of the land within Rock Island County are very developed with significant amounts of impervious surfaces. As more development occurs in the watersheds, the amount of runoff produced also increases. Unless measures are taken to reduce the amount of runoff produced (or slow its movement), flash floods will continue to occur and possibly increase. In certain areas, aging storm sewer systems were not designed to carry the capacity currently needed to handle the increased storm runoff. This combined with rainfall trends (that are moving upwards) and rainfall extremes (that are patterning higher) all demonstrate the high likelihood, yet unpredictable nature of flash flooding in Rock Island County.

The *Illinois Natural Hazard Mitigation Plan, 2018* showed Rock Island County's flood hazard at an elevated risk. In Rock Island County, areas of the Rock River floodplain are subject to sudden rises in flooding from ice jams. The relatively shallow depth of the river and constructions in the river flow due to narrow areas and obstructions, such as bridges or dams, can back up water behind an ice jam with little to no advanced warning. The Rock River forms the eastern boundary of Rock Island County for a distance of about 20 miles before flowing westward across the county to join the Mississippi River at the city of Rock Island.

Magnitude and Severity. Flash floods occur in all 50 states in the U.S. Particularly at risk are those in low-lying areas; close to dry creek beds or drainage ditches; or near water or downstream from a dam, levee, or storage basin. People and property with insufficient storm sewers and other drainage infrastructure can also be put at risk because the drains cannot rid the area of the runoff quickly enough. Nearly half of all flash flood fatalities are auto-related. Motorists often try to traverse water-covered roads and bridges and are swept away by the current. Six inches of swiftly-moving water can float a full-sized automobile. Recreational vehicles and mobile homes located in low-lying areas can also be swept away by water.

Areas in a floodplain, downstream from a dam or levee, or in low-lying areas can certainly be affected by flash flooding. People and property located in areas with narrow stream channels, saturated soil, or on land with large amounts of impermeable surfaces are likely to be affected in the event of significant rainfall. Unlike areas affected by river/stream flood, flash floods can affect areas a good distance from the stream itself. Flash flood prone areas are not particularly those areas adjacent to rivers and streams. Streets can become swift-moving rivers, and basements can become deathtraps because flash floods can fill them with water in a matter of minutes.

Rescuers are at significant risk when attempting to work in swift-moving floodwaters associated with flash flooding. Continuity of operations may be affected depending on the area,

transportation limitations, and delayed or postponed government services. Personal property can be extensively damaged and destroyed by swift-moving water. Facilities and infrastructure can be scoured around, degrading its structural integrity. Flash floods can quickly inundate areas thought to be out of the Special Flood Hazard Area (SFHA).

Warning Time. Flash floods may be unpredictable, but there are factors that can point to the likelihood of the occurrence of a flash flood in the area. Flash floods occur within a few minutes or hours of excessive rainfall, a dam or levee failure, or a sudden release of water held by an ice jam. Weather surveillance radar is being used to improve monitoring capabilities of intense rainfall. Knowledge of the watershed characteristics, modeling, monitoring, and warning systems increase the predictability of flash floods. Depending on the location in the watershed, warning times can be increased. The National Weather Service (NWS) forecasts the height of flood crests, the data, and the time the flow is expected to occur at a particular location. Gauges on the Rock River at Moline and Joslin are recorded through the National Weather Service Advanced Hydrologic Prediction Service.

Duration. The response to the effects of flash flooding in Illinois is short in duration due to the nature of the hazard.

Sources:	
National Centers for Environmental Information	https://www.ncdc.noaa.gov/stormevents/
Illinois Natural Hazard Mitigation Plan, 2018	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
FEMA Region 5 Report Disaster Costs 1999-2013	

Grassland, Field, or Woodland Fire

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	6	6	2	1	21

This hazard is a fire occurring in grasslands, wooded areas, or farm fields that is uncontrolled and threatens life and property. These fires can occur when conditions are favorable, including periods of severe drought or low humidity combined with high winds when vegetation is dry and burns easily.

Rock Island and Moline both have year-round burn bans for vegetative materials. Local burn bans are common in other parts of the county at times of severe vegetation dryness. In 2010, Black Hawk State Historic Site along with Augustana College's Collinson Ecological Preserve and West Lake Park in Scott County, IA received a joint multi-year Federal Forestry Hazard Mitigation grant. The grant was used to mitigate the large number of downed trees caused by the July 2008 derecho that went through the area. An additional grant from the Illinois Nature Preserves Commission allowed the work to continue at Black Hawk State Historic Site. Prescribed burns as well as additional staff and volunteer hours were used to clear understory brush and reduce the duff layer from the Site's Nature Preserve. The Historic Site is an area of wildland-urban interface in the county. Prescribed fire were also used at the Loud Thunder Forest Preserve near Andalusia and the Collinson Ecological Preserve in Milan, as a method of fuel reduction. In August 2020, another severe derecho occurred that caused a large number of downed trees and crops, posing a new fire hazard within the area and requiring extensive clearing of brush and debris.

The National Centers for Environmental Information contains no record of reported large wildfires or forest fires for Rock Island County from 1950 to present time. In Illinois, from 2014 to 2019, there were 1,764 acres burned by wildfires. There were 77,627 acres burned by prescribed fires in Illinois from 2014 to 2019. Local fire departments or fire protection districts, particularly in more rural portions of the planning area, may have more history with occurrences of fires in grasslands, agricultural fields, or wooded areas.

Probability. Primarily because of the potential for lightning to trigger a grassland or woodland fire, there is a near 100% chance that a grassland or other form of wildfire could occur each year in the planning area. However, human activities are the primary cause of these outdoor fires. People burn when it is too windy and dry, and do not have precautions in place to mitigate a small fire should it start spreading. The probability of this occurring in a given year in this county is 100%. The National Weather Service issues a daily Fire Weather Planning Forecast. This forecast gives the expected weather conditions and fire danger probability for a region for that day.

Magnitude and Severity. The *Illinois Natural Hazard Mitigation Plan, 2018* did not rate counties for fire hazard. However, buildings are becoming more vulnerable to wildfires as

development occurs in the Wildland-Urban Interface (WUI) fire areas of the planning area. The value of exposed property is increasing at a faster rate than population. Rock Island County is vulnerable to forest and woodland fires because there are 50,998 acres of forested areas as of 2016. In 2016, the County also had 24,440acres of pasture/grassland and 135,005 acres of cropland. Map 3-3 on page 45 displays the current land cover of Rock Island County. Grassland or cropland fires are more likely to occur in the planning area than woodland fires. Grass fires are often more easily contained and extinguished before there is damage to people or developed property. However, in rural areas, grass fires have spread into farm fields causing considerable damage to crops. In the fall, when crops are dry, large portions of crop fields may easily combust due to lightning strikes, or when harvesting equipment overheats and throws off sparks. If this happens, it can be quite costly to the farmer in terms of lost production and/or equipment. Field fires near the outer edges of communities could become severe quickly.

As a scale of magnitude, Keetch and Byram (1968) designed a drought index specifically for fire potential assessment. It is a number representing the net effect of evapotranspiration and precipitation in producing cumulative moisture deficiency in deep duff and upper soil layers. It is a continuous index relating to the flammability of organic material in the ground. The Keetch-Byram Drought Index (KBDI) attempts to measure the amount of precipitation necessary to return the soil to full field capacity. It is a closed system ranging from 0 to 800 units and represents a moisture regime from 0 to 8 inches of water through the soil layer. At 8 inches of water, the KBDI assumes saturation. Zero is the point of no moisture deficiency, and 800 is the maximum drought that is possible. At any point along the scale, the index number indicates the amount of net rainfall that is required to reduce the index to zero, or saturation. The inputs for KBDI are weather station latitude, mean annual precipitation, maximum dry bulb temperature, and the last 24 hours of rainfall. Reduction in drought occurs only when rainfall exceeds 0.20 inch (called net rainfall). The computational steps involve reducing the drought index by the net rain amount and increasing the drought index by a drought factor. The KBDI scale and description of moisture conditions is as follows:

KBDI = 0 –200: Soil moisture and large class fuel moistures are high and do not contribute to fire intensity. This is typical of the spring dormant season following winter precipitation.

KBDI = 200 – 400: Typical of late spring, early growing season. Lower litter and duff layers are drying and beginning to contribute to fire intensity.

KBDI = 400 – 600: Typical of late summer, early fall. Lower litter and duff layers contribute to fire intensity and burn actively.

KBDI = 600 – 800: Often associated with more severe drought with increased wildfire occurrence. Intense, deep burning fires with significant downwind spotting can be expected. Live fuels can also be expected to burn actively at these levels.

The Haines Index (HI) (also known as Lower Atmosphere Severity Index) is another way to measure the atmosphere's contribution to the growth potential of a wildfire. This National Weather Service index uses a numerical value that indicates the potential for wildfires to experience extreme fire behavior. The index is derived from the stability (temperature difference between different levels of the atmosphere) and moisture content (dew point depression) of the lower atmosphere.

Haines Index	Potential For Large Fire Growth
2 or 3	Very Low
4	Low
5	Moderate
6	High

In 2009, the National Weather Service in the Quad Cities started using the Grassland Fire Danger Index (GFDI). Weather Service personnel use the GFDI to advise the public when dangerous burning conditions exist. This index contains five fire ratings: low, medium, high, very high, and extreme. The National Weather Service will only issue an advisory notice to the public when the index is in the very high or extreme category.

Most grass fires are usually contained to highway right-of-way and rail right-of-way ditches or other geographically small areas and are less than a few acres in size. However, high winds can change a small fire into a multi-acre fire within a matter of minutes. The extent is dependent upon conditions such as land use/land cover, moisture, and wind. Field fires can be more extensive due to the availability of burnable materials and the difficulty involved in getting fire suppression equipment to the fire. Most grass or field fires destroy only the grasses, crops, or other low land cover. Residents and school children with preexisting health conditions related to the heart and lungs may need to be removed from areas of heavy smoke. Buildings in the fire path may need to be evacuated of persons and livestock. Injuries and/or deaths most often occur during efforts to fight the fire such as burns, sprains and muscle strains, smoke inhalation, and heat exhaustion. Death due to natural causes such as heart attack or asthma attack may occur.

Property damage is usually limited to grass, small trees, crops, fence posts, etc. Damage could occur to buildings, if the fire is out of control. Large fires can result in road closures and traffic detours due to the large volume of smoke limiting visibility. Fires can be triggered by naturally occurring weather events, such as drought or lightning strikes. Large forest fires may result in erosion issues, but grass, plants, and trees generally start growing again as conditions permit.

There is minimal financial or economic risk in rural areas with potential for crop loss. There is moderate risk in the urban-wild land fringe areas where fires could affect structures.

Warning time. The National Weather Service's daily Fire Weather Planning Forecasts; Haines Index forecasts; and Grassland Fire Rating forecasts, watches, and warnings alert the public several days in advance of potential for extreme wildfire behavior. Local fire departments also issue burn bans and warnings on days when there is high potential for erratic fire behavior. The

warning time residents have after a fire starts depends on the fuel type for that fire. Flash fuels such as tall grasses, dry field crops, leaves, and draped pine needles are readily ignited and are consumed rapidly when dry. Slash, which is debris left after logging, pruning, thinning, or brush cutting (including logs, chips, bark, branches, stumps, and broken understory trees or brush), can also burn very quickly if fuel is dry and conditions are windy. Heavy fuels, such as large diameter snags, logs, and large limb wood, when ignited are consumed more slowly than flash fuels.

Duration. Most fires can be extinguished quickly if the fire is accessible to firefighting equipment.

Sources:	
Illinois Natural Hazard Mitigation Plan, 2018	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
United States Fire Service Wild Fire Assessment Service (WFAS)	National Interagency Fire Center
USDA National Agricultural Statistical Service Census of Agriculture	River Action Wild Places for Rock Island County
National Weather Service	USGS NLCD, 2016

Map 3-3

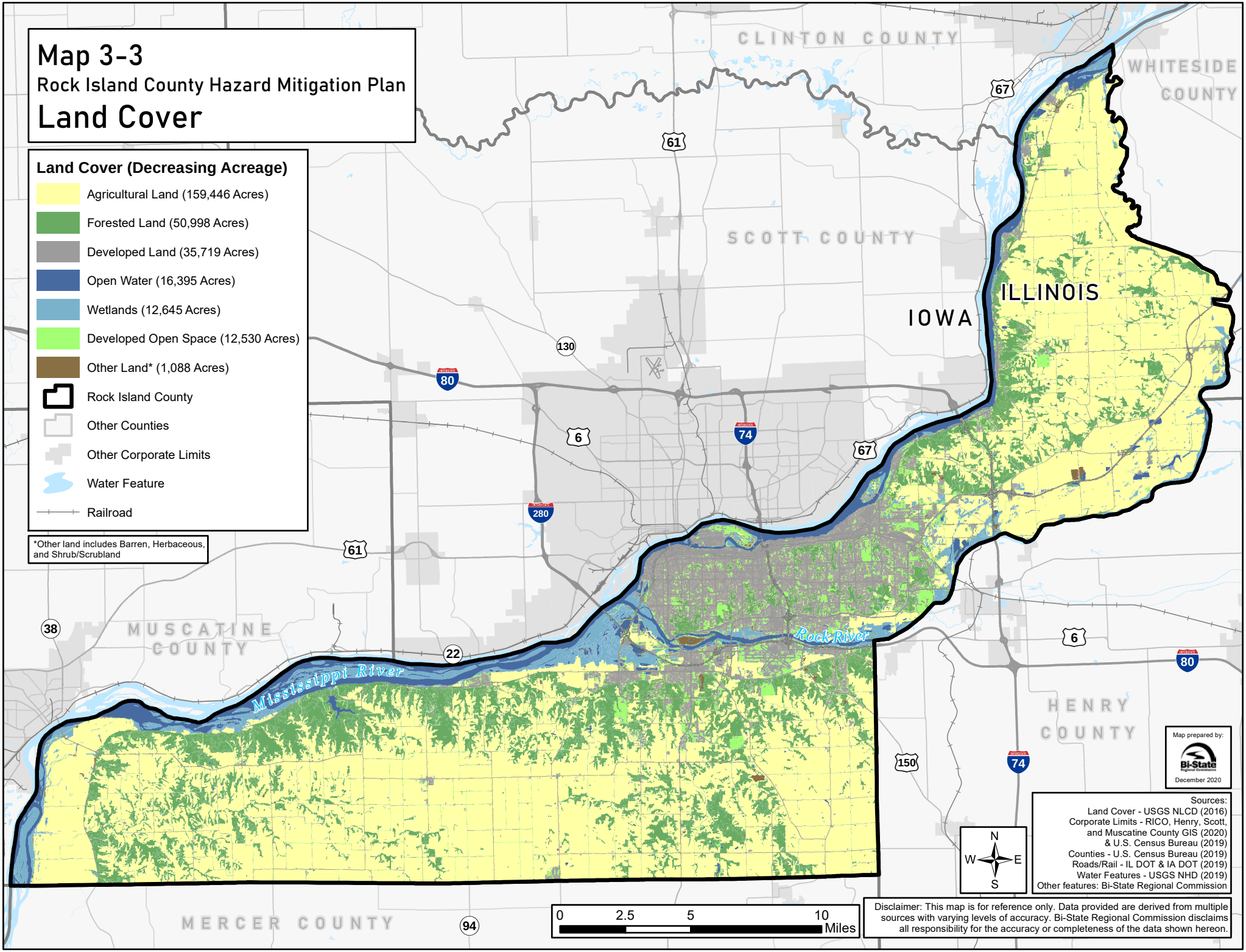
Rock Island County Hazard Mitigation Plan

Land Cover

Land Cover (Decreasing Acreage)

- Agricultural Land (159,446 Acres)
- Forested Land (50,998 Acres)
- Developed Land (35,719 Acres)
- Open Water (16,395 Acres)
- Wetlands (12,645 Acres)
- Developed Open Space (12,530 Acres)
- Other Land* (1,088 Acres)
- Rock Island County
- Other Counties
- Other Corporate Limits
- Water Feature
- Railroad

*Other land includes Barren, Herbaceous, and Shrub/Scrubland



0 2.5 5 10 Miles

N W E S

Map prepared by: Bi-State Regional Commission December 2020

Sources:
Land Cover - USGS NLCD (2016)
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission

Hazardous Materials Incident

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
18	6	18	2	1	45

A hazardous materials incident is an accidental release of chemical substances, mixtures, or potential explosions that present danger to the public health and safety during the production or handling of materials during transportation or at a facility. Hazards of this nature may cause death or injury to persons, damage to property, and/or damage to the environment when released into soil, water, or air. Chemicals are manufactured and used in ever increasing types and quantities. Hazardous substances are categorized as toxic, corrosive, flammable, irritant, or explosive. Hazardous materials incidents usually occur within a localized area, and the use of planning and zoning can minimize the area of impact.

Most hazardous materials incidents are localized and are quickly contained or stabilized by highly trained fire departments and hazardous materials teams. Depending on the characteristics of the hazardous material or the volume of product involved, the affected area can be as small as a room in a building or as large as five square miles or more. General wind patterns and climate data help in predicting spread of airborne materials. Many times, additional regions outside of the immediately affected area are evacuated for precautionary reasons. More widespread effects occur when the product contaminates the municipal water supply or water system such as a river, lake, or aquifer.

Rock Island County is bordered by the Mississippi River. The Mississippi River is a navigable waterway, and boats or barges regularly use the river as transport. The Coast Guard is the responder to spills on waterways. On November 25, 2013 the tugboat Stephen L. Colby sunk on the Mississippi River near Le Claire, Iowa, across the river from Rapids City and Hampton, Illinois. There were no reports of injury to the crew, but the tugboat released approximately 89,000 gallons of diesel fuel into the river. There was a quick response to the incident, and much of the diesel fuel was captured. Clean-up took over two weeks, but there were no reported fish kills or contamination to drinking water.

Railroads also have the potential to have hazardous materials incidents from derailments or accidental release from container cars. Rail lines run along both the Mississippi and Rock Rivers and through the urban areas of the county. The Rock Island County Emergency Management Director has been notified by the railroad company that Bakken oil is transported through the county. Bakken oil is more flammable than other types of crude oil and causes explosions. Transport of Bakken oil by rail has grown rapidly over recent years.

Hazardous materials are also transported through the county in pipelines. Spills may occur due to a break in a line or during construction or activities requiring digging. In Illinois, state law requires that anyone planning a project that requires digging must contact the Joint Utility Locating Information for Excavators (JULIE). JULIE is a not-for-profit corporation whose mission

is to prevent damages to underground utilities, environment, and property while reducing service interruptions and costly repairs.

Extremely Hazardous Substances are shown by general location in Map 3-4 on page 49. The majority of facilities are located within the Cities of Moline and Rock Island; however, sites are scattered throughout both urban and rural areas. Fixed hazardous material facilities within Rock Island County tend to cluster along the railroads as well as major highways and interstates. Rock Island County also has multiple pipelines running throughout the county, also shown on Map 3-4 on page 49. The vast majority of pipeline incidents that occur are caused by third-party damage to the pipeline, often due to construction or some other activity that involves trenching or digging operations. With development occurring at an unprecedented rate and the ground becoming more and more congested with utilities, the probability of an underground pipeline incident is significant. Petroleum and natural gas pipeline accidents occur with some regularity, but they usually have a limited impact and are quickly and adequately handled by pipeline company emergency crews and local and state responders. Pipeline operators are required to coordinate all safety preparedness and response activities with the communities. Continuing to plan, train, and exercise emergency procedures helps to limit the occurrence and severity of incidents.

Probability. According to hazardous materials spill reports provided by Rock Island County Emergency Management Agency, there have been 66 leaks or spills since 2016, averaging slightly over 13 incidents per year. The City of Rock Island has experienced the largest number of incidents, totaling 21 from 2016-2020, followed by Moline with 14 total. According to the Rock Island County EMA report, approximately 57.5% of the hazardous materials incidents from 2016-2020 involved diesel, gas, or other type of fuel spillage of leaking underground storage tanks or trucks. The probability of a hazardous material incident occurring within Rock Island County is 100%, but the probability varies by individual communities. Carbon Cliff, Oak Grove, Port Byron, and Reynolds did not have incidents between 2016 and 2020, making the probability of an incident low. Andalusia, Cordova, Hampton, Rapids City, and Silvis had less than five incidents from 2016 to 2020, making the probability of an incident average. Unincorporated Rock Island County, Coal Valley, East Moline, Hillsdale, Milan, Moline, and Rock Island experienced five or more incidents, making the probability of an incident high.

Magnitude and Severity. Most of the hazardous materials incidents are localized and are quickly contained or stabilized by highly trained fire departments and hazardous materials teams. Depending on the characteristics of the hazardous materials or the volume of product involved, the affected area can be as small as a room in a building or as large as 5 square miles or more. Many times, additional regions outside the immediately affected area are evacuated for precautionary reasons. More widespread effects occur when the product contaminates the municipal water supply or water system such as a river, lake, or aquifer.

The release of some toxic gases may cause immediate death, disablement, or sickness if absorbed through the skin, injected, ingested, or inhaled. Some chemicals may cause painful and damaging burns to skin if they come in direct contact with the body.

A hazardous materials accident can occur almost anywhere, so any area is considered vulnerable to an accident. Pets, livestock, and vegetation in close proximity to facilities producing, storing, or transporting hazardous substances are at higher risk. Populations near transportation corridors or downstream, downwind, and downhill of a released substance are also vulnerable. Depending on the characteristics of the substance released, a larger area may be in danger from explosion, absorption, injections, ingestion, or inhalation. Occupants of areas previously contaminated by a persistent material may also be harmed either directly or through consumption of contaminated food and water. Fixed facilities are required to have an off-site consequence plan that addresses the population of the surrounding area. Responding personnel are required to be trained to HAZMAT Operation Level to respond to the scene. Those personnel that come into direct contact with substances released are required to have HAZMAT Technician level training.

Warning Time. When managed properly under current regulations, hazardous materials pose little risk. However, when handled improperly or in the event of an accident, hazardous materials can pose a significant risk to the population. Hazardous materials incidents usually occur very rapidly with little or no warning. Even if reported immediately, people in the area of release have very little time to be warned and evacuated. During some events, sheltering in place is the best alternative to evacuation because the material has already affected the area and there is no time to evacuate safely. Public address systems, television, radio, and the NOAA Weather Alert Radios are used to disseminate emergency messages about hazardous materials incidents.

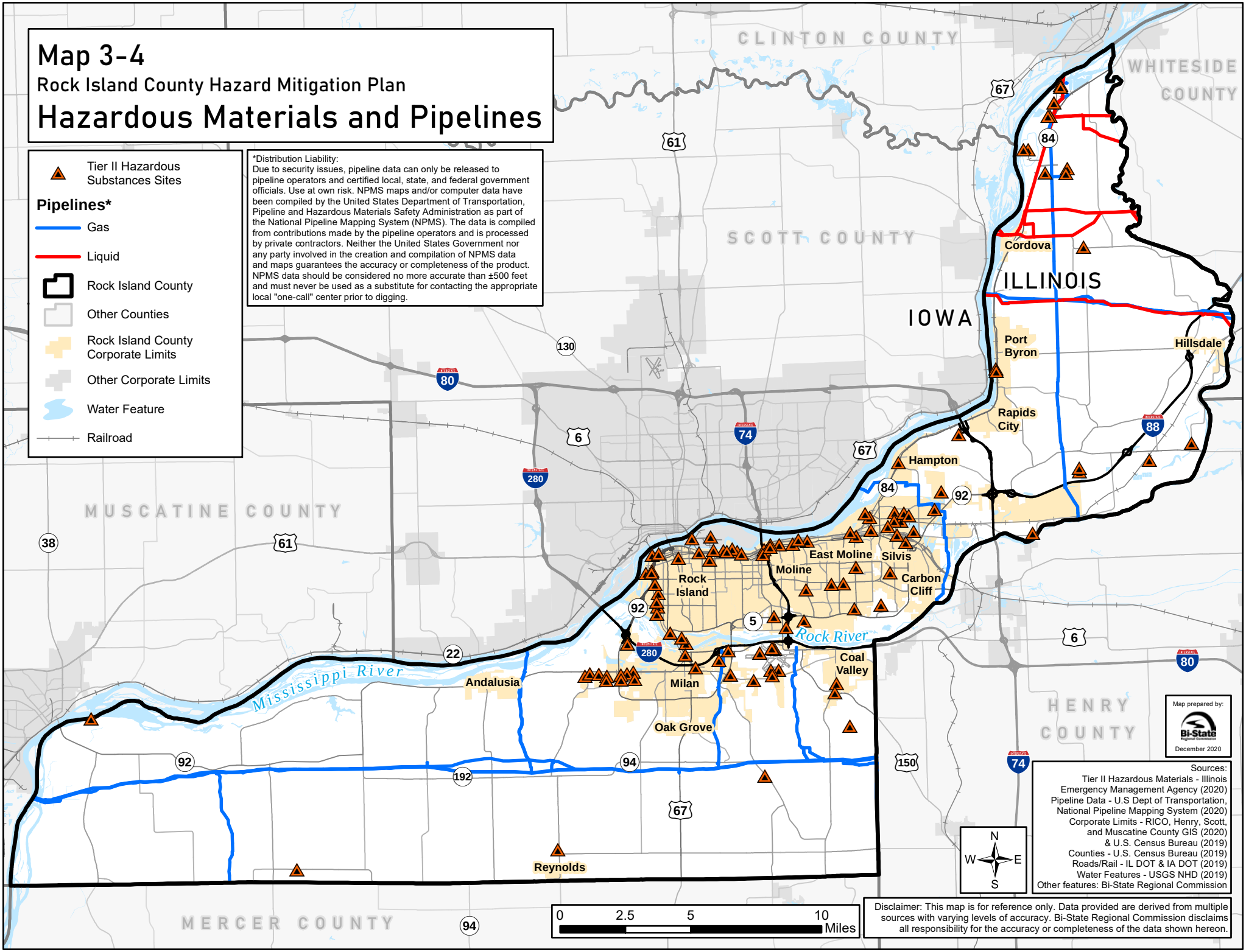
Duration. Response to a hazardous materials release is generally limited to the immediate effects of a release of dangerous materials and their threat to life and property. However, due to the laws surrounding hazardous materials and the duty to the public to inform and protect citizens from the effects of hazardous materials in their vicinity, response is expanded for environmental emergencies.

Sources:	
Quad Cities News WQAD-TV	Nelson, Shellie. Nov. 27, 2012. "Illinois Offers Potassium Iodide Pills to Residents Near Nuclear Plants."
Rock Island County	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
JULIE	http://www.illinois1call.com/index.html
NBC News	http://www.nbcnews.com/news/other/towboat-carrying-89-000-gallons-fuel-sinks-mississippi-river-f2D11657522
State of Illinois, IEMA	*Illinois Natural Hazard Mitigation Plan, 2018*

Map 3-4

Rock Island County Hazard Mitigation Plan

Hazardous Materials and Pipelines



Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Land Subsidence

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	6	12	2	1	27

There are two causes of potential land subsidence in Rock Island County: manmade land subsidence, which is a downward sinking, collapse, or a shifting of the land surface resulting from underground mining or land excavation; and natural land subsidence.

Illinois generally has two forms of mine subsidence: pit and sag. During the late 1800s to early 1900s, coal was extracted from many locations within the planning area. Land areas over these old mines were generally sparsely populated, and if settlement or collapse occurred, homes or other structures were seldom damaged. As towns or cities expand over these old mined-out areas, subsidence damage to structures may become increasingly common.

Although the central and southern parts of Illinois present the highest risk of land subsidence, the Illinois State Geological Survey (ISGS) has recorded about 290 underground mine locations in Rock Island County in its *Directory of Coal Mines in Illinois*, published August 2019 (see Map 3-5 on page 55). Those records document mine operations as early as 1863 and as late as 1940. Rock Island County has about 5.4% of its land area or an estimated 15,570 acres undermined by coal mines. Because mining activity was not regulated or documented until the late 1800s, little or no size or location information is available for older mines. The Illinois State Geological Survey (ISGS) also has record of one underground clay mine in Rock Island County.

Rock Island County also has four large open pit limestone quarries currently in operation. They are Collinson Quarry in Milan, IL, Midway Stone in Hillsdale, IL, Cordova Sand & Gravel in Cordova, IL, and Allied Stone Quarry on Vandruff's Island, which is an island in the Rock River between Rock Island and Milan, IL. The Collinson Quarry is located adjacent to the town of Milan, and there is a large trailer park located within 500 feet of the quarry pit. A residential neighborhood, including a neighborhood park, is directly adjacent to the Collinson quarry property boundaries. Smaller limestone quarries are operated in Moline on Sylvan Island and in the Port Byron and Cordova areas.

Natural land subsidence is a downward sinking, collapse, or a shifting of the land surface due to natural geology and topography of the area. Map 3-6 on page 56 shows the topography of Rock Island County. The geology of an area containing karst features may contribute to land subsidence. Karst is a terrain with unique landforms and hydrology created from the dissolution of soluble rocks such as limestone and dolomite. This terrain is characterized by springs, caves, sinkholes, and a unique hydrogeology that results in aquifers that are highly productive, but extremely vulnerable to contamination. In the United States, about 40% of the groundwater used for drinking comes from karst aquifers.

Rock Island County contains areas of gently dipping to flat-lying beds of carbonate rock (limestone) beneath an overburden of noncarbonate material (shale, sandstone, loess) 10 feet

to 200 feet thick. These areas have fissures, tubes, and caves generally less than 1,000 feet long and 50 feet in vertical extent. Fissures are commonly conduits for subterranean streams. In addition, they can cause serious engineering problems to things such as reservoirs and road cuts, bridge abutments, piers, and dam foundations and abutments.

Rock Island County also contains many areas of natural subsidence due to the local geology. Pennsylvanian shale underlies the surficial soils in many areas of the county. These shales do not allow water to penetrate and are very slippery when wet. Shales outcrop in the bottoms of many deep ravines in the county and at the bases of the steeps bluffs bordering the Rock and Mississippi Rivers. These bluff areas are moving, and slumping can occur after heavy rains. A Surficial Geology of Rock Island County, Illinois created by Dr. Richard C. Anderson in 1980 shows the areas of high vulnerability to land subsidence or landslides. These areas are known as the Lacon Formation and are shown in black on Map 3-5, page **Error! Bookmark not defined.**. Areas in the Lacon Formation within the City of Rock Island were verified by LIDAR and direct field observation by Augustana student Kevin Gosiewski, for his senior thesis in 2015. He noted that these areas show hummocks and slumps and evidence of recent movement. Trees with root balls intact have slid down into ravines or have bent trunks indicative of soil movement.

Probability. The potential for manmade subsidence in an area depends on many factors, but a key factor is the proximity of the area to underground mines. In ISGS Circular 575, GIS mapping software was used to define and apply two zones around each known coal mine location in Illinois. Zone 1 includes the land over or adjacent to mines that, based on the mapped extent and general depth of the mine, could be affected by subsidence. Zone 2 surrounds Zone 1 and indicates additional land that could be affected because exact mine information has not been obtained. These two zones are associated only with known underground mines. Areas outside these two zones could also be undermined. Old, undocumented mine openings have been discovered in many parts of the state, even in areas not known to contain minable deposits. Although the potential for subsidence exists in these places, most undocumented mines were prospect pits or short-term operations that undermined only a few acres. Designation of an area in these zones cannot be directly translated into a subsidence risk. Probability for mine subsidence is generally higher in Zone 1 than the adjacent Zone 2. Many other factors come into play in determining the actual risk for any one location. The following table shows mine affected acres by land use category for Rock Island County. Density refers to the development density of the land. Housing units (house, apartment, mobile home, etc.) were determined by using year 2000 U.S. Census Block information for housing units. Commercial structures were not included in the following table.

Acreage and Percentage of Land in Zone 1 and 2 by Land Use Category Year 2009 for Rock Island County

	Low-medium density		High-density		Urban open space		Rural area		Total area		Estimated Housing units	
	(acres)	(%)	(acres)	(%)	(acres)	(%)	(acres)	(%)	(acres)	(%)	(units)	(%)
Zone 1	329	2.9	218	1.6	437	5.3	4,042	1.7	5,025	1.9	2,028	3.2
Zone 2	528	4.7	497	3.6	554	6.7	6,925	2.9	8,504	3.2	2,950	4.6
Total 1+2	857	7.6	715	5.2	991	12.0	10,967	4.7	13,529*	5.0	4,978	7.8

Source: Illinois State Geological Survey Circular 575 – *The Proximity of Underground Mines to Urban and Developed Lands in Illinois, 2009*

**The acres of total land undermined has increased to 15,570 since 2009 due to updated mined-out area Quadrangle maps. However, no other studies have been completed since 2009 to update the Low-medium density, Urban open space, or Estimated housing units for Zone 1 and 2 with this new land total.*

The Illinois Geological Survey reports the probability for natural land subsidence caused by karst features is rare for Rock Island County. The probability for subsidence is very high or is occurring in the areas of steep bluffs and ravines that contain a shale layer.

Magnitude and Severity. In 2009, an estimated 4,978 housing units were vulnerable to mine subsidence in Rock Island County. This number will increase as the density of buildings increases within the urban area and on the urban fringe in the areas that were previously mined.

Mine subsidence areas in Illinois are usually 2-40 feet across and 6-8 foot deep. However, a general subsidence can spread over several acres. Depth of collapse is based on the depth of the mine shaft that collapses. The collapse can spread sideways as it moves upward to the land surface. Lateral propagation of the subsidence is highly unpredictable. Mine subsidence incidents in Rock Island County have generally been related to coal mining. Several small occurrences have happened in the Carbon Cliff area. One required the rebuilding of a neighborhood road. There has been one Mine Subsidence Insurance claim filed in Rock Island County between 1999 and 2017.

Land subsidence movements are not selective – all structures (buildings, sidewalks, driveways, fences, streets, curbs, etc.) in the immediate area will be affected with a subsidence event. The type and extent of damage to structures directly relates to their physical orientation and location in the subsidence area. Ground movements can also damage water and sewer lines, as well as other utilities. In most cases, damage ranges from minor to moderate in severity. Repair or renovations are usually sufficient to restore structural integrity. However, in severe cases, ground settlement and the resulting damages associated with land subsidence may require complete demolition and rebuilding.

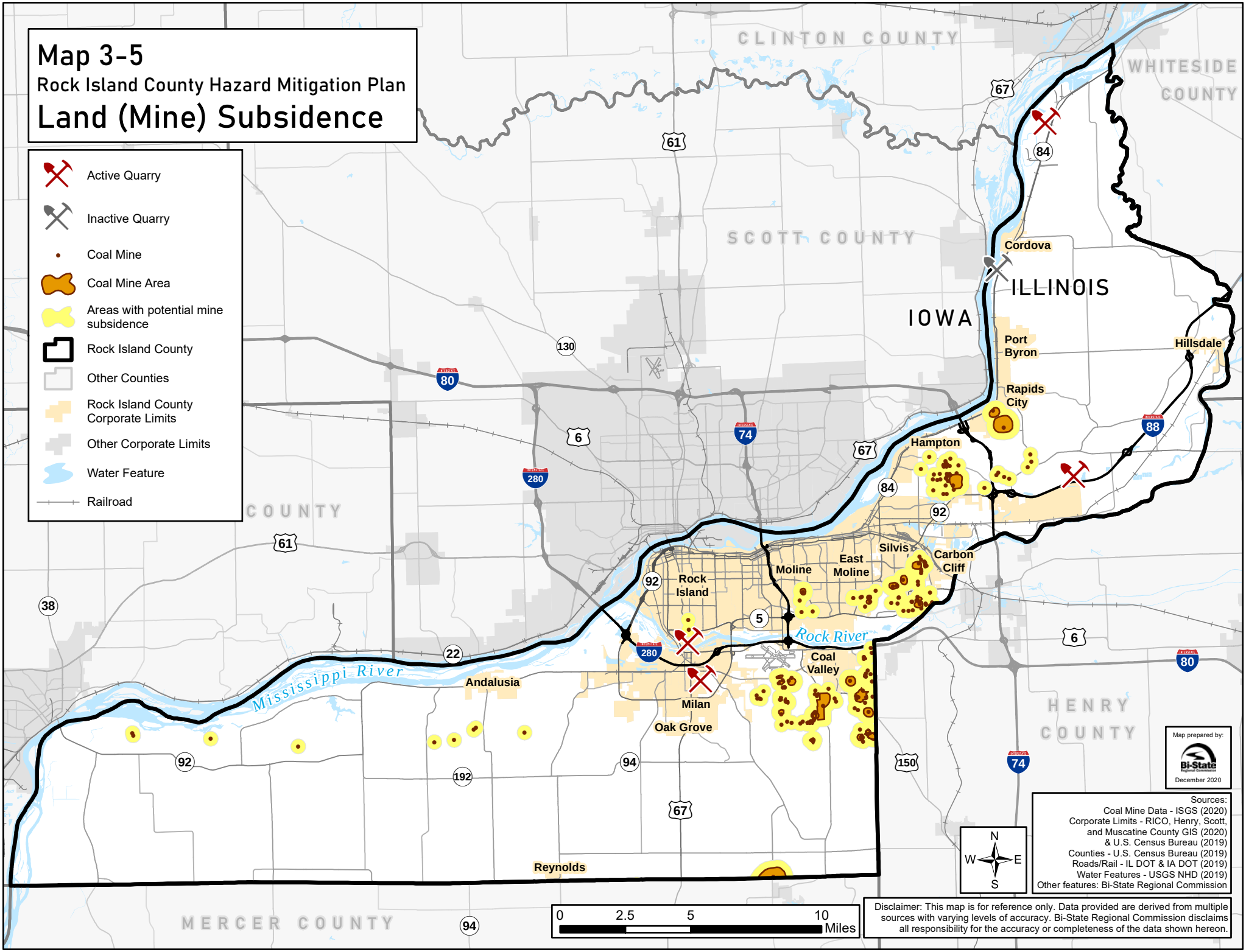
Geological karst features are reported to occur in Rock Island County. The sinkhole incident noted by ISGS is a karst feature that has affected the ground surface west of 11th Street in the City of Rock Island, where the coal-bearing Pennsylvanian strata was removed by the Mississippi River, and the bedrock below the area is the Devonian limestone.

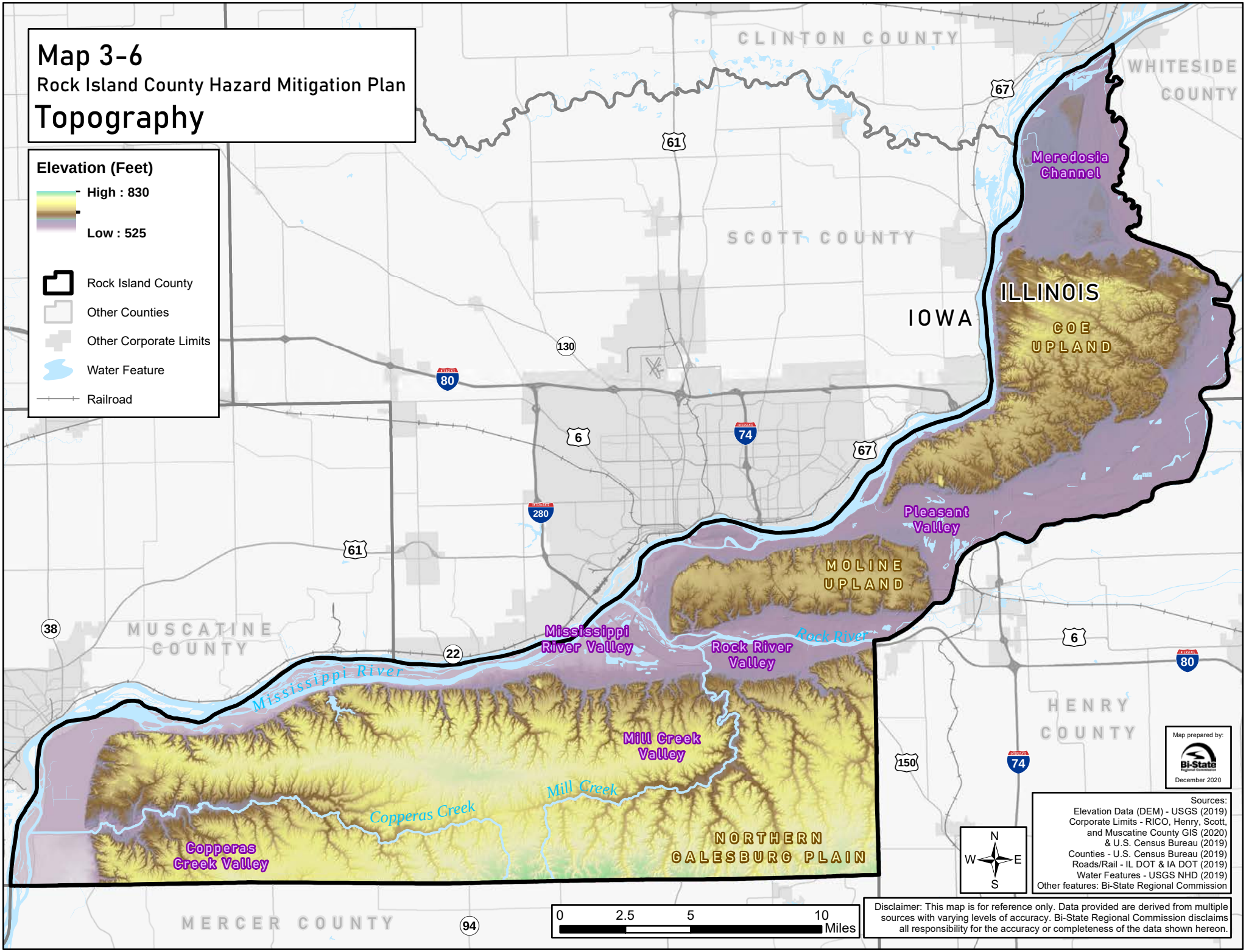
The health and safety of persons in affected areas is limited. Injuries and death are unlikely. The safety of response personnel depends on the type and size of the collapse and what is impacted by the collapse. If the collapse causes a petroleum pipeline break and a fire results, there may be health and safety risks. There may be risks if people need to be rescued from the collapse area. Property damage would be limited to a very small number of structures. Infrastructure damages would possibly be more significant. Utilities such as pipelines, cables, power poles, etc. could be vulnerable to downward movements of the soil. This may be of greater concern as new areas of the planning area are developed. Interruption of services would be limited to only those services where infrastructure was affected. For example, there may be power outages or water and sewer disruptions if a subsidence event would destroy underground utilities. Cross-country pipelines can also be affected by mine subsidence, if mine location information was not available when the pipelines were constructed. Breakage of pipelines carrying natural gas or other petroleum products could cause extensive environmental damage. Breakage of pipelines carrying sewage also carries environmental concerns. Breakage of pipelines carrying water could cause localized flooding, road collapse, and interruption of water service or cause detours on transportation routes. Land subsidence by manmade causes have damaged homes and commercial structures, disrupted gas/electricity, water service, communications, and could even disrupt transportation routes. From 1999 to 2017, the State of Illinois has had 1,330 confirmed mine subsidence claims filed for a total of $158,039,727. In 1979, the Mine Subsidence Insurance Act was passed to provide subsidence insurance for homeowners in mining areas. The risk of damage was high enough that the law mandated that private insurance carriers include coverage as a part of their homeowner policies. Homeowners in counties where 1% or more of the land has been undermined will automatically have subsidence insurance added to their policies when issued. Rock Island County has the mandatory insurance requirement. Those individuals refusing coverage will be asked to sign a waiver (ISGS, 06). Later Amendments to this Act have increased coverage for insured structures from $50,000 (1979) to $350,000 (1990). Mine subsidence insurance in Illinois covers damage caused by underground mining of any solid mineral resource (ISGS, 13).

Warning time. Subsidence events resulting from mining or natural features are very isolated and localized. They are very hard to predict in advance due to undermined and destabilized rock and soil conditions or movements below ground. Warning signs such as cracks and soil settlement may appear in advance and may need to be closely watched with inspections and overall monitoring of conditions. Events may occur over extended periods, although they have occurred very rapidly with little advance warning.

Duration. Land movement can be quick and can last days or even years.

Sources:	
Illinois Natural Hazard Mitigation Plan, 2018	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
Illinois State Geological Survey Circular 575 - *The Proximity of Underground Mines to Urban and Developed Lands in Illinois, 2009* by Christopher P. Korose, Andrew G. Louchios, and Scott D. Elrick	Illinois Mine Subsidence Insurance Fund
United States Geological Survey – Office of Groundwater	USGS publication *Engineering Aspects of Karst* by William E. Davis
Illinois Geological Survey publication: ISGS Guidebook 18 – *Early Pennsylvanian Paleotopography and Depositional Environments, Rock Island County, IL, 1985* by Richard L. Leary, Illinois State Museum , Springfield, IL	Illinois Geological Survey publication: Circular 510, *Geology for Planning Rock Island County*, Illinois, 1980, by Richard C Anderson, Augustana College, Rock Island, IL


Map 3-5
Rock Island County Hazard Mitigation Plan
Land (Mine) Subsidence
Active Quarry
Inactive Quarry
Coal Mine
Coal Mine Area
Areas with potential mine subsidence
Rock Island County
Other Counties
Rock Island County Corporate Limits
Other Corporate Limits
Water Feature
Railroad
CLINTON COUNTY
WHITESIDE COUNTY
SCOTT COUNTY
HENRY COUNTY
MERCER COUNTY
ILLINOIS
IOWA
Cordova
Port Byron
Hillsdale
Rapids City
Hampton
Silvis
Carbon Cliff
East Moline
Moline
Rock Island
Coal Valley
Andalusia
Milan
Oak Grove
Reynolds
Rock River
Mississippi River
61
67
84
130
80
6
74
280
88
92
5
22
38
192
94
150
0 2.5 5 10 Miles
N
W
E
S
Map prepared by:
Bi-State Regional Commission
December 2020
Sources:
Coal Mine Data - ISGS (2020)
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.


Map 3-6
Rock Island County Hazard Mitigation Plan
Topography
Elevation (Feet)
High : 830
Low : 525
Rock Island County
Other Counties
Other Corporate Limits
Water Feature
Railroad
CLINTON COUNTY
WHITESIDE COUNTY
SCOTT COUNTY
IOWA
ILLINOIS
Meredosia Channel
COE UPLAND
Pleasant Valley
MOLINE UPLAND
Mississippi River Valley
Rock River Valley
Rock River
Mississippi River
Mill Creek Valley
Mill Creek
Copperas Creek
Copperas Creek Valley
NORTHERN GALESBURG PLAIN
MUSCATINE COUNTY
HENRY COUNTY
MERCER COUNTY
61
67
130
80
6
74
280
22
38
150
94
N
W
E
S
0
2.5
5
10
Miles
Map prepared by:
Bi-State Regional Commission
December 2020
Sources:
Elevation Data (DEM) - USGS (2019)
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Landslide

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	6	18	2	1	33

A landslide is a downward and outward movement of slope-forming materials reacting under the force of gravity. Landslides occur when masses of rock, earth, or debris move down a slope. Landslides can have great variation in size and speed of flow. Landslides have been occurring over the same terrain since prehistoric times. In Illinois, they are primarily activated by excessive rainfall and by human modification of the land. This information is reiterated by the Illinois State Geological Survey, which typically sees most landslides as the result of human interaction, where toes of slopes are cut away for roads, borrow, or just more flat space. Other removals are associated with small creeks, streams, and rivers removing stream bank material and floods saturating bases of slopes.

The geographic extent of historic events has been limited to less than a city block in size and has "run out" over the stretch of less than 100 yards. The maximum extent is limited to steep bluff areas within the planning area. Steep bluff areas with as much as 18 to 60% slope were identified in the Illinois Route 5 Corridor Study done in 1986. Areas of steep slope in combination with shale layer along the bluffs of the Rock River can be of concern for future development.

Probability. The bluff edges and side slopes in the planning area, where underlain with Pennsylvanian shale, are susceptible to slumping and landslides. The northern third of Rock Island County does not have a shale layer, and landslide probability is very low. The soils in this area tend to contain more sand than loess or clay.

There have been several small-scale landslide events in Illinois. However, there have been none of such significance that it has resulted in injury or death. According to the Illinois State Geological Survey Circular 510, the geologic materials in Rock Island County provide adequate foundation for most types of construction. Some soils are made up of Peyton Colluvium, which is a poorly sorted mixture of silt, clay, sand, and pebbles that has accumulated, largely by creep and slopewash, at the base of steep, unstable slopes. It also includes alluvial fans. The Peyton Colluvium is often found in association with the Lacon Formation, which are deposits from large-scale mass-movements on steep slopes. The Lacon Formation is the product of soil and rock creep, slump, and landslides, all common on steep slopes underlain by weak materials such as shale, glacial till, and loess. When dry, these materials are firm and stable, but when water saturated, they lose their strength and then creep, slump, or slide downhill. Such conditions are common on the steep valley sides in Rock Island County, particularly in those areas where shale is present. The Lacon Formation is recognizable throughout the county. However, it has not been mapped separately because some areas are too small to map, and other areas do not have definable boundaries. In addition, the materials that make up the extensive unstable slopes, loess, glacial till, and shale can usually be distinguished and mapped

individually, even though they may have moved downslope. The Peyton Colluvium is mapped only where it is extensive and easily recognized on aerial photographs, such as along the bluffs of the Mississippi River downstream from the mouth of the Rock River. It is usually less than 10 feet (3 m) thick.

Areas where shale underlies the loess along the north bluff of the Rock River have produced occurrences of slumping or minor landslides in Rock Island County. The most notable was in the Wildwood subdivision between the Cities of Rock Island and Moline in the early 1990s. Several expensive residential structures were damaged or destroyed because of landslides or slumping. Damage to municipal sewer lines also occurred in this area. There have been several occurrences of slides along the steep Rock River Bluffs in the Black Hawk State Historic Site. This has caused trail structures to be removed and rebuilt. Remedial actions have been to stabilize the soils and trails along the bluff.

Magnitude and Severity. Those occupying structures overlooking or on the side of river valleys and steep ravines are most vulnerable. At this time, these areas constitute a very small portion of homes and commercially occupied structures in the county. Road cut areas are the most vulnerable.

There is very little risk to health and safety of persons in affected areas. Injuries and death are very unlikely except in the case of undetected slope failure or if warning signs in structures that are located on steep slopes are ignored. Property damage would be limited to a very small percentage of structures. Infrastructure damages would be more significant. Utilities such as pipelines, cables, power poles, etc. are often vulnerable to downward movements of the soil. Slides may cause minor power outages or water disruptions if the slide affects these utilities. Landslides are usually a naturally occurring event. In Illinois, these would be on a very localized scale. Slides may alter stream flow and direction until the stream seeks a new channel. Landslides have damaged homes and disrupted electricity, water service, communications, and transportation routes. Economic effects would be secondarily associated with landslides.

Warning time. Warning time depends on the individual landslide. If it is a slow slide, there may be warning time. If it is a sudden slide, then there may be no warning.

Speed of Onset. Landslides and flooding are often related because precipitation, runoff, and ground saturation combine to destabilize soil and rock. For this reason, potential landslides can be detected if high potential landslide areas are monitored. Landslides can last from minutes to days. Response to the slide depends on slide location and what the landslide affects.

Sources:	
Illinois Natural Hazard Mitigation Plan, 2018	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
Illinois State Geological Survey Circular 510 - 1980 Geology for Planning in Rock Island County, Illinois by R. C. Anderson	2009 American Geological Institute - Living with Unstable Ground by Thomas L. Holzer

Levee Failure (Non-Performance)

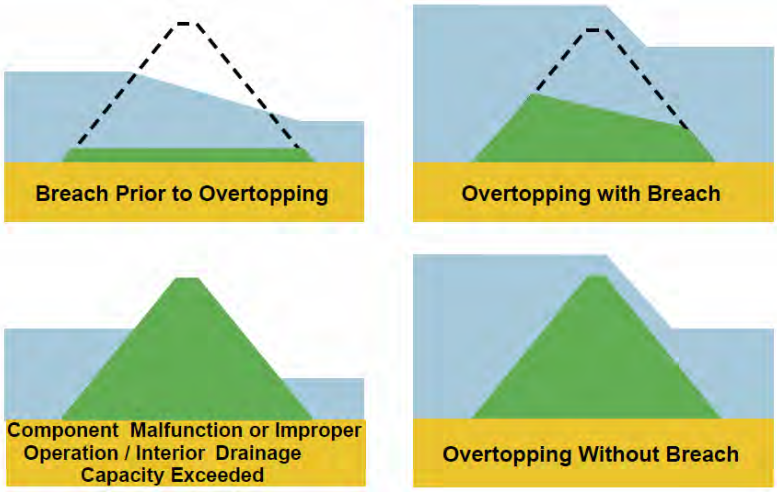
Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	6	18	2	1	33

The Federal Emergency Management Agency (FEMA) defines a levee as "a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water in order to reduce the risk from temporary flooding." Levees reduce the risk of flooding, but do not eliminate the risk. Levees and floodwalls are constructed from the earth, compacted soil, or artificial materials, such as concrete or steel. To protect against erosion and scouring, earthen levees can be covered with grass and gravel or hard surfaces like stone, asphalt, or concrete. A levee system comprises one or more levee segments and other features that collectively provide flood risk reduction to a defined area. The levee system is inclusive of all features that are integral to the performance of excluding flood waters from the leveed area. These levee features may consist of embankment sections, floodwall sections, closure structures, pumping stations, and interior drainage works. Highway and railroad embankments or other non-levee features that are integral to the performance of excluding flood water from the leveed area will be considered to be part of a levee system for evaluation purposes. Embankments that function as levees also exist in water conveyance systems, navigation channels, recreation areas, and habitat restoration projects.

Levees typically function in keeping the leveed area free from inundation. Hence, in common language, a levee does not perform ("that fails") when people and property get wet. In technical terms, levees can "non perform" through four principal modes:

- Breach Prior to Overtopping
- Overtopping with Breach
- Component Malfunction or Improper Operation/Interior Drainage Capacity Exceeded
- Overtopping Without Breach

Figure 3-4
Levee Breach Diagram



Levees are designed with an expected water height. Sometimes, this water height corresponds to a flood frequency such as a 10-year, 50-year, or 100-year return period. As longer records are kept, the flood frequencies are changed such that although the height of the levee remains constant, a levee that provided 100-year flood frequency may not always provide assurance that it will provide a leveed area free from inundation.

FEMA provides flood insurance to the nation. Rates for flood insurance are set by an examination of potential flooding using the best available information. Levees can be accredited by FEMA that allows for lower insurance rates if the levee is shown to have sufficient capability to resist non-performance. Levees that have a minimum performance at the 100-year flood flow frequency can be accredited by FEMA and results in lower flood insurance rates.

Rock Island County has 13 levees, according to the *2018 Illinois Statewide Mitigation Plan - Rock Island County Flood Hazard Assessment* conducted by the Natural Hazard Research and Mitigation Group (NHRMC) at Southern Illinois University, Carbondale. Eleven of those levee districts participate in the PL-84-99 program that provides reimbursement for specific damages to levees that result from high-water events. The levee sponsor is required to provide a standard level of maintenance and proper operation acceptable to the United State Army Corps of Engineers (USACE), which in turn reduces the probability of levee non-performance. Below is a chart from the assessment with information on the levees in Rock Island County.

An acceptable rating indicates no unacceptable rating on any of the rated items, and a significant majority of acceptable over minimally acceptable ratings. Minimally acceptable indicates no unacceptable rating on any of the rated items, and less than a significant majority of acceptable over minimally acceptable ratings. Unacceptable ratings indicate one or more unacceptable ratings on any of the rated items. Levees with unacceptable ratings are often moved from active to inactive status within the PL84-99 Program until the necessary repairs to the levee system are made. The PL 84-99 rating is a relative judgment of how closely the levee is operated and maintained to USACE standards.

Name	River	Area (Acres)	Design Protection Level	Program		Inspection	
				PL 84-99	FEMA accredited	Date	Rating
Meredosia Drainage and Levee District	Mississippi River	10,348	100-year	Yes	No	2/23/2015	Minimally Acceptable
Zuma Canoe Special Service Area	Rock River	5,007	50-year	Yes	No	11/11/2015	Minimally Acceptable
East Moline LFPP	Mississippi River	1,193	200-year	Yes	Yes	12/3/2014	Minimally Acceptable
Rock Island Arsenal (Fed Gov)	Mississippi River	822	NA	No	No	N/A	N/A
Rock Island LFPP	Mississippi River	863	200-year	Yes	Yes	112/9/2014	Minimally Acceptable
Milan, IL LFPP and Big Island Conservatory District	Rock River	1,147	200-year	Yes	Yes	2/14/2015	Acceptable
Milan, IL West	Rock River		200-year	Yes	Yes	2/15/2015	Minimally Acceptable
Milan, IL LFPP – Mill Creek / LBD Rock	Rock River	811	200-year	Yes	Yes	11/20/2014	Minimally Acceptable
Village of Andalusia Levee	Mississippi River	63	50-year	Yes	No	Not Available	Minimally Acceptable
Village of Andalusia Levee	Mississippi River	113	50-year	Yes	No	Not Available	Minimally Acceptable
Drury Drainage District	Mississippi River	5110	50-year	Yes	No	11/20/2014	Minimally Acceptable
Andalusia Refuge Levee	Mississippi River	130	2-year	Yes	No	6/5/2014	Minimally Acceptable
Bay Island Drainage and Levee District	Mississippi River	24,989	50-year	Yes	No	3/20/2014	Minimally Acceptable
Milan/Big Island RDB South	Slough and Mill Creek	85	100-year	Yes	Yes	11/20/2014	Minimally Acceptable

Probability. Records of levee non-performance within Rock Island County are few. The Meredosia Levee along the Rock River was overtopped in 1946 due to ice jams on the Rock River. In 1973, the Meredosia Levee non-performance was caused by under seepage and backward erosion piping. Backward erosion piping is a process in which erosion initiates at the exit point of seepage, and progressive backward erosion results in formation of a continuous water passage or pipe. The main stem Mississippi River levee was sandbagged to prevent an overtopping breach. Ponding of water in the inundated area fostered the federal project to increase in height to that which is present along the Mississippi. The levee for controlling flood waters from the Rock River is still at the pre-1973 level as it was not reconstructed as planned.

The probability of non-performance of a levee or floodwall is difficult to predict, and USACE has undertaken a probabilistic analysis of levee non-performances for the levees in Rock Island County. Proper design, construction, and operation and maintenance can limit the probability of a levee component not performing.

Historical Occurrence. In 2013, a record high-water event was predicted on the Mississippi to crest 5 feet above the historic maximum level. Fortunately, several days of unexpected cold decreased the upstream flows and allowed waters to remain below record heights, and no levee overtopping occurred. Throughout the 1970s to 2000s, the watersheds that feed the Rock and Mississippi Rivers have witnessed significant changes in climate patterns than those experienced in the first two-thirds of the 20th Century. That earlier period contained the flow records that were the basis of design of the levee height. This has, in most basins, increased the flood frequencies from that used in the original designs thereby increasing the probability of overtopping. Development in the watershed can raise flood levels and make a levee, designed and constructed under previous characteristics, inadequate for current runoff conditions.

Magnitude and Severity. People, property, and utilities in the floodplain are most at risk. The magnitude and severity of flooding impact depends on several factors. These factors include:

- Mode of levee non-performance
- Potential depth of inundation
- Nature of building construction in the leveed area i.e. wood vs. masonry
- Social and economic valuation of building contents
- Warning times of the event occurring
- Evacuation plans and plan execution
- Community willingness to leave threatened properties

Levees and floodwalls, when considered “protective,” give a false sense of security. People feel that levees will protect them and their property against any future flooding. If actual risk is not communicated to the residents by the jurisdiction, there may be effects to the reputation of the community if the levee fails.

Floodwaters breaching a levee are usually contained in the historic floodplain. Levee non-performance in one area may prevent flooding in another area. A levee breach or overtopping occurring along one segment may drop the level of water along other segments of the stream. For initial overtopping, the overriding concern where the overtopping location will occur and the availability of water will determine the inundation of the interior.

In an urban setting, the severity and duration may cause health-related concerns to the public, while the main impact of a levee non-performance in agricultural areas is economic. It should be pointed out that the inundated areas of the Meredosia primarily agricultural levee was declared a public health hazard that required breaching to control the mosquito population In a breach, water bursting through a narrow levee breach is moving much faster than the floodwaters in the main channel. The breaking out of this front of water and its fast flow can cause more destruction to structures behind the levee than floodwaters in the main channel would have caused.

Residents behind levees often have a false sense of security. If the actual risk is not communicated to the residents by the jurisdiction, there may be effects to the reputation of the community if the levee fails. Effects would be similar to those experienced during a river or flash flood. Areas directly behind a levee (land-side) can experience pooling of water.

With updated floodplain mapping, FEMA requires certification of levees in order for property protected by the levee to be eligible for flood insurance at a discounted rate. Without certification, those properties would only be eligible for flood insurance at the actuarial rate for the elevation of the structure compared to the 100-year or 1 percent flood level.

2020 Census data analyzed through Esri indicates that approximately 10,167 people live in leveed areas in Rock Island County. Since the likelihood of a levee non-performance is during a flood, the amount of warning time available should allow the health and safety of persons in the affected area to be minimal. Injuries and death are possible but unlikely.

Continuity of operation would be minimal and would be determined by which levee failed. Non-performance of the Rock Island Levee could have a significant impact on the continuity of county and city government. Property damage would be limited to inundation areas behind the levee system. Levees protecting more urban areas such as downtown Rock Island, East Moline, southwest Rock Island, and a large portion of Milan would cause significantly more damage than in the rural areas. See the River Flooding profile on page 68 for information related to aggregate flood losses by Census Block in the Levee Fails Scenario of HAZUZ-HM.

Economic and financial effects vary based on which levee fails. Crop flooding, severe scouring, and erosion around bridges could take place and could have agricultural and economic effects in rural areas. If an urban area levee did not perform, the economic and financial losses would be very high. Using the available databases, USACE has estimated non-performance consequences, in aggregate for the Rock Island County Levees, of approximately $1.3 billion dollars, although this does not include the loss of wages, inconvenience by loss of critical infrastructure, and inventory of businesses.

Warning Time. The amount of warning time depends on the type of levee non-performance and the ability to effectively transmit the warning. Local flood warning systems can help in determining the maximum water surface and the timing of a flood situation. Hours or days of warning may be available for high water that may overtop levees, but this does not provide complete security from a rupture in the levee itself. A sudden non-performance of a portion of the levee may send floodwaters gushing from this break within seconds. Normally, occupants of the floodplain can be warned about potential levee breaches or breaks when high water encroaches upon the levee. Plans for effective transmittal of warnings need to be evaluated, exercised, and refined.

Duration. The effects of a levee non-performance and its association with river flooding are extensive and require substantial response efforts. The Meredosia leveed area remained inundated for approximately 10 weeks in 1965. Large volumes of water can enter formerly dry areas, forming temporary lakes. Such lakes do not go away immediately, because the lake is blocked from returning to the main channel by higher grounds that were not destroyed. Consequently, the water level drops along the main river days before it drops behind breached levees. Often, pumps behind the levees are needed to remove floodwaters that breach the levees. This alleviates some of the effects associated with levee non-performances. Levee non-performance continues to cause damage long after it occurs. In urban settings, flooding may have a deleterious effect on economic prosperity lasting 25 years or more. The Institute of Business and Home Safety estimates that only 10% of small business survive a flooding event.

Sources:	
"The International Levee Handbook" CIRIA Publication C731, CIRIA, www.ciria.org (2014)	Moss, R.E.S. and Eller, J.M. (2007) "Estimating the Probability of Failure and Associated Risk of the California Bay Delta Levee System." GeoDenver, Feb.
Illinois Natural Hazard Mitigation Plan, 2018	Illinois Statewide Mitigation Plan – Rock Island County Flood Hazard Assessment
Illinois State Water Survey, McConkey, Sally (2013)	FEMA Factsheet: What is a Levee, November 11, 2012
U.S. Army Corps of Engineers (USACE) National Levee Database: https://levees.sec.usace.army.mil/#/	

Radiological Incident

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	6	18	2	1	33

Definition. This hazard is an incident resulting in a release of radiological or nuclear material at a fixed facility to include power plants, hospitals, laboratories, and the like.

Description. Although the term "nuclear accident" has no strict technical definition, it generally refers to events involving the release of significant levels of radiation. Most commercial nuclear facilities in the United States were developed in the mid-1960s and are designed to withstand aircraft attack. Therefore, they should withstand most natural hazards even though they may not have been specifically designed for those forces. Medical facilities may also have radiological materials.

Historical Occurrence. Emergency classifications are divided into four categories. Each calls for a certain level of response from plant and government personnel. From least to most severe, the classifications are: Unusual Event, Alert, Site Area Emergency, and General Emergency. Since 1993, the Quad Cities Nuclear Power Plant operated by Exelon near Cordova has had 12 Unusual Events, 4 Alerts, and no Site Area Emergencies or General Emergencies.

Probability. The Quad Cities Nuclear Power Plant is located approximately 3 miles north of the Village of Cordova on the Illinois bank of the Mississippi River. All operators of facilities that use radioactive materials and transporters of radioactive waste are circumspect in the packaging, handling, and shipment of the radioactive waste, and, since they are closely regulated by a variety of federal, state, and local organizations, the likelihood of an incident is remote. Hospital facilities in Rock Island County that have radiological materials have recently upgraded facilities to avoid future incidents. Due to very strict nuclear regulatory restrictions, standards, and inspections, as well as very detailed and established emergency response plans, the hazard planning steering committee has evaluated that the probability of a fixed radiological incident occurring in Rock Island County is less than 1% in the next 100 years.

Magnitude/Severity. In 30 years of nuclear power production in the U.S., no deaths or serious injuries from radiation have been recorded among the general public. Except in a nuclear detonation, exposure to large amounts of radiation is less likely to cause large-scale damage, death, and injury than many of the conventional hazards we face. Wide-scale radiological hazards would come from naturally-occurring radiation such as radon. According to the United States Geological Survey, all of Illinois has a high potential to geologic radon. All nuclear facilities in the United States identify a 10-mile radius as an Emergency Planning Zone and a 50-mile radius as an Ingestion Pathway Zone.

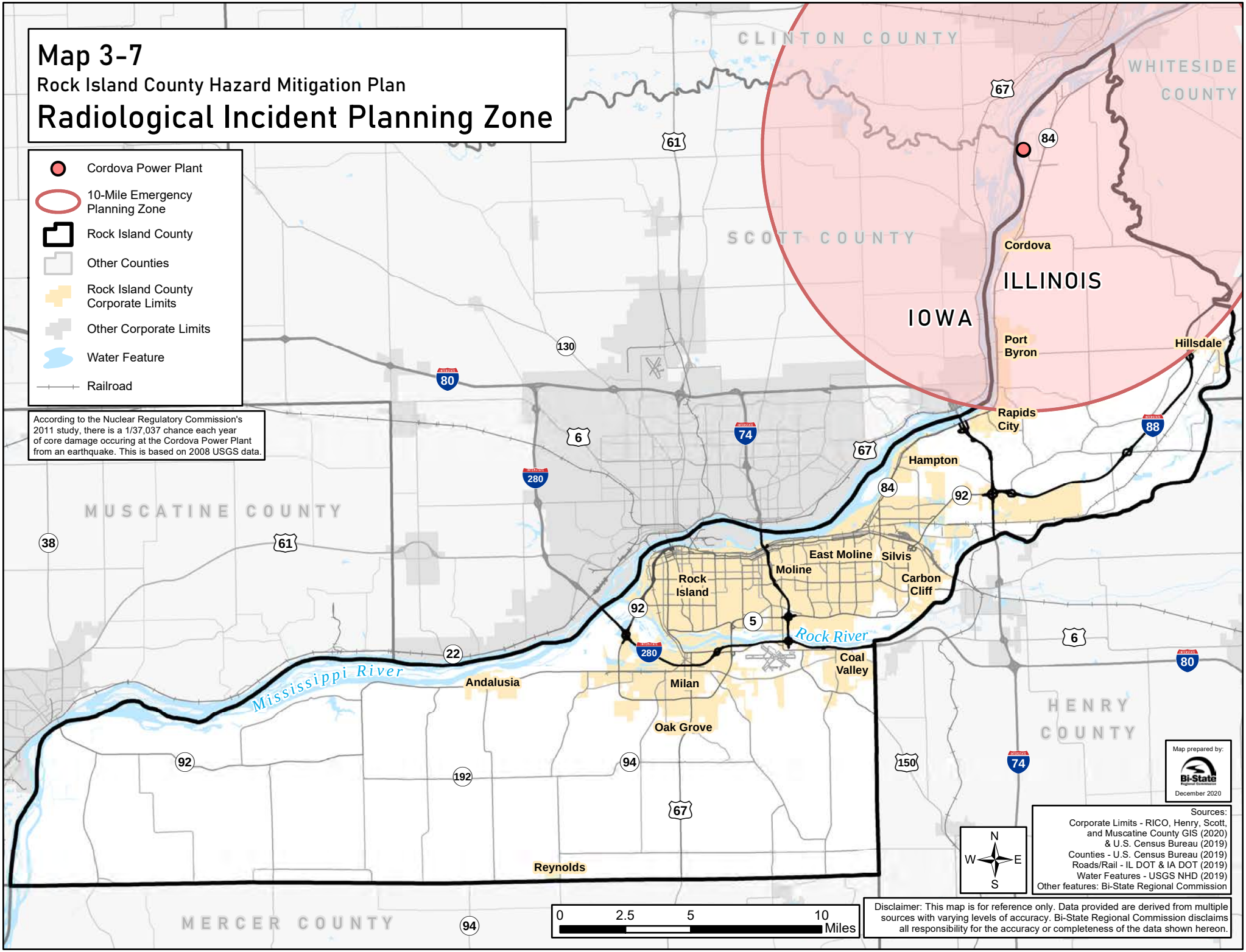
Warning Time. Ionizing radiation cannot be seen, smelled, heard, or detected with human senses. Detection instruments are needed to indicate the existence of dangerous radiation. Distance from the incident would dictate the amount of time needed to avoid exposure from damaging radiation. Protective actions directed by state, county, and city officials would depend upon weather conditions and developments at the power plant. In an actual emergency, the public can turn to their local Emergency Alert System Station or NOAA Weather Radio.

Sources:	
Exelon Corporation	Michael Muth, Emergency Preparedness
Quad Cities News WQAD-TV	Nelson, Shellie. Nov. 27, 2012. "Illinois Offers Potassium Iodide Pills to Residents Near Nuclear Plants."
Rock Island County and Bi-State Regional Commission	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
State of Illinois, IEMA	*Illinois Natural Hazard Mitigation Plan, 2018*

Map 3-7

Rock Island County Hazard Mitigation Plan

Radiological Incident Planning Zone



Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

River Flooding

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
18	6	18	2	1	45

River flooding is a rising or overflowing of a tributary or body of water that covers adjacent land not usually covered by water when the volume of water in a stream exceeds the capacity of the channel. Floods are the most common and widespread of all natural disasters, except fire. Most communities in the United States can experience some kind of flooding after spring rains, heavy thunderstorms, winter snow thaws, waterway obstructions, or levee or dam failures. Often, it is a combination of these elements that causes damaging floods.

Floodwaters can be extremely dangerous. The force of six inches of swiftly moving water can knock people off their feet, and two feet of water can float a car. Floods can be slow or fast rising but generally develop over a period of days. Flooding is a natural and expected phenomenon that occurs annually, usually restricted to specific streams, rivers, or watershed areas.

Flood categories in feet at the National Weather Service gauge point within Rock Island County are as follows:

Flood Stages	Mississippi River at LeClaire	Mississippi River at Rock Island	Rock River at Joslin	Rock River at Moline
Major Flood Stage (ft)	13.5	18	16.5	14
Moderate Flood Stage (ft)	12	16	14	13
Flood Stage (ft)	11	15	12	12
Action Stage (ft)	10	13	11	11

The National Centers for Environmental Information reports 63 flood events for Rock Island County between 1/01/1950 and 8/61/2020. Flash flooding is not included in this count (see Flash Flooding Hazard Profile on page 37). These events document flooding on the major rivers in Rock Island County, the Mississippi River and its tributary the Rock River. The highest crest on record for the Mississippi River occurred in 1965 for the LeClaire river gauge and 2019 for the Rock Island river gauge, which was The Great Flood of 1993 until recently.

The Mississippi River Flood of 1965 (DR-194) was caused by higher precipitation levels within the upper Midwest and a colder than usual March that inhibited a gradual melt of snow pack up stream. The City of Rock Island experienced severe flooding in the downtown area. As a result of the 1965 flood, the City of Rock Island decided to protect its downtown with a levee, which was finished in 1973.

The Great Flood of 1993 (DR-997) did the most damage along the Mississippi River in Illinois in recorded history. Heavy snowfall in the winter and continuous heavy rain falling on most of the upper Midwest in the spring and summer caused major flooding in nine states. Flood waters begin rising in March 1993 and receded in September. The Great Flood had severe effects on agricultural land, and barge traffic ceased for over eight weeks, causing severe economic loss to barge operators.

On April 18, 2001 (DR-1368), flooding began as a result of heavy rains and snow melt in the upper Midwest and continued through the end of the month. On May 9, 2001, the President declared 10 counties a major disaster where near-record flooding occurred on the Mississippi River from the Wisconsin border down to the confluence of the Mississippi and Missouri rivers (FEMA 1368-DR). Rock Island County local governments reported approximately $1.95 million in damages and preventative measures under the FEMA Public Assistance program and received approximately $1.5 million from FEMA.

Often known as the Great Flood of 2008 (DR-1771), major to record flooding occurred during the month of June 2008. Persistent heavy rain from late May to early June resulted in both the Mississippi River and the Rock River rising above flood stage in most locations. Within Rock Island County, local governments reported approximately $2.42 million in damages and preventative measures under the FEMA Public Assistance program and received approximately $1.87 million in FEMA funding.

The 2011 Mississippi River Flood made the top ten historic crests at both Mississippi River gauges within Rock Island County; however, Rock Island County was not part of a disaster declaration as a result of this flood. Snowmelt from above normal snowfall in Minnesota caused major flooding along the Mississippi River and remained above major flood levels for one week.

In the spring of 2013, heavy rains of three to seven inches combined with snowmelt caused major flooding on both the Mississippi River and the Rock River. The flood event is the flood of record for the Rock River at Moline. The Rock River remained above major flood level for the last two weeks of April.

The 2019 Mississippi River Flood was known as the longest-lasting since the Great Flood of 1927 in multiple locations. Significant flooding occurred across eastern Iowa and northwest Illinois during the spring of 2019. Moderate to major flooding was observed on the Mississippi River due to snowmelt, frozen ground, ice jams, saturated soils, and rainfall from mid-March that continued through the end of the month and into April and May. Extensive flooding occurred late May and into June across eastern Iowa, northwest Illinois, and northeast Missouri. The last half of May was very wet with 5-8 inches of rain falling over the region. This, combined with saturated soils, brought many rivers above Moderate to Major flood levels. Many climate sites only saw 3 days of no precipitation from May 16 to May 31. The main stem Mississippi also crested again in late May/early June, with sites from Le Claire LD 14 on downstream recording a Top 10 crest.

Historic Crests at the Four River Gauges in Rock Island County

	Mississippi River at LeClaire		Mississippi River at Rock Island		Rock River at Joslin		Rock River at Moline	
	Crest	Date	Crest	Date	Crest	Date	Crest	Date
1	17.75	4/28/1965	22.70	5/2/2019	19.24	6/7/2002	16.53	4/21/2013
2	16.93	4/24/2001	22.63	7/9/1993	19.11	4/21/2013	16.38	3/6/2008
3	16.56	7/8/1993	22.48	4/28/1965	18.88	2/23/1997	16.21	6/2/2019
4	16.50	5/2/2019	22.33	4/25/2001	18.73	5/31/1996	16.15	4/26/1973
5	15.14	4/8/2019	22.00	3/10/1868	18.55	6/16/2000	15.79	6/7/2002
6	15.08	6/1/2019	21.68	6/1/2019	18.51	3/16/2019	15.7	5/20/1974
7	14.97	4/22/2011	21.49	6/16/2008	18.51	7/25/2017	15.57	3/17/2019
8	14.84	6/16/2008	20.94	7/4/2014	18.36	2/23/2018	15.40	7/26/2017
9	14.61	4/19/1997	20.71	4/22/2011	18.35	3/26/1993	15.36	5/3/2019
10	14.60	4/26/1969	20.68	4/8/2019	18.02	2/27/2001	15.31	2/24/1997

Source: NWS Quad Cities Advanced Hydrologic Prediction Service – Hydrograph/Historic Crests

All of the incorporated communities within Rock Island County [except Oak Grove that does not have a Special Flood Hazard Area (SFHA)] participate in the National Flood Insurance Program (NFIP) and have adopted floodplain management ordinances based on the State Model Ordinance, which goes beyond minimum requirement of the NFIP. School Districts are not eligible to participate in the NFIP.

In addition to floodplain management practiced as required in their ordinances, Rock Island County and the City of Moline participate in the Community Rating System. Rock Island County is currently a Class 7, and Moline is a Class 8. The Community Rating System (CRS) is a volunteer program for NFIP-participating communities. The goal is to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. The CRS provides incentives in the form of premium discounts for communities that go beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.

Probability. Rock Island County has been included in nine federally-declared flood disasters. Given this information, at least minor flooding could occur nearly every year somewhere in the county. The *Illinois Hazard Mitigation Plan, 2018* categorized Rock Island County's flood hazard as a Medium rating. Locally, flood hazards vary greatly. This is especially true when comparing Oak Grove, with no Special Flood Hazard Area (SFHA), to Hillsdale, with a little over 81% of its area in the SFHA. Following is a list of the percentage of SFHAs within each community.

Jurisdiction	Percent of Jurisdiction within SFHA
Andalusia	24.75%
Carbon Cliff	31.62%
Coal Valley	12.38%
Cordova	17.81%
East Moline	35.27%
Hampton	16.24%
Hillsdale	81.22%
Milan	16.50%
Moline	16.42%
Oak Grove	0.00%
Port Byron	8.05%
Rapids City	3.57%
Reynolds	11.29%
Rock Island, City of	15.41%
Rock Island, County of	20.74%
Silvis	1.54%

Magnitude/Severity. Flooding effects include potential loss of life. River flooding does not have as high a risk as flash flooding because of the slower onset of the river flood. Personal property can be extensively damaged and destroyed by swift moving water. Facilities and infrastructure can be scoured around, degrading its structural integrity. Damage and disruption of communications, transportation, electric service, and community services are likely in severe cases. Water treatment and wastewater treatment facilities are often located in or near the floodplain and are at high risk of flooding and will eventually be taken offline.

The vulnerability from river flooding is quite delineated. Work in flood hazard mapping has allowed many communities to restrict development in hazardous areas. The Federal Emergency Management Agency has delineated the special flood hazard areas in Rock Island County. Flood Insurance Rate Maps (FIRMs) show properties potentially affected by the floods that have at least a 1% chance of occurring in any given year. Generally, these areas are in the floodplain or adjacent areas. Map 3-8 on page 76 shows general locations of the repetitive loss properties (discussed below) as associated with the Special Flood Hazard Areas with a 1% chance of flooding annually in the preliminary digital FIRM for Rock Island County.

The National Flood Insurance Program (NFIP) Repetitive Loss Properties (RLP) report identifies properties vulnerable to multiple flood losses. Repetitive loss properties are any NFIP-insured buildings for which two or more claims of more than $1,000 each were paid by the NFIP within any 10-year period. This report provided by FEMA Region V shows 208 repetitive loss properties with 791 total losses totaling $10,708,458.40 within Rock Island County as of January 18, 2021. Map 3-8, page 76, shows approximate locations of the repetitive loss properties in Rock Island County as well as the FIRM 1% chance of flooding occurring in any given year. More

detailed FIRMS for the planning area can be found in Appendix 3-3. Following is more detailed information on Repetitive Loss Properties by jurisdiction.

Jurisdiction	Total Losses	Number of Properties	Number of Residential	Number of Commercial	Number of Industrial	Total Paid
Andalusia	12	5	5	0	0	$197,841.53
Carbon Cliff	14	5	5	0	0	$240,305.29
Coal Valley	6	3	3	0	0	$66,792.43
Cordova	8	2	2	0	0	$48,272.22
East Moline	29	10	9	1	0	$322,947.89
Hampton	17	5	5	0	0	$148,176.73
Hillsdale	2	1	1	0	0	$9,423.86
Milan	19	5	5	0	0	$250,427.66
Moline	45	14	12	2	0	$1,730,948.93
Oak Grove	0	0	0	0	0	$ —
Port Byron	7	2	2	0	0	$13,677.98
Rapids City	0	0	0	0	0	$ —
Reynolds	0	0	0	0	0	$ —
Rock Island, City	5	1	1	0	0	$33,028.82
Rock Island, County	627	155	155	0	0	$7,646,615.06
Silvis	0	0	0	0	0	$ —
Total	791	208	205	3	0	$10,708,458.40

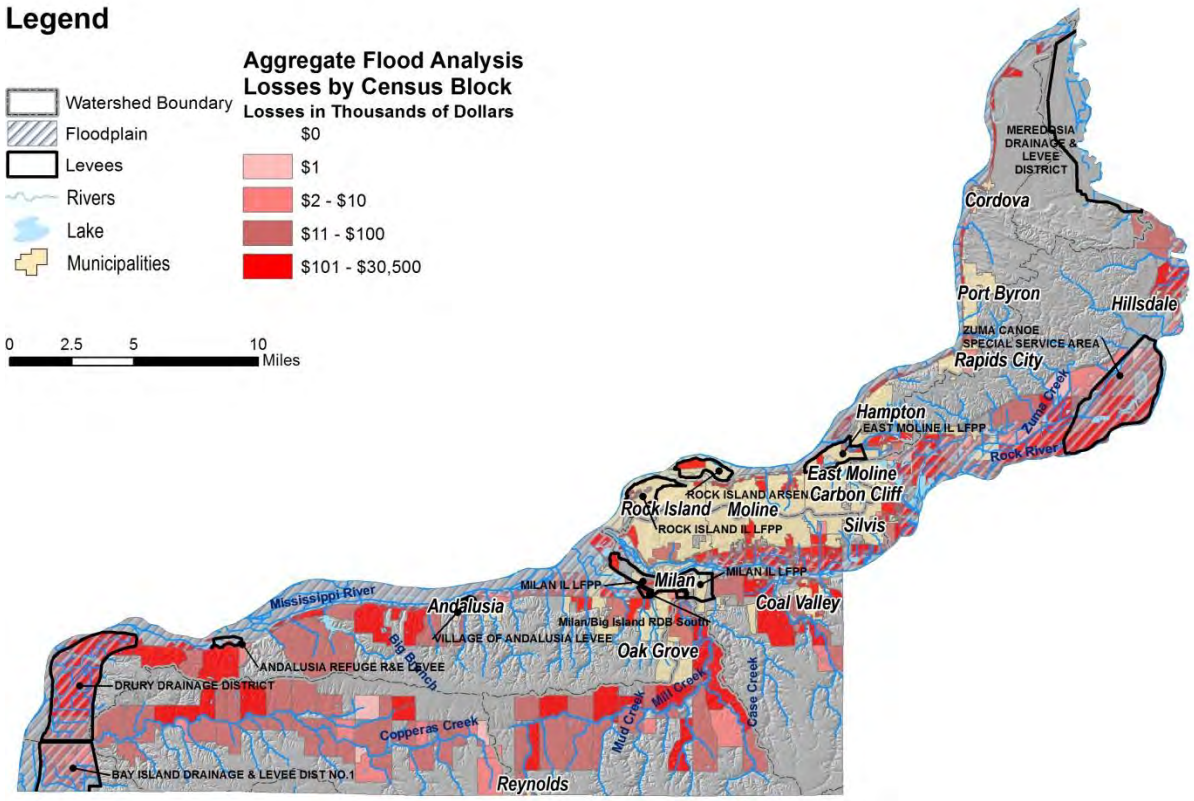
The *Illinois Hazard Mitigation Plan, 2018* included information on a state-wide HAZUS analysis conducted by the Natural Hazard Research Group at Southern Illinois University, Carbondale to develop a risk assessment focused on defining the potential flood exposure throughout each county in Illinois. HAZUS is a Geographic Information System-based risk assessment tool designed by FEMA in collaboration with the National Institute of Building Sciences. The HAZUS flood model assesses the impact of flooding based on FEMA and USACE damage relationships that was then applied to infrastructure inventories to estimate losses for a selected flood scenario. Level 1 HAZUS flood loss modeling was utilized to create a flood-hazard assessment to estimate potential flood losses within the 100-year floodplain. Two scenarios were run in the HAZUS flood model. One where levees hold and one where levees fail.

Expected Flood Exposure and Losses in 100-year Floodplain for Levee Holds Scenario

General Occupancy	Estimated Building Exposure x $1000	Building Losses x $1000	Total Building Related Losses x $1000
Residential	$1,362,404	$66,480	$105,020
Commercial	$763,751	$36,890	$132,900
Industrial	$260,353	$16,630	$63,520
Other	$119,185	$3,310	$20,830
Total	**$2,505,693**	**$123,300**	**$322,270**

For the Levee Holds Scenario, approximately 2,800 households may be displaced due to the flood. This includes households evacuated from within or very near the inundated area. From the displaced households, approximately 5,700 people may seek temporary shelter. Approximately 26,800 tons of debris may be generated from this flood scenario. Debris includes building materials such as drywall, insulation, wood, brick, and foundations. If the tonnage is converted into truck loads (25 tons/truck), it would take an estimated 1,100 truckloads to remove debris.

Figure 3-5
Aggregate flood losses by census block
for Rock Island County for the Levee Holds Scenario

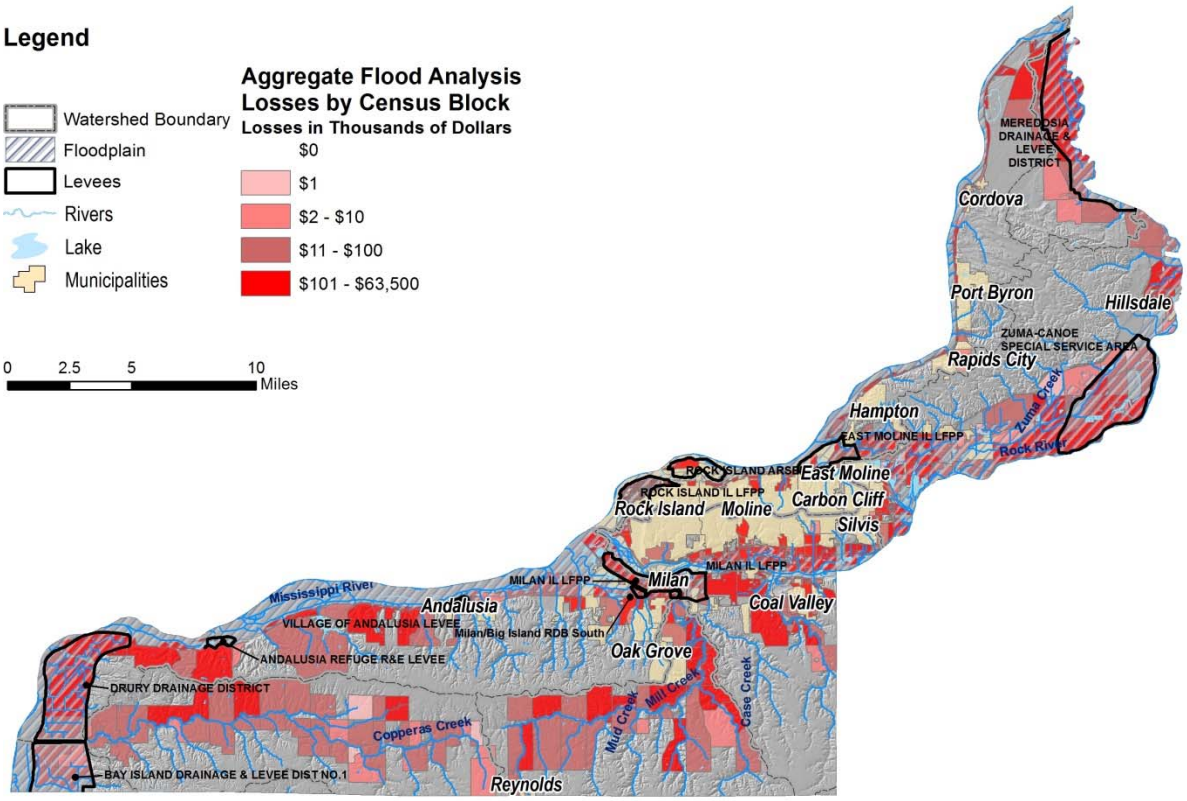


Expected Flood Exposure and Losses in 100-year Floodplain for Levee Fails Scenario

General Occupancy	Estimated Building Exposure x $1000	Building Losses x $1000	Total Building Related Losses x $1000
Residential	$1,760,781	$115,380	$185,620
Commercial	$1,265,604	$137,960	$476,610
Industrial	$378,456	$38,880	$147,480
Other	$22,931	$16,560	$111,090
Total	**$3,607,772**	**$308,770**	**$920,790**

For the Levee Fails Scenario, approximately 5,700 households may be displaced due to the flood. This includes households evacuated from within or very near the inundated area. From the displaced households, approximately 13,600 people may seek temporary shelter. Approximately 52,600 tons of debris may be generated from this flood scenario. If the tonnage is converted into truck loads (25 tons/truck), it would take an estimated 2,100 truckloads to remove debris.

Figure 3-6
Aggregate Flood Losses by Census Block
for Rock Island County for the Levee Fails Scenario



Two structure based flood risk assessments for Rock Island County were performed by the Rock Island District of USACE which are hosted on the ISWS SAFR website. The first study was done in 2017 in The City of Rock Island in an area behind a Mississippi River Levee. The second risk assessment was done for the rest of the at risk structures in Rock Island County during the Upper Mississippi River analysis in 2019. Both of these projects were performed under the Silver Jackets program. These two projects have been combined into one data source on the SAFR site accessible to state and public officials. Publically available information can be found at: https://illinoisfloodmaps.org .

A summary of the SAFR data is located in the table below:

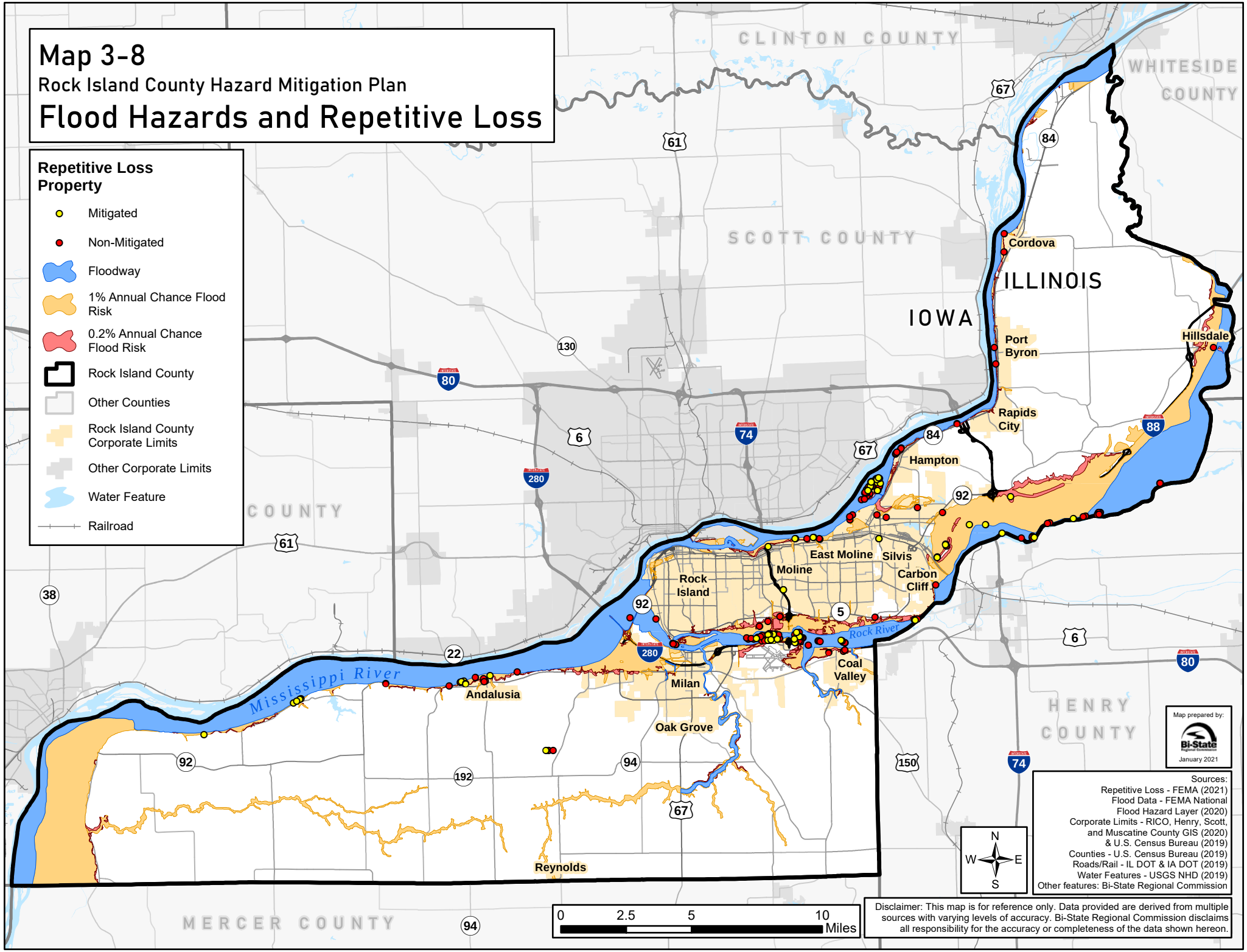
Community Name	Total # of Properties	Total Value of Properties*	# of Residential Properties	# of Commerical Properties	# of Industrial Properties	# of Agricultrual Properties	# of Religious Properties	# of Government Properties	# of Education Properties	# of Other/No Data Properties
Rock Island County Unincorporated	333	$ 144,161,564	265	20	9	0	1	4	1	33
Andalusia	208	$ 25,478,477	193	7	2	0	2	3	1	0
Carbon Cliff	166	$ 14,708,216	139	14	3	0	1	3	0	6
Coal Valley	447	$ 30,176,735	365	42	4	0	3	2	1	30
Cordova	37	$ 9,560,564	34	1	0	0	0	0	0	2
East Moline	491	$ 47,234,336	422	31	6	2	3	6	0	21
Hampton	156	$ 28,715,442	143	5	0	0	0	0	1	7
Hillsdale	348	$ 48,223,066	308	8	10	4	2	14	2	0
Milan	57	$ 10,774,831	35	9	7	1	2	1	0	2
Moline	1589	$ 544,458,560	1233	246	44	0	6	7	6	47
Oak Grove										
Moline Community School District										
Orion Community School District										
Port Byron	238	$ 32,614,446	213	21	0	0	0	2	0	2
Rapids City	45	$ 12,784,163	41	1	0	1	0	0	0	2
Reynolds										
Rock Island	1157	$ 334,122,654	808	281	25	0	19	24	0	0
Silvis										
TOTAL	**5272**	**$ 1,283,013,054**	**4199**	**686**	**110**	**8**	**39**	**66**	**12**	**152**

Warning Time. Gauges along streams and rain gauges throughout the state provide for an early flood warning system. River flooding usually develops over the course of several hours or even days, depending on the basin characteristics and the position of the particular reach of the stream. The National Weather Service provides flood forecasts for Illinois. Flood warnings are issued over emergency radio, TV messages, and smartphone alerts as well as the NOAA Weather Radio. People in the paths of river floods may have time to take appropriate actions to limit harm to themselves and their property.

Map 3-8

Rock Island County Hazard Mitigation Plan

Flood Hazards and Repetitive Loss



Severe Storms Combined

Hail, Lightning, Thunderstorm, Tornadoes, and Wind

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
18	18	18	2	1	57

This combined hazard category of severe storms includes hail, lightning, thunderstorms, tornadoes, and wind. Severe storms typically occur in conjunction with each other. Thunderstorms are accompanied by lightning and can produce strong winds, hail, and tornadoes.

Hailstorms are thunderstorms that produce hail. A hailstone is a ball or irregularly shaped lump of ice that forms within a large cumulonimbus thunderstorm cloud. Hail is produced by many strong thunderstorms. Strong rising currents of air within a storm carry water droplets at a height where freezing occurs. Ice particles grow in size until they are too heavy to be supported by the updraft. Hail can be smaller than a pea or as large as a softball and can be very destructive to plants, crops and buildings. Pets and livestock are particularly vulnerable to hail.

Lightning is an electrical discharge that results from the buildup of positive and negative charges within a thunderstorm. When the buildup becomes strong enough, lightning appears as a "bolt." This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning reaches temperatures approaching 50,000 degrees Fahrenheit in a split second. This rapid heating, expansion, and cooling of air near the lightning bolt creates thunder. Almost all lightning will occur within 10 miles of its parent thunderstorm, but it can strike from much farther away. Lightning detection equipment has confirmed bolts striking almost 50 miles away from the parent thunderstorm.

Thunderstorms are created from a combination of moisture, rapidly raising warm air, and a lifting mechanism such as clashing warm and cold air masses. Thunderstorms can occur singly, in clusters, or in lines. Most thunderstorms produce only thunder, lightning, and rain, but severe storms can produce tornadoes, straight-line winds and microbursts above 58 mph, lightning, hailstorms, and flooding. The National Weather Service considers a thunderstorm severe if it produces hail at least one-inch in diameter, wind 58 mph or higher, or tornadoes. Straight-line winds can often exceed 60 mph, are common occurrences, and are often mistaken for tornadoes.

A tornado is a violent whirling wind characteristically accompanied by a funnel-shaped cloud extending down from a cumulonimbus cloud that progresses in a narrow, erratic path. Rotating wind speeds can exceed 300 mph and travel across the ground at average speeds of 25 to 30 mph. A tornado can be a few yards to about a mile wide where it touches the ground; however, an average tornado is a few hundred yards wide. It can move over land for distances ranging from short hops to many miles, causing great damage wherever it descends. Multiple tornado funnels can develop from the same supercell cumulonimbus thunderstorm. The funnel

is made visible by the dust sucked up and by condensation of water droplets in the center of the funnel. Most tornadoes occur in spring and summer months, but they can and have occurred in the fall and winter months. Late afternoon to evening hour tornadoes are most common, but they can occur at any time of the day.

Windstorms can be described as extreme winds associated with severe winter storms, severe thunderstorms, downbursts, and very strong pressure gradients. It is difficult to separate the various wind components that cause damage from other wind-related natural events that often occur with or generate windstorms. Historically, windstorms are associated with severe thunderstorms and blizzards. High impact Derechos are associated with bands of rapidly moving thunderstorms known as bow echoes, squall lines, or quasi-liner thunderstorm systems. They are a widespread long-lived storm that races across a large area such as a state or region.

Between 1951-2020, the National Centers for Environmental Information reports a total of 263 severe storm events have occurred in Rock Island County. The severe weather events include tornadoes and thunderstorms with hail, lightning, and wind speeds ranging between 50 and 80 mph. Maps 3-9, 3-10, and 3-11 show the historic tornado, hail, and wind events for the County. Severe storms may develop or be an outgrowth of a typical thunderstorm weather system. According to the *2018 Illinois Natural Hazard Mitigation Plan,* these events resulted in $13,094,000.00 in total losses between 1951-2017. Many times, it is difficult to separate these types of weather events and distinguish them as individual hazard events, as one system can spawn multiple events. There have been eight major disaster declarations in Rock Island County involving severe storms.

Severe Storms Major Disaster Declarations 1964-2013:

1965 – DR# FEMA 194-DR

1969 – DR# FEMA 262-DR

1973 – DR# FEMA 373-DR

1974 – DR# FEMA 438-DR

1979 – DR# FEMA 583-DR

1985 – DR# FEMA 735-DR

1990 – DR# FEMA 871-DR2013 – DR# FEMA 4116-DR

The State of Illinois has not had a Federal Disaster Declaration since 2013, however, gubernatorial proclamations have been made by the Governor of Illinois from 2010 to 2018. There have been three severe storm(s) gubernatorial proclamations for Rock Island County:

Date Governor Declared	Nature of Events
July 26, 2010	Severe storms with high wind & torrential rain
April 25, 2011 (Reissued 5/25/11)	High wind, tornadoes, & torrential rain

April 18/20/21/25/30, 2013	Severe storms with heavy rainfall, flooding, & straight-line winds

Selected historical events in Rock Island County:

March 13, 1990: An F3 tornado was reported near Cordova with one injury and $2.5 million in property damage

May 10, 1996: Thunderstorm winds between 80 and 90 mph struck the Quad Cities Nuclear Power Plant operated by Exelon near Cordova. No damage was done to the plant or its operations; however, several small outbuildings sustained heavy damage, and a number of "tear away" tiles were blown off the main building of the facility.

April 6, 1997: Strong gradient winds without a thunderstorm caused widespread and significant damage to trees and power lines. Gusts of 52 knots were recorded at the Quad City International Airport in Moline.

May 18, 1997: 3.00 inch hail was recorded near Milan

June 18, 1998: 3.00 inch hail was recorded near Milan

June 29, 1998: A Derecho crossed Rock Island County with winds exceeding 65 mph.

June 10, 1999: A man and woman fishing along the Rock River just east of the U.S 67 Bridge in Milan were struck and killed by lightning.

March 12, 2006: A thunderstorm event included record wind gust of 93 knots or 107 mph near the Quad City International Airport in Moline. A Hampton Inn under construction on the northeast side of the airport was demolished, and a nearby interstate highway sign was blown over. Many trees were downed in the area. Trinity Medical Center on 7th Street in Moline lost all electrical power for several hours.

March 13, 2006: An F1 tornado south of Illinois City travelled 13 miles and caused damage to several buildings.

June 6, 2006: Lightning from storms struck two houses in Moline with considerable damage from resulting fires.

May 13, 2008: A cold front moving into a warm and unstable air mass triggered severe thunderstorms across portions of the region. Several reports of nickel to quarter-sized hail were received from trained spotters in extreme eastern Iowa and northwest Illinois. A trained spotter estimated hail the size of pennies near Illinois City.

July 21, 2008: A severe line of thunderstorms moved into the area and produced widespread and destructive straight line winds of 60-94 mph, this storm was classified as a Derecho. The highest measured wind gust was 94 mph at the National Weather Service Office in Moline, IL. The damage corridor started 5 miles west of the Quad City International Airport in Moline, IL. It followed Interstate 280 to the Quad City Airport and then along John Deere Road in Moline then eastward generally 10 miles through

Colona and the Green River corridor in Henry County. These extreme winds produced wind damage in an area 20-40 miles wide, comprised largely of downed trees and power lines. Power was knocked out to over 130,000 utility customers in the Quad Cities Area. Many homes, businesses, and private and public water wells lost power for several days to a week. The John Deere Road Corridor in Moline had several large utility poles bent over with one snapped in half. Milan also had many utility poles snapped in half. Numerous elevated business signs were blown out or severely damaged. There was severe damage to a bank's automatic teller machine and drive-up overhang structure. Windows were blown out of a few businesses. Empty utility trailers were blown across a road and on to their sides. Widespread tree damage occurred across the County with damage impacting houses, vehicles, businesses and power lines. Many local roads were blocked by debris and downed power lines for several days.

June 18-19, 2009: An upper level disturbance moved through the region during the morning and early afternoon hours of June 18 and produced showers and thunderstorms across the area with some reports of damaging winds and large hail. Heavy rains also common resulted in some flash flooding. Quarter to golf ball-sized hail fell for about five minutes in Coal Valley, IL around 12:20 p.m. June 18. Three-quarter-inch hail was reported in Moline. Quarter-sized hail fell at the intersection of John Deere Road and 41st Street in Rock Island at 12:31 p.m. One and a half-inch diameter hail fell at the Wal-Mart in Moline around 12:32 p.m. A wind gust estimated to be 65 mph blew a semi-trailer outside of its traffic lane about 2 miles north of Coal Valley, IL around 12:31 p.m. June 18. A cold front pushed through Iowa and Illinois during the afternoon and evening of June 19 bringing severe thunderstorms and flooding to much of the area. Winds in excess of 70 mph were reported as well as torrential downpours that produced from three quarters of an inch to over 3 inches of rain in only an hour or two. Heavy rain resulted in flash flooding of some streets in Milan and Moline during the early evening. Quad City International Airport in Moline recorded 72 mph winds. Wind gusts estimated to be 65 mph blew down some 5 to 6 inch diameter tree branches in Cordova around 5:52 p.m. Wind gusts estimated to be 65 mph blew down several tree branches in Moline around 6:00 p.m. **Property Damage**: $75,000

June 23, 2010: In Milan, four adults were shocked by a nearby lightning strike at the KOA campground at 4:54 p.m. CDT. The Boy Scout leaders were attempting to hold down an awning when the lightning struck. One person complained about difficulty hearing and was transported to a hospital.

May 29, 2011: Thunderstorms developed in the region with heavy rain, and some storms produced large hail and damaging winds. Wind gusts estimated to be 60 mph blew a large tree down across 18th Avenue in Rock Island around 10:40 a.m. CDT May 29. A 60 mph wind gust was measured by the ASOS at the Quad City International Airport in Moline at 10:40 a.m. CDT May 29. Wind gusts estimated to be 60 mph blew down several large tree branches in Rock Island, IL at 10:45 a.m. CDT May 29. **Property Damage**: $20,000

April 14, 2012: Thunderstorms developed during the late afternoon through much of the evening hours. Large hail and damaging winds were reported across eastern Iowa and western Illinois. Three aircraft were damaged at the Quad City International Airport near Moline. A house was partially unroofed near the airport, and a highway sign was also blown over. The automated wind sensor recorded 78 mph winds at the airport. A dome of a former church was blown off at 700 22nd street near the Quad City International Airport, falling onto a house and causing some damage.

May 31, 2013: Severe thunderstorms produced an EF1 tornado near Andalusia, IL with 95 mph winds. Tornado travelled north to Buffalo, Iowa. Total path length 2.5 miles. Path width was 100yards. Trees were damaged and one mobile home was damaged.

June 24, 2013: Severe thunderstorm with winds measured at 68 mph at the Quad City Airport, Moline, IL. Damage and uprooting occurred to numerous trees in Moline, .75 inch hail was reported and numerous power outages occurred.

June 22, 2015: Severe thunderstorms produced significant straight line winds and tornadoes. An EF2 tornado was reported near Edgington in Rock Island County causing heavy damage to roofs and several garages were destroyed. Large trees were uprooted. There were no reported injuries.

March 15, 2016: Severe late winter thunderstorms produced an EF2 tornado in the Hampton/Rapids City area. Tornado winds speeds were estimated at 130 mph. The storm path was 4.8 miles long and 200 yards wide. Forty homes were damaged and four were completely destroyed. Other damage occurred in the John Deere Road and 7th Street Moline area to the hospital building façade, cart stations at Target and Hy-Vee were lifted and dropped onto cars, and some building damage occurred to businesses. Augustana College, Rock Island had building damage to student housing when a large tree fell, and 30 students had to be relocated. Power was out to the entire campus for over 12 hours. Arsenal Island in Rock Island had damage to 50 trees on the island and damage to a building roof and some vehicles. Peak winds were reported at 69 mph and the Quad City International Airport, Moline. Quarter to half dollar size hail fell in many locations in the county. **Injuries**: **10**

April 1, 2016: A strong cold front moving southward during the day on the 2nd brought strong, gusty northwest winds to western Illinois. Sustained wind speeds of 30 to 40 mph with gusts as high as 60 mph caused damage to trees, power lines, and personal property. The winds were the strongest from 7AM to 7PM CST.

August 11, 2016: A line of thunderstorms moved eastward across Iowa into western Illinois during the morning hours of August 11, 2016. These thunderstorms produced heavy rain and gusty winds of 50 to 60 mph that caused damage to trees in Rock Island and Henry Counties.

October 16, 2016: Low pressure brought strong thunderstorms over Iowa and Illinois the evening of October 6th, 2016. Just ahead of the low's path, a warm front was positioned over Iowa and Illinois near Interstate 80. This allowed for winds supporting tornadoes to

develop with the strongest storms. A cluster of strong to severe storms moved from southeast Iowa northeast into Rock Island County, with several areas of damaging winds and tornadoes along the path from around the Quad Cities to Cordova, Illinois. A fast moving narrow tornado caused damage to trees and crops along its 4.9 mile long path. A few trees were uprooted at the Arrowhead Ranch just south of Coal Valley, Illinois. An EF1 tornado began in southwestern Davenport in the downtown area, tracking northeast. Damage began on Credit Island, and extended through downtown Davenport, the Village of East Davenport, Bettendorf, and into rural northeast Scott County. The tornado crossed the Mississippi River south of Princeton, Iowa and continued into Illinois, hitting Cordova, Illinois before lifting. Along the path, damage was primarily to trees and outbuildings. Some trees fell on homes and cars. In downtown Davenport, the roof of the jail and the roof of a homeless shelter were also damaged. Peak winds were estimated to be 100 mph. The widest portion of the path occurred in eastern Davenport/Village of East Davenport.

March 6, 2017: A line of severe storms tracked east over eastern Iowa, northwest Illinois, and northeast Missouri during the evening of March 6th. Widespread winds over 70 mph, small hail, and several tornadoes were reported. Damage from these storms included: downed trees, power poles, destroyed outbuildings, and roof damage to several homes.

July 21, 2017: A long duration convective event along a stalled boundary occurred. This resulted in a major heavy rain and flooding event from 3 to over 8 inches of rain falling. Some storms become severe with damaging winds over 60 mph and isolated large hail. A trained spotter reported wind knocked down a 5 inch in diameter healthy tree branch off a silver maple tree.

June 8-9, 2018: A cluster of strong thunderstorms near the Quad Cities developed late in the evening of June 8th. A severe storm developed near Rock Island, where it produced very large hail up to 3 inches in diameter. The hail produced significant damage to vehicles, house siding, and a tin shed. Then on the 9th, after an early morning flash flood event in eastern Iowa, with some damaging winds near the Mississippi River into far northwest Illinois, a line of slow moving supercell thunderstorms moved southeast from northern Iowa, into portions of eastern Iowa the evening of June 9th. Damaging winds, large hail, a few tornadoes, and torrential rain accompanied the storms. Several trees snapped off on the Illinois shore line of the Mississippi River directly east of Comanche, Iowa.

September 25, 2018: A line of strong storms tracked east across eastern Iowa, northwest Illinois, and northeast Missouri during the afternoon. Widespread significant wind damage occurred across portions of northwest Illinois. The worst damage was in eastern Rock Island County and in Milledgeville in Carroll County. Wind speeds were estimated at 90 to 100 mph in these areas.

May 16, 2019: A slow, south moving cold front and an outflow boundary from morning thunderstorms over northern Illinois, combined with a hot and humid environment to

produce widespread showers and thunderstorms across eastern Iowa and northwest Illinois overnight. Several thunderstorms became severe, and produced large hail and damaging winds. Quarter sized hail was reported across Clinton and Iowa counties, while destructive winds of 70-90 MPH were reported Iowa and Washington Counties. In addition, torrential rainfall amounts of 1 to 2 inches were reported along the Interstate 80 corridor as storms slowly moved across the area. This lead to flash flooding across many major roadways, including Interstate 80 near Coralville and Highway 965 in Oakdale.

May 25, 2019: A slow, south moving cold front and an outflow boundary from morning thunderstorms over northern Missouri and Illinois, combined with a hot and humid environment to produce widespread showers and thunderstorms across portions of eastern Iowa, northwest Illinois and northeast Missouri during the evening and early overnight hours. Several thunderstorms became severe, and produced large hail and damaging winds. Several reports of hail ranging from quarter to golf ball size were reported along and south of Interstate 80 lasting 3 minutes and nearly covering the ground, while damaging winds around 60 MPH were reported south of Highway 34. |In addition, torrential rainfall amounts of 1 to 4 inches were reported across southeast Iowa, west central Illinois and northeast Missouri as storms slowly moved across the area. This lead to flash flooding across many major roadways, including Highway 61 near Augusta, IL and Gregory Landing, MO, and County Road A near Rutledge, MO.

June 4, 2019: The evening of June 4th, a severe thunderstorm developed over northern Scott county Iowa, producing very heavy rain, small hail, and damaging winds. As this storm moved east into portions of Henry, Whiteside, and Bureau counties in Illinois, it intensified and become a high precipitation supercell thunderstorm, with winds over 80 mph, and torrential rainfall. Several large trees were reportedly uprooted.

June 30, 2019: A line of thunderstorms tracked southeast across northeast Iowa into eastern Iowa and northwest Illinois during the afternoon and evening of Sunday, June 30, 2019, bringing widespread downed trees and power lines as 50-70 mph winds rolled through. The strongest winds were recorded in Dubuque County, where a wind gust of 76 mph was observed at the Dubuque Regional Airport. Several hometowns were without power after the storms passed.

April 7-8, 2020: Severe thunderstorms developed along a cold front that dropped south across eastern Iowa and northwest Illinois Tuesday evening. Heavy downpours and very large hail were reported. The hardest hit areas were the northeast side of Cedar Rapids and the Iowa side of the Quad Cities, where ping pong ball to baseball sized hail fell. Golf ball hail fell in northern Stephenson County near Orangeville, IL. Widespread quarter sized hail was also reported during the evening in several other counties. Severe thunderstorms developed along a cold front that dropped south across southeast Iowa and northwest Illinois during the afternoon hours of Wednesday, April 8, 2020. Very large hail was reported with some of the severe storms. The hardest hit areas were parts of southeast Iowa and west central Illinois, where hail stones of golf ball to softball

sized were reported. Other areas that got storms saw copious amounts of small hail which covered the ground.

July 11, 2020: Severe thunderstorms developed across eastern Iowa and northwest Illinois Saturday, July 11, producing widespread wind damage and very large hail. The first line of storms came through during the morning, producing damaging wind gusts and reports of quarter to ping pong ball size hail from Independence to Tipton Iowa. A wind gust of 65 MPH was measured just west of Independence. The second round of thunderstorms developed as a result of an upper level disturbance interacting with an atmosphere characterized by extremely high instability with modest vertical wind shear. Activity initially formed in north central Iowa, producing golf ball to two inch hail from Fort Dodge to Waterloo Iowa. Eventually, storms made their way towards the Cedar Rapids/Iowa City metro areas, producing widespread wind damage and hail up to baseball size. These storms continued through the Quad Cities metro east towards Princeton, Sterling, and Hennepin Illinois, producing additional reports of wind damage and winds of 70 to 90 mph. Numerous power outages and uprooted trees were also reported.

August 10, 2020: A powerful line of severe thunderstorms produced a derecho which tracked across eastern Iowa and northwest Illinois on the afternoon of Monday, August 10th, resulting in widespread straight line wind damage. The cost of damage from this storm was extreme, reaching an estimated 7.5 billion dollars along the path of these storms from Iowa through Illinois. Two brief tornadoes have been confirmed within the widespread swath of wind damage, one just north of the Eastern Iowa Airport in Linn County Iowa, and one just south of Freeport, Illinois. These tornadoes have been designated as EF-U, as there was no observable damage directly attributable to the tornadoes from which an EF-scale rating could be assigned. While an average of two derechos a year occur across the area, a derecho of this intensity is a roughly once-in-a-decade occurrence. Another unusual aspect of this derecho was the duration of the strong winds, with gusts over 60 mph for over an hour at some locations. The most extreme winds, estimated at 110-140 mph, destroyed or damaged numerous outbuildings, barns, grain bins, homes, mobile homes, apartment buildings, trees, and power poles in parts of Benton, Linn, Jones, Cedar, and Clinton Counties. The Cedar Rapids area was particularly hard hit. One fatality occurred in Linn County, as a tree fell on a cyclist. Several homes, apartment complexes, and businesses sustained damage consistent with 130-140 mph winds. Radio transmission towers in Marion and Clinton, Iowa collapsed due to winds estimated around 130 mph. Wind gusts of 80-100 mph were common as the line of storms moved through the Quad Cities area and then through northwest Illinois. A small pocket of winds estimated at 100-110 mph impacted Princeton, IL in Bureau County, where a 150 foot communications tower collapsed and numerous power poles were snapped. In addition to the damage, numerous long-duration power outages occurred across the region. Damage to crops was considerable along the derecho path. Numerous semi-trucks were also blown off roadways along the path of the derecho.

Probability. According to the *Illinois Hazard Mitigation Plan, 2018* based on 61 years of historical records, the annual probability of a severe storm event (hail, lightning, thunderstorm, and wind) is 525.8% or approximately 5 events per year, and the annual probability of a tornado event is 30.6% or approximately 0.3 events per year.

Storm Events in Rock Island County 1951-2017	Severe Storms - combined hail, lightning, thunderstorm, wind	Tornadoes
Number of Events	228	28
Total Recorded Losses	$1,535,000.00	$11,559,000.00
Average $ in crop & property damage per event	$6,732.00	$412,821.00
Annual probability of Event	345%	42%
Estimated Annual Loss	$23,258	$175,136.00

Source: 2018 Illinois Natural Hazard Mitigation Plan (https://www2.illinois.gov/iema/Mitigation/Documents/Plan_IllMitigationPlan.pdf)

Magnitude and Severity. Those most at risk from severe storms are those in dwellings without secure foundations or basements, such as manufactured homes and campgrounds as well as people in automobiles. Vulnerable populations that include the elderly, very young, and the physically and mentally disabled are at most risk because of the lack of mobility to escape the path of destruction. People who may not understand the watches and warnings due to language barriers are also at risk.

Large hail, strong straight-line winds, heavy rains, flash flooding, lightning, and tornadoes are associated with severe storms and may cause significant damage to a wider area. Lightning presents the greatest immediate danger to people and livestock during a thunderstorm, and is the second most frequent weather-related killer in the U.S. with an average of 60 deaths and 300 injuries each year. (Floods and flash floods are the number one cause of weather-related deaths in the U.S.). Livestock and people who are outdoors, especially under a tree or other natural lightning rods, in or on water, or on or near hilltops are at risk from lightning. Hail can be very dangerous to people, pets, and livestock if shelter is not available.

High winds can damage trees, homes (especially manufactured homes), and businesses as well as knock vehicles off of the road. Straight-line winds are responsible for most thunderstorm damage. Unlike tornadoes, windstorms may have a destructive path that is tens of miles wide and several hundred miles long. Generally, the destructive path of a tornado is only a couple of hundred feet in width, but stronger tornadoes can leave a path of destruction up to a mile wide. As with the other severe storms, those most vulnerable during a tornado will be the ones unable to escape the path of destruction.

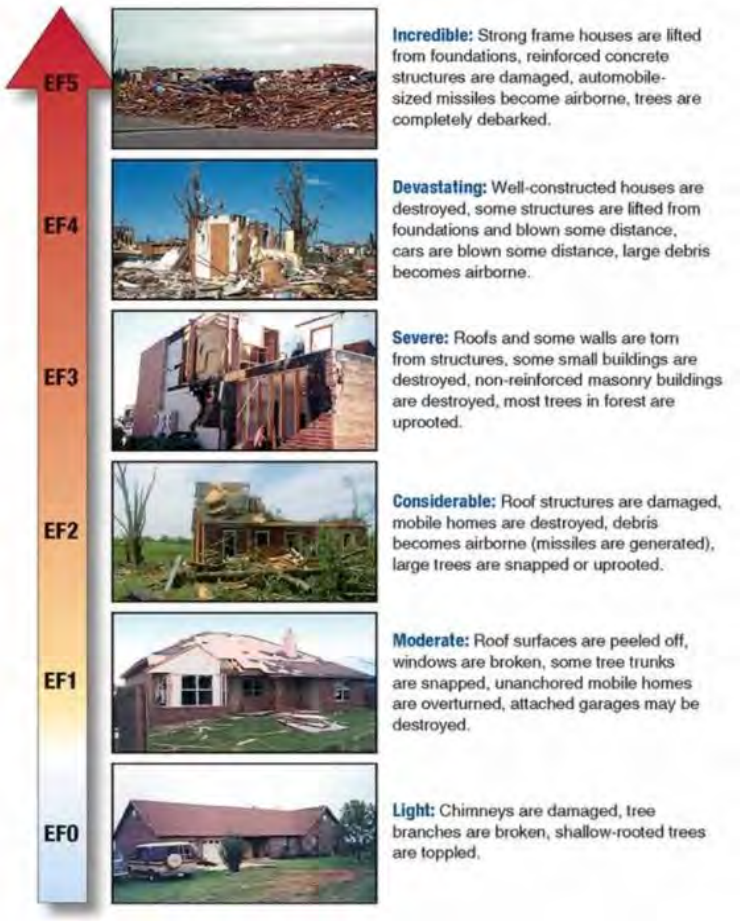
Tornado intensity is measured by the Fujita Scale, which estimates wind speeds based on the damaged caused by the tornado. The Fujita scale was revised in 2007 to the Enhanced Fujita (EF) Tornado Scale, which includes additional enhanced descriptions of damage to multiple types of structures and vegetation with photographs and enhanced training materials. Figures 3-10 and 3-11 show the Enhanced Fujita scale and destruction categories.

Figure 3-7
Fujita/ Enhanced Fujita Scale

Fujita Scale		EF Scale	
Fujita Scale	3-Second Gust Speed (mph)	EF Scale	3-Second Gust Speed (mph)
F0	45-78	EF0	65-85
F1	79-117	EF1	86-109
F2	118-161	EF2	110-137
F3	162-209	EF3	138-167
F4	210-261	EF4	168-199
F5	262-317	EF5	200-234

The Fujita Scale categorizes tornado severity based on observed damage. The six-step scale ranges from F0 (light damage) to F5 (incredible damage). Since February 2007, the National Weather Service has used the Enhanced Fujita Scale (EF Scale). This new scale ranges from EF0 to EF5. See http://www.spc.noaa.gov/efscale for further information on the EF Scale.

Figure 3-8
Tornado Destruction based on Enhanced Fujita



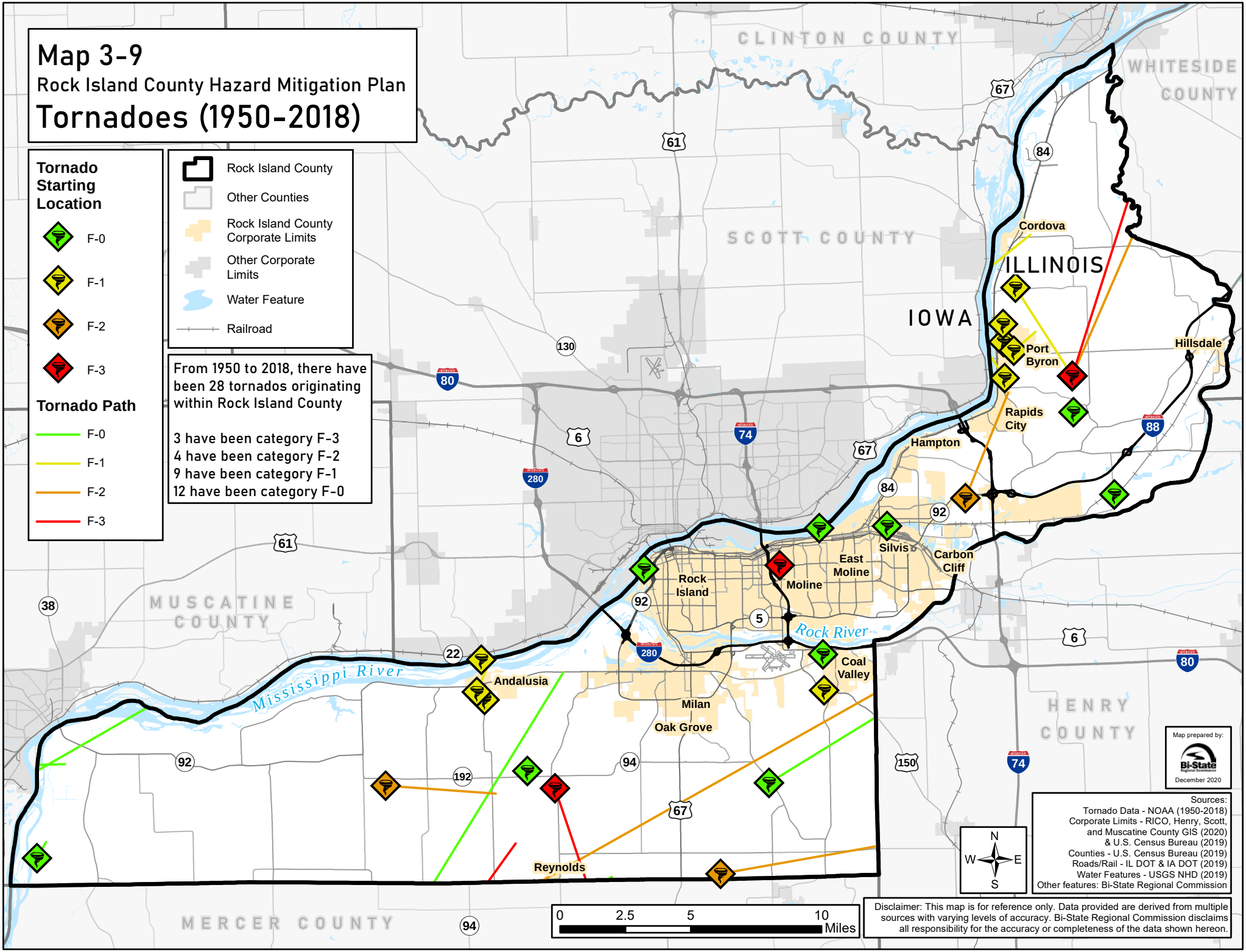
Effects from severe storms can range from broken tree branches, shingle damage to roofs, and some broken windows all the way to complete destruction of well-constructed structures, infrastructure, trees, and entire towns. Crop damage is often associated with windstorms and hail; stripping the plant of leaves, laying down crops, breaking stalks, and twisting plants, reducing yield and making it difficult to harvest. Hail can also do considerable damage to vehicles and buildings. Exposure to hail larger than a nickel can be very dangerous and life threatening. Severe storms can affect many critical services, especially electrical power. Disruption of critical services can also affect operations. Economic effects can result from direct damages to facilities or business disruption from the lack of critical services such as electrical power.

Warning Time. Advances in weather prediction and surveillance have increased the accuracy of storm location and direction. Weather forecasting and severe weather warnings issued by the National Weather Service usually provide residents and visitors with adequate time to prepare. Isolated problems arise when warnings are ignored. The advancement in weather forecasting has allowed watches to be delivered to those in the path of these storms up to hours in advance. Watches are issued when conditions are favorable for thunderstorms to develop 12 to 24 hours in advance. Advisories are issued when existing or immanent threats cover part or all of the forecast area and pose a threat to life and property. The best lead time for a specific severe storm and tornado is about 30 minutes. Tornadoes are harder to predict and have been known to change paths very rapidly, thus limiting the time to take shelter. Tornadoes may not

be visible on the ground due to blowing dust or heavy rain and hail. Warnings in the 20 to 30 minute range are usually available prior to the occurrence of the storm. Some severe storms can be seen approaching, while others hit without much warning. The National Weather Service issues severe storm watches and warnings as well as statements about severe weather and localized storms. These messages are broadcast over NOAA Weather Alert Radios as well as TV and radio stations. In addition to the National Weather Service and NOAA alerts, the Quad Cities Metro Area has a linked outdoor warning siren system.

Duration. Severe storms can be quite expansive with areas of localized severe conditions. Most severe thunderstorm cells are 5 to 25 miles wide with a larger area of heavy rain and strong winds around the main cell. Most non-severe thunderstorms have a lifespan of 20 to 30 minutes, yet severe thunderstorms can last longer than 30 minutes. Generally, the destructive path of a tornado is only a couple of hundred feet in width, but stronger tornadoes can leave a path of destruction up to a mile wide. Normally, a tornado will stay on the ground for no more than 20 minutes; however, one tornado can touch ground several times in different areas.

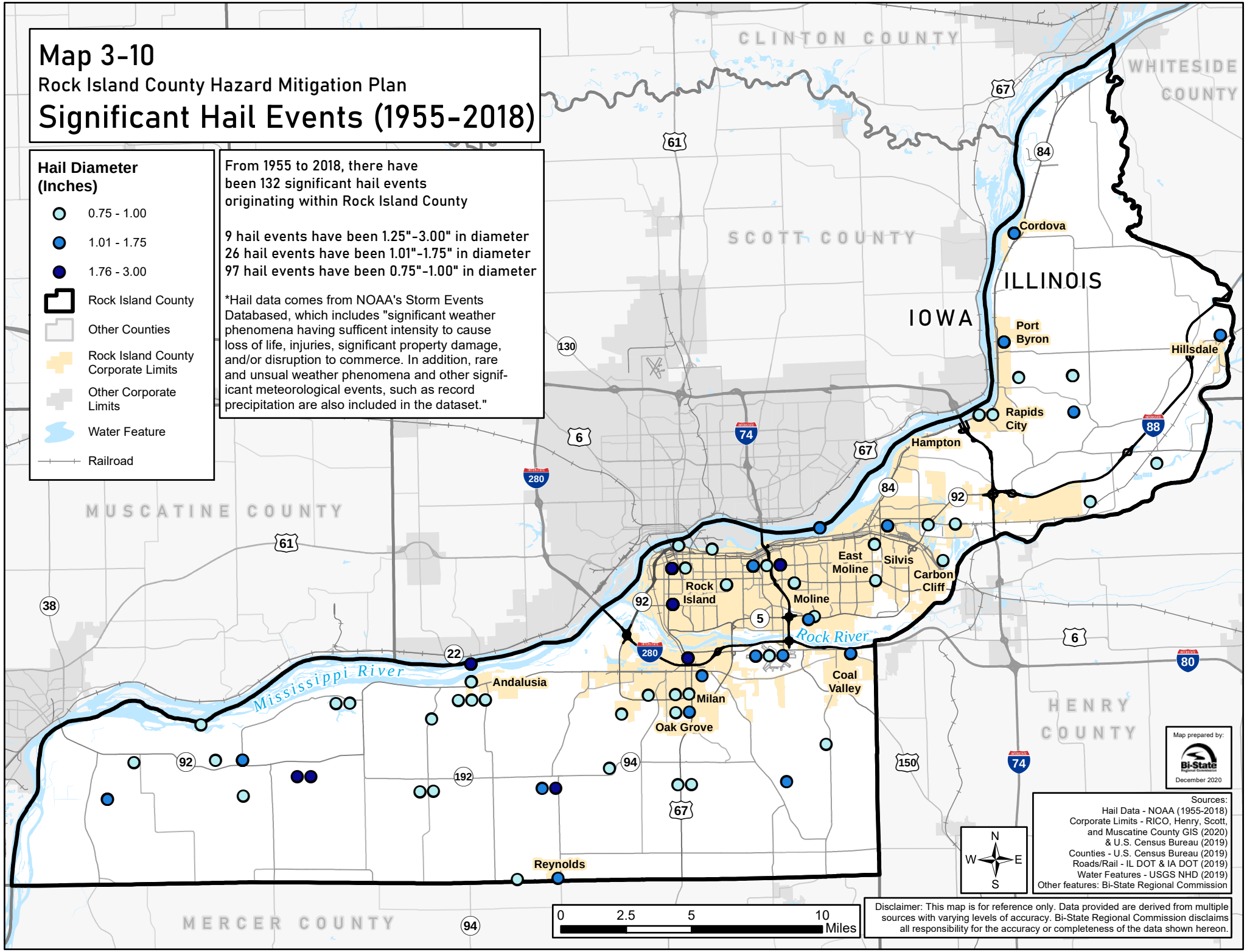
Sources:	
National Weather Service Weather Forecast Office – Quad Cities, IA/IL	NOAA National Centers for Environmental Information (http://www.ncdc.noaa.gov/stormevents/)
Illinois Natural Hazard Mitigation Plan, 2018	State Climatologist Office for Illinois (https://stateclimatologist.web.illinois.edu/tornado-maps-for-illinois/)
NOAA Storm Prediction Center – *About Derechos* (http://www.spc.noaa.gov/misc/AbtDerechos/derechofacts.htm)	Quad Cities – Rock Island County Emergency Actualization Plan (5/20/2014)


Map 3-9
Rock Island County Hazard Mitigation Plan
Tornadoes (1950-2018)
Tornado Starting Location
F-0
F-1
F-2
F-3
Tornado Path
F-0
F-1
F-2
F-3
Rock Island County
Other Counties
Rock Island County Corporate Limits
Other Corporate Limits
Water Feature
Railroad
From 1950 to 2018, there have been 28 tornados originating within Rock Island County
3 have been category F-3
4 have been category F-2
9 have been category F-1
12 have been category F-0
CLINTON COUNTY
WHITESIDE COUNTY
SCOTT COUNTY
ILLINOIS
IOWA
MUSCATINE COUNTY
HENRY COUNTY
MERCER COUNTY
Cordova
Port Byron
Hillsdale
Rapids City
Hampton
Silvis
Carbon Cliff
East Moline
Moline
Rock Island
Coal Valley
Milan
Oak Grove
Andalusia
Reynolds
Mississippi River
Rock River
61
67
84
130
80
6
74
280
92
88
5
22
192
94
150
38
Map prepared by:
Bi-State Regional Commission
December 2020
Sources:
Tornado Data - NOAA (1950-2018)
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission
N
W
E
S
0
2.5
5
10
Miles
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Map 3-10

Rock Island County Hazard Mitigation Plan

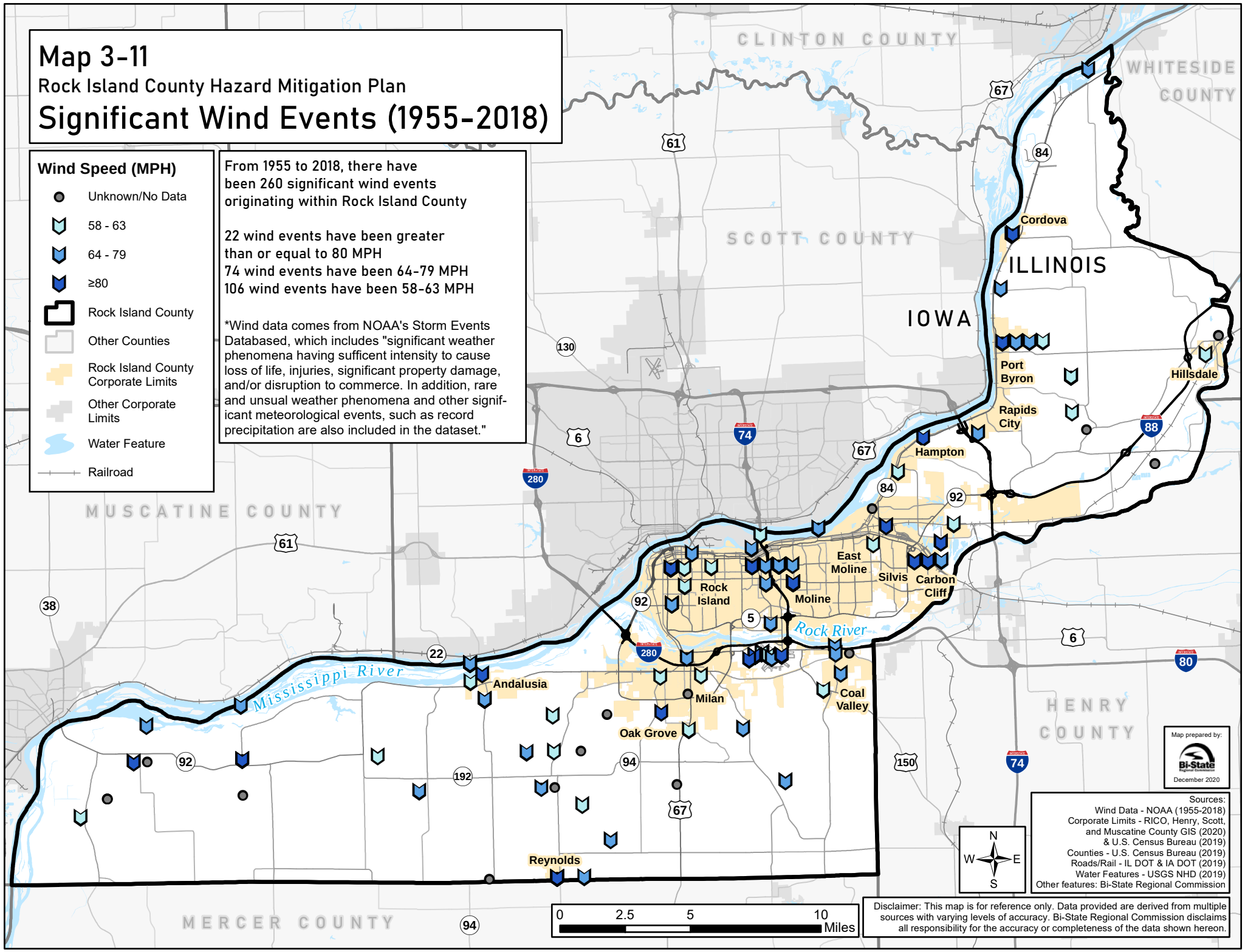
Significant Hail Events (1955-2018)



Map 3-11

Rock Island County Hazard Mitigation Plan

Significant Wind Events (1955-2018)



Severe Winter Storm

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
18	18	18	2	1	57

Severe winter weather conditions that affect day-to-day activities. Severe winter weather conditions are identified as blizzard conditions, heavy snow, blowing snow, freezing rain, heavy sleet, ice storm, and/or extreme cold. Winter storms are common during the months of October through April.

Description. The various types of extreme winter weather cause considerable damage. Heavy snows cause immobilized transportation systems, downed trees and power lines, collapse of buildings, and loss of livestock and wildlife. Blizzard conditions are winter storms that last at least three hours with sustained wind speeds of 35 mph or more, reduced visibility of 1/4 mile or less, and white out conditions. Heavy snows of more than 6 inches in a 12-hour period or freezing rain greater than 1/4 inch accumulation may cause hazardous conditions in the community and slow or stop the flow of vital supplies, as well as disrupting emergency and medical services. Loose snow begins to drift when the wind speed reaches a critical speed of 9 to 10 mph under freezing conditions. The potential for some drifting is substantially higher in open country than in urban areas where buildings, trees, and other features obstruct the wind. Ice storms result in fallen trees, broken tree limbs, downed power lines and utility poles, fallen communications towers, and impassable transportation routes. Severe ice storms have caused total electric power losses over large areas of Illinois and rendered assistance unavailable to those in need due to impassable roads. Frigid temperatures and wind chills are dangerous to people, particularly the elderly and the very young. Dangers include frostbite or hypothermia. Water pipes, livestock, fish and wildlife, and pets are also at risk from extreme cold and severe winter weather.

Historical Occurrence. The National Climatic Data Center reports 157 storm events for Rock Island County between January 1, 1994 and August 31, 2020. Notable events include:

- **December 6, 1994:** Freezing rain, sleet, and snowstorm occurred in northwest Illinois in the vicinity of the Quad Cities. The ice storm caused thousands of tree limbs to break, taking power lines with them. The damage to lines, poles, and equipment was extensive. Nearly 300,000 residents lost power. Repairs to damaged electrical equipment cost an estimated $1 million. Hardest hit were Moline, East Moline, Rock Island, and the rural Illinois communities of Orion, Reynolds, and Sherrard. The weight of heavy snow brought down tree limbs, and more than 300 Iowa-Illinois Gas and Electric employees worked around the clock during a four-day period to restore power. Thirty tree clean-up crews were required to clear tree limbs and fallen trees.
- **April 10, 1997:** Twelve to eighteen inches of heavy snow fell in several waves. The weight of snow was enough to collapse roofs of barns and sheds and damaged trees. Perhaps the

greatest impact of the late season snow is that most cities had to re-tool trucks for snow removal after having just modified them for summer duty. Snow also slowed sand bagging efforts on the Mississippi River.

- **January 1, 1999:** Holiday travelers were stranded at the Quad City International Airport in Moline when airport crews were unable to keep up with 8-12 inches of blowing and drifting snow.
- **January 31-February 2, 2011:** A wide spread severe winter storm passed over the majority of Illinois resulting in large accumulations of heavy snow. Moline, Illinois observed 16.7 inches of snow from the evening of February 1 to the morning of February 2, setting a new 24-hour snowfall record, topping a January 3, 1971 event by 0.3 inches. The Moline three-day totals of 18.4 inches also tied the record for a single storm that was set in January 1979.
- **January 22-24, 2014:** Thirty-five mph wind gusts exacerbated sub-zero temperatures and caused wind chill values to fall below -30 degrees. The winter of 2013-2014 was about 9 to 10 degrees below normal and was the snowiest and 6th coldest winter for Moline.
- **February 1, 2015:** A prolonged snow event occurred from the mid-afternoon on Jan 31st to the late evening on Feb 1st. A strong area of low pressure moved across Missouri and southern Illinois spreading widespread snow across the region. The heaviest snowfall of 9 to 15 inches generally fell along the Interstate 80 corridor. Gusty northwest winds developed behind the system, resulting in considerable blowing and drifting snow on Feb 1st. Several areas experienced prolonged power outages and downed tree limbs due to the heavy wet snow.
- **November 20, 2015:** A potent low pressure system moved across Missouri and southern Illinois Nov. 20th and 21st, bringing the season's first snowfall to much of the area. Widespread snowfall totals of 6 to 12 inches were found across northern Iowa and the Wisconsin-Illinois border. Isolated higher amounts of 14 to 16 inches were reported. Strong northerly winds developed as the system moved off to the northeast, which created patchy blowing and drifting snow. Rain prevailed for much of the night in parts of northeast Missouri and west central Illinois limiting snowfall amounts in those areas to generally under an inch.
- **December 28, 2015:** An unseasonably warm and moist air mass interacted with the system to produce heavy mixed precipitation across western Illinois. Heavy snow, sleet accumulations up to 2-4 inches, and a glaze ice amounts over a quarter inch were reported across the region. The ice and strong winds gusting up to 50 mph resulted in widespread downed trees and power lines, and power outages. The hardest hit areas, with glaze ice amounts of 1/4-1/2 inch, were located along and south of Interstate 80. The highest amounts of combined snow and sleet, in the 3-5 inch range, occurred in northwest Illinois.

- **November 25, 2018:** A strong low pressure system moved from Kansas into Central Illinois bringing heavy snows of 4 to 13 inches to the area. Strong north winds gusted to 40 to 50 mph and combined with the heavy snow to produce widespread blizzard conditions.
- **January 29, 2019:** A strong arctic high pressure system brought historic cold to much of the Midwest January 29th through January 31st. Numerous low temperature records were broken, including all-time record lows at Moline. A state record low temperature was observed by the Mount Carroll Cooperative Observer on January 31st when they record a low of -38F. In addition, life threatening wind chills were reported with values below -30 degrees for many hours. Numerous schools, churches, and businesses closed during the arctic outbreak.

Probability. Winter storms regularly move easterly and use both the southward plunge of cold arctic air from Canada and the northward flow of moisture from the Gulf of Mexico to produce heavy snow and sometimes blizzard conditions in Iowa and Illinois, as well as other parts of the Midwest. The cold temperatures, strong winds, and heavy precipitation are the ingredients of winter storms. Most counties can usually expect 2 or 3 winter storms a season with an extreme storm every 3 to 5 years on average. A snowfall greater than 6" from one single storm occurs in approximately 49% of Illinois winters, while a large winter storm event of 10 inches or more will occur about once every 3 years.

Magnitude/Severity. Hazardous driving conditions due to snow and ice on highways and bridges lead to many traffic accidents. About 70% of winter-related deaths occur in automobiles, and about 25% are people caught out in a storm. Those at risk are primarily either engaged in an outdoor activity (shoveling snow, digging out vehicles, or assisting stranded motorists), or are elderly or very young. Citizens' use of kerosene heaters and other alternative forms of heating create other hazards such as structural fires and carbon monoxide poisoning. The *Illinois Hazard Mitigation Plan, 2018* estimates that the annual loss from Severe Winter Storm events is $0 for Rock Island County and $2.5 million for the state. However, in March 2011, a federal disaster declaration estimated damages of $529,447.45 for Rock Island County resulting from severe winter storm activity. The *Illinois Hazard Mitigation Plan, 2018* gave Rock Island County a high rating for Severe Winter Storms.

Warning Time. The National Weather Service has developed effective weather advisories that are promptly and widely distributed. Radio, TV, and weather alert radios provide the most immediate means to do this. Accurate information is made available to public officials and the general public up to days in advance. Weather prediction capabilities have made significant improvements in recent years. There are several notifications made by the National Weather Service, including winter storm watches, winter storm warnings, blizzard warnings, winter weather advisories, and frost/freeze advisories.

Duration. Winter storms may affect a large area, although local variations in storm intensity and quantity of snow or ice may occur. The duration of the storm will be determined by the local response to snow removal and any associated losses and dangers of electrical outages. The Illinois Department of Transportation, Rock Island County road departments, and local

public works agencies are responsible for the removal of snow and treatment of snow and ice with sand and salt on the hundreds of miles of streets and highways in Rock Island County.

Sources:	
National Centers for Environmental Information	Storm Events Database. http://www.ncdc.noaa.gov/stormevents/
National Weather Service	Climate Reports: February 2014 & Winter 2013-2014.
Rock Island County, Bi-State Regional Commission	*Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*
State of Illinois, IEMA	*Illinois Natural Hazard Mitigation Plan, 2018*
FEMA Region 5	http://www.fema.gov/zh-hans/disaster/1960. Illinois Severe Winter Storm and Snowstorm, DR-1960.

Pandemic Disease

Hazard Score Calculation					
Historical/ Probability	Vulnerability	Severity of Impact	Current Population	Projected Population	Hazard Score
6	18	18	2	1	45

A pandemic is a global outbreak of disease that occurs when a new virus appears or "emerges" in the human population, causes serious illness, and then spreads easily from person to person worldwide. Pandemics are different from seasonal outbreaks or "epidemics" of influenza. Seasonal outbreaks are caused by subtypes of influenza viruses that are already in existence among people, whereas pandemic outbreaks are caused by new subtypes or by subtypes that have never circulated among people or that have not circulated among people for a long time. Past pandemics have led to high levels of illness, death, social disruption, and economic loss. Examples of viruses with pandemic potential include avian flus H5N1 and H7N9 as well as coronavirus, COVID-19. These are non-human viruses for which humans have little to no immunity. Until recently with COVID-19, human infections with these viruses rarely occurred, and did not spread easily from person to person.

During the first wave of the pandemic, outbreaks occur simultaneously in many locations throughout the nation, preventing a targeted concentration of national emergency resources in one or two places – and requiring each locality to depend in large measure on its own resources to respond. An effective local response depends on pre-established partnerships and collaborative planning by public health officials, hospital administrators, and community leaders who have considered a range of best-case and worst-case scenarios.

If a disease, like COVID-19, is highly infectious, it will spread across the nation by the time it is discovered. This causes a severe disadvantage during the response and recovery. Influenza happens every year in nearly every country in the world. It spreads through a population for a few months and then will disappear or will move onto another country. COVID-19 was the first occurrence of coronavirus that has spread quickly and everywhere all at once, causing worldwide panic and killing hundreds of thousands of people.

Probability. Before COVID-19, many scientists believed it was only a matter of time until the next pandemic occurred. Since 1918, pandemic diseases have occurred five times.

1918-1919: The Spanish flu affected 20-40% of the population worldwide, and an estimated 50 million died. Nearly 675,000 people died in the United States.

1957-1958: In February 1957, another flu pandemic was identified in the Far East. The virus was found in the United States in August and then spread among school children when classes began in the fall. Infection rates peaked in October and declined in December. A second wave of infection hit in January 1958. While not as devastating at the Spanish flu, approximately 68,000 people in the United States died with the highest rates among the elderly.

1968-1969: This flu virus was first reported in Hong Kong in early 1968 and detected in the United States in September 1968, although it was not widespread until December. Deaths peaked in December 1968 and January 1969, with those over 65 being the most likely to die. The number of deaths between September 1968 and March 1969 totaled 38,800.

2009-2010: H1N1 was first diagnosed in the United States in April 2009. By June, 18,000 cases were reported in the United States. A total of 74 countries were affected. 80 million people were vaccinated against H1N1, which minimized the impact of the illness. The CDC estimates that between 43 and 89 million people had H1N1 with an estimated 8,870 to 18,300 H1N1-related deaths.

2020-2021: COVID-19 was first identified in 2019. The virus rapidly spread into a global pandemic by spring of 2020. According to the World Health Organization, the elderly and those with underlying medical conductions such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. In an effort to slow the spread of the virus, the federal government and States urged the public to avoid touching of the face, properly wash hands often, and use various social distancing measures as well as requiring face masks in public. Overall, 223 countries were affected with over 2 million confirmed deaths and over 100 million positive cases worldwide. In Rock Island County, there were 280 confirmed deaths and 12,818 positive cases from COVID-19 at the time of this plan update. At the time of this plan update, vaccines were being deployed to essential workers and elderly over the age of 65, with over 1 million vaccines administered in the state of Illinois.

Magnitude and Severity. The occurrence and severity of the next pandemic cannot be predicted, but modeling studies suggest that its effect in the United States could be just as severe as COVID-19. In the absence of any control measures (vaccination or drugs), it is estimated that in the United States, a medium-level pandemic could cause in between 15% and 35% of the U.S. population to be affected again.

Public health agencies work to protect citizens from infectious diseases and preserve the health and safety of people through disease surveillance, investigation of suspect outbreaks, education, and consultation to county, local, and public/private health agencies. Historically, pandemics occur every 30 years.

Potential Pandemic Cases, Deaths and Hospitalizations in Rock Island County (assuming a 15% - 35% attack rate)*				
County Population	**Projected Cases**	**Projected Outpatient Visits**	**Projected Hospitalized**	**Projected Dead**
149,374	22,406-52,280	8,402-23,526	134-444	44-104

*Estimates are based on CDC national projections

Source: Rock Island County Health Department Pandemic Flu Plan

Because of our highly mobile society, these diseases move rapidly across the nation within days, weeks, or months. Many of the diseases on the national notification list result in serious illness or death. Some are treatable; others only the symptoms are treatable.

The number of health-care workers and first responders available to work can be expected to be reduced. They will be at high risk of illness through exposure, and some may have to miss work to care for ill family members. Resources in many locations could be limited because of how widespread the pandemic would be.

Warning Time. The private practitioner is the first line of defense and will undoubtedly be the first to witness the symptoms of human disease incidents. The Illinois Department of Public Health (DPH) and the U.S. Centers for Disease Control and Prevention (CDC) monitor reports submitted by doctors, hospitals, and labs to identify patterns. The DPH and the CDC are proactive in providing information to the health care community on medical concerns. Conditions related to scope and magnitude can escalate quickly, and area resources can be drained of personnel, medications, and vaccinations quickly.

Duration. A pandemic will last much longer than most other public health emergency events and may include "waves" of activity separated by months. Response to highly infectious diseases occurs continuously, although the direct effects of a pandemic can occur for months or even years at a time as evident with the COVID-19 pandemic in 2020.

Sources:	
Center for Disease Control: Resources for Pandemic Flu	Rock Island County Health Department Pandemic Flu Plan
Illinois Natural Hazard Mitigation Plan, 2018	Flu.gov Pandemic Flu History
World Health Organization: https://www.who.int/emergencies/diseases/novel-coronavirus-2019	Illinois Department of Public Health: http://www.dph.illinois.gov/covid19/statistics

Assessing Vulnerability: Overview

This section analyzes the Rock Island County planning area's vulnerability to hazards in terms of community assets and population. This first part is a general profile of Rock Island County that describes the countywide planning area characteristics and its historic development.

Community Profile: Rock Island County, Illinois

Local History

Rock Island County was the home of the Sauk and Meskwaki (Fox) tribes of Native Americans for about one hundred years before the county became incorporated. These native peoples lived, farmed, and hunted all along the Rock River Valley. Black Hawk was a distinguished leader of the Sauk tribe, and his legacy remains in numerous landmarks that bear his name. White settlements eventually pushed the Native Americans out of the area after the Black Hawk War, but not without much bloodshed.

On February 9, 1831, the Illinois General Assembly established Rock Island County and defined its boundaries. In 1833, early pioneers approved formation of a county government with the first county election held on July 5 of that year. In 1856, petitions were submitted to the county board requesting the formation of townships during the next election in November. In this election, Col. George Davenport, John W. Spencer, and George W. Harlan were the first County Commissioners elected along with Benjamin Axe being chosen first Sheriff and Levi Wells first County Coroner. This township form of government is still in existence after nearly 150 years.

The railroads played a significant role in the development of the area, and the rail yards and "humping stations" that exist today in Silvis and Carbon Cliff are a remnant of that once thriving industry. Local coal was a stimulus to the development of the rail lines. Newspaper accounts at the turn of the nineteenth century report numerous mine openings for both coal and clay, mine fires, water supply and sulfur contamination problems, the building of huge mining scales, and the founding of many coal and rail companies. All this is evidence of the important role of coal and rail in the early development of the county-wide planning area.

The United States Census of Population taken in 1840 was the first census to list a population figure for Rock Island County; at that time, a total of 2,610 people lived in the county. By 1860, the population had jumped to 21,005 persons, and since then it has experienced both inclines and declines in population. In 1960, Rock Island County's population was 150,991, an increase of 148,381 people since the first census was taken 120 years before. The period from 1890 to 1920 was one of rather rapid and sustaining population growth, and during those 30 years 50,380 people were added to the county's population. This sustained growth, however, dropped abruptly during the 1920s when the population increase was only 5,894 people. During the Depression of the 1930s, the population of Rock Island County grew at a rate greater than the larger regions of which it is a part – the State of Illinois, the North Central Region, and the United States as a whole. Past population growth in Rock Island County has been characterized by sustained, but rarely "booming" expansion. More recent population trends are identified later in this section.

Dates of certificate of incorporation as issued by the Secretary of State of Illinois

Earlier dates of community settlement or founding as reported by the local jurisdiction are shown in parentheses.

Village of Andalusia – 1894 (1845)

Village of Carbon Cliff – 1907

Village of Coal Valley – 1876 (1856)

Village of Cordova – 1894

City of East Moline – 1903

Village of Hampton – 1894 (1838)

Village of Hillsdale – 1951 (1895)

Village of Milan – 1893 (1870)

City of Moline – 1872 (1848)

Village of Oak Grove – 1956

Village of Port Byron – 1877 (1836)

Village of Rapids City – 1875

Village of Reynolds – 1897

City of Rock Island – 1879 (1841)

City of Silvis – 1907 (1906)

Source: Illinois Counties & Incorporated Municipalities, Illinois Secretary of State, May 2006

Geography

Rock Island County is comprised of 452 square miles with a total land area of 426.75 square miles. The physical setting is dominated by the major rivers and streams that flow across the county and along its borders. The Mississippi River extends for more than 60 miles along its western border and is no more than 14 miles distant from any point in the county. The Rock River forms the eastern boundary for a distance of almost 20 miles before flowing westward across the county to join the Mississippi at the city of Rock Island.

The topography is characterized by relatively flat upland areas, ranging from 700 to 800 feet above sea level, and river floodplains, which range from 580 feet above sea level at the northeast end of the county to 540 feet in the southwest. The Mississippi and Rock Rivers follow roughly parallel courses in the northern half of the county and are separated by a narrow upland tract, which itself is segmented by broad valleys connecting the Mississippi and Rock River floodplains. The extensive floodplains of Rock Island County are not restricted to areas immediately adjoining the major rivers.

Government Structure

Rock Island County is governed by a 25-member board elected by district to four-year terms. Elections are on a staggered basis. The county has both taxing and bonding authority. County government provides court and law enforcement services, the Department of Public Works (road and bridge building and maintenance), the Department of Public Health, a liquor commission, veterans assistance, community mental health facilities and services, county nursing homes, a forest preserve district, and a zoning office that handles all inspections, platting and building permits. County board districts are distinct from townships. Townships within Rock Island County have elected supervisors and trustees and take care of assessments for property taxes. The county offers limited sewer services only to the unincorporated developed area of Coyne Center.

Other participating jurisdictions include incorporated municipalities that range from small villages to cities with sizeable staff. All the villages have a similar governmental structure with the President of the Board of Trustees as the Chief Executive Officer of the village. The president is generally elected for a four-year term, except for the Village of Port Byron, which has a two-year term for Village Board President. All villages elect board members for four-year staggered terms. More information on government structure can be found under the individual jurisdiction profiles.

Climate and Weather

The climate in Rock Island County is sub-humid mid-continental with an average annual temperature of 51.2 degrees Fahrenheit. The average July temperature is 75.5 degrees Fahrenheit, and the January average temperature is 23.3 degrees Fahrenheit. The typical precipitation in Rock Island County is 38.27 inches with an average of 36.1 inches of snowfall, and an average wind speed of 7.4 mph.

Monthly Normals for Moline Quad Cities International Airport

Month	Average Temperature (°F)	Average Precipitation (In.)
January	23.3	1.66
February	27.7	1.83
March	39.7	2.62
April	51.4	3.81
May	62.5	4.67
June	72.1	5.01
July	75.5	4.23
August	73.4	3.97
September	66.1	3.32
October	53.7	2.81
November	40.4	2.30
December	28.9	2.04

Source: National Oceanic & Atmospheric Administration. National Centers for Environmental Information. 1991-2020 U.S. Climate Normals. (https://www.ncei.noaa.gov/access/us-climate-normals/)

Seasonal Normals for Moline Quad Cities International Airport

	Winter	Spring	Summer	Fall	Annual
Average Temperature (°F)	26.6	51.2	73.7	53.4	51.2
Average Precipitation (In.)	5.53	11.10	13.21	8.43	38.27

Source: National Oceanic & Atmospheric Administration. National Centers for Environmental Information. 1991-2020 U.S. Climate Normals. (https://www.ncei.noaa.gov/access/us-climate-normals/)

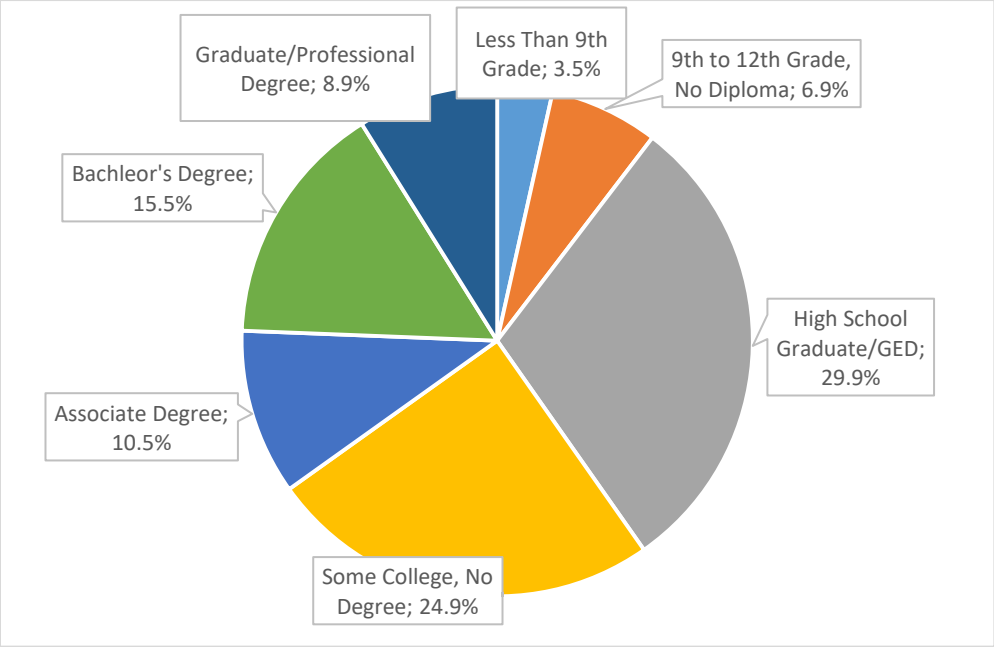
Communications (Quad Cities Area)

Newspapers	Radio Stations	Local TV Stations
The Quad City Times (Davenport, IA)	27 FM Stations	CH 23: Western Univ. - QC
The Dispatch / The Rock Island Argus (Moline, IL)	6 AM Stations	CH 34: Iowa Public TV
Star Courier (Kewanee, IL)		CH 36: KWQC Davenport
The North Scott Press (Eldridge, IA)		CH 38: WQAD Moline
Aledo Times-Record (Aledo, IL)		CH 49: KLJB Davenport
The River Cities Reader (Davenport, IA)		CH 61: KQCT-LP Davenport

Education (Rock Island County)

When looking at the county population over the age of 25, 24.9% has at least some college experience, while 15.5% has bachelor's degrees, and 8.9% has graduate degrees.

Figure 3-12
Educational Attainment



Source: ESRI Community Analyst Reports 2020-2025.Schools and Colleges

Rock Island County contains all or portions of the following school districts:

- Hampton School District #29
- United Township HS District #30
- Silvis School District #34
- Carbon Cliff-Barstow School District #36
- East Moline School District #37
- Moline-Coal Valley School District #40
- Rock Island-Milan School District #41
- Riverdale Community Unit School District #100
- Sherrard Community Unit School District #200
- Orion Community School District #223
- Rockridge Community School District #300
- Black Hawk Area Special Education District

There are three private or parochial schools in Rock Island County. Buildings that serve Augustana College, Black Hawk College, and Western Illinois University are also located within the county.

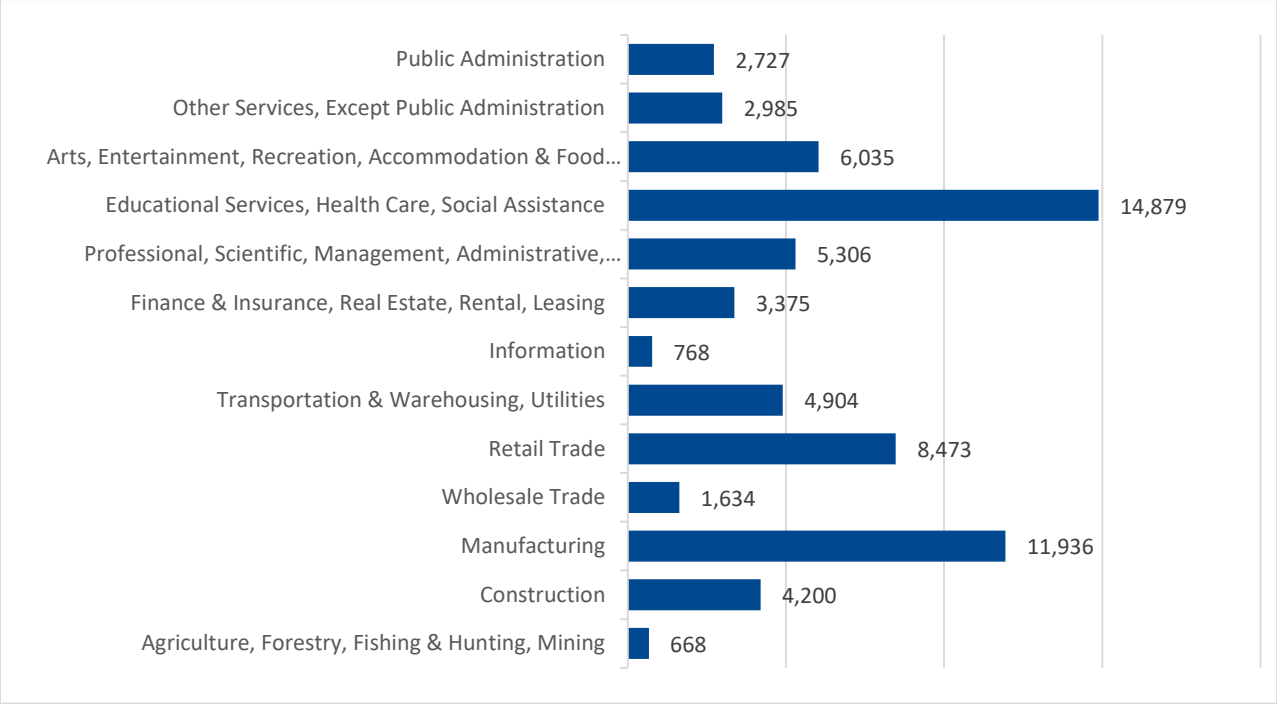
Economic Characteristics

Employment Status

Population 16 years and over	115,296
In labor force	72,129
Civilian labor force	72,013
Employed	67,890
Unemployed	4,123
Armed Forces	116
Not in labor force	43,167

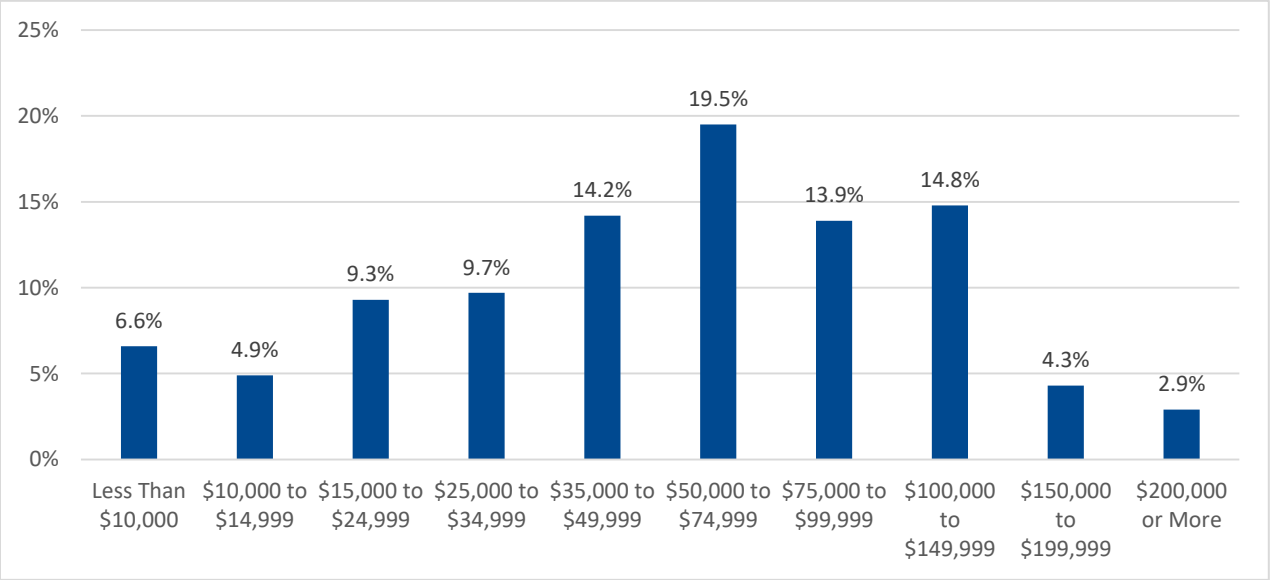
Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

Figure 3-13
Employment By Industry



Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

Figure 3-14
Household Income



Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

Top Area Employers Over 300 in Rock Island County as of January 2020

	Employer	Employed
1	John Deere Harvester Works	2800
2	Unity Point Health Moline	2700
3	Trinity Pain Management Center	2500
4	Tyson Fresh Meats	2400
5	Unity Point Health Rock Island	2048
6	Deere & Company	1600
7	XPAC	1000
8	John Deere N.A. Parts Distribution	800
9	Hy-Vee (All Locations)	600
10	Jumer's Casino & Hotel	550
11	PFG TPC Roma Foods	530
12	Tax Slayer Center	500
13	Walmart Supercenter	450
14	Genesis Medical Center Silvis	440
15	Modern Woodmen Of America	435
16	3M Company	413
17	John Deere SW Office Building	400
18	Modern Woodmen Of America	400
19	Walmart Supercenter	350
20	Anderson Dean	300
21	Friendship Manor	300
22	Rock Island Argus	300
23	US Post Office	300

Source: Bi-State Regional Commission, InfoGroup, Reference USA Gov, Individual Employers.

Housing

Units in Structure

Unit Type	Number of Structures	Percent of Total Structures
1-unit, detached	47,109	71.2%
1-unit, attached	2,743	4.1%
2 units	2,317	3.5%
3 or 4 units	2,264	3.4%
5 to 9 units	2,770	4.2%
10 to 19 units	2,567	3.9%
20 or more units	4,598	6.9%
Mobile home	1,773	2.7%
Boat, RV, van, etc.	19	0%
Total Housing Units: 65,720		

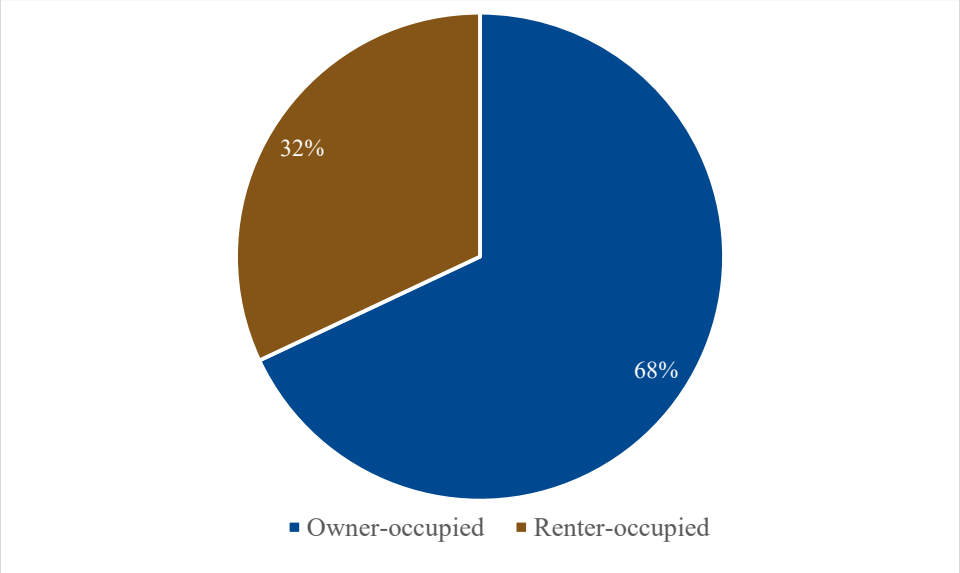
Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

Year Structure Built

Built 2014 or Later	591	0.9%
Built 2010 to 2013	966	1.5%
Built 2000 to 2009	3,312	5%
Built 1990 to 1999	4,153	6.3%
Built 1980 to 1989	4,181	6.3%
Built 1970 to 1979	9,597	14.5%
Built 1960 to 1969	9,990	15.1%
Built 1950 to 1959	9,676	14.6%
Built 1940 to 1949	6,401	9.7%
Built 1939 or earlier	17,293	26.1%

Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

Figure 3-15
Home Ownership



Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates

Infrastructure

Rock Island County is traversed by four Interstate Highways: I-80, I-280, I-88, and I-74. In addition, there are U.S. Routes 6, 150, and 67. Six automobile bridges span the Mississippi River within Rock Island County's limits: the I-80 Bridge, the Iowa-Illinois (I-74) Bridge, the Government Bridge, the Centennial Bridge, the I-280 Bridge, and the Muscatine Bridge. The Quad City International Airport, located in Moline, Illinois, offers commercial air service for the Quad Cities Metropolitan Statistical Area and beyond. Railway companies operating within the county include the Burlington Northern Santa Fe, Canadian Pacific, and Iowa Interstate. Waterways within the county include the commercially navigable Mississippi River, the Rock River, and Copperas Creek (both the Rock River and Copperas Creek are tributaries of the Mississippi River). Lock and Dam 14, 15, and 16 on the Mississippi River are located within the county borders. Source water for municipalities in the county comes from either the Mississippi River or individual wells. Water treatment facilities are operated by individual municipalities and are located in the communities of Coal Valley, East Moline, Milan, Moline, Port Byron, Rock Island, and Silvis. Wastewater is also treated by individual municipalities with treatment facilities located in East Moline, Milan, Moline (North and South facilities), and Rock Island (Mill Street and Southwest facilities).

Medical and Healthcare

Rock Island County is served by three hospital campuses: Genesis Medical Center, Illini Campus in Silvis; UnityPoint Trinity in Moline; and UnityPoint Trinity in Rock Island.

Population and Selected Social Characteristics (Rock Island County)

Household Types

• Married-couple family	26,575	43.9%
With own children under 18 years	9,154	15.1%
• Cohabitating couple household	3,456	5.7%
With own children under 18 years	1,278	2.1%
• Male householder, no spouse/partner present	12,156	20.1%
With own children under 18 years	930	1.5%
• Female householder, no spouse/partner present	18,389	30.3%
With own children under 18 years	4,093	6.8%
• Householder living alone	10,771	17.8%
65 years and over	5,948	9.8%
Average Household Size	2.30	
Total Households	60,546	

Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

Age Categories

Under 5 years	6.2%
5 to 9 years	6%
10 to 14 years	6.4%
15 to 19 years	6.3%
20 to 24 years	6.1%
25 to 34 years	12.4%
35 to 44 years	11.9%
45 to 54 years	12%
55 to 59 years	7%
60 to 64 years	6.9%
65 to 74 years	10.5%
75 to 84 years	5.9%
85 years and over	2.4%
Median age	40.1

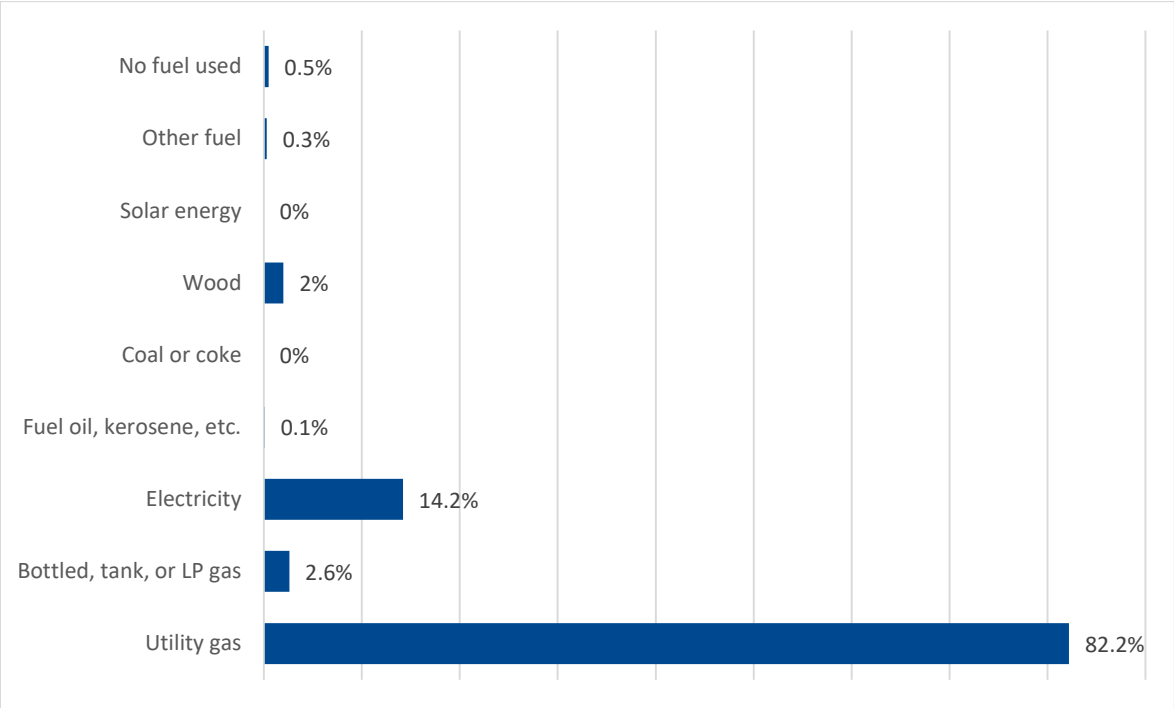
Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates

Ethnicity

White	115,405	80.2%
Black or African American	14,968	10.4%
American Indian and Alaska Native	582	0.4%
Asian	3,650	2.5%
Native Hawaiian and Other Pacific Islander	61	0%
Some Other Race	3,941	2.7%

Source: U.S. Census Bureau, 2019American Community Survey 5-Year Estimates

Figure 3-16
Heating Sources



Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

Municipal Population Trends

Jurisdiction	2020 Population	2025 Population	% Change 2020-2025
Rock Island County	144,287	141,029	-2.3%
Andalusia	1,153	1,126	-2.4%
Carbon Cliff	2,019	1,961	-2.9%
Coal Valley	3,662	3,607	-1.5%
Cordova	626	621	-0.8%
East Moline	20,737	20,217	-2.55%
Hampton	1,700	1,671	-1.7%
Hillsdale	483	477	-1.25%
Milan	4,992	4,833	-3.25%
Moline	42,700	41,800	-2.15%
Moline School District	47,922	46,916	-2.1%
Oak Grove	490	484	-1.25%
Orion School District	6,114	6,069	-0.75%
Port Byron	1,733	1,730	-0.15%
Rapids City	939	916	-2.45%
Reynolds	489	481	-1.65%
Rock Island	37,847	36,894	-2.55%
Silvis	7,325	7,140	-2.55%
Unincorporated Rock Island County	17,335	17,016	-1.85%

Source: ESRI, Community Analyst Reports 2020-2025

Assessing Vulnerability: Identifying Structures

Determining Community Assets

An outline and definition of assets was taken from the state and local hazard mitigation planning how-to guide, Understanding Your Risks: Identifying Hazards and Estimating Losses, FEMA document 386-2 published August 2001. The following types of facilities were considered. General information about the presence of these types of facilities in the county-wide planning area is mentioned here in italics as available. However, a description of the facilities selected by participating jurisdictions is included within the individual multi-jurisdiction risk assessments.

A. Critical Buildings and Facilities

- **Essential Facilities:** Essential to the health and welfare of the whole population and are especially important following hazard events. The potential consequences of losing them are so great, that that should be carefully inventoried. Be sure to consider not only their structural integrity and content value, but also the effects on the interruption of their functions because ***the vulnerability is based on the service they provide rather than simply their physical aspects.***
    - Hospitals: Genesis and Trinity Healthcare systems
        - Other medical facilities
        - Police stations
        - Fire stations
        - Emergency operations centers
        - Evacuation shelters
        - Schools and colleges: *Black Hawk College, Augustana College, and Western Illinois University*
- **Transportation Systems**
    - Airways: airports, heliports: Quad City International Airport
    - Highways: bridges, tunnels, roadbeds, overpasses, transfer centers
        - *Interstate Highways: I-80, I-280, I-88, and I-74*
            - *I-74 Bridge Reconstruction and Realignment underway and to be completed in 2022*
        - *U.S Routes 6, 150, and 67*
        - *Six automobile bridges span the Mississippi River within Rock Island County's limits: the I-80 Bridge, the Iowa-Illinois (I-74) Bridge, the*

Government Bridge, the Centennial Bridge, the I-280 Bridge, and the Muscatine Bridge

- *Rock River bridges*

- Railways: trackage, tunnels, bridges, rail yards, depots
  - *Burlington Northern Santa Fe and Iowa Interstate railroads (Iowa Chicago & Eastern operates on Burlington Northern tracks within the county)*
- Waterways: canals, locks, seaports, ferries, harbors, drydocks, piers
  - *Mississippi River(commercially navigable)*
  - *Rock River and other tributaries of the Mississippi River*
- *Lock and Dam 14, 15, and 16 on the Mississippi River are located within the county borders*

- **Lifeline Utility Systems**
  - Potable water
    - *Water treatment operated by individual jurisdictions*
  - Wastewater
    - *Wastewater treatment provided by individual jurisdictions*
  - Oil
  - Natural Gas: MidAmerican Energy
  - Electric Power: MidAmerican Energy
  - Communications Systems
- **High Potential Loss Facilities**
  - Nuclear Power Plants: Quad Cities Nuclear Power Plant
  - Dams *as documented in the Dam and Levee Failure Hazard Profile*
  - Military Installations: *Rock Island Arsenal*
- **Hazardous Material Facilities**: Includes facilities housing industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins

B. Vulnerable Populations: Can include small children, persons with disabilities, elderly persons or non-English speaking residents that may require special response assistance or special medical care after a disaster.

Rock Island County

Vulnerable populations countywide:

Under 5 years of Age:	8,987 or 6.2% of total
Persons with Disability (all age groups):	19,272 or 13.7%
65 years and older:	27,050 or 18.8%

Language spoken at home other than English:

There are 18,532 residents, or 13.7% of the population, who speak a language other than English.

Source: U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates.

C. Economic Elements: Could affect the local or regional economy if significantly disrupted

- Major employers: *Listed previously*
- Financial centers

D. Special considerations: Such as areas of high-density residential or commercial development that, if damaged, could result in high death tolls and injury rates

- Shopping districts and malls
  - *South Park shopping mall*
  - *Avenue of the Cities commercial development*
  - *Individual municipality* downtown business and commercial districts
- High density residential developments
- High rise residential or commercial buildings
- High-attendance event venues, such as sports fields, entertainment facilities, etc
  - *I-wireless Center*
- College dorms: *Augustana College*

E. Historic, cultural, and natural resource areas: Including areas that may be identified and protected under state or federal laws

- *Deere-Wiman Center, Moline*
- *Butterworth Center, Moline*

F. Other important facilities: Help ensure a full recovery of your community following a hazard event

- Government functions
- Major employers or banks
- Certain commercial establishments, such as grocery homes, hardware stores, and gas stations

Rock Island County

- City Halls, Village Halls, Police, and Fire Stations
- Public Works Buildings
- Rock Island County Building
- U.S. Postal Offices and Facilities
- Federal Buildings/Courts

Critical Facilities

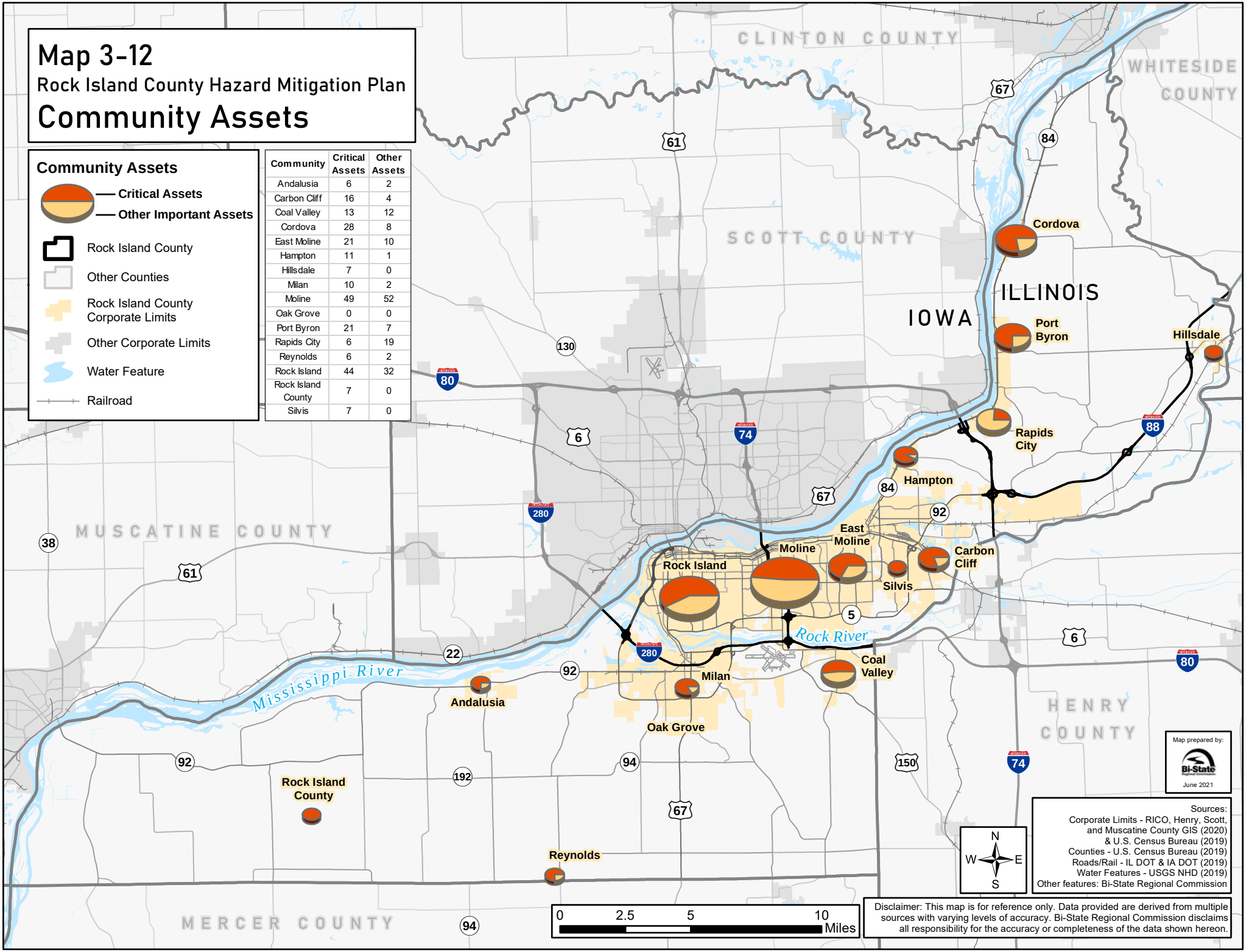
Participating jurisdictions were asked to inventory community assets that could be damaged by a hazard event using the samples listed above as a guide. They individually determined which ones they considered critical facilities. These assets and critical facilities are described in general terms for each participating jurisdiction in the Multi-Jurisdiction Risk Assessment section. While specific site addresses are not included in this document for security reasons, the selected critical facilities have been mapped for the planning area as a whole and in relation to the 100-year floodplain areas (Map 3-12). The list may be further refined in future plan updates.

Map 3-12
Rock Island County Hazard Mitigation Plan
Community Assets

Community Assets

- Critical Assets
- Other Important Assets
- Rock Island County
- Other Counties
- Rock Island County Corporate Limits
- Other Corporate Limits
- Water Feature
- Railroad

Community	Critical Assets	Other Assets
Andalusia	6	2
Carbon Cliff	16	4
Coal Valley	13	12
Cordova	28	8
East Moline	21	10
Hampton	11	1
Hillsdale	7	0
Milan	10	2
Moline	49	52
Oak Grove	0	0
Port Byron	21	7
Rapids City	6	19
Reynolds	6	2
Rock Island	44	32
Rock Island County	7	0
Silvis	7	0



Map prepared by: Bi-State Regional Commission
June 2021

Sources:
Corporate Limits - RICO, Henry, Scott, and Muscatine County GIS (2020) & U.S. Census Bureau (2019)
Counties - U.S. Census Bureau (2019)
Roads/Rail - IL DOT & IA DOT (2019)
Water Features - USGS NHD (2019)
Other features: Bi-State Regional Commission

N W E S

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Assessing Vulnerability: Analyzing Development Trends

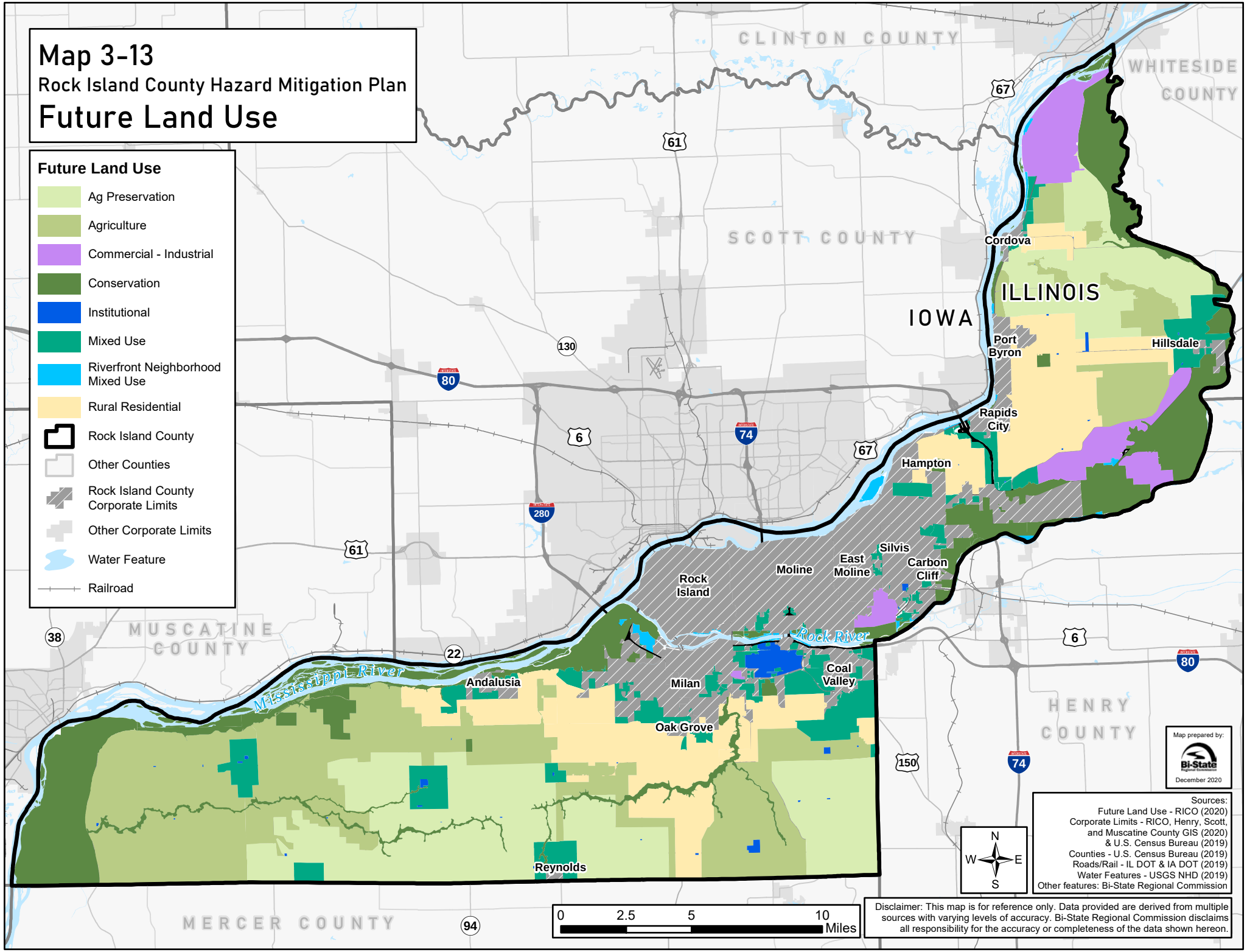
Future land uses in the Rock Island County planning area are shown in Map 3-13. The map provides the ability to view generalized future land use plans for the area in a comprehensive manner. In developing this map, the comprehensive/land use plans for the jurisdictions were used. Note that some smaller jurisdictions do not have land use plans, and zoning information was used in those cases. Municipal plans took precedence over county plans since their extraterritorial jurisdiction extends 1.5 miles in Illinois. The land use categories used on the map provide transition between different jurisdictions while allowing for a variety of land uses. Although the land use categories on the map were selected to reduce discrepancies, the task of fitting each jurisdiction's specific land uses to these categories was difficult. It is important to emphasize that these are generalized land use classifications, and questions regarding specific parcels of land should be directed to the appropriate jurisdiction. Every jurisdiction has different factors for classifying land use.

Existing land use is concentrated on the peninsula between the Mississippi and Rock River. The largest cities in the planning area, Moline, Rock Island, and East Moline, make up the Illinois portion of the Quad Cities Metropolitan Area. Earliest settlement is generally along the Mississippi River, but railroads stimulated settlement further out with the commercial development of natural resources in timber, clay, and coal. Map 3-13 shows commercial development and industrial development, which are generally concentrated along major transportation corridors.

Development Trends

With limited space remaining on the peninsula, development pressures for residential growth are radiating out of the core urban area. While the current development pattern is still fairly concentrated within the boundaries of Interstates 80 and 280, the desired future growth pattern is shown by areas mapped as low-density residential. Some of this future development is shown south of the Rock River and in a corridor of U.S. Route 67. The recent opening of the west Rock River Bridge, known formally as Veterans Memorial Bridge at Carr's Crossing, has increased growth in this direction, especially for the Village of Milan area. Other planned future development connects the Mississippi River towns of the upper part of the county. The attraction of the rivers for residential development also extends downriver below the confluence of the Rock River with the Mississippi and toward the Village of Andalusia. The geographic distribution of flood plain, substantial slope, and former coal mine sites identified in the risk assessment means that future development needs to be carefully planned and regulated to avoid hazard risks. More specific information related to development since the 2016 plan and five years out can be found in each jurisdiction's individual profile.

Map 3-13
Rock Island County Hazard Mitigation Plan
Future Land Use



Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Multi-Jurisdictional Risk Assessment

As described in the previous section on Profiling Hazards, each of the participating jurisdictions evaluated the hazards identified for the planning area. Each jurisdiction was asked to score the hazards profiled based on the methodology in Attachment 3-1. Each jurisdiction was asked to score the hazards based on their own local perspective and to note any additional information for the profile specific to its jurisdiction. The following individual jurisdiction risk assessments provide comparable data regarding population and land area. A geographic summary notes specific features that distinguish the jurisdiction from the planning area as a whole. The hazard priority list provides the top ranking hazards based on the hazard profile scoring and adjusted as needed based on local experience. This is compared to hazard priorities for each jurisdiction in the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*. This section also explains any differences in hazard ranking compared to the planning area. The Critical Facilities section summarizes structures identified as important to the jurisdiction that may be vulnerable to hazard effects. The specific lists of critical facilities were mapped in relation to the floodplain for the county-wide planning area as presented on Map 3-12.

Andalusia

Population:

2015: 1,384 (±348) **2020:** 1,153 **2025:** 1,126

Current County Rank in Population: 11

Land Area: 1.18 SQ MI

County Rank in Land Area: 12

Land Use & Geography:

Andalusia is located in the lower southwest portion of Rock Island County on the Mississippi River below the confluence of the Rock River. Because of the Mississippi River islands in that location, Andalusia is not on the main Mississippi River channel but on the backwater area called Andalusia Slough. Most of the older developed area is north of Illinois Route 92. Most of this area is part of the Mississippi River flood plain, but protected by levees. South of Route 92 begins some of the river bluff area with more slopes and ravines and timbered areas. There is a new residential addition that has been developed in an area with some slope issues. However, existing planning mechanisms provide subdivision and site review along with regulatory erosion controls.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Department of Public Works

Boards and Commissions:

- Planning and Zoning Board
- Water and Sewer
- Streets and Alleys
- Finance and Audit
- Buildings and Grounds
- Zoning Board of Appeals
- Parks and Recreation
- Tax Increment Finance
- Police

The Village of Andalusia participates in the National Flood Insurance Program and has a floodplain management ordinance enforced by Rock Island County's Building and Zoning Department. Andalusia also has zoning and building ordinances that are enforced by contract with Rock Island County. Andalusia is a volunteer community with ambulance service and fire department staffed by volunteers, and police services provided by the Rock Island County Sheriff's Department.

Financial Capabilities:

Andalusia is a taxing body and can also issue bonds, but the village does not have a capital improvement plan. As of September 2013, Andalusia has two Tax Increment Financing Districts, with one at 1st Street and 6th Avenue, and the other on Andalusia Road.

Critical Facilities:

Andalusia listed six structures. These are primarily local government facilities, including the Village Hall, water, maintenance, police, and fire. Also included is the U.S. Post Office. Because of the geography of the area, all of these facilities are in the floodplain behind the levee. The well heads for the Village's water supply are within the floodplain. In the event of a flood, the water source could be super chlorinated for a time. Doing this for a long period of extended flood conditions could burn out pump equipment. The long-term solution would be to move the well heads to a better location. This will entail realigning the water distribution system in relation to the water tower.

Development Trends:

Andalusia's commercial developments are centered downtown along 1st street and Highway 92, with single-family residential zoned in the south and west of the city, and multi-family residential zoned in the northeast. The land that is zoned for single-family residential in the northwest corner of the village is adjacent to the Mississippi River, which is a slight cause for concern, although there is a levee that abuts the waterfront. By 2025, there will be a predicted 468 total housing units and a population of 1,126 people.

Hazard Priorities:

2020	**2015**
1. Severe Storms Combined	1. Severe Storms Combined
2. Severe Winter Storms	2. Severe Winter Storms
3. River Flooding	3. Flash Flooding
4. Levee Failure	4. River Flooding
5. Pandemic Disease	5. Levee Failure

Andalusia's hazard priorities are mostly similar to the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*. Small shifts in priorities may be due to a different scoring methodology and the inclusion of tornadoes in the Severe Storms Combined. The frequency of severe storms and the related problems triggered by this hazard, such as power outages, make this a priority hazard for many of the jurisdictions in the planning area. Additionally, substantial river frontage makes river flood and levee failure a major concern. The levee was constructed by the U.S. Army Corps of Engineers and has been maintained by the village. In October 2014, the Village Board of Trustees began a process of getting Levee Accreditation from FEMA by contracting help from Klingner and Associates Engineers.

Carbon Cliff

Population:

2015: 2,076 (±205) **2020:** 2,019 **2025:** 1,961

Current County Rank in Population: 8

Land Area: 2.09 SQ MI

County Rank in Land Area: 9

Land Use & Geography:

The Village of Carbon Cliff is on the east end of the peninsula of land between the Mississippi and Rock Rivers that characterizes the central portion of Rock Island County. The northwest corner of Carbon Cliff is about two to three miles from the Mississippi River, but there is a small portion of Rock River frontage to the south and east of the village. Illinois Route 84 separates the bluff line from the flood plain. Unlike the Mississippi River towns in the upper portion of the county, the bluff line is to the west of Route 84, and the land to the east is part of the Rock River floodplain. With historic development based on mining and the railroad, Iowa Interstate Railroad tracks cross the village from northwest to southeast. The oldest development is between the bluff line and the railroad tracks, and the 100-year flood plain line meanders through this portion of town. The elevation toward the east of the railroad tracks declines even more. The village is surrounded by wetlands on the north and east sides. Heavy rains can cause flash flooding from the bluff area and add to the drainage problems on the lower side of

town. Also on this lower side, historic coal mine sites have been mapped that contribute to the village's name. In an Illinois Route 5 Corridor Study done by Bi-State Regional Commission in 1986, one mine was described as having extensive shafts that run in several directions of a couple of blocks.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Maintenance Department

Water and Sewer

Fire (Carbon Cliff Barstow Fire Protection District)

Boards and Commissions:

Building Board of Appeals

Ethics Commission

Planning Commission

Public Works Quarterly Billing Appeals Committee

Zoning Board of Appeals

The Village of Carbon Cliff participates in the National Flood Insurance Program, and has a floodplain management ordinance and a zoning code that are enforced by the Director of Community & Administrative Services. The village has a building code that is enforced by contract by the City of East Moline's Building Inspector. The police services are provided by the Rock Island County Sheriff's Department.

Financial Capabilities:

Carbon Cliff is a taxing body, and can also issue bonds. Carbon Cliff does not have a capital improvement plan.

Critical Facilities:

Carbon Cliff listed 20 structures in its inventory of community assets. Sixteen of these are noted as critical and include village services and infrastructure, such as Village Hall, fire, police, and water and sewer infrastructure. Two school buildings are included as critical facilities, as are the railroad tracks that pass through town. Critical facilities located east of Route 84 may be in or near the 100-year flood plain. Two housing areas were noted for vulnerable populations. Two commercial convenience outlets were listed as other important facilities, providing local services and economic continuity following major hazard events.

Development Trends:

Carbon Cliff has some future industrial and future commercial zoning planned for the eastern and northern edges of the city, although neither of them extend enough to be adjacent to the Rock River. As far as future development, by 2025, there will be a predicted 856 total housing units and a population of 1,961 people.

Hazard Priorities:

2020

1. Severe Winter Storms
2. Severe Storms Combined
3. Pandemic Disease
4. River Flooding
5. Drought

2015

1. Severe Winter Storms
2. Severe Storms Combined
3. Flash Flooding
4. River Flooding
5. Drought

The hazards of Severe Winter Storms is at the top of the list due to the amount of damage incurred during winter snowstorms. Severe Storms Combined is also high on the list due to the high occurrence of events and severity of damage. Flash Flooding and River Flooding scored high as well due to the village's proximity to the Rock River. Due to flash flooding associated with heavy rain, the bridge at First Street and Argillo Creek has been heavily damage and is no longer open. With the floodplain and wetlands as described in the geography section above, severe storms produce heavy rains that contribute to flash flooding. With run off from the bluff area, storm water drainage is a major issue for the village. Incidents of Drought can happen annually, which is why it is also included in the top-ranked hazards.

Coal Valley

Population:

2015: 3,784 (± 209) **2020:** 3,662 **2025:** 3,607

Current County Rank in Population: 7

Land Area: 2.34 SQ MI

County Rank in Land Area: 8

Land Use and Geography:

The Village of Coal Valley has developed land within a bluff line south of the Rock River. Coal Creek and Shaffer Creek and bluff slopes provide conditions for occurrence of flash flooding. U.S. Routes 6 and 150 run through the village with Interstate 280/74 running on the north side of the village limits along the Rock River. Former coal mine sites are located throughout the village. A recent draft flood way and floodplain map from the Illinois State Water Survey concerns the village, as the draft map puts a large section of the U.S. Route 6 village

commercial area within the flood way of the Rock River. The Village participates in the National Flood Insurance Program.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Administration

Finance

Police

Water & Sewer

Roads & Parks

Boards and Commissions:

Planning and Zoning Committee

The Village of Coal Valley has a floodplain management ordinance and a zoning code, which are enforced by the Public Works Director. The village has a building code that is enforced by the building inspector.

Financial Capabilities:

The village has 12 to 18 months of capital reserve and is able to directly finance some major water and sewer capital improvement projects through its water and sewer account. There is one active TIF district on route 6 in Coal Valley. Coal Valley has a 10-year capital improvement plan with the village administrator and the trustees, that was recently revised in 2017.

Critical Facilities:

Coal Valley has 31 structures on its list of community assets. Fifteen of these include local government infrastructure critical to continued operations such as Village Hall, township office, maintenance garage, water wells with towers and ground storage tanks, and sanitary sewer lift stations. The fire station is located in the village and is part of the Coal Valley Fire Protection District, which has 25 volunteers on its roster. The U.S. Post Office is a federal facility included in the list of critical facilities. Ten structures listed include private businesses providing essential services, such as a medical clinic, banks, restaurants, gas stations, and the power company. Six other structures listed note locations of potentially vulnerable populations, such as schools, child day care, and mobile homes.

Development Trends:

Within the next 5 years, there could be one new residential subdivisions constructed within the village and redevelopments within the village's TIF District. Coal Valley's future land use map is comprised of mostly low density residential zoning, with some commercially zoned land in the

west and in the downtown area in the north of the village by Highway 6. There is also some land zoned for heavy industrial in the northeast corner of the village, along the Rock River near Kone and FCA Manufacturing. Future developments by 2025 include an estimated 1,579 total housing units and a population of 3,607 people.

Hazard Priorities:

2020

1. Severe Storms Combined
2. Severe Winter Storms
3. Pandemic Disease
4. Drought
5. Earthquake

2015

1. Severe Storms Combined
2. Severe Winter Storms
3. Flash Flooding
4. River Flooding
5. Drought
6. Extreme Heat
7. Landslides
8. Land Subsidence

Coal Valley's top hazards are similar to the planning area. Severe Storms Combined is the top hazard for Coal Valley. Severe Winter Storms is also a hazard priority due to the high occurrence of winter storms. Due to COVID-19, Pandemic Disease became a main priority. Drought occurs on an almost annual basis for the community. Tied with drought was Earthquake, although the probability may be low, the impact is extremely high if one were to occur.

Cordova

Population:

2015: 624 (± 114) **2020:** 626 **2025:** 621

Current County Rank in Population: 14

Land Area: 0.57 SQ MI

County Rank in Land Area: 15

Land Use & Geography:

The Village of Cordova is one of the smaller participating jurisdictions in terms of land area and population. The village is located on the Mississippi River, which forms its corporate boundary on the west. The 100-year flood plain elevation follows the river shoreline, but most of the streets are above this elevation. A tributary drainage area of the 100-year flood elevation crosses the village through a central part where the Mississippi River takes a slight bend. North of this drainage area, the elevation rises so that the 100-year flood plain of the Mississippi River is much narrower than in the southern portion of the village. Although most of the developed area of the village appears to be above the 100-year flood elevation, periods of high river

flooding may decrease access to parts of the village. As with the other river towns in upper Rock Island County, the Burlington Northern and Santa Fe Railroad tracks and Illinois Route 84 run parallel to the Mississippi River through portions of Cordova's jurisdiction.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Fire

Parks and Recreation

Recycling

Water & Sewer

Boards and Commissions:

Planning and Zoning Committee

Zoning Board of Appeals

Cordova disbanded its police department in 2011, citing controversy and lawsuits, and its fire protection currently falls under the Cordova Fire Protection District, which is a predominately volunteer department. The Village of Cordova now contracts law enforcement with Rock Island County (RICO) sheriff's department. The village participates in the National Flood Insurance Program and has both a floodplain management ordinance and building code. The village has a building inspector who enforces the floodplain management ordinance and building code.

Financial Capabilities:

Cordova is a taxing body, can also issue bonds, and as of September 2013, Cordova has three Tax Increment Financing Districts. As of spring 2015, Cordova is working with MSA to develop a capital improvement plan that will outline their financial capabilities and their planned infrastructure.

Critical Facilities:

Cordova listed 30 facilities in its inventory of community assets. Twenty of these are local government structures and infrastructure, including the Village Hall, water and wastewater treatment services, bridges, and emergency services and communication. Several river-related facilities were noted, such as boat docks and barge terminals. Private businesses include several chemical facilities as major employers, both in and near corporate limits. Other businesses listed provide convenience outlets for food and gasoline. For vulnerable populations, places where large numbers of people may congregate, large employers with potentially hazardous materials, and housing for seniors and the disabled were noted.

Development Trends:

In 2009, Cordova held multiple community workshops to explore the subject of active recreation and downtown development by the waterfront, including the development of a boat launch, fishing pier, gazebo, completion of the new municipal building, and parking at a downtown central site. An additional development site near the west shoreline was identified for the potential development of passive/active recreation, including enhanced natural environment with trails, fishing, eagle watching/birding, basketball courts, and a skate park and potential parking on village-owned parcels along Third Street. A boat landing currently exists off Main Avenue and off 2nd Avenue South. Riverfront development is ongoing at Main and 5th Street.

Hazard Priorities:

2020

1. Severe Storms Combined
2. Severe Winter Storms
3. Radiological Incident
4. Hazardous Materials
5. Pandemic Disease

2015

1. Radiological Incident
2. Hazardous Materials
3. Extreme Heat
4. Severe Storms Combined
5. Severe Winter Storms

Cordova's hazard priorities of 2020 are similar to the priorities from 2015. With the Quad Cities Nuclear Power Plant just a few miles north of the corporate limits, Cordova ranks Radiological Incident as one of the highest hazard priority. Although the 10-mile evacuation planning radius for the plant may touch other Rock Island County jurisdictions, Cordova is the nearest neighbor. With the railroad and state highway running through town, regular freight transportation is perceived as a hazard. In addition, several businesses in and near Cordova are listed as Critical Facilities because of the sensitive materials handled. As a result, Cordova ranks Hazardous Materials Incident higher than the planning area when scored on the basis of vulnerability and severity of effects. The remaining priority hazards for Cordova include the same extreme weather hazards that were noted for the planning area: Severe Storms Combined and Severe Winter Storms, which occur annually in the area. Tied with these hazards is Pandemic Disease, primarily because of the increased awareness due to the COVID-19 pandemic.

Carbon Cliff-Barstow Eagle Ridge School District #36

Overview:

The Carbon Cliff-Barstow Eagle Ridge School district provides public education for grades pre-kindergarten through 8. Below are enrollment numbers for the district's school.

School Enrollment for Academic Year 2020-2021

School	Location	Enrollment	Staff	Total
Eagle Ridge	Silvis	240	45	**285**

The district reports to a school board with seven members elected by residents within the school district. The board is responsible for managing district policies and overseeing the district budget. The Superintendent is hire by the Board of Education and is responsible for the fiscal management and personnel of the district. The building is led by the Principal. The district also employs a full time counselor and a part time nurse.

Land Use & Geography:

The district spans 7 square miles, serving an estimated 1,981 residents in Carbon Cliff. See Map 2-1 in Chapter 2 for district location. The school is not located within the floodplain and is not protected by a levee system.

Financial Capabilities:

The district is a taxing body. Its main revenue source is generated by the tax levy prepared by the district superintendent and adopted by the Board of Education. The district can issue bonds for large projects as well as applying for state and federal grants to offset overall cost.

Critical Facilities:

The only critical facility is the one school building within the district.

Development Trends:

There are no development trends happening in this district at this time.

Hazard Priorities:

1. Severe Storms Combined
2. Severe Winter Storms
3. Extreme Heat
4. Pandemic Disease

This is Carbon Cliff-Barstow Community School District's first time participating the in the multi-jurisdictional hazard mitigation plan. The school district's hazard priorities are similar to the planning area. Both Severe Winter Storms and Extreme Heat have caused school closures. Another pandemic would cause staffing issues at schools or could cause another closure to deep clean the school(s) and keep everyone safe.

East Moline

Population:

2015: 21,422 (± 233) **2020:** 20,737 **2025:** 20,217

Current County Rank in Population: 3

Land Area: 14.46 SQ MI

County Rank in Land Area: 4

Land Use & Geography:

The City of East Moline is located in the central part of Rock Island County on the east end of the peninsula between the Mississippi River and the Rock River. East Moline only has frontage on the Mississippi River. The corporate limits meet the City of Moline to the west and south and the City of Silvis to the east. Although East Moline does not have frontage on the Rock River, the flood plain of the Rock River reaches into the northeast portions of the city north of Silvis and the Village of Carbon Cliff as well as land south of Illinois 92/5/Interstate 88. Sugar Creek, a tributary of the Mississippi, also has its floodplain in this northeast area. A system of levees along the Mississippi River and Sugar Creek protect areas that would otherwise be in the 100-year floodplain. This levee has been certified.

Illinois Route 92 travels east and west through the city and roughly marks the separation between the Mississippi River floodplain to the north and the bluff line that forms an east-west spine in this central peninsula. Much of the southern portion of East Moline is characterized by upland slopes and ravines. Illinois Route 84 turns north between East Moline and Silvis into the upper portion of the county. The Burlington Northern and Santa Fe Railroad tracks run parallel to the Mississippi River through the northern and older developed portion of East Moline until the tracks turn north paralleling Route 84 in the upper county. Route 92 joins Illinois Route 5 on a diagonal across the northeastern portion of East Moline.

Government Structure:

Mayor-Council structure, non-home rule

Seven elected city council representatives elected by wards

Mayor serves a 4-year term, City Council serves 4-year, staggered terms

Departments:

- City Administrator
- Engineering
- Finance
- Fire
- Health
- Human Resources
- Inspections
- Maintenance Services
- Police
- Wastewater Treatment
- Water Filtration

Boards and Commissions:

Board of Zoning Appeals	Human Relations Commission
Citizens' Advisory Committee	Library Board
Economic Development Commission	Park Board
Historical Preservation Commission	Plan Commission

The City of East Moline participates in the National Flood Insurance Program, and has a floodplain management ordinance that is enforced by the City Engineer. The city has a building code that is enforced by the Building Inspector.

Financial Capabilities:

The city has a five-year comprehensive Capital Improvement Plan. Major categories in the CIP are streets, stormwater, utility, water plant, water distribution, sewer plant, sewer collection, public safety, and parks. Hazard mitigation projects, especially those related to stormwater management or the levee system, could be incorporated into the CIP. The city can also issue bonds to finance large projects.

Critical Facilities:

East Moline included 31 facilities on its list of community assets, up from 24 in the last plan. New assets include the lift stations, Hope Creek Nursing Home, and River Wood Rehab Facility, which is senior housing. Of these, 21 were designated as critical facilities. Critical facilities include those for administration and operation of essential community services and infrastructure, such as City Hall, police and fire stations, lift stations, water and wastewater treatment, and engineering and maintenance. The city also included the Mississippi River levee system as a critical facility. Finally, five senior housing facilities, a nursing home, and a rehabilitation facility were listed among the critical facilities for their concentration of a vulnerable population. In addition to these critical facilities, other community assets include schools, community centers, and the East Moline Correctional Center. These were designated as locations of vulnerable populations. The John Deere Harvester Works plant was listed as an economic asset and also for the large number of employees who might be considered a vulnerable population in a hazard event.

Development Trends:

The comprehensive plan for the city was completed in 1999, with the demographics section and Future Land Use Map updated in 2006. Changes within the existing corporate limits identify a mixed-use area, known as The Quarter, between 7th Street and Deere Harvester and 13th Street and the Mississippi River. Infill of light industrial uses in available space north of 13th Avenue and residential uses south of the central business are proposed. Growth through annexation is proposed to occur to the east along Illinois Routes 5 and 92 and Interstate 88 to Interstate 80 and north to the Mississippi River. Light industrial development is expected to occur to the south of IL5/IL92 and I-88. Residential development is expected to occur to the north of this

area. Commercial development is proposed in the northwest quadrant of the I-88 and I-80 interchange. By 2025, East Moline will see an estimated 9,003 total housing units and a population of 20,217 people.

Hazard Priorities:

2020

1. Severe Winter Storms
2. Pandemic Disease
3. Hazardous Materials
4. Severe Storms Combined
5. Drought
6. Levee Failure

2015

1. Severe Storms Combined
2. Severe Winter Storm
3. Hazardous Materials
4. Levee Failure
5. Flash Flooding
6. Extreme Heat
7. River Flooding

East Moline's top hazard priorities are similar to the Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016, with Severe Winter Storms and Severe Storms Combined in the top priorities list as usual. New into the top priorities is Pandemic Disease, due to the COVID-19 pandemic having a large effect on all communities. Hazardous Materials is still in the top because it affects a larger percentage of the city compared to river and flash floods and occur more frequently than levee failures. Also new to the list is drought, which occurs on an annual basis. As new development moves to the northeast, East Moline is vulnerable to the Rock River flood plain where there is no levee protection. Any future development would fall under the floodplain management ordinance.

Hampton

Population:

2015: 1,942 (± 188) **2020:** 1,700 **2025:** 1,671

Current County Rank in Population: 9

Land Area: 1.50 SQ MI

County Rank in Land Area: 11

Land Use & Geography:

The Village of Hampton is located in the upper portion of Rock Island County on the Mississippi River upstream from the City of East Moline. Illinois Route 84 and Burlington Northern and Santa Fe railroad tracks pass through Hampton roughly parallel to the Mississippi River shoreline, marking a dividing line between steeper bluff areas and flatter land to the river. The oldest developed part of Hampton is on the Mississippi River side west and below the highway/railroad line. First Avenue runs along the Mississippi River at the western corporate limits. The central portion of the village east of First Avenue to the highway is above the 100-year flood elevation, although some parts are at the 500-year flood elevation. However, south

to where First Avenue becomes River Road and north where First Avenue becomes Water Street, the elevation declines back to Zone A 100-year flood levels. Even without a levee, Hampton weathers many spring Mississippi River flood seasons without serious flooding. However, severe, high Mississippi River floods are a threat at the northern and southern ends of the village below the highway and restrict access. More recent development is generally found at the level of the highway and above the hills and ravines of the bluff line.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Fire

Parks and Recreation

Police

Public Works (Water and Sewer)

Boards and Commissions:

Zoning Board

Hampton participates in the National Flood Insurance Program and has a floodplain management ordinance and building code enforced by the building inspector.

Financial Capabilities:

Hampton has three financial districts, and most of the financing is used for the purchase of vehicles. There is an informal capital improvement plan. The approximate amount of the operating budget of the Village of Hampton is $2,742,951.00.

Critical Facilities:

Hampton listed 13 facilities including the village hall, police and fire departments, and Maintenance Services Building. Eight of the facilities listed refer to water or wastewater infrastructure. The Hampton Heritage Center is also a village facility and is an important cultural asset. Most of these facilities are not within the 100-year flood elevation.

Development Trends:

Hampton is located on the Mississippi River, and their future land use map has park land zoned by the waterfront, which should help mitigate flooding along future developments. There is a small amount of low density residential land along the Mississippi river on the west side of the village. By 2025, there is expected to be 769 total housing units and a population of 1,671 people.

Hazard Priorities:

2020

1. Severe Winter Storms
2. Pandemic Disease
3. Severe Storms Combined
4. Drought
5. River Flooding

2015

1. Severe Storms Combined
2. Severe Winter Storms
3. Extreme Heat
4. River Flooding
5. Radiological Incident

Hampton's vulnerability to Severe Storms Combined, Severe Winter Storms, and Drought is similar to that of the rest of the county, and reflects the threat and incident of annual occurrence at the top of the hazard priority list. Because of its position on the Mississippi River, River Flooding is also a high priority hazard. New to the list is Pandemic Disease, due to the COVID-19 pandemic having a large impact on all communities.

Hampton Community School District #29

Overview:

The Hampton School district provides public education for grades kindergarten through 8. Below are enrollment numbers for the district's schools.

School Enrollment for Academic Year 2020-2021

School	Location	Enrollment	Staff	Total
Hampton Elementary	Hampton	230	29	**259**

Hampton School District consists of one school that houses students in grades K-8. The Hampton 29 School Board consists of seven elected members tasked with governing the district throughout the school year. The superintendent or principal administers day-to-day operations and reports to the school board throughout each month.

Land Use & Geography:

Hampton School District is located in the Village of Hampton with a residential population of approximately 1900.

Financial Capabilities:

The school district's main revenue is generated from a tax levy to properties located within Hampton. The district also receives state and federal funding. The district issues bonds for large projects and manages both state and federal grants.

Critical Facilities:

The school district's only property is located in Hampton on 5th Street and is two blocks from the banks of the Mississippi River.

Development Trends:

There are no plans at the present time to expand the current building or acquire additional property in or around the Hampton Village.

Hazard Priorities:

1. Severe Storms Combined
2. Severe Winter Storms
3. Hazardous Materials Incident
4. Extreme Heat
5. Pandemic Disease

Hillsdale

Population:

2015: 547 (± 103) **2020:** 483 **2025:** 477

Current County Rank in Population: 15

Land Area: 0.69 SQ MI

County Rank in Land Area: 13

Land Use & Geography:

The Village of Hillsdale is one of the smaller jurisdictions in both population and land area participating in this plan update. Hillsdale is in a geographically flat part of Rock Island County, which can contribute to widespread flooding from the Rock River. All but a few structures within the corporate limits are in a flood plain area. The most severe incident of flooding in recent record occurred February 20, 1997. Heavy rains in combination with frozen soil and ice jams caused the Rock River to reach a record crest of 18.77 feet at Joslin. Despite massive sand-bagging efforts, the combination of high water and ice broke through levees near Erie and Hillsdale. Hillsdale was 95% covered in knee-deep water with some areas over ten feet deep. Eighty percent of Hillsdale's residents were evacuated. There are no other geographic features that distinguish Hillsdale from the other jurisdictions in the county in regard to naturally occurring hazards. However, in regard to the human-cause hazards identified in this planning process, several trains a day pass through downtown, and the Quad Cities Nuclear Power Plant at Cordova is within 12-15 miles.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Fire

Maintenance

Boards and Commissions:

Finance Committee

Streets/Park Committee

Police Committee

Sanitary/Sewer Committee

Hillsdale participates in the National Flood Insurance Program and has a floodplain management ordinance and building code that is enforced by contract with Rock Island County.

Financial Capabilities:

Hillsdale is a taxing body and can also issue bonds, but it does not have a capital improvement plan.

Critical Facilities:

Hillsdale listed seven structures in its inventory of community assets. Three of these are government facilities, including the Village Hall, the Fire Protection District facility, and the U.S. Post Office. The other four structures listed are local businesses included for essential services and economic continuity. These include the grain elevator, bank, and two convenience stores with gasoline. It was noted that with a small community, everyone turns out to help with flood incidents, including sandbagging threatened properties or moving books from the library.

Development Trends:

Hillsdale is a small town whose population is projected to decrease by 2025, according to ESRI Community Analyst. There are no large scale developments scheduled for Hillsdale.

Hazard Priorities:

2020

1. Severe Winter Storms
2. River Flooding
3. Pandemic Disease
4. Severe Storms Combined
5. Drought

2015

1. River Flooding
2. Levee Failure
3. Flash Flooding
4. Grassland, Field, or Woodland Fire
5. Severe Winter Storm

Hillsdale ranks River Flooding and Sever Winter Storms highest among priority hazards. This is understandable in light of the geography and flooding incident described above. Hillsdale also ranks the hazards of Pandemic Disease, Severe Storms Combined, and Drought as other high priorities.

Milan

Population:

2015: 5,137 (± 39) **2020:** 4,992 **2025:** 4,833

Current County Rank in Population: 6

Land Area: 6.35 SQ MI

County Rank in Land Area: 5

Land Use & Geography:

The Village of Milan is located south of the Rock River. It is bordered by the southwest portion of the City of Rock Island on the west and by the Quad City International Airport on the east. The land area consists of a north facing bluff and Mill Creek with its highly dissected valley sides, lesser creeks, terraces, and rolling upland plains. The land north of Knoxville Road is mostly protected by a certified levee on the Rock River. There is floodplain adjacent to Mill Creek that is susceptible to floods, especially flash flooding from ice jams and heavy rain. See Appendix 3-3 for more details of the Special Flood Hazard Areas. The transition from the Rock River Valley to the upland area is marked by a distinct topographic change from flat low land to slopes. The higher land south of the current village limits is characterized by rolling terrain. Mill Creek is responsible for much of the topography in this part of Rock Island County.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

City Departments:

- Public Works
- Police
- Building
- Parks and Recreation

Boards and Commissions:

- Advisory Board for Building Inspectors
- Board of Local Improvements
- Building Board of Appeals
- Local Liquor Control Commission
- Metropolitan Airport Authority of Rock Island Co.
- Park Advisory Board
- Planning Commission
- Police Commission
- Police Pension Board
- Zoning Board of Appeal

Milan participates in the National Flood Insurance Program and has a floodplain management ordinance enforce by the City Administrator. The village also has a building code that is enforced by the Building Inspector.

Financial Capabilities:

Milan is a taxing body, can issue bonds, and has 4 TIF districts as of September 2019. As of summer 2015, the city developed a plan to raise the rates for water and sewer in order to increase funds for capital improvement plans and pay for any bond indebtedness incurred.

Critical Facilities:

Milan listed 12 facilities in its inventory of community assets. Four of these are related to essential village services, including police, fire, water, and wastewater treatment. Other critical infrastructure includes bridges and river-related levees and dam. Two business locations were noted for the services provided and the economic contribution to the community. This includes a telecommunications transmission center and a major grocery complex. Although protected by the levee system, a number of these sites would otherwise be located in the 100-year floodplain.

Development Trends:

The future land use map of Milan has a diversity of land uses, partly stemming from its mix of industrial, commercial, and office properties, and due to its close proximity to the Quad City International Airport. There is some land use adjacent to the Rock River, with developments zoned for a mix of industrial and commercial uses, although there is a levee adjacent to the river. By 2025, there is expected to be 2,458 total housing units.

Hazard Priorities:

2020

1. Severe Storms Combined
2. Severe Winter Storms
3. Pandemic Disease
4. Levee Failure
5. Hazardous Materials

2015

1. Severe Storms Combined
2. Flash Flooding
3. Hazardous Material
4. Levee Failure
5. Severe Winter Storms

Similar to the planning area, Severe Storms Combined can occur at least annually, and was ranked as the top priority hazard. Additionally, Severe Winter Storms and Levee Failure are priority hazards from the Rock River and Mill Creek as described in the geography section above. Continued certification of the levees is an ongoing priority. Hazardous materials that travel through the area are also a concern, as is Pandemic Disease.

Moline

Population:

2015: 43,062 (± 89) **2020:** 42,700 **2025:** 41,800

Current County Rank in Population: 1

Land Area: 16.73 SQ MI

County Rank in Land Area: 3

Land Use & Geography:

The City of Moline is the largest municipality in population. It is located on the peninsula between the Mississippi and Rock Rivers in the center portion of Rock Island County. Moline is bordered by the city of Rock Island to the west and by the City of East Moline to the east. The Mississippi River runs from east to west through this area known as the Quad Cities, so the Mississippi River is Moline's northern border. The Rock Island Arsenal is located on an island of the Mississippi River between Moline and the City of Rock Island. Bluffs facing the Mississippi River to the north and the Rock River to the south form a spine running east to west across the peninsula. As a result, the center portion of Moline is in an upland area that drains off both north and south in steep slopes and ravines.

On the south, Moline touches and crosses the Rock River in several locations. Historic coal mine sites are recorded generally east of I-74 and south of the Avenue of the Cities. Transportation features include Interstate 74 north and south through the center of the city with major interchanges at Illinois Route 5 and I-280. Tracks for the Iowa Interstate Railroad roughly parallel the Mississippi River across the north of the city through the oldest downtown and industrial developed areas.

Government Structure:

Mayor-Council structure, home rule

Eight elected city council representatives elected to seven wards; one at-large representative

Mayor serves a 4-year term, City Council serves 4-year, staggered terms

Departments:

City Administration
City Clerk
Economic Development
Finance
Fire
Human Resources
Information Technology
Law
Library
Parks & Recreation
Planning & Development
Police
Public Works

Boards and Commissions:

- Citizen's Advisory Council on Urban Policy
- Consolidated Public Safety Communication Budget Board
- Fire & Police Commissioners
- Fire Pension Board
- Foreign Fire Tax Board
- Historic Preservation Advisory Commission
- Human Rights Commission
- Keep Moline Beautiful Commission
- Library Board of Trustees
- Moline Centre Main Street Commission
- Moline Housing Authority Board
- Park Board
- Plan Commission
- Police Pension Board
- Project Management Team
- Traffic Engineering Committee
- Youth Commission

The City of Moline participates in the National Flood Insurance Program and has a floodplain management ordinance, which is enforced by the city's Floodplain Manager. The city has a building code enforced by the Building Inspector. The city also has a stormwater management ordinance enforced by the city's Environmental Manager.

Financial Capabilities:

The city has a comprehensive 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 Moline listed 92 facilities in its inventory of community assets. Of these, 49 are designated as critical and include major infrastructure, such as water and sewer system facilities, schools, major medical centers, and bridges. Other transportation-related facilities listed as critical include the Quad City International Airport, railroads, and the transit system center. Business facilities included as critical relate to electrical energy transmission and fuel products storage. Other local government facilities include City Hall, police and fire departments, library, municipal garage, and pump stations. Areas noted for vulnerable populations include schools and colleges, child day care, elderly housing and assisted living, low income or minority housing concentrations, and medical facilities. Facilities where large numbers of people may congregate are listed, including arenas and shopping centers. Historic or cultural facilities include the Deere-Wiman House and the Butterworth Center.

Development Trends:

The city's most recent comprehensive plan was adopted November 13, 2001. A description of future land use is taken from that plan. The South Rock Planning District is generally bounded by the Rock River on the north and the City of Coal Valley on the east. The vast majority of this area is not in the city limits and will need to be annexed. The Quad City International Airport is

located in the district and is the single largest land use. The airport has many effects on adjacent land use such as noise, structure height, approach zones, traffic, and utilities. This southern development area is the future economic driver of Moline. The city plans to move forward with annexation so that it can help guide new development rather than end up trying to correct development problems that could have been prevented. Some development has occurred, but the city has the opportunity to create the vision of a new planned community that incorporates community planning and sustainable development principles. In 2014, Moline updated their comprehensive plan for Moline Centre, Floreciente, and Edgewater neighborhoods. The most significant change will occur after the construction of the new Interstate 74 Bridge. The current right of way for the bridge will be vacated and redeveloped.

The City is currently developing a form-based zoning code for the Downtown. While traditional zoning focuses on land uses, this new document will guide development and land use with more of an approach to form, connectivity to the public right of way, design, etc. The City has received a grant from the State of Illinois to assist with paying a consultant to lead this project. A steering committee has been formed to provide guidance. It is anticipated that the form-based code will be completed by early 2022.

By 2025, there will be an estimated 20,044 total housing units.

Hazard Priorities:

2020

1. Severe Storms Combined
2. Severe Winter Storms
3. Pandemic Disease
4. Drought
5. Extreme Heat
6. Hazardous Materials

2015

1. Severe Storms Combined
2. Severe Winter Storms
3. Flash Flooding
4. River Flooding
5. Extreme Heat
6. Hazardous Materials

Moline's hazard priorities are similar to the *Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan, 2016*. Small shifts in priorities may be due to a different scoring methodology and the COVID-19 pandemic. Drought and Extreme Heat remain hazards as annual occurrences become increasingly prevalent. With freight transfer by railroad and major highways through developed areas, the frequency and probability of hazardous materials spills is a major concern for the fire department.

Moline-Coal Valley Community School District #40

Overview:

The Moline-Coal Valley School district provides public education for grades kindergarten through 12. The district also has a preschool and an alternative high school. Following are enrollment numbers for the district's schools.

School Enrollment for Academic Year 2020-2021

School	Location	Enrollment	Staff	Total
Bicentennial Elementary	Coal Valley	290	37	**327**
Butterworth Elementary	Moline	247	38	**285**
Franklin Elementary	Moline	281	41	**322**
Hamilton Elementary	Moline	621	82	**703**
Jane Addams Elementary	Moline	299	38	**337**
Lincoln-Irving Elementary	Moline	286	49	**335**
Logan Elementary	Moline	302	48	**350**
Roosevelt Elementary	Moline	372	60	**432**
Washington Elementary	Moline	294	51	**345**
Willard Elementary	Moline	184	37	**221**
Jefferson Early Learning Center	Moline	199	35	**234**
John Deere Middle School	Moline	800	85	**885**
Wilson Middle School	Moline	857	84	**941**
Moline High school	Moline	2095	206	**2301**
Coolidge Alt. High School	Moline	69	37	**106**
		7196	928	

Ericsson and Garfield Elementary Schools closed at the end of the 2014-2015 school year. District lines were redrawn with a major expansion of Hamilton Elementary School. Elementary schools serve kindergarten through fifth grade. Middle schools serve grades 6-8, and high school is 9-12.

The district reports to a school board with seven members elected by residents within the school district. The board is responsible for setting policies, budgets, and administrative decisions in public meetings. The Superintendent is responsible for advising the school board and overall administration of the entire school district. Other administrative positions include:

Assistant Superintendent for Secondary Teaching and Learning

Assistant Superintendent of Human Resources

Assistant Superintendent for Elementary Teaching and Learning

Assistant Superintendent for Pupil, Personnel and Special Education

Chief Financial Officer, Comptroller and Treasurer

Educational Technology Manger

Director of Instructional Programming

Director of Facilities

Director of Public Relations and Communications

Coordinator of English Learners

Coordinator of Special Education Services

In addition, each school has additional administration. Elementary schools have a Principal. Middle schools have a Principal, an Assistant Principal, and a School Counselor. The High school has a Principal, two Assistant Principals, two Deans of Students, and an Athletic Director.

Land Use & Geography:

The district spans 27.88 square miles, serving an estimated 43,768 residents in Moline, parts of Coal Valley, and the Rock Island Arsenal. None of the schools are located within the floodplain or are protected by levee systems.

Financial Capabilities:

The school district is a taxing body. Its main revenue is generated from a tax levy to properties located within the school district, while the district also receives state and federal funding. The district can issue bonds for large projects as well as apply for and manage both state and federal grants. The district utilizes a three-year operational plan to address improvements to student achievement, capacity building, and sustainability throughout the school district.

Critical Facilities:

The school district's critical facilities are all of the schools and their administrative building.

Development Trends:

The school district recently completed two major expansions at Moline High School with the addition of 12,384 sq. ft. Bartlett Performing Arts Center and a new 58,000 sq. ft. P.E. Center. There are no other expansions identified in the current Operational Plan.

Hazard Priorities:

1. Severe Storms Combined
2. Severe Winter Storms
3. Hazardous Materials Incident
4. Extreme Heat
5. Pandemic Disease

The school district's hazard priorities are similar to the planning area. Hazardous Materials Incident scored higher for the school district to the number of extremely hazardous substance sites within Moline. Both Severe Winter Storms and Extreme Heat have caused school closures. Unlike the majority of the other participating jurisdictions, the school district left Influenza Pandemic in its top hazard priorities. An influenza pandemic would cause staffing issues at schools or could cause closure to deep clean the school(s).

Orion Community Unit School District #223

Overview:

The Orion School district provides public education for students in pre-kindergarten through twelfth grade. Below is enrollment numbers for the district's schools. There is one high school, one middle school, one elementary school, and one district office.

School Enrollment for Academic Year 2020-2021

School	Location	Enrollment	Max Capacity
Orion High School	Orion	329	600
Orion Middle School	Orion	217	550
C.R. Hannah Elementary School	Orion	428	600

The district is governed by a school board with seven members elected by residents within the school district. The board is responsible for setting policies, budgets, and administrative decisions in public meetings. The superintendent is responsible for advising the school board and overall administration of the entire school district. Among other duties, the board is responsible for providing a quality education for all students that focuses on academic excellence and achievement, seeking parental and community input, and to strive to offer opportunities to students that will provide them with the tools needed to become well-rounded, effective, life-long learners, and productive members of society. As of the 2020-2021 school year, there are 69 total teachers, a principal in each school, and a superintendent.

Land Use & Geography:

The district serves the communities of Orion, Andover, Lynn Center, Osco, Sunny Hill, Warner, and portions of Coal Valley and Colona in Henry County and a small portion of Rock Island County. As of the 2020-2021 school year, there were 974 students currently enrolled, but the district as it stands currently has a capacity to serve 1,750 students. While the majority of the school district is located in Henry County, the school district elected to participate in the Rock Island County plan because hazards affect students and staff that live in Rock Island County and travel through Rock Island County to get to school.

Financial Capabilities:

The school district is a taxing body. Its main revenue comes from the revenue generated from properties levees to properties located within the school district, while the district also receives state and federal funding. The district can issue bonds for large projects as well as apply for and manage both state and federal grants. According to the Illinois State Board of Education's District Report Card for school year 2019-2020, the district receives about 72.9% of its funding from local sources, 23% of its funding from state sources, and 4.1% of its funding from federal sources.

Critical Facilities:

The school district's critical facilities are all of the schools and their administrative building. See the corresponding Map 3-6 for reference.

Development Trends:

The school district does not have any major expansion or development planned, although it would like to take the actions of installing a safe room and generators in event of hazards.

Hazard Priorities:

1. Severe Storms Combined
2. Pandemic Disease
3. River Flooding
4. Severe Winter Storms

The Orion Community Unit School District participates in the multi-jurisdictional hazard mitigation plan. The school district's hazard priorities are similar to the planning area. Severe Winter Storms have the potential to cause school closures. Severe Storms Combined and River Flooding have the potential to do serious harm to students and individuals.

Port Byron

Population:

2015: 1,708 (± 210) **2020:** 1,733 **2025:** 1,730

Current County Rank in Population: 10

Land Area: 2.41 SQ MI

County Rank in Land Area: 7

Land Use & Geography:

The Village of Port Byron is in the upper portion of Rock Island County just north of Rapids City. Since the village is located upstream of the westward bend of the Mississippi, the river forms the western corporate limits. There is a bluff just above the river's edge, so that most of the oldest parts of the village are outside the 100-year flood plain. However, there are some pockets where the flood plain crosses Main Street along the river, which may affect access to parts of the village during major floods. As with other river towns in the upper part of the county, Illinois Route 84 travels the line between the higher river bluffs and the flatter land going toward the river. However, instead of paralleling the highway at the upland bluff line, the Burlington Northern and Santa Fe railroad tracks travel right on the edge of the river bluff between Main Street and the Mississippi. The railroad bed forms somewhat of a levee protecting the bluff at the river's edge from erosion. While the original settlement is at the

river's edge, newer residential development is in the upland bluff area above and east of Route 84.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Police

Public Works

Boards and Commissions:

Cemetery Board

Planning and Zoning Board

Economic Development Committee

Port Bryon participates in the National Flood Insurance Program and has a floodplain management ordinance and building code that are enforced by the building inspector.

Financial Capabilities:

Port Byron has TIF funding West of Highway 84; part of the subdivisions are included, and the village is currently working on a capital improvement plan and updating infrastructure.

Critical Facilities:

Port Byron listed 27 structures in its inventory of community assets, of which 21 are noted as critical. Of the critical facilities, several are located at the Village Municipal Building in addition to administrative functions, including police, fire department, emergency operations, and a warming center. Other essential services are also noted, such as water and wastewater treatment. Transmission facilities for electrical power, natural gas, and radio communication are listed, as are transportation facilities such as Illinois Route 84 and those related to the Burlington Northern and Santa Fe railroad tracks. Several commercial facilities are noted that may handle sensitive materials. A church and day care are listed as locations of vulnerable populations. In addition, the village lists several commercial establishments that would be important for recovery and economic continuity in the event of a disaster.

Development Trends:

Port Byron is a waterfront village located in the north eastern part of the county along the Mississippi River, and their proposed land use map contains a lot of land zoned for conservation and open space. There are some residential and mixed development zones near the waterfront, and then a mix of residential and open space land zoned as the village extends east. By 2025, there will be an estimated 803 total housing units.

Hazard Priorities:

2020

1. Pandemic Disease
2. Severe Winter Storms
3. Radiological Incident
4. Severe Storms Combined
5. Drought

2015

1. Radiological Incident
2. Severe Winter Storm
3. Severe Storms Combined
4. Grassland, Field, or Woodland Fire
5. River Flooding

The third highest ranking hazard, Radiological Incident, is due to the proximity to the nuclear power plant. Severe Winter Storms, Severe Storms Combined, and Drought ranked high because of the annual occurrence of strong storms and extreme weather. Additionally, with the COVID-19 pandemic, Pandemic Disease has become a high priority.

Rapids City

Population:

2015: 1,047 (± 193) **2020:** 939 **2025:** 916

Current County Rank in Population: 12

Land Area: 1.67 SQ MI

County Rank in Land Area: 10

Land Use & Geography:

Rapids City is in the upper portion of Rock Island County on the Mississippi River. The Mississippi River forms the northwest corporate boundary of the village due to the bend in the river. Rapids City is upstream and just east of where I-80 crosses the Mississippi River. The Village of Port Byron is upstream to the north and meets the Rapids City corporate limits. Similar to other river towns in the upper part of the county, Illinois Route 84 and the Burlington Northern and Santa Fe railroad track run in a parallel line to the Mississippi River and mark the change in geography between the bluff line and the flatter land surface at the riverfront. First Avenue in the older historic area of development follows the Mississippi shoreline and is within the 100-year flood elevation. However, the elevation rises approaching the line of the highway and railroad track, so that portions of the older development are not in the 100-year flood zone. Newer development is south of the highway where the bluffs rise into hills and ravines.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Fire

Public Works

Parks

Boards and Commissions:

Planning and Zoning Commission

Rapids City participates in the National Flood Insurance Program and has a floodplain management ordinance and building code enforced by the building/electrical inspector.

Financial Capabilities:

Rapids City has a comprehensive/action plan that outlines funding tools, including tax abatement, TIF funding (if created), and state and federal grant programs, and has a vision of completing a capital improvement plan with the planning commission and village board in the coming years.

Critical Facilities:

The Village of Rapids City listed 25 facilities as community assets. Half of those are associated with village operations and are considered critical, including the Village Hall, Public Works building, and water and wastewater infrastructure. Other facilities are important to economic continuity within the village, including the public boat dock and restroom, a bank, convenience stores, and other small businesses. With the exception of the boat dock, all the facilities listed appear to be located above the 100-year floodplain.

Development Trends:

Rapids City is a waterfront village located in the north-eastern part of the county along the Mississippi River, and their proposed land use map contains a lot of land zoned for conservation and open space. There are some residential and mixed development zones near the waterfront, and then a mix of residential and open space land zoned as the village extends east. By 2025, there will be an estimated 397 total housing units.

Hazard Priorities:

2020

1. Pandemic Disease
2. Severe Winter Storms
3. Severe Storms Combined
4. Drought

2015

1. Severe Storms Combined
2. Severe Winter Storm
3. River Flooding
4. Flash Flooding
5. Hazardous Materials Incident

Severe Winter Storms, Severe Storms Combined, Drought now occur at least annually in the area, and these weather extremes have a high priority for most of the participating jurisdictions.

Pandemic Disease is new in high priorities due to the COVID-19 pandemic largely affecting all communities.

Reynolds

Population:

2015: 451 (± 84) **2020:** 489 **2025:** 481

County Rank in Population: 16

Land Area: 0.32 SQ MI

County Rank in Land Area: 16

Land Use & Geography:

The Village of Reynolds is the smallest of the participating jurisdictions both in terms of population and land area. Reynolds has no major river frontage; however, the head of Mill Creek is a source of occasional minor flooding. There are no other unique geographic features noted, since the land area of the incorporated village is relatively small and flat. The village is surrounded by undeveloped agricultural uses, and no specific soil limitations are noted for future development.

Government Structure:

President, Village Board of Trustees

6 Trustees elected at-large

President and Trustees serve 4-year, staggered terms

Departments:

Water and Sewer

Boards and Commissions:

Planning and Zoning Commission

Reynolds participates in the National Flood Insurance Program and has a floodplain management ordinance and building code enforcement responsibilities that fall under the Village Board. Reynolds has a volunteer fire department that oversees the fire protection district.

Financial Capabilities:

Reynolds has no capital improvement plan that is currently available publically, nor any TIF districts available for financing. The village is a taxing body and can issue bonds for large projects.

Critical Facilities:

Reynolds listed nine structures in its list of community assets. None appear to be in a flood hazard area. Six of these are related to village operations. The Village Hall is listed as an important facility with the fire department, water, and wastewater infrastructure listed as critical. Two businesses are also listed. One operates for farm service and has agricultural chemicals and fuel on site. A bank location is also listed. Local businesses are important for recovery and continued economic activity in the event of a disaster.

Development Trends:

Reynolds is a small community with very little predicted population growth or large scale development predicted in the coming years.

Hazard Priorities:

2020

1. Severe Winter Storm
2. Pandemic Disease
3. Severe Storms Combined

2015

1. Severe Storms Combined
2. Severe Winter Storm
3. Grassland, Field, or Woodland Fire

As with the rest of the planning area, Severe Storms Combined and Severe Winter Storm hazards are weather events that are likely to occur annually with both direct and secondary effects. These weather-related hazards may have power outages as a secondary impact. The most distinct difference between the 2016 Plan and now is that Grassland, Field, or Woodland Fire has been replaced by Pandemic Disease, mainly due to the COVID-19 pandemic.

Rock Island

Population:

2015: 38,946 (± 285) **2020:** 37,847 **2025:** 36,894

Current County Rank in Population: 2

Land Area: 17.02 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 bluff lines 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
- Finance
- Fire
- Legal
- Library
- MLK Community Center
- Parks & Recreation
- Police
- Public Works

Boards and Commissions

- Advanced Tech & Sustainability Consortium
- Arts Commission
- 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
- Foreign Fire Insurance Tax Board
- Health Code Board of Appeals
- Human Rights Commission
- Joint Review Board (TIFs)
- Labor Day Parade Advisory Board
- Library Board of Directors
- Liquor Control Commission
- Martin Luther King, Jr. Community Center Board
- Mechanical Bode Board of Appeals
- Neighborhood Partners
- Parks & Recreation Board
- Planning Commission
- Plumbing Code Board of Appeals
- Police Pension Board of Trustees
- Preservation Commission
- Property Maintenance Board of Appeals
- Stormwater Board of Appeals
- Sunset Marina Boaters Advisory Committee
- Water Pollution Control Commission

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 was the relocation of the Police Department building in 2015. In addition, a new water treatment facility was constructed and went fully operational in 2020. 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 planning efforts are holistic and aimed at well-rounded, sustainable patterns of development and redevelopment. New development is taking place primarily south of the Rock River along the Andalusia Road and Rock Island – Milan Expressway corridors. Redevelopment is taking place primarily north of the Rock River and consists of both targeted infill as well as rehabilitation of existing structures.

Numerous different plans, all derived from the Comprehensive Plan, provide direction in these efforts. Residential, commercial, and industrial development is required to be sensitive to the natural features of the area including topography, vegetation, and waterways. Sustainability, resiliency, and energy conservation are also important considerations. That ethos is reflected in the City's approach to economic development which prioritizes right-fit businesses that are likely to endure over big-name ones which may not be as committed to the long term.

Improving the quality and diversity of housing is another major priority. That effort includes not just new construction, but also rehabilitation. The City runs a suite of housing repair and

rehabilitation programs that provide assistance to income qualifying residents. It is also partnered with neighboring cities in an effort to reduce lead-based paint health hazards in older housing. These efforts seek to eliminate deteriorating and deteriorated conditions, but also to extend the life of existing housing. Development follows rooftops, so keeping those rooftops in good shape is a top priority among all community development staff. By 2025, there is a predicted 17,159 total housing units.

Hazard Priorities:

2020

1. Hazardous Materials Incident
2. Severe Storms Combined
3. Severe Winter Storms
4. Pandemic Disease
5. Drought

2015

1. Hazardous Materials Incident
2. Severe Storms Combined
3. Levee Failure
4. Severe Winter Storm
5. Extreme Heat

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: Pandemic Disease and Drought.

Rock Island County (Unincorporated)

Population:

2015: 16,747 **2020:** 17,335 **2025:** 17,016

Current County Rank in Population: 4

Land Area: 376.54 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 within its jurisdiction. Larger areas of floodplain, slope, and soils with limitations for

development all pose potential hazards for future development. The county participates in the National Flood Insurance Program.

Government Structure:

County Board – County Administrator

25 Board Members elected by District

4-year, staggered terms with Chair elected by the Board

Additional Elected Officials (Also 4-Year Terms)

- Auditor
- County Clerk
- Circuit Clerk
- Coroner
- Recorder
- Regional Superintendent of Schools
- Sheriff
- State's Attorney
- Treasurer

County Departments

- Administration
- Assessments
- Court Administration
- Court Services
- Emergency Management
- GIS
- Forest Preserve
- Highway
- Human Resources
- Information Systems
- Public Defender
- Public Health
- Veterans Assistance
- Zoning & Building

Boards and Commissions

- Administration
- Board of Review
- Executive
- Finance
- Governmental Affairs
- Health and Human Services
- Human Resources
- Public Works

Financial Capabilities:

The county is a taxing body and receives revenue from property tax and fees for services, and is capable of receiving and managing federal, state, and local grants. The county can issue bonds to finance large projects.

Critical Facilities:

A number of community assets for Rock Island County are located within incorporated jurisdictions. Critical facilities, such as the Rock Island County Courthouse and the Rock Island County Office Building, are already listed for the City of Rock Island where they are located. Since some assets for Rock Island County were listed with the municipalities, this reduced the number of remaining assets to list. As a result, Rock Island County has identified critical

facilities, generally located in unincorporated areas. These facilities include the county Emergency Management Agency office and the Highway Department building.

Development Trends:

Rock Island County has jurisdiction over land uses in the unincorporated area. These land uses are largely agricultural and open spaces with the exception of limited residential development and pockets of industrial development in unincorporated areas, such as north of Cordova. While the future land use map shows large areas of low-density residential development, in reality, immediate growth pressure will likely stay close to the largest cities.

Hazard Priorities:

2020

1. River Flooding
2. Severe Storms Combined
3. Severe Winter Storms
4. Pandemic Disease
5. Radiological Incident

2015

1. River Flooding
2. Flash Flooding
3. Levee Failure
4. Severe Storms Combined
5. Severe Winter Storm
6. Hazardous Materials Incident
7. Extreme Heat
8. Influenza Pandemic

Unincorporated Rock Island County has four hazards tied for highest priority: River Flooding, Severe Storms Combined, Severe Winter Storms, and Pandemic Disease. This is not surprising as unincorporated Rock Island County has the largest amount of floodplain in the planning area, as well as the largest number of repetitive loss properties both along the Rock River and on Campbell's Island in the Mississippi River. The unincorporated county has a high occurrence of Severe Storms Combined and Severe Winter Storm hazards. Pandemic Disease makes the top priorities due further distances to medical facilities to seek needed attention as well as the recent COVID-19 pandemic effects. Radiological Incident is new to the list for this plan update, due to the large unincorporated population near the nuclear power plant.

Rock Island-Milan Community School District

Overview:

The Rock Island-Milan School District #41 (RIMSD#41) is a PreK-12 public school district that encompasses the City of Rock Island and Village of Milan. There are 9 elementary schools, 2 junior high schools (serving grades 7 & 8), 1 high school (serving grades 9 - 12), and 1 alternative program (serving grades 7 - 12). The district also has a comprehensive Pre-K and Head Start program through the Horace Mann Early Learning Center.

School Enrollment for Academic Year 2020-2021

School	Location	Enrollment	Staff	Total
Rock Island High School	1400 25th Avenue, Rock Island	1704	194	1898
Washington Jr. High School	3300 18th Avenue, Rock Island	569	66	635
Edison Jr. High School	4141 9th Street, Rock Island	382	53	435
Denkmann Elementary	4101 22nd Avenue, Rock Island	383	45	428
Earl Hanson Elementary	4000 9th Street, Rock Island	384	64	448
Eugene Field Elementary	2900 31st Avenue, Rock Island	397	50	447
Frances Willard Elementary	2503 9th Street, Rock Island	324	41	365
Longfellow Liberal Arts Elementary	4198 7th Avenue, Rock Island	230	35	265
Ridgewood Elementary	9607 14th Street West, Rock Island	270	46	316
Rock Island Academy	930 14th Street, Rock Island	401	65	466
Rock Island Center for Math & Science	2101 16th Avenue, Rock Island	473	52	525
Thomas Jefferson Elementary	1307 W 4th Street, Milan	316	44	360
Thurgood Marshall Learning Center	600 11th Avenue, Rock Island	97	28	125
Horace Mann Early Learning Center	3530 38th Avenue, Rock Island	69	23	92
RIMSD #41 Administration Center	2101 6th Avenue, Rock Island		45	45

Rock Island-Milan School District #41

The Rock Island-Milan Board of Education consists of seven community members chosen by school district voters on a non-partisan ballot. Board members are volunteers and receive no compensation for their service district. The Board establishes policy governing local school matters within the framework set by the State Legislature and the State Board of Education and is responsible for the budget, personnel matters, facilities and equipment, and policies for the operation of the district. The Superintendent is responsible for advising the school board and overall administration of the entire school district.

Other administrative positions include:

Assistant Superintendent, Human Resources

Assistant Superintendent, Teaching and Learning

Chief Financial Officer

Director, Grants, Accountability and Assessments

Director, Pupil Personnel Services

Director, Instructional Technology

Director, Communications

Director, Nutrition Services

Each school building has an administrative office. Elementary schools have a principal and either a Building Supervisor, Student Assistance Manager or Assistant Principal. Each Elementary also has a school counselor. Junior High Schools have a principal, assistant principal, dean and counselor. The junior high/high school alternative program has a Principal and a counselor. The high school has a principal, two assistant principals, two deans, a Freshman Academy dean, an Athletic Director and five counselors.

Land Use & Geography:

The district encompasses 23.87 miles combined that serves an estimated 38,111 (2019) residents in Rock Island, 5,056 (2019) in the Village of Milan and select households at the Rock Island Arsenal. A small portion in southwest of Rock Island falls in the Rockridge School District. No buildings are located within the floodplain or are protected by levee systems.

Financial Capabilities:

The school district is a taxing body. Its main revenue is generated from a tax levy of those properties located within the school district boundary area. The district also receives state and federal funding through grants and also receives a portion of the Rock Island County 1% Sales Tax revenue for capital projects. The district can also issue bonds for large projects.

Critical Facilities:

The school district's critical facilities include all school buildings and the Administration Center.

Development Trends:

The school district recently completed a series of renovations starting in 2018 that included the construction of secure entryways at Earl Hanson Elementary, Ridgewood Elementary, Thomas Jefferson Elementary, Horace Mann Early Learning Center and Edison Junior High. Washington Junior High is currently under construction for secure entryway, cafeteria and office expansion. Rock Island High School will be undergoing a renovation to update the main entrance/secure entryway and commons renovation. New construction of the Administration Center is also planned for 2022 that includes accessible office space, food production facility and warehouse space.

Hazard Priorities:

1. Severe Storms Combined
2. Severe Winter Storms
3. Pandemic Disease

Severe Weather related issues have caused school closures. The pandemic causes staffing issues at schools or could cause closure to deep clean the school(s).

Silvis

Population:

2015: 7,522 (± 43) **2020:** 7,325 **2025:** 7,140

Current County Rank in Population: 5

Land Area: 4.27 SQ MI

County Rank in Land Area: 6

Land Use & Geography:

The City of Silvis ranks as the fifth largest jurisdiction in the planning area by population and sixth by land area. The city is bordered by the City of East Moline on the north and west and by the Village of Carbon Cliff on the east. Located on the peninsula between the Rock and Mississippi Rivers, there are areas of river bluff and steep slopes. The corporate boundaries of the city touch the Rock River. There is a floodplain and wetland area north of the rail yard to the northern boundary of the city. A certified levee in this area that also runs west into East Moline protects that area from flooding. There is a small area of floodplain along the Rock River where a golf course is located. See Appendix 3-3 for maps of the flood hazard areas. The historic rail yard and trackage in this northern area was used as a place to reassemble train cars. There is still considerable freight traffic but less than at its historic peak.

Historic records of coal mine activity show some sites located between Silvis and East Moline. No mine subsidence issues have been reported for Silvis; however, coal mine locations may be in currently unincorporated or undeveloped areas and maybe an issue for future development.

Government Structure:

Mayor-Council structure, non-home rule

Eight elected city council representatives elected by wards

Mayor serves a 4-year term, City Council serves 4-year, staggered terms

Departments:

City Administrator	Parks
City Clerk	Police
Fire	Treasurer
Inspections	Police

Boards and Commissions:

Civil Service	Planning & Zoning Board
Economic Development Commission	Police Pension Board
Library Board	Water Board
Liquor Commission	Zoning Board of Appeals

The City of Silvis participates in the National Flood Insurance Program and has a floodplain management ordinance enforced by the Building Inspector. The city has a building code that is enforced by the City Inspector.

Financial Capabilities:

The City of Silvis is a taxing body and receives revenue from property tax and sales tax. The city is capable of receiving and managing grants.

Critical Facilities:

The City of Silvis's critical facilities include City Hall, the fire department, street department, public safety building, water department, water plant, and two water towers. Also considered for this plan were the city's vulnerable populations at Deer Villa Apartments, Warren Towers, Illini Towers, and Heartland.

Development Trends:

Silvis adopted its comprehensive plan in 1998. In that plan, few changes were proposed for the exiting corporate limits. Infill and conversion of residential uses were proposed to concentrate commercial development along 1st Street between 6th and Crosstown Avenues and along 1st Avenue and Illinois Route 92. The newly annexed area to the south to of the city was expected to change from open space to commercial land south of Colona Road and east of 10th Street. During public input, expanded commercial and residential development was suggested east of Illinois Route 5 and north of Colona Road. In the longer term, existing subdivisions near the Friendship Farms area may be annexed to the city and remain in residential use. Recognizing the wetland and flood prone areas of the Rock River, these areas were proposed to remain in open space use whenever possible.

By 2025, there is a predicted 3,604 total housing units.

Hazard Priorities:

2020

1. Severe Storms Combined
2. Severe Winter Storms
3. Pandemic Disease
4. Drought
5. Extreme Heat

2015

1. Severe Storms Combined
2. Severe Winter Storm
3. Flash Flooding
4. Extreme Heat
5. Hazardous Materials Incident

The City of Silvis has the same two top ranked hazards as they did in the previous plan. New to the priorities list are Pandemic Disease and Drought. Pandemic Disease is noted due to the serious effects from the COVID-19 pandemic and awareness of future potential pandemics. Drought, similar to Extreme Heat, is now an annual occurrence that is likely to increase in severity overtime due to climate change. As noted in the geographic narrative above, Silvis does not have a large amount of floodplain; therefore, River Flooding was lower on their hazard priorities.

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 2016 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.

2016 Plan Goals

- **Goal 1:** Protect human life and health.
- **Goal 2:** Minimize the need for rescue and relief efforts associated with all hazards.
- **Goal 3**: 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.
- **Goal 6:** 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 May 14, 2021 Steering 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:

2021 Plan Goals

- **Goal 1:** Protect human life and public health from the effects of hazards.
- **Goal 2:** Minimize vulnerability of property from the effects of hazards.
- **Goal 3:** Minimize damage and disruption to critical facilities, infrastructure, and other community assets from the effects of hazards.

- **Goal 4:** 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 Steering Committee reviewed the objectives from the 2016 plan at their May 14, 2021 meeting. It was agreed that the objectives from the 2016 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 - PM)
- **Objective 2:** Protect buildings and structures from hazards by modifying or removing them from hazard areas. (Property Protection - PP)
- **Objective 3:** Inform and educate citizens, elected officials, and property owners about hazards and ways of mitigating. (Public Education and Awareness - PE)
- **Objective 4:** Preserve or restore functions of natural systems while minimizing hazard losses. (Natural Resource Protections - NP)
- **Objective 5:** Construct and maintain structural projects to reduce or redirect the impact of hazards away from at-risk populations and facilities. (Structural Projects - SP)
- **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 - ES)

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
- Hazardous Materials Incident
- Pandemic Disease
- River Flooding

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 2016 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 2021 update, the Planning Committee reviewed existing mitigation actions and updated as necessary.

Due to the format utilized in the 2016 plan, it was difficult 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.

For the 2009 and 2016 plans, actions were evaluated according to the STAPLEE method recommended by FEMA guidance for local hazard mitigation planning. Although this provided a very thorough and systematic means of evaluating each action, it was cumbersome for the participating governments to track and review. As committee members reflected on those mitigation actions from the 2009 and 2016 plans, there did not seem to be a clear correlation between the STAPLEE scores and the actions that were and were not implemented.

Because of this, the Planning Committee chose to develop a process for evaluating and prioritizing mitigation actions based more on a simplified review of the potential benefits and costs, as these seemed to be the determining factors as to which actions were implemented. Using this methodology, each mitigation action was categorized as being either high cost or moderate to low cost. For these purposes, "high cost" was defined as projects for which the cost was beyond the current capabilities of the community and for which financial assistance and/or a special bond issue would be required to fund the majority of the project. "Moderate to low cost" was defined as a project for which the cost was not prohibitive and/or could be incorporated into the normal operational budget for the individual jurisdiction with some or no financial assistance.

At the same time, each mitigation action was also categorized as being "high benefit" or "moderate benefit." (Actions that were judged as having little or no benefit were automatically ruled out of consideration for inclusion in the plan.) "High benefit" actions were defined as those that met two or more of the goals previously defined on page 131. "Moderate benefit" actions were defined as those that met no more than one goal.

Using these categorizations, a matrix was developed as follows:

	Moderate to Low Cost	High Cost
Moderate Benefit	**Medium Priority**	**Low Priority**
High Benefit	**High Priority**	**Medium Priority**

Mitigation actions that were determined to be of moderate to low cost and high benefit were assigned the highest priority consideration. Actions that were moderate to low cost and moderate benefit, as well as actions determined to be high cost but also high benefit were both categorized as medium priority. Any mitigation actions that were high cost but of moderate benefit were given the lowest priority consideration.

Following Planning Committee review and concurrence, the priority actions selected are summarized in Table 4-1 on page 163. The top multi-jurisdictional priority action is in bold. A more detailed analysis of each action item is included as Appendix 4-1, including the potential benefit of the action, alternatives considered, estimated costs, funding source, person/entity best suited to serve as project lead, timeframe for completion, and priority rating.

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. Each jurisdiction completed the evaluation method previously detailed on pages 133-134 for the mitigation actions their jurisdiction intended to carry out. The individual jurisdiction priority actions are summarized in Table 4-2 on page 163. The top priority mitigation action for each jurisdiction is in bold. In instances where the high priority actions (as determined by the prioritization evaluation matrix) were already completed or underway, some jurisdictions opted to select a medium priority item as their top priority action.

Table 4-1
Multi-Jurisdictional Priority Actions

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Andalusia								
1	high cost medium priority	Obtain levee certification to meet 100-year flood certification guidelines. Possible reconstruction will be needed.	SP	2	Levee Failure; River Flood	yes	on going	no
2	low cost medium priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	Flash Flood; River Flood	yes	on going	no
3	low cost medium priority	Create a voluntary flood acquisition program and elevation program	PP	2	Flash Flood; River Flood	yes	on going	no
4	low cost medium priority	Enforce and keep building codes updated to Rock Island County's current standards.	PM	1	All Hazards	yes	on going	no
5	low cost medium priority	Construct safe room at Andalusia Elementary School to provide shelter to vulnerable populations.	SP	1	Severe Storms Combined	yes	on going	no
6	high cost medium priority	Relocate well head out of floodplain and realign distribution system with water tower	PP	3	River Flood	yes	new owner Il American Water, not completed	no

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Carbon Cliff								
1	High Priority	Enforce and keep building codes updated to Rock Island County's current standards.	PM	1	All Hazards	yes	Ongoing	no
2	High Priority	Reconstruct 1st Avenue culvert which needs upgrading	SP	3	Flash Flood, River Flood	no	Plans to restore by end of 2022	yes
3	High Priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	Flash Flood, River Flood	yes	Ongoing	no
4	Medium Priority	Raise 9 properties out of the floodplain	PP	2	Flash Flood, River Flood	no	Ongoing, looking for FEMA assistance	yes
5	Medium Priority	Storm water management through permeable pavements in the downtown streets	SP	3	Flash Flood, River Flood	yes	Dug deeper ditches in the downtown area to handle flash flooding	no
6	Medium Priority	Bank stabilization east of the river	SP	3	Flash Flood, River Flood	no	Ongoing	yes
Carbon Cliff-Barstow School District #36								
1	High Priority	Continue to promote and educate on proper hand washing practices for students and staff.	PE	1	Covid 19 Pandemic	no	Ongoing	yes
2	Medium Priority	Install backup generators at Eagle Ridge School.	ES	1	All Hazards	no	Planning	yes

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Coal Valley								
1	High Priority	Enforce and keep building codes updated to Rock Island County's current standards.	PM	1	All Hazards	no	Ongoing	yes
2	High Priority	Ensure that mobile homes have adequate tie downs	PM	1	Severe Storms Combined	no	Ongoing	yes
3	High Priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	Flash Flood, River Flood	no	Ongoing	yes
4	Medium Priority	Replace current flood gate with permanent access gate	SP	2	Flash Flood, River Flood	no	Examining gate choices	yes
5	Medium Priority	Provide seasonal hazards information for residents in Village's quarterly newsletters	PM	4	All Hazards	no	ongoing	yes
6	Low Priority	Construct safe room at Coal Valley Municipal Building to provide shelter to vulnerable populations.	SP	1	Severe Storms Combined	no	not completed	yes
Cordova								
1	High Priority	Enforce and update building codes to current International Code Series	PM	1	All Hazards	yes	ongoing	no
2	High Priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Cod, which exceeds NFIP minimum requirements: Floodplain Manager is building inspector	PM	2	Levee Failure; River flood	yes	ongoing	no
3	Medium Priority	Purchase generators for emergency backup: $66,000 for new lift station & $71,000 for water tower and well pump	ES	3	Levee Failure; River flood	yes	ongoing	no

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
East Moline								
1	High/High Priority	Repalace/repair pumps 1-3 Suger Creek	PM	2	Levee Failure/Flash Flooding	no	Pending	yes
2	Low/High Priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	River Flood	Yes	Ongoing	No
3	Low/Med Priority	Enforce and update building codes to current International Code Series	PM	1	All Hazards	Yes	Ongoing	No
4	High/Med Priority	Home buy out and Demolition Flood Prone area	PM	2	Levee Failure/Flash Flooding	no	Pending	yes
5	High/Med Priority	Retention Pond at residential buy out site	PM	2	Levee Failure/Flash Flooding	no	Pending	yes
6	Low/Low Priority	Promote use and purchasing of NOAA radios to vulnerable populations	PM	4	All Hazards	No	Pending	Yes
7	Low/Med Priority	Ensure manufactured homes have adequate tie downs.	PM	2	Severe Storms Combined	Yes	Ongoing	No

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Hampton								
1	Medium Priority	Enforce and keep building codes updated to Rock Island County's current standards.	PM	1	All Hazards	yes	ongoing	no
2	Low Priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	All Hazards	yes	ongoing	no
3	Medium Priority	Create a voluntary flood acquisition program near the City Park on 8th St	PP	3	River Flooding; Flash Flood	yes	ongoing	no
Hampton School District #29								
1	Low / High	Educate Hampton 29 families on proper handwashing and cleanliness procedures to reduce the spread of infectious disease	PE	1	Pandemic	No	Ongoing	yes
2	Low/High	Work with the county on Haz Mat plan to insure the safety of students and staff	ES	2	Hazardous material spill / contamination	yes	TBD	No

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Hillsdale								
1	High priority	Enforce and keep building codes updated to Rock Island County's current standards.	PM	1	All Hazards	yes	ongoing	no
2	High priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	Flash Flood, River Flood	yes	ongoing	no
4	Medium priority	Exploring levee improvements to meet 100-year flood certification guidelines. Possible reconstruction will be needed.	SP	2	Levee Failures	no	ongoing	yes
5	Low priority	Upgrade existing control system for local sirens	SP	1	All Hazards	no		yes
3	Medium priority	Design and elevate sewage treatment pond embankments and infrastructure above the base flood elevation	SP, PM	1	Flash Flood, River Flood	no	ongoing (in a grant app process for this mitigation)	no
MILAN								
1	High/ Moderate	Update levee certification	SP	2	Levee Failure; River flood	no	ongoing	yes
2	High/ Moderate	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	All Hazards	no	ongoing	yes
4	Medium/ Moderate	Establish written procedures for severe weather and hazard events	PM	5	All Hazards	yes	not completed	no
3	Medium/Mode rate	Ensure that mobile homes have adequate tie downs	PM	1	Severe Storms Combined	no	ongoing	yes

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Moline								
1	Medium Priority	Relocate stormwater pump near 49th Street and construct an earthen berm	PP, SP	2	River Flood	No	Ongoing	No
2	Medium Priority	Install two new sluice gates (on 60" pipe and another 84" pipe) and two new pump stations by Moline City Water Department	PP, SP	2	River Flood	No	Not Completed	No
3	Medium Priority	Install additional stormwater pump at the 16th Street stormwater station to prevent flooding of River Drive near 15th and 16th Streets	PP, SP	2	River Flood	No	Not Completed	No
5	High Priority	Install/replace rock (rip-rap) on the shoreline in Ben Butterworth Memorial Parkway	SP	2	River Flood	No	Ongoing	No
6	Low Priority	Construct secondary road to provide access to businesses along 48th Avenue	PP	2	River Flood	No	Not Completed	No
4	Medium Priority	Pave the alley parallel to River Drive east of 34th Street to provide secondary access to businesses	SP	2	River Flood	No	Not Completed	No
7	High Priority	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 as they are issued.	PM	2	River Flood	Yes	Ongoing	No
8	High Priority	Maintain Community Rating System at current class level.	PM	2	River Flood	No	Ongoing	Yes

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
9	Medium Priority	Secure outside funding to update and enhance City's Emergency Services Preparedness Plan	PM	5	All Hazards	Yes	Ongoing	No
10	High Priority	Enforce and update building codes to current International Code Series	PM	1	All Hazards	Yes	Ongoing	No
11	Medium Priority	Implement voluntary flood acquisition and mitigation programs on both Mississippi and Rock Rivers as needed	PP	2	River Flood	Yes	Ongoing	No
Moline-Coal Valley Community School District								
1	Medium Priority	Continue to promote and educate on proper hand washing practices for students and staff.	PM	4	Influenza Pandemic	No	Ongoing	Yes
2	Medium Priority	Work with Rock Island County Emergency Management to identify the hazardous substances near schools and create shelter in place or evacuation plans as needed.	PM	5	Hazardous Materials Incident	No	Ongoing	Yes
3	Medium Priority	Construct safe rooms in new or substantially expanded school buildings as financially feasible.	SP	1	Severe Storms Combined	No	Ongoing	Yes
Orion Community School District								
1	High Priority	Install safety grate on storm water pipe located at Orion Middle School.	SP	1	Flash Flooding	no	Maintenance will be welding cover/cage	yes
2	Medium Priority	Install backup generators at Orion High School, Orion Middle School, and Orion Elementary School.	SP	1	All Hazards	no	Wiring updated at OHS to accept a generator	yes
3	Low Priority	Construct safe room at Orion High School to provide shelter to vulnerable populations.	SP	1	All Hazards	no	no progress	yes

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Port Byron								
1	Medium Priority	Enforce and keep building codes updated to Rock Island County's current standards.	PM	1	All Hazards	yes	Ongoing	no
2	Medium Priority	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	Flash Flood, River Flood	yes	Ongoing	no
Rapids City								
1	Low Cost /High Benefit	Emergency generator for community center - warming/cooling center	ES	1	All Hazards	yes	Ongoing	no
2	Low Cost /High Benefit	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	Flash Flood, River Flood	yes	Ongoing	no
3	Low Cost /High Benefit	Enforce and keep building codes updated to Rock Island County's current standards.	PM	1	All Hazards	yes	Ongoing	no
4	High Cost / Moderate Benefit	Retrofitting existing building near Public Works Dept for sandbag and equipment storage	SP	3	Flash Flood, River Flood	no	Not Completed	yes

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
Reynolds								
1	High Cost/High Benefit	Upgrade water mains by connecting currently unconnected mains to create loops at four locations (Main St, Perryton St, Bush St, and Lloyd St) and add additional fire hydrants.	SP	1	Drought	no	Ongoing	yes
2	Low Cost/Moderate Benefit	Enforce and update building codes to Rock Island County's current standards.	PM	1	All Hazards	yes	Ongoing	no
3	Low Cost/Moderate Benefit	Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	PM	2	All Hazards	yes	Ongoing	no
Rock Island								
1	High	Update levee certification	SP	1	Levee Failure	Yes	Levee is inspected and certified annually.	No
2	Medium	Identify critical facilities such as lift stations where backup generators should be installed and purchase as necessary.	ES	3	All Hazards	Yes	Most critical facilities have back-up generators, but gaps exist. CIP funding needed to address this gap.	No

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
3	High	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	PM	2	River Flood	Yes	Floodplain ordinances in place in accordance with IDNR guidelines. Levee has 4' of freeboard above 200 year flood event.	No
4	Medium	Enforce and update building codes to current International Code Series	PM	1	All Hazards	Yes	Adopted 2015 edition of the I-Codes in 2017. Enforced by CBO and Fire Marshal	No
5	Low	Seek funding to undertake rehabilitation or reconstruction of levees as needed to maintain certification	SP	2	Levee Failure	Yes	Ongoing as the need arises.	No
6	Medium	Research options to protect sewer systems to the 100-year flood level.	PM	3	Flash Flood; River Flood	Yes	Ongoing as options require a large amount of funding.	No
7	Low	Construct safe room where vulnerable populations may not have other sources of shelter as feasible.	SP	1	Severe Storms Combined	Yes	Ongoing through code enforcement by the CBO as projects arise.	No
8	Medium	Ensure manufactured homes have adequate tie downs	PM	2	Severe Storms Combined	Yes	Ongoing through code enforcement by	No

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
							the CBO as projects arise.	
9	Low	Implement voluntary flood acquisition program if need arises	PP	2	River Flood	Yes	Instituted as the need would arise. Current levee reduces the need for such a program.	No
Rock Island-Milan School District #41								
1	Medium Priority	During a national pandemic/outbreak, increase awareness, promote and implement safety protocols as suggested by IDPH and RICHD.	PM	9	Human Disease Pandemic	No	Ongoing	Yes
2	Medium Priority	Work with Rock Island County Emergency Management to identify the hazardous substances near schools and create shelter in place or evacuation plans as needed.	PM	8	Hazardous Materials Incident	No	Ongoing	Yes
3	Medium Priority	Construct safe rooms in all new and/or expanded school buildings to provide shelter for vulnerable populations as needed and as financially feasible.	SP	15	Multiple Hazards	No	Ongoing	Yes
Rock Island County								
1	High Priority	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.	PM	2	River Flood	Yes	ongoing	No

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
2	High Priority	Continue participation of Community Rating System at a class 7	PM	2	River Flood	No	ongoing	No
3	High Priority	Evaluate siren system for adequate warning coverage	PM	5	Severe Storms Combined	Yes	ongoing	No
4	High Priority	Identify locations of vulnerable populations, such as elderly	PM	5	All Hazards	Yes	ongoing	No
5	High Priority	Identify critical waterways that may be subject to hazardous material spills	NR	5	Hazardous Materials Incident	Yes	ongoing	No
6	High Priority	Coordinate flood warning systems and response	PM	5	Flash Flood; River Flood	Yes	ongoing	No
7	High Priority	Maintain, regularly review, communicate with community partners, and execute county Pandemic Influenza Plan if a pandemic occurs.	PM	1, 5	Influenza Pandemic	No	ongoing	Yes
8	High Priority	Make educational materials about flood areas, regulations, mitigation measures, and insurance limitations for the public	PM	4	Flash Flood; River Flood	Yes	ongoing	No
9	High Priority	Train staff in storm water management and promote local trainings to local governments	PM	5	Flash Flood; Severe Storms Combined	Yes	ongoing	No
10	Medium Priority	Levee Certification; seek funding to undertake rehabilitation or reconstruction of levees as needed for certification	SP	2	Levee Failure	Yes	ongoing	No
11	Medium Priority	Elevate floodprone buildings in Barstow Area or mitigate as necessary	PP	2	River Flood	No	ongoing	Yes
12	Medium Priority	Voluntary acquisition of floodprone properties in Barstow area	PP	2	River Flood	No	ongoing	Yes

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
13	Medium Priority	Elevate floodprone buildings on Campbell's Island or mitigate as necessary	PP	2	River Flood	No	ongoing	Yes
14	Medium Priority	Voluntary acquisition of floodprone Campbell's Island properties	PP	2	River Flood	No	ongoing	Yes
15	Medium Priority	Elevate floodprone buildings in First Avenue North or mitigate as necessary	PP	2	River Flood	No	ongoing	Yes
16	Medium Priority	Voluntary acquisition of floodprone First Avenue North properties	PP	2	River Flood	No	ongoing	Yes
17	Medium Priority	Elevate floodprone buildings in South Shore Drive or mitigate as necessary	PP	2	River Flood	No	ongoing	Yes
18	Medium Priority	Voluntary acquisition of floodprone South Shore Drive Properties	PP	2	River Flood	No	ongoing	Yes
19	Medium Priority	Elevate floodprone buildings in North Shore Drive or mitigate as necessary	PP	2	River Flood	No	ongoing	Yes
20	Medium Priority	Voluntary acquisition of floodprone North Shore Drive Properties	PP	2	River Flood	No	ongoing	Yes
21	Medium Priority	Voluntary acquisition of floodprone properties on 7th Street, south of 52nd Avenue	PP	2	River Flood	No	ongoing	Yes
22	High Priority	Enforce and update building codes to current International Code Series	PM	1	All Hazards	Yes	ongoing	No
23	Low Priority	Ensure manufactured homes have adequate tie downs.	PM	2	Severe Storms Combined	Yes	ongoing	No

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
24	Low Priority	Construct safe room for vulnerable populations without other sources of shelter in unincorporated Rock Island County	SP	1	Severe Storms Combined	Yes	ongoing	No
25	Low Priority	Hold local training on fire code enforcement	PM	5	All Hazards	Yes	ongoing	No
26	Low Priority	Promote the purchase of NOAA weather radios	PM	4	All Hazards	Yes	ongoing	No
27	Low Priority	Look for more information on hazardous materials incidents for the next plan update and distinguish between fixed site and transportation related incidents	PM	5	Hazardous Materials Incident	Yes	ongoing	No
28	Medium Priority	Provide more detail of critical facilities in next plan update include information on critical facilities in floodplain	PM	3	All Hazards	Yes	ongoing	No
29	Low Priority	Conduct commodity studies for Extremely Hazardous Substances fixed facilities	PM	5	Hazardous Materials Incident	No	ongoing	Yes
Silvis								
1	Medium	Design and construct 14th Street and 7th Avenue storm water management project	SP	2	Flash Flood; Severe Storms Combined	No	Discussion & Design	Yes
2	High	Establish written procedures for severe weather hazard events	PM	5	All Hazards	Yes	Evaluation	No
3	Medium	Regularly trim city owned trees	PM	2	Severe Storms Combined	No	Continuous	Yes
4	High	Enforce and update building codes to current International Code Series	PM	1	All Hazards	Yes	Continuous	No

Priority	Cost/Benefit	Action	Objective	Goal	Hazard Addressed	From 2016 Plan	Status	New in 2021
5	Medium	Ensure manufactured homes have adequate tie downs.	PM	2	Severe Storms Combined	Yes	Continuous	No
6	Medium	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.	PM	2	River Flood	Yes	Continuous	No

Table 4-2

Mitigation Actions Not Carried Forward

Action from 2016 Plan	Reason for Removal	Jurisdiction
Improve floodgates B, C, D, and E on levee system	Completed	East Moline
Automate floodgate and gate wells monitoring system using SCADA	Completed	East Moline
Upgrade tornado sirens with SCADA	Completed	East Moline
Purchase two warning sirens @ $16,000 each	Completed	Hampton
Divert storm water runoff at Orion High School from adjacent farm field to designated retention area.	Waterway reworked, no longer an issue	Orion Community School District
Upgrade existing village hall to include permanently mounted generator for power outages	Completed	Port Byron
Local siren system installation for emergencies	Completed	Rapids City
Installation of 2 emergency generators for sewage treatment plant in the event of power loss	Completed	Rapids City
Exploring warning system through web-based list-serve in event of emergency	Completed/Ongoing	Rapids City
Continue acquisition program for Barstow area trailer park.	Completed	Rock Island County

5. PLAN MAINTENANCE PROCESS

Rock Island County and Moline report on their mitigation actions as part of the Community Rating System annual reporting required. Individually, jurisdictions worked toward completing their mitigation actions, and those achievements are discussed in Chapter 4. After review of the procedures outlined in the 2016 plan, the Planning Committee agreed the plan maintenance process outlined made sense. Moving forward, Bi-State Regional Commission will help Rock Island County coordinate annual meetings to review, evaluate, and update the plan as necessary. Any comments received after the public comment period for the plan update willbe considered as part of the annual review and documented in the Public Input appendix. All comments received will be evaluated to determine if document revisions are necessary. For record keeping purposes, an annual update form will be used to track any changes to each jurisdiction and how they were affected by various hazards. The form can be found in Appendix 5-1.

Monitoring the Plan

Rock Island County Emergency Management Agency (EMA) will be the lead in the overall monitoring of the plan but will work closely with the Rock Island County Zoning and Building Safety Department. The Planning Committee structure as described in Chapter 2 will be maintained to assure that each jurisdiction participates. Jurisdictions will be asked to fill vacancies at least annually to maintain a primary contact for the plan maintenance process. The Rock Island County will schedule an annual meeting of the Planning Committee, open and publicized to the public, to track progress made on implementation of priority actions for both the planning area as a whole and individual jurisdictions. Generally, jurisdictions with their own ordinances and enforcement procedures will be responsible for monitoring their individual mitigation actions. At the annual meeting, the Planning Committee will also review the plan and make recommendations on if plan amendments or updates are needed due to changing conditions.

Evaluating the Plan

As part of the annual meeting described above, the Planning Committee will evaluate whether events of the previous year have affected the priority ranking of identified hazards. The plan will be evaluated based on the success of carrying out priority mitigation actions as identified in the plan. The Rock Island County EMA will be responsible for preparing periodic progress reports on the plan utilizing the annual report form as described above. This report will be copied to the chief elected officials of the participating jurisdictions and other primary contacts as appropriate. Finally, the Planning Committee will evaluate if the benefits of the priority actions are addressing the identified goals and objectives of the plan. If the completed actions from this plan are found to not benefit and address the goals and objectives of the plan, the Planning Committee may elect to update the plan early as described below.

Updating the Plan

The plan will be updated within five years of the date of the Federal Emergency Management Agency's (FEMA) approval of the plan as required by 44 CFR 201.6(c)(4)(i). The plan may be

updated earlier at the discretion of the Planning Committee, or in the event of a Presidential Disaster Declaration, which requires an update by regulation. The EMA and Rock Island County Zoning and Building Safety Department will be responsible for collecting and maintaining information pertinent to future plan updates based on recommendations of the Planning Committee. Any changes will be documented and appended to the plan document in a section titled "Amendments" until such time as a full update is scheduled. The Annual Update Reports from each jurisdiction will be collected and utilized to update the plan in the next cycle. If no earlier update is needed, the Planning Committee will evaluate the need for funding assistance for the update at its third annual meeting. This will allow time to make an application for planning grant funds and identify whether a contract with a consultant will be necessary for the update process. Actions to undertake the plan update should be scheduled, so that there is continuity of FEMA approval for the applicable plan document.

An area of improvement identified for the next plan update is increased public engagement. This could be accomplished by a number of strategies to be outlined as part of the update process. As an example, a dedicated webpage for the project could be hosted and promoted by participating jurisdictions through traditional and social media. The webpage could include links to the previous plan, a timeline for plan development, links to current plan documents and contact information. Another example could include a recorded presentation describing the Hazard Mitigation Plan document and update process and posted to the site. Public open houses could be held at the plan kickoff both in person and virtual. Participating jurisdictions could, as part of their regular Board or Council meetings, or as a special meeting, discuss their mitigation actions and prioritization. These would promote more accessibility as the meetings would be more geographically disbursed and would amplify awareness of the plan update prior to consideration for adoption.

Incorporation into Existing Planning Mechanisms

Early in the planning process, participating jurisdictions were asked to list their own existing local planning mechanisms and ordinances to evaluate what was already in place to incorporate the requirements of the mitigation plan. These lists are summarized in a matrix of existing planning mechanisms for the participating jurisdictions as shown in Appendix 2-7.

Some specific examples of incorporation of the previous 5-year plan into existing planning mechanisms include the *Rock Island County Comprehensive Plan 2020,* which included a review and updates of mitigation strategies, such as continued participation in the CRS program, and to incorporate storm water best management practices. It also includes incorporating building code best practices to support resilient development and mitigate natural hazards.

Another example is the *Quad Cities Iowa/Illinois MPO Extreme Weather and Transportation Resilience Report Quad Cities Iowa/Illinois MPO Extreme Weather and Transportation Resilience Report* that included the majority of communities in Rock Island County. The report addresses critical and vulnerable transportation assets that complement and derive hazards information from the Rock Island Hazard Mitigation Plan. See link: https://bistateonline.org/transportation/quad-cities-metro-planning.html

The Village of Milan updated their comprehensive plan and included continued participation in the Hazard Mitigation plan in their Strategies for Implementation section. It's specifically noted in the Public Services section of the Public Facilities/Services, Finance, Intergovernmental Relations, and Image that "This plan, in addition to the most recent *Rock Island County Hazard Mitigation Plan*, will aid future decision-making and community responsiveness to natural and man-made hazards and issues of security and hazard mitigation planning."

These are just some detailed examples of recent planning activities among many other efforts outlined in the matrix found in Appendix 2-7.

What:

Incorporating requirements of the mitigation plan will focus on existing planning mechanisms common among participating jurisdictions. These include:

- Comprehensive/Land Use Plans
- Subdivision Regulations
- Zoning Ordinances
- Building Codes
- Flood Plain Management Ordinances

Comprehensive/land use plans, or subdivision regulations for communities without a current comprehensive plan, provide the guidance for a community's ongoing and future development. The remaining ordinances and regulations listed above provide the enforcement tools for those development plans.

Who:

Rock Island County EMA will collect information on review and incorporation of requirements of the mitigation plan. The department contracts enforcement of many of the above-listed planning mechanisms for a number of the smaller jurisdictions in the county. Larger communities with their own planning and ordinance enforcement officials will review their own existing planning mechanisms. These larger communities can communicate any adjustments in their planning mechanisms through their representation on the Planning Committee and in their Annual Update Report.

How:

Existing planning mechanisms will be reviewed for consistency with the requirements of the *Rock Island County Multi-Jurisdictional Hazard Mitigation Plan* in order to avoid duplication of efforts among jurisdictional departments or enforcement officials. Risk analysis and vulnerability data from the plan should be incorporated in the comprehensive/land use plans of each participating jurisdiction during regular review and update cycles. Risk analysis and vulnerability data and mitigation actions will be incorporated into enforcement tools where appropriate. For example, references to the scale of earthquake intensity may be appropriate to building codes. Any adjustments or amendments to existing planning mechanisms will be

made through the regular review cycle of the participating jurisdiction. Inconsistencies found between existing planning mechanisms and the *Rock Island County Multi-Jurisdictional Hazard Mitigation Plan* should be reported to the Rock Island County Building and Zoning Department for the annual plan review meeting.

When:

Rock Island County EMA will report at least annually on the progress of incorporating requirements of the mitigation plan through the meeting of the Planning Committee as described in the "Monitoring the Plan" section on page 181. Any issues reported of inconsistency between the local hazard mitigation plan and existing planning mechanisms will be considered for plan amendments or updates.

APPENDIX 1-1 RESOLUTIONS

Resolution Number # _____

APPROVAL AND ADOPTION OF THE ROCK ISLAND COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

WHEREAS, Rock Island County contracted with the Bi-State Regional Commission (BSRC) for assistance in preparing the Plan and the Bi-State Regional Commission and County staff have prepared the plan in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, those municipalities and school districts within Rock Island County that have participated in the multi-jurisdictional plan process will each pass their own resolutions to approve and adopt the plan; and

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

WHEREAS, the Rock Island County has reviewed the Plan and affirms that the Plan will be updated no less than every five years.

NOW, THEREFORE BE IT RESOLVED that the Rock Island County Board hereby approves and adopts the Rock Island County Multi-Jurisdiction Local Hazard Mitigation Plan. The plan document will be adopted in the final format approved by FEMA.

ADOPTED THIS 20th DAY OF JULY 2021 BY THE ROCK ISLAND COUNTY BOARD.

_____

Richard H. Brunk, County Board Chairman

ATTEST:

_____

Karen Kinney, County Clerk

Resolution Number # 2021-07

APPROVAL AND ADOPTION OF THE ROCK ISLAND COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

WHEREAS, Rock Island County contracted with the Bi-State Regional Commission (BSRC) for assistance in preparing the Plan and the Bi-State Regional Commission and County staff have prepared the plan in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, those municipalities and school districts within Rock Island County that have participated in the multi-jurisdictional plan process will each pass their own resolutions to approve and adopt the plan; and

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

WHEREAS, the Rock Island County has reviewed the Plan and affirms that the Plan will be updated no less than every five years.

NOW, THEREFORE BE IT RESOLVED that the Rock Island County Board hereby approves and adopts the Rock Island County Multi-Jurisdiction Local Hazard Mitigation Plan. The plan document will be adopted in the final format approved by FEMA.

ADOPTED THIS 20th DAY OF JULY 2021 BY THE ROCK ISLAND COUNTY BOARD.

Richard H. Brunk, County Board Chairman

ATTEST:

Karen Kinney, County Clerk

Village of Carbon Cliff, Illinois

Resolution Number # 2021-06

APPROVAL AND ADOPTION OF THE ROCK ISLAND COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

WHEREAS, Rock Island County contracted with the Bi-State Regional Commission (BSRC) for assistance in preparing the Plan and the Bi-State Regional Commission and County staff have prepared the plan in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, those municipalities and school districts within Rock Island County that have participated in the multi-jurisdictional plan process will each pass their own resolutions to approve and adopt the plan; and

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

WHEREAS, the Village of Carbon Cliff has reviewed the Plan and affirms that the Plan will be updated no less than every five years.

NOW, THEREFORE BE IT RESOLVED that the Village of Carbon Cliff Board of Trustees hereby approves and adopts the Rock Island County Multi-Jurisdiction Local Hazard Mitigation Plan. The plan document will be adopted in the final format approved by FEMA.

ADOPTED THIS 7th DAY OF SEPTEMBER 2021 BY THE CARBON CLIFF BOARD OF TRUSTEE.

	AYES	NAYS	ABSENT
Todd Cantrell	X		
Keith Curry	X		
Robert Dreher	X		
Leevon Harris	X		
Alma Neels	X		
Larry Scott	X		
	Ayes: 6	Nays: 0	Absent: 0

APPROVED by the President of the Board of Trustees, Village of Carbon Cliff, this 7th day of September 2021.

Bill Hintz, Village President

Attest:

Carly Neblung, Village Clerk

Resolution Number # 2021-08-16

APPROVAL AND ADOPTION OF THE ROCK ISLAND COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

WHEREAS, Rock Island County contracted with the Bi-State Regional Commission (BSRC) for assistance in preparing the Plan and the Bi-State Regional Commission and County staff have prepared the plan in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, those municipalities and school districts within Rock Island County that have participated in the multi-jurisdictional plan process will each pass their own resolutions to approve and adopt the plan; and

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

WHEREAS, the Hillsdale has reviewed the Plan and affirms that the Plan will be updated no less than every five years.

NOW, THEREFORE BE IT RESOLVED that the VILLAGE OF HILLSDALE BOARD OF TRUSTEES hereby approves and adopts the Rock Island County Multi-Jurisdiction Local Hazard Mitigation Plan. The plan document will be adopted in the final format approved by FEMA.

ADOPTED THIS 16th DAY OF AUGUST 2021 BY THE VILLAGE OF HILLSDALE BOARD OF TRUSTEES.

Thomas Francis, Mayor/President

ATTEST: Jane Lundquist

Jane Lundquist, Clerk 8/16/2021

RESOLUTION NO. 15-2021

APPROVAL AND ADOPTION OF THE ROCK ISLAND COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

WHEREAS, Rock Island County contracted with the Bi-State Regional Commission (BSRC) for assistance in preparing the Plan and the Bi-State Regional Commission and County staff have prepared the plan in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, those municipalities and school districts within Rock Island County that have participated in the multi-jurisdictional plan process will each pass their own resolutions to approve and adopt the plan; and

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

WHEREAS, the City of Rock Island, Illinois has reviewed the Plan and affirms that the Plan will be updated no less than every five years.

NOW, THEREFORE BE IT RESOLVED that the Rock Island City Council hereby approves and adopts the Rock Island County Multi-Jurisdiction Local Hazard Mitigation Plan. The plan document will be adopted in the final format approved by FEMA.

ADOPTED THIS 23rd DAY OF August 2021 BY THE ROCK ISLAND CITY COUNCIL.

MAYOR OF THE CITY OF ROCK ISLAND

PASSED: August 23, 2021

AYES: Alderpersons Swanson, Parker, Poulos, Geenen, Robinson, Hurt, Gilbert

APPROVED: August 24, 2021

ATTEST: CITY CLERK

NAYS: None

ABSENT: None

APPENDIX 2-1 ROCK ISLAND COUNTY HAZARD MITIGATION PLANNING COMMITTEE

Rock Island County Hazard Mitigation Planning Committee

Jurisdiction	Name	Position
Municipalities		
Rock Island County EMA	Jerry Shirk	EMA Director
Rock Island County EMA	Mindy Meyers	EMA Coordinator
Rock Island County EMA	Randy Heisch	EMA
Rock Island County	Greg Thorpe	Director of Zoning
Andalusia	Shelly Hoffman	Village Clerk
Andalusia	Curtis Morrow	Village President
Andalusia	Justin Parchert	Public Works Director
Carbon Cliff	Nick Gottwalt	Village Director
Carbon Cliff	Carly Neblungh	Village Clerk
Coal Valley	Penny Mullen	Director of Finance/Assistant Village Administrator
Coal Valley	Mike Bartels	Mayor
Cordova	Jim Boone	Village President
Cordova	Melissa Bowman	Village Clerk
East Moline	Doug Maxeiner	City Administrator
East Moline	Tim Kammler	City Engineer
East Moline	Robert DeFrance	Fire Chief
East Moline	John Showalter	Emergency Management Coordinator
Hampton	Terry Engle	Police Chief
Hillsdale	Thomas Francis	Village President
Hillsdale	Jane Lindquist	Village Clerk
Milan	Steve Seiver	Village Administrator
Moline	Joe Kuhlenbeck	Public Works Director
Moline	Jeff Snyder	Chief
Port Byron	Kristie Guardia	Deputy Clerk
Port Byron	Eric Sikkema	Emergency Coordinator
Rapids City	Missy Housenga	Village Clerk
Rapids City	Harold Mire	Village President
Reynolds	Ben Rowe	Water/Sewer
Rock Island	Jeff Yerkey	Fire Chief
Rock Island	Michelle Martin	Floodplain Manager
Silvis	Nevada Lemke	City Administrator
Community School Districts		
Carbon Cliff-Barstow Elementary School District	Eric Lawson	Superintendent
Carbon Cliff-Barstow Elementary School District	Carri Anderson	Administrative Assistant
East Moline Elementary School District	Dr. Kristin Humphries	Superintendent
Erie School District	Marty Felesena	Superintendent

Jurisdiction	Name	Position
Hampton Elementary School District	Scott McKissick	Superintendent
Moline- Coal Valley School District	Dr. Rachel Savage	Superintendent
Moline- Coal Valley School District	David McDermott	Chief Financial Officer
Moline- Coal Valley School District	Dan Smith	Director of Operations
Orion School District	Joe Blessman	Director of Operations
Riverdale School District	Ron Jacobs	Superintendent
Rock Island-Milan School District	Dr. Reginald Lawrence	Superintendent
Rock Island-Milan School District	Leslie Fonseca	Executive Assistant to the Superintendent
Sherrard School District	Alan Boucher	Superintendent
Silvis Elementary School District	Dr. Terri Vandewiele	Superintendent
United Township High School District	Dr. Jay Morrow	Superintendent

APPENDIX 2-2 PLAN KICK-OFF MEETING PRESENTATION

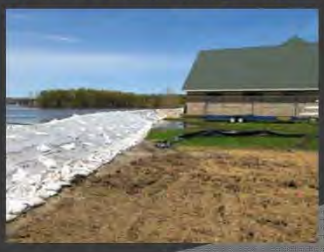
Rock Island County Multi-Jurisdictional Hazard Mitigation plan 6/28/2021

ROCK ISLAND COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Plan Update Kick-Off Meeting

Bi-State Regional Commission
October 22, 2020

What is Hazard Mitigation?



What is Hazard Mitigation Planning?

Why Create a Hazard Mitigation Plan?

- Disaster Mitigation Act of 2000
- Allows communities to be eligible for FEMA Hazard Mitigation Assistance Grant Programs
- Update to the current Hazard Mitigation Plan
  - Will conform to Federal Regulations found in 44 CFR 201.6

2016 Rock Island County Plan

- Expires in September 2021.
- What does that mean?
  - Accelerated Timeline
  - If plan expires, it is more difficult to receive FEMA funding

Hazards From 2016 Plan

- Dam Failure
- Drought
- Earthquake
- Expansive Soils
- Extreme Heat
- Flash Flood
- Grassland, Field or Woodland Fires
- Land Subsidence
- Landslide
- Pandemic Disease
- Radiological Incident
- River Flood
- Severe Storms (Wind/Rain/Lightning)
- Severe Winter Storms
- Tornado
- Hazardous Materials
- Civil Unrest (New for 2021)

1

Rock Island County Multi-Jurisdictional Hazard Mitigation plan

6/28/2021

2018 State of Illinois Plan Natural Hazards

- Severe Storms and Tornadoes
  - Wind, Lightning, Hail, Tornadoes
- Floods
  - Flash Floods, River Floods, Levee Failure
- Severe Winter Storms
- Drought
- Extreme Heat
- Earthquakes
- Other Natural Disasters
  - Dam Failure, Mine Subsidence, Influenza Pandemic, Landslide

Previous Participating Jurisdictions

- Rock Island County
- Andalusia
- Carbon Cliff
- Coal Valley
- Cordova
- East Moline
- Hampton
- Hillsdale
- Milan
- Moline
- Oak Grove
- Port Byron
- Rapids City
- Reynolds
- Rock Island
- Silvis
- Moline-Coal Valley School District
- Orion School District

Role of Participating Jurisdictions

- Participate in the planning process by:
  - Designate a primary contact
  - Attend planning committee/subcommittee/individual community meetings (minimum requirement is at least 50% of the meetings)
  - Provide information
  - Review Planning Documents
- Adoption of the Hazard Mitigation Plan

Role of Advisory Committee

- Provide technical information related to your field of experience
- Review planning document
- Stay appraised of the planning process

Public Input

- Very Important part of the planning process
- Ideas:
  - All planning committee meetings will be open to the public
  - 30-day comment period before plan is submitted to FEMA
  - Any additional ways to get public input?

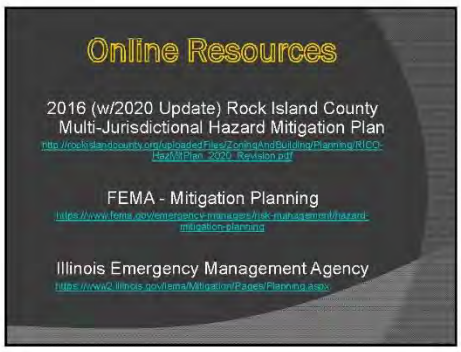
Timeline of Planning Process

- Phase 1 (October- December)
  - Kick-Off
  - Research Hazards
  - Risk Assessment for each community
  - Hazard Priorities
- Phase 2 (January – March)
  - Goal Review
  - Mitigation Actions
  - Evaluate Mitigation Actions
- Phase 3 (April – June)
  - Formal Public Review of Planning Document
  - State and FEMA Review and Approval
  - Community Adoption

2

Rock Island County Multi-Jurisdictional Hazard Mitigation plan

6/28/2021



3

APPENDIX 2-3 ROCK ISLAND COUNTY HAZARD MITIGATION PLAN UPDATE ADVISORY COMMITTEE

Rock Island County Hazard Mitigation Plan Update Advisory Committee

Organizations	Contact Name
American Red Cross	Amber MacGrath
Black Hawk College	Rick Fiems
Black Hawk Fire Protection District	Todd Fitzpatrick
Community Foundation of the Great River Bend	Kelly Thompson
Exelon Corporation	Mike Muth
Henry Count EMA	Mr. Mathew Schnepple
Henry County Administrator	Erin Knackstedt
IEMA	Steve Builta
IL NFIP Coordinator	Marilyn Sucoe
IL State Climatologist	Dr. Jim Angel
IL State Geologist	Bob Bauer
Illinois State Patrol	Jason Dickey
Illinois State Patrol	Ron Salier
Illinois State Patrol	Brett Tucker
KWQC-TV 6	Sue Ramsett (General Manager)
Mercer County EMA	Angie Litterst
Mid American Energy	Shane Emmert
MidAmerican	Greg Theis
Muscatine County Administrator	Nancy Schreiber
Muscatine County EMA	Brian Wright
National Weather Service	Rich Kinney
QC Airport	Cathie Rochau
QC Airport	Jeff Swan
QC Chamber of Commerce	Paul Rumler
QC Hispanic Chamber of Commerce	Janessa Calderon
Red Cross	Brooke Mehaffey
REDEEM	Tim Kinanishu
RICO Soil & Water Conservation District	Rich Stewart
Riverfront Council	Steve Clark
Rock Island Arsenal	Nicholas Seibert
Rock Island County EMA	Mindy Meyers
Rock Island County EMA	Jerry Shirk
Rock Island County Health Department	Nita Ludwig
Rock Island County Highway Engeineer	John Massa
Rock Island County Sheriff	Gerald Bustos
Rock Island Regional Office of Education	Tammy Muerhoff
Rock River Valley Association	Doug Riel
Scott County Administrator	Mahesh Sharma
Scott County EMA	Dave Donovan
United Way of the Quad Cities	Karrie Abbott

Organizations	Contact Name
USACE	Christopher Haring
USACE	Allan Tamm
USACE	Jerry Skalak
WHBF-TV 4	Pat Baldwin (General Manager)
Whiteside County Administrator	Joel Horn
Whiteside County EMA	Seth Janssen
WQAD-TV 8	Jim Kizer
WQAD-TV 8	Chris Russel

APPENDIX 2-4 ADVISORY COMMITTEE INVITATION

Bi-State
Regional Commission
1504 Third Avenue. P.O. Box 3368
Rock Island, IL 61204-3368
Phone: (309) 793-6300 • Fax: (309) 793-6305
Website: http://www.bistateonline.org

To All Organizations and Interested Parties:

This notice is to invite you or another representative of your organization to participate in a planning process to update the Rock Island County Multi-Jurisdictional Hazard Mitigation Plan. Rock Island County, Illinois is working with Bi-State Regional Commission to guide the preparation of the update of the 2016 Rock Island County Multi-Jurisdictional Hazard Mitigation Plan. In addition to Rock Island County and the local jurisdiction representatives, the planning process requires a broad range of input and expertise from individuals and organizations with interest in hazard mitigation within Rock Island County (and neighboring organizations).

The plan will meet the requirements of the Disaster Mitigation Act of 2000, also known as DMA 2000. The Act, which was signed into law on October 30, 2000, streamlines delivery and utilization of disaster recovery assistance and places increased emphasis on local mitigation planning. It requires local governments to develop and submit mitigation plans as a condition of receiving project grants under four FEMA programs: Pre-Disaster Mitigation (PDM), Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), Severe Repetitive Loss (SRL). Plans must be updated every 5 years in order to remain eligible.

Those participating are asked to review materials as the planning document develops. Please let us know if you or another representative of your organization would be willing to participate in this planning process, so that we may develop an accurate contact list. Also, if you know of other organizations that should be included in this process, please let us know. Bi-State Regional Commission will be assisting Rock Island County in the plan update and you may be contacted regarding correspondence and questions. Contact information is provided below. Thank you for your assistance with this planning process, and we hope you can join us at our introductory public meeting on November 19, 2020 at 4 pm.

Questions regarding the ongoing planning process may be directed to Brandon Melton at Bi-State Regional Commission (309) 793-6300 x 1148 or bmelton@bistateonline.org.

Note: If you would NOT like to be contacted please email Brandon Melton and we will remove you from the list.

APPENDIX 2-5 PUBLIC MEETING NOTICE AND INPUT OPPORTUNITIES

*** Proof of Publication ***

STATE OF ILLINOIS)
COUNTY OF ROCK ISLAND)
CITY OF EAST MOLINE)

The undersigned, hereby certifies that Lee Enterprises, Incorporated is a corporation, existing and doing business under the laws of the State of Delaware, licensed to do business in the State of Illinois, is publisher of The Dispatch/Rock Island Argus, and further certifies that the public notice attached hereto, was printed and published in said newspaper 1 time(s) in each week for 1 successive week(s), for publication dates as listed below.

BI-STATE REGIONAL COMMISSION

1504 THIRD AVENUE
ROCK ISLAND IL 61201

ORDER NUMBER 48129

The undersigned, further certifies that The Dispatch/Rock Island Argus is now and has been for more than one year continuously, a daily secular newspaper of general circulation published in the City of East Moline, County of Rock Island, State of Illinois, and further certifies that said newspaper has been continuously published at a regular interval of more than once each week with more than a minimum of fifty issues per year for more than one year prior to the first publication of the notice, and further certifies that The Dispatch/Rock Island Argus is a newspaper as defined by the Statutes of the State of Illinois in such cases made and provided, and further hereby certifies that the annexed notice is a true copy, and has been regularly published in said paper.

IN WITNESSETH WHEREOF, Lee Enterprises, Incorporated has signed this Certificate by Deb Anselm, Publisher of The Dispatch/Rock Island Argus, or by her authorized agent this 15 day of Nov., 2020.

LEE ENTERPRISES, INCORPORATED
d/b/a THE DISPATCH/ROCK ISLAND ARGUS

By: Kelly Monson
Publisher/or his/her Authorized Agent

Date: 11/20/20

Section: Legals

Category: 2627 Miscellaneous Notices

PUBLISHED ON: 11/15/2020

TOTAL AD COST:	55.59
FILED ON:	11/15/2020

NOTICE

Rock Island County is in the process of preparing an update of the 2016 Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan. The County is partnering with the Bi-State Regional Commission to prepare the plan update. An introductory meeting for public participation will be held on Thursday, November 19, 2020 at 4:00 PM. The meeting will be held virtually in order to limit physical contact and avoid the spread of COVID-19. If you are interested in attending, please contact Brandon Melton at bmelton@bistateonline.org or call (309) 793-6300 ext. 1148 for access information. Jurisdictions participating in the plan, in addition to Rock Island County, in the past have included the Villages/Cities of Andalusia, Carbon Cliff, Coal Valley, Cordova, East Moline, Hampton, Hillsdale, Milan, Moline, Oak Grove, Port Byron, Rapids City, Reynolds, Rock Island, and Silvis. School Districts are also invited to participate in the plan. Public participation and comments are invited as the plan update is developed. All planning meetings are open to the public. Planning documents will be posted for review on the County's website at https://www.rockislandcounty.org/ . Questions regarding the ongoing update process may be directed to Brandon Melton at the Bi-State Regional Commission, (309) 793-6300, or Mindy Meyers with the Rock Island Emergency Management Agency, (309) 799-5166.

Bi-State Regional Commission
1504 Third Avenue, Third Floor
Rock Island, IL 61201
Phone: (309) 793-6300 • Fax: (309) 793-6305
Website: http://www.bistateonline.org

July 9, 2021

FOR IMMEDIATE RELEASE:

Rock Island County Updates Multi-Jurisdictional Hazard Mitigation Plan

Notice of Public Review

Rock Island County has prepared the update of the *2016 Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan*. The plan will be considered at the county's Wednesday, July 14 Committee of the Whole meeting and at its Tuesday, July 20 meeting. Both meetings will commence at 5:30 p.m. at the Rock Island County Office Building, 1504 Third Avenue, Rock Island, Illinois.

Jurisdictions participating in the plan in addition to the county include the Cities of East Moline, Moline, Rock Island and Silvis; and the Villages of Andalusia, Carbon Cliff, Coal Valley, Cordova, Hampton, Hillsdale, Milan, Port Byron, Rapids City, and Reynolds. The Orion, Moline-Coal Valley, Rock Island-Milan, Hampton, and Carbon Cliff-Barstow Community School Districts also participated.

Public participation and comments are invited by **August 9** as the plan development is finalized before plan adoption. The plan draft is posted for review on the county's website at http://rockislandcounty.org/ZoningAndBuildingDept/Downloads/#PDMD.

If you have questions or comments regarding the plan, please email, call, or write to Brandon Melton, BMelton@bistateonline.org, (309) 793-6300 x 1148, Bi-State Regional Commission, 1504 Third Avenue, Third Floor, Rock Island, Illinois 61201.

END

FOR MEDIA CONTACT INFORMATION:

Brandon Melton, Senior Planner
Bi-State Regional Commission
1504 Third Avenue
Rock Island, Illinois 61201
(309) 793-6300, extension 1148
BMelton@bistateonline.org

BMedg
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Rock Island County
1504 Third Avenue
Rock Island, IL 61201
(309) 558-3605

Mission Statement: *To Build the Future and Improve the Quality of Life For Our Community*

Chairman Richard H. "Quijas" Brunk
Vice Chairman Brian D. Vyncke

Public Works & Facilities Committee Agenda
Monday, July 12th, 2021 8:30 AM

The Public Works & Facilities Committee of the Rock Island County Board will meet at the above date and time in the County Board Chambers on the third floor of the County Office Building, 1504 Third Avenue, Rock Island, Illinois.
Agenda as follows:

1. Call to order and roll call
2. Public Comment
3. Approval of the minutes from the June 7th, 2021 Public Works & Facilities Meeting
4. Reports to the Committee
5. Consider Rock Island County Hazard Mitigation Plan Update (2021)
   a. Resolution for approval and adoption of the Rock Island County multi-jurisdictional local hazard mitigation plan
6. Consider Highway Item(s):
   a. Consider Permission to close portion of CH 59, Loud Thunder Road for the Illinois City Fire Department Fundraiser
7. Committee member opportunity for brief comment *(no decisions will be made)*
8. Adjourn

The next regularly scheduled meeting of the Public Works and Facilities Committee will be on August 9th 2021 at 8:30 AM

Rock Island County

BUILD THE FUTURE AND IMPROVE THE QUALITY OF LIFE FOR OUR COMMUNITY

ROCK ISLAND COUNTY BOARD AGENDA
[AMENDED]

TUESDAY, JULY 20th 2021 5:30 PM
CHAIRMAN RICHARD H. BRUNK
VICE-CHAIRMAN BRIAN D. VYNCKE

The Rock Island County Board will meet at the above date and time in County Board Chambers on the third floor of the County Building, 1504 Third Ave, Rock Island, IL. Agenda as follows:

1. Call to order and roll call
2. Invocation [K. Swanson, District 16]
3. Pledge of Allegiance [D. Adams, District 12]
4. Approval of the minutes from the June 15th 2021 County Board Meeting
5. **Consider Appointments for County Board Districts 3, 10, & 23**
   Mr. Michael Burns, District 3—Term to Expire 11/30/2022
   Mr. Porter McNeil, District 10—Term to Expire 11/30/2022
   Ms. Kristin Bogdonas, District 23—Term to Expire 11/30/2022

6. Administration of the Oath of Office
   Mr. Michael Burns – District 3
   Mr. Porter McNeil—District 10
   Ms. Kristin Bogdonas—District 23

7. Public Comment
8. Presentation; Rock Island County Children's Advocacy Center – Marcy O'Brien, Executive Director

9. **Consider Finance and Personnel Committee Reports and Requests**
   a. Consider Staffing Request from Sheriff Bustos; Deputy Sheriff
   b. Consider FY2021 Edward Byrne Justice Assistance Grant (JAG)
   c. Consider Zoning Department Request for Grant Administration with Bi-State Regional Commission
   d. Consideration of State Mandated and Budgeted Adjustment for Compensation for State's Attorney & Public Defender
   e. Consider Public Defender's FY2021 Budget Amendment Request
   f. Consider authorizing the County Board Chairman to enter into contract extensions with Berteau Consulting and Grapple LLC, pending Legal review
   g. Consider Delinquent Tax Resolutions
      i. Permanent Parcel #0834310003; Tax Payor ID 088893
      ii. Permanent Parcel #140608591; Tax Payor ID 140608591
   h. Consider Transfers of Appropriation
   i. Consider Appropriation Resolutions for Funds
   j. Consider Claims in the amount of $1,041,275.89
   k. Consider Treasurers' Disbursements (TDs) in the amount of $5,466,859.00
   l. Consider Board Member Per Diem/Mileage Report
   m. Approval of the Report

ROCK ISLAND COUNTY BOARD
July 20th, 2021

10. Consider Governance, Health and Administration Committee Reports and Requests

- **a.** Consider FY2021 IDOT ProjectNOW Grant OP 21-34 CARES
- **b.** Consider FY2021 5311 Downstate Operating Assistance Grant Program; ProjectNOW OP-21-31
  - i. Resolution Authorizing Execution and Amendment of the Federal CARES Act Section 5311 Grant Agreement
- **c.** Approval of the Report

11. Consider Public Works and Facilities Committee Reports and Requests

- **a.** Consider Rock Island County Hazard Mitigation Plan Update 2021
  - i. Consider Resolution for approval and adoption of the Rock Island County Multi-Jurisdictional Local Hazard Mitigation Plan
- **b.** Consider Highway Items
  - i. Consider Permission to close portion of County Highway 59, Loud Thunder Road for the Illinois City Fire Department Fundraiser
- **c.** Approval of the Report

12. Consider Chairman's Appointments

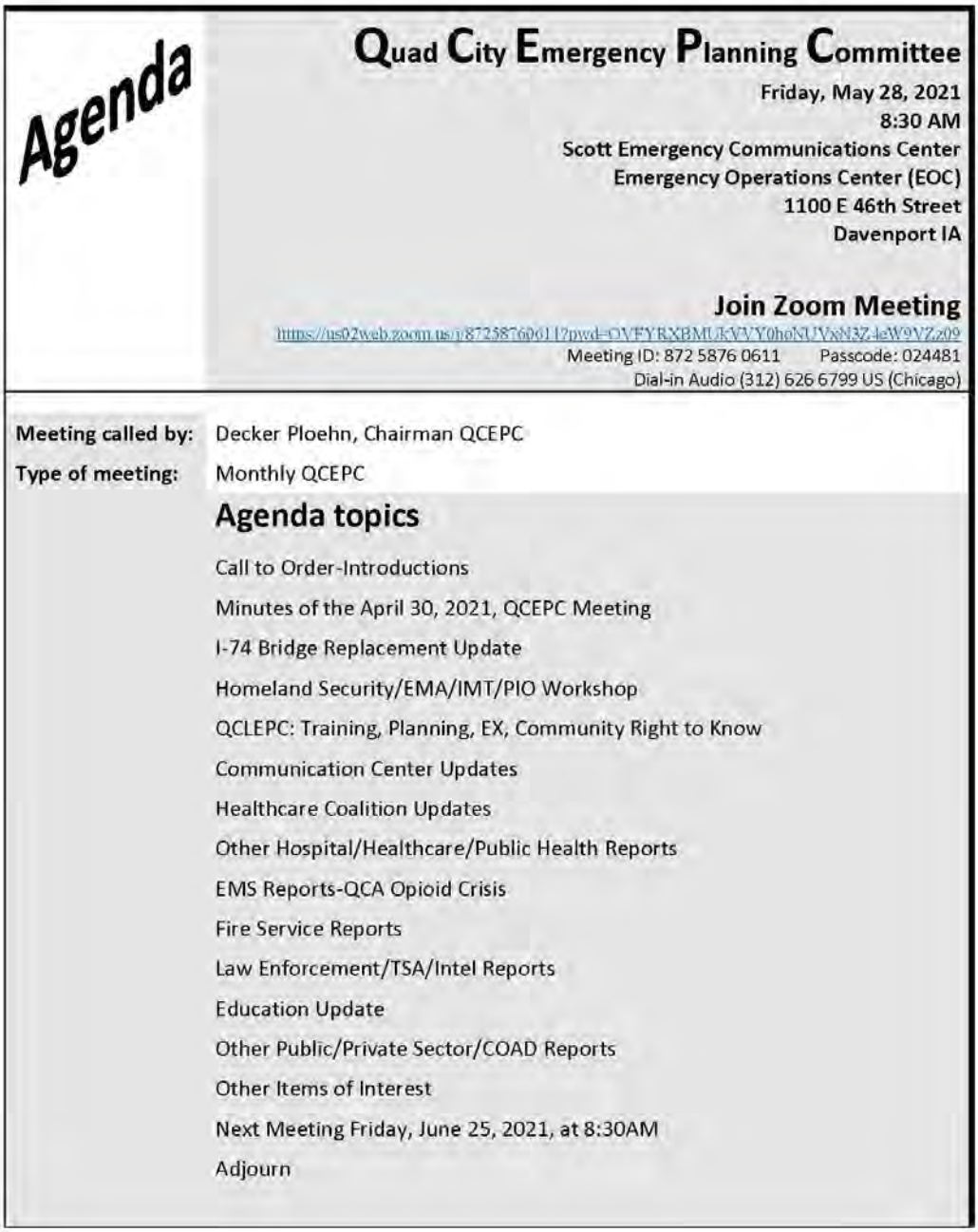
- Appointment of Ms. Martha Nieto to the Rock Island County Board of Health; Term to Expire 06/30/2024
- Reappointment of Mr. Luis Puentes to the Illini Hospital District Board; Term to Expire 07/30/2024
- Reappointment of Mr. Jim Grafton to the Illini Hospital District Board; Term to Expire 07/30/2024
- Reappointment of Mr. Paris Foto to the Illini Hospital District Board; Term to Expire 07/30/2024
- Appointment of Mr. Steven Hyde to the Coyne Center Sanitary District; Term to Expire 05/30/2023
- Reappointment of Mr. Jim Boyd to the Rock Island County Zoning Board of Appeals; Term to Expire 06/30/2026
- Appointment of Ms. Carla Enburg to the Rock Island County 708 Mental Health Board; Term to Expire 11/30/2024

13. The County Board may enter into Closed Session for the following:

- 5 ILCS 120/2(c) (1) – The appointment, employment, compensation, discipline, performance, or dismissal of specific employees of the public body or legal counsel for the public body, including hearing testimony on a complaint lodged against an employee of the public body or against legal counsel for the public body to determine its validity.
- 5 ILCS 120/2(c) (2) – Collective negotiating matters between the public body and its employees or their representatives, or deliberations concerning salary schedules for one or more classes of employees.
- 5 ILCS 120/2(c) (11) – Litigation, when an action against, affecting or on behalf of the particular public body has been filed and is pending before a court or administrative tribunal, or when the public body finds that an action is probably or imminent, in which case the basis for the finding shall be recorded and entered into the minutes of the closed meeting

14. Consider Action as necessary based on Closed Session
15. Communications—County Clerk Karen Kinney
16. Recess

The next regularly scheduled meeting of the Rock Island County Board will be
Tuesday, August 17th, 2021 at 5:30 PM



Agenda

Quad City Emergency Planning Committee

Friday, May 28, 2021
8:30 AM
Scott Emergency Communications Center
Emergency Operations Center (EOC)
1100 E 46th Street
Davenport IA

Join Zoom Meeting

https://us02web.zoom.us/j/87258760611?pwd=OVFYRXBMUkVVY0hoNUVxN3Z4eW9VZz09
Meeting ID: 872 5876 0611 Passcode: 024481
Dial-in Audio (312) 626 6799 US (Chicago)

Meeting called by: Decker Ploehn, Chairman QCEPC

Type of meeting: Monthly QCEPC

Agenda topics

Call to Order-Introductions
Minutes of the April 30, 2021, QCEPC Meeting
I-74 Bridge Replacement Update
Homeland Security/EMA/IMT/PIO Workshop
QCLEPC: Training, Planning, EX, Community Right to Know
Communication Center Updates
Healthcare Coalition Updates
Other Hospital/Healthcare/Public Health Reports
EMS Reports-QCA Opioid Crisis
Fire Service Reports
Law Enforcement/TSA/Intel Reports
Education Update
Other Public/Private Sector/COAD Reports
Other Items of Interest
Next Meeting Friday, June 25, 2021, at 8:30AM
Adjourn

QCEPC Members

Name	Agency
Andorf, Paul	MEDIC
Andybur, Katrina	United Way
Barr, Michael	UnityPoint
Beckwith, Mark	Augustana College
Bladel, Andrea	Genesis Health
Bladel, Jeff	Davenport Police Dept
Bradley, Eric	Scott County Health Dept
Brock, Finas	Iowa American Water
Brown, Jamie	Davenport Police Dept
Brus, Mel	I-80
Burchette, Ron	Davenport Fire Dept
Burns, Nancy	Clinton County EMA
Caffery, Joe	Scott County Sheriff Dept
Cisna, Shawn	Black Hawk College
Conklin, Bethaney	Genesis VNA/SA5AHCC
Conklin, Terry	Red Cross
Cook, Jason	SECC
Cotton, Gregory	Rock Island Arsenal
DeClerck, Amy	Fresenius Dialysis
DeFrance, Robert, E.	East Moline Fire Dept
Donovan, Dave	SECC/EMA
Dunn, Robbin	Davenport Public Works
Ewers, Jerry	Muscatine Fire Department
Fellows, Jacob	Rock Island Arsenal
Flies, Rich	John Deere
Flowers, Tilford	John Deere
Frederiksen, Linda	MEDIC
Frisch, Dennis	Durant Ambulance
Gallops, Wayne	Davenport Fire Dept/MEDFORCE/Genesis
Garrington, Steve	Salvation Army
Gaskin, Marc	CHEMTREAT
Gibbs, Thomas	Scott County Sheriff Dept
Gipson, Chuck	MEDIC
Glass, Nicole	Mercy Health
Goode, Seth	Rock Island Arsenal
Graff, Bob	RI Fire
Gustafson, Brian	Rock Island County Coroner
Hahn, Don	41st Iowa Civil Air Patrol
Hamerlinck, Jennifer	Mercy, IL County EMA
Hanssen, Mark	Davenport PD
Hardacre, Jeff	TSA
Harris, Robbie	3M Cordova
Haut, Adam	Genesis Ambulance
Hawkes, Jim	SECC
Heim, Joe	Rock Island Arsenal

Name	Agency
Heisch, Randy	Rock Island Co Sheriff Dept/ Rock Island County EMA
Houdyshell, Tony	Candadian Pacific Railroad
Howard, Dan	Clinton County EMA
Huber, Brianna	City of East Moline
Johnson, Kevin	Department of Homeland Security
Johnston, Leslie	American Red Cross - Illinois Region
Kanakares, Daniel	Department of Homeland Security
Keith, Darin	Rock Island Arsenal Fire
Kelly, Dave	Genesis Health
Kimball, Keith	Bettendorf Police Dept
Kinney, Rich	National Weather Service
Kness, Chance	Clinton County EMA
Knorrek, Steve	Bettendorf Fire Dept
Koenig, Jeff	I-74 Project
Kruse, Dan	Barton Solvents, Inc.
Lane, Tim	Scott County Sheriff
Lange, Kevin	MEDIC
Leach, Glenn	Davenport Dicocese
Lighton, Josh	Iowa American Water
Litterst, Angie	Mercy, IL County Health Department
Loeffelholz, Al	Genesis Health
Ludwig, Nita	Rock Island Co Health Dept
Lundeen, Gayle	Scott County EMA Volunteer
MacGrath, Amber	Red Cross
Macuga, Stephanie	Scott County IT
Maranda, Ken	RI County Chairman
Marr, Stephen	USAG - Rock Island Aresenal
Martin, Mike	EICC
McClure, Mike	National Weather Service
McCullough, Jeannine	Mississippi Valley Regional Blood Center
McKee, Bruce	Davenport School District
McMaster, Terry	QCOMM 911
Medley, Russell	University of IL Extension
Meyer, Kate	Rock Island Co Health Dept
Meyers, Mindy	Rock Island Co EMA
Moreno, Doris	911 Center
Mulholland, Colleen	Genesis Health System
Noe, Casey	Rock Island Arsenal Emergency Family Assistance Center

Name	Agency
Nolan, Brad	Iowa Dept of Public Safety
Noyd, Travis	Moline Fire Department
O'Boyle, Marty	City of Eldridge Mayor
Osborne, David	TSA
Payne, Brian	SCEMA
Plett, Tina	Davenport Community Healthcare
Ploehn, Decker	City of Bettendorf Administrator
Pries, Jacob	Joint Munitions Command
Quick, Kaye	Black Hawk College
Randolph, Orville	Durant Police Dept
Ringenberg, Matt	IL Dept of Public Health
Roth, Shawn	Scott County Sheriff Dept
Said, Troy	Bettendorf Fire Dept
Sanders, Tracey	SECC
Schneider, Jordan	QCCOAD/MCQC
Schwarz, Brenda	Scott County Health Dept
Seals, Brian	Scott County Waste Commission
Seibert, Nick	RI Arsenal
Sharkey, Brian	Palmer Chiropratic College
Shirk, Jerry	Rock Island County EMA
Showalter, John	East Moline City
Sikorski, Paul	Davenport Police Dept
Simms, Michelle	Mississippi Valley Regional Blood Center
Sisler, Joe	Eldridge Police
Snyder, Jeff	Moline Fire
Soliz, Eli	Moline Police Department
Sowells, Adam	UnityPoint
Speidel, Tammy	Scott County Facility and Support Services

Name	Agency
Spiegel, Corri	City of Davenport Administrator
Starns, Scott	Rock Island Arsenal
Stevens, Andrew	Genesis Ambulance
Takacs, Kevin	MEDFORCE
Temple, Jamie	Eastern Iowa Community College
Thee, Mary	Scott County Administration
Thompson, Kelly	Quad Cities Community Foundation
Thoreson, Amy	Scott County Health Dept
Threadgill,Jim	I-74 Project
Tillman, Rodney	RI Arsenal
Tumbleson, Jake	John Deere Continuity Coordinator
Urmanskij, Josh	Davenport School District
Uttech, Zachary	National Weather Service
Valladares, Pedro	Moline Police Department
Varnes, Chris	Scott County Health Dept
Vermeer, Richard	Scott County Medical Director EMS
Webster, Chris	Genesis Health System
West, Bill	Good Samaritan
Whitchelo, Todd	Davenport Fire Dept
Whittington, Mike	Select Medical
Willits, Patsy	UnityPoint Muscatine
Woomert, Roger T.	Princeton Fire
Wright, Brian	Muscatine CO EMA
Yerkey, Jeffrey	Rock Island Fire Dept

Disaster Ready Quad Cities/Quad Cities COAD
General Membership Committee
6/16/20

Agenda

I. Approval of Minutes from last General Membership meeting
II. COVID 19 Update
III. Committee Reports
   A. Executive Committee
   B. Donations Committee
   C. Volunteer Committee
   D. Program, Education, Outreach and Membership Committee
   E. Communications Committee
   F. Animal Management Committee
   G. Long Term Recovery Committee
IV. Other Items of Interest
V. Date of Next Meeting
   A. Executive Meeting: July 21, 2020, 10 am - Zoom
   B. Next General Meeting: August 18, 10 am - Zoom
VI. Adjourn

APPENDIX 2-6 PUBLIC COMMENTS

No public comments were received.

APPENDIX 2-7 EXISTING PLANNING MECHANISMS MATRIX

Existing Planning Mechanisms Matrix

	Rock Island County	Andalusia	Carbon Cliff	Coal Valley	Cordova	East Moline	Hampton	Hillsdale	Milan	Moline	Moline CSD	Orion CSD	Port Byron	Rapids City	Reynolds	Rock Island	Silvis
Existing Community Plans																	
Comprehensive/Land Use Plan	X		X	X	X	X	X		X	X			X	X	X	X	X
Capital Improvement Plan			X	X		X				X	X	X				X	X
Growth Management Plan			X	X						X							
Redevelopment Plan				X						X						X	
Regional Comprehensive Economic Strategy (CEDS)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Special Area Management Plan (SAMP)	X		X			X				X						X	X
Open Space Plan	X		X			X				X						X	
Economic Development Plan	X			X		X				X						X	X
Parks & Recreation Plan				X	X	X	X		X	X			X	X		X	X
State Hazard Mitigation Plan	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Emergency Response Plan	X				X	X		X		X						X	X
Emergency Management Plan	X				X	X	X	X		X							X
College Campus Development Plan										X						X	
Evacuation Plan	X				X	X							X				
Illinois Public Water Supply Emergency Procedures														X			
Brick Street Plan																X	
Existing Codes & Regulations																	
Zoning Ordinance	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Subdivision Regulations	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Current Building Code	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Current Residential Code	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Current Electrical Code	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Current Plumbing Code	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Current Mechanical Code	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Current Rental Property Code	X		X					X									

	Rock Island County	Andalusia	Carbon Cliff	Coal Valley	Cordova	East Moline	Hampton	Hillsdale	Milan	Moline	Moline CSD	Orion CSD	Port Byron	Rapids City	Reynolds	Rock Island	Silvis
Current Fire Code			X			X				X				X		X	X
Growth Management Ordinance																X	
Landscape Code				X	X					X					X	X	
Site Plan Review Requirements			X	X		X				X						X	X
Architectural Review Guidelines										X						X	X
Tree Ordinance					X										X	X	
Real Estate Disclosure Requirements	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Property Deed Restrictions	X					X										X	X
Flood Plain Management	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Flood Damage Prevention Ordinance	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Post-disaster Recovery Ordinance														X		X	
Stormwater Management	X		X	X		X				X				X	X	X	
Drainage Ordinance			X	X		X		X						X	X	X	
Hillside or Steep Slope			X							X							X
Burning or Wildfire Ordinance			X	X		X		X		X					X	X	X
Hazard Setback Requirements															X		
Soil Erosion Ordinance	X		X	X						X					X		
Solid Waste and Recycling		X	X	X	X	X	X	X	X	X			X	X	X	X	X
Existing Programs																	
Historic District Preservation										X						X	
Downtown Redevelopment						X				X						X	
Urban Transportation Improvement Program	X	X	X	X		X	X		X	X			X	X		X	X
Long-Range Recreational Facilities				X		X				X				X		X	
Stormwater Management Program			X	X		X				X				X	X	X	
Fire Rescue Program			X			X		X							X	X	X
School Siting Program or Plan																X	

	Rock Island County	Andalusia	Carbon Cliff	Coal Valley	Cordova	East Moline	Hampton	Hillsdale	Milan	Moline	Moline CSD	Orion CSD	Port Byron	Rapids City	Reynolds	Rock Island	Silvis
Flood Insurance Studies	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Engineering Studies						X								X	X	X	
Technical Documents																	
Critical Facilities Map	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Existing Land Use Map	X		X	X	X	X	X			X				X	X	X	X
Elevation Certificates	X			X			X		X	X			X		X	X	

APPENDIX 3-1 HAZARD SCORING DEFINITIONS

Hazard Scoring Definitions

1). HISTORICAL/ PROBABILITY: The number of times that a disaster has occurred in a jurisdiction since 1950

Rank	Definition	Value
Low	0-12 occurrences since 1950	6
Medium	13-60 occurrences since 1950	12
High	More than 60 occurrences since 1950	18

2). VULNERABILITY: The relationship of where people live in or near the hazard area.

Rank	Definition	Value
Low	Less than 10% of the total population of the jurisdiction	6
Medium	10 - 25% of the total population of the jurisdiction	12
High	More than 25% of the total population of the jurisdiction	18

3). SEVERITY OF IMPACT: The worst conceivable impact to human life and property which could result from a hazard. The essential facilities are defined for this purpose as *Public Safety* (fire, police, local government) and *Utilities* (electric, gas, telephone, water/sewer)

Rank	Definition	Value
Low	Minor injuries (under 50) and property damage (under $1,000,000), or less than 24 hour shutdown of essential facilities	6
Medium	Serious injury (more than 50), major property damage (structural stability) ($1,000,000 to $15,000,000), or 24-72 hour shutdown of essential facilities	12
High	Multiple deaths (more than 5), property destroyed or damaged beyond repair (more than $15,000,000), or more than 3 days of shutdown for essential facilities	18

4A). POPULATION: Total current population in 2020

Rank	Definition	Value
Low	0 - 1,000 population in the jurisdiction	1
Medium	1,000 - 20,000 population in the jurisdiction	2
High	More than 20,000 population in the jurisdiction	3

4B). POPULATION GROWTH: Total projected population in 2025

Rank	Definition	Value
Low	Decrease in projected population	1
Medium	0.0% - 5.0% projected population increase	2
High	More than 5.0% projected population increase	3

HAZARD SCORING KEY:
VERY LOW = 0-12
LOW = 13-24
MEDIUM = 25-36
HIGH = 37-48
SEVERE = 49-60

APPENDIX 3-2 HAZARD SCORES

Hazard Profile Scoring Summaries

Jurisdiction: Andalusia

2020 Population	2025 Population		Percent Change 2020-2025
1,153	1,126		-2.34%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

2. DROUGHT	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	35	39

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	33

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	41	33

6. FLASH FLOODING	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	18	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	47	27

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	33

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	29	21

Jurisdiction: Andalusia

(OVER →)

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	41	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	47	45

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

14. RIVER FLOODING	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	6	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	47	51

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	53	51

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	47	51

Jurisdiction: Carbon Cliff

2020 Population	2025 Population		Percent Change 2020-2025
2,019	1,961		-2.87%

1. DAM FAILURE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

2. DROUGHT		
	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	39

3. EARTHQUAKE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	33

4. EXPANSIVE SOILS		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

5. EXTREME HEAT		
	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	27	33

6. FLASH FLOODING		
	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	27

7. GRASSLAND, FIELD, OR WOODLAND FIRES		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	27

8. HAZARDOUS MATERIALS		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

Jurisdiction: Carbon Cliff

(OVER →)

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	39

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	27	27

14. RIVER FLOODING	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	12	12
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	39

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	18	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	45

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	51	51

Jurisdiction: Carbon Cliff-Barstow School District #36

2020 Population	2025 Population		Percent Change 2020-2025
			#DIV/0!

1. DAM FAILURE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

2. DROUGHT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

3. EARTHQUAKE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

5. EXTREME HEAT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

6. FLASH FLOODING	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

(OVER →)

Jurisdiction: Carbon Cliff-Barstow School District #36

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

10. LANDSLIDES	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

12. LEVEE FAILURE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

#DIV/0!

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

14. RIVER FLOODING	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

Jurisdiction: Coal Valley

2020 Population	2025 Population		Percent Change 2020-2025
3,662	3,607		-1.50%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	21

2. DROUGHT	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	39

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	28	39

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	21

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	33

6. FLASH FLOODING	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	21

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	27

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	28	33

(OVER →)

9. HUMAN DISEASE PANDEMIC

10. LANDSLIDES

Jurisdiction: Coal Valley

	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	40	45

	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	27

11. LAND SUBSIDENCE		
	2016	**2021**
1). Historical/Probability	6	6
2). Vulnerability	12	12
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	33

12. LEVEE FAILURE		
	2016	**2021**
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	21

13. RADIOLOGICAL INCIDENT		
	2016	**2021**
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	21

14. RIVER FLOODING		
	2016	**2021**
1). Historical/Probability	18	12
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	33

15. SEVERE STORMS COMBINED		
	2016	**2021**
1). Historical/Probability	18	12
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	58	51

16. SEVERE WINTER STORM		
	2016	**2021**
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	52	51

Jurisdiction: Cordova

2020 Population	2025 Population		Percent Change 2020-2025
626	621		-0.80%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	20

2. DROUGHT	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	38

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	32

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	20

5. EXTREME HEAT	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	39	38

6. FLASH FLOODING	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	20

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	32

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	12	18
2). Vulnerability	12	6
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	45	44

(OVER →)

Jurisdiction: Cordova

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	39	44

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	20

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	20

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	20

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	45	44

14. RIVER FLOODING	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	21	32

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	39	50

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	2	1
Total:	39	44

Jurisdiction: East Moline

2020 Population	2025 Population		Percent Change 2020-2025
20,737	20,217		-2.51%

1. DAM FAILURE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	28

2. DROUGHT		
	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	28	40

3. EARTHQUAKE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	34

4. EXPANSIVE SOILS		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

5. EXTREME HEAT		
	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	40	34

6. FLASH FLOODING		
	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	12	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	40	28

7. GRASSLAND, FIELD, OR WOODLAND FIRES		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

8. HAZARDOUS MATERIALS		
	2016	2021
1). Historical/Probability	6	18
2). Vulnerability	18	6
3). Severity of Impact	18	18
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	46	46

(OVER →)

Jurisdiction: East Moline

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	40	46

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	28	22

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	28	22

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	12
3). Severity of Impact	18	18
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	40	40

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

14. RIVER FLOODING	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	34	34

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	46	40

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	46	46

Jurisdiction: Hampton

2020 Population	2025 Population		Percent Change 2020-2025
1,700	1,671		-1.71%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	27

2. DROUGHT	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	40	39

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	34	33

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	27

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	46	33

6. FLASH FLOODING	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	40	27

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	28	21

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	40	27

(OVER →)

Jurisdiction: Hampton

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	40	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	21

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	22	21

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	28	27

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	6
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	46	33

14. RIVER FLOODING	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	12	12
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	46	39

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	58	45

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	2	1
Total:	52	51

Jurisdiction: Hampton School District #40

2020 Population	2025 Population		Percent Change 2020-2025
			#DIV/0!

1. DAM FAILURE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

2. DROUGHT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

3. EARTHQUAKE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

5. EXTREME HEAT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

6. FLASH FLOODING	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

(OVER →)

Jurisdiction: Hampton School District #40

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

10. LANDSLIDES	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

12. LEVEE FAILURE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

14. RIVER FLOODING	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

Jurisdiction: Hillsdale

2020 Population	2025 Population		Percent Change 2020-2025
483	477		-1.24%

1. DAM FAILURE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

2. DROUGHT		
	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	38

3. EARTHQUAKE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	32

4. EXPANSIVE SOILS		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

5. EXTREME HEAT		
	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	32	32

6. FLASH FLOODING		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	6
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	26

7. GRASSLAND, FIELD, OR WOODLAND FIRES		
	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	20

8. HAZARDOUS MATERIALS		
	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	26

Jurisdiction: Hillsdale

(OVER →)

9. HUMAN DISEASE PANDEMIC		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	44

10. LANDSLIDES		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

11. LAND SUBSIDENCE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

12. LEVEE FAILURE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	6
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	44	32

13. RADIOLOGICAL INCIDENT		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	26	26

14. RIVER FLOODING		
	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	44	50

15. SEVERE STORMS COMBINED		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	32	38

16. SEVERE WINTER STORM		
	2016	2021
1). Historical/Probability	12	18
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	50

Jurisdiction: Milan

2020 Population	2025 Population		Percent Change 2020-2025
4,992	4,833		-3.19%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

2. DROUGHT	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	39

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	33

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

5. EXTREME HEAT	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	27	33

6. FLASH FLOODING	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	27

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	18
2). Vulnerability	18	6
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	45

(OVER →)

Jurisdiction: Milan

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	45

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

14. RIVER FLOODING	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	33

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	57	51

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	45

Jurisdiction: Moline

2020 Population	2025 Population		Percent Change 2020-2025
42,700	41,800		-2.11%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	23	22

2. DROUGHT	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	29	40

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	23	34

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	23	22

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	35	34

6. FLASH FLOODING	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	35	28

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	23	22

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	12	18
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	29	34

(OVER →)

Jurisdiction: Moline

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	41	46

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	23	22

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	29	28

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	23	22

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	23	22

14. RIVER FLOODING	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	35	28

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	47	46

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	2	1
Total:	35	46

Jurisdiction: Moline-Coal Valley School District #40

2020 Population	2025 Population		Percent Change 2020-2025
			#DIV/0!

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	23	#DIV/0!

2. DROUGHT	2016	2021
1). Historical/Probability	12	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	29	#DIV/0!

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	23	#DIV/0!

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	23	#DIV/0!

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	
2). Vulnerability	12	
3). Severity of Impact	12	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	47	#DIV/0!

6. FLASH FLOODING	2016	2021
1). Historical/Probability	18	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	35	#DIV/0!

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	23	#DIV/0!

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	18	
2). Vulnerability	18	
3). Severity of Impact	18	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	59	#DIV/0!

(OVER →)

Jurisdiction: Moline-Coal Valley School District #40

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	
2). Vulnerability	12	
3). Severity of Impact	18	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	41	#DIV/0!

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	23	#DIV/0!

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	12	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	29	#DIV/0!

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	23	#DIV/0!

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	23	#DIV/0!

14. RIVER FLOODING	2016	2021
1). Historical/Probability	18	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	35	#DIV/0!

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	
2). Vulnerability	18	
3). Severity of Impact	18	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	59	#DIV/0!

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	
2). Vulnerability	18	
3). Severity of Impact	18	
4). Population		
A. Population	3	1
B. Population Growth	2	#DIV/0!
Total:	59	#DIV/0!

Jurisdiction: Orion Community Unit School District #223

2020 Population	2025 Population		Percent Change 2020-2025
			#DIV/0!

1. DAM FAILURE		
	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

2. DROUGHT		
	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

3. EARTHQUAKE		
	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

4. EXPANSIVE SOILS		
	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

5. EXTREME HEAT		
	2016	2021
1). Historical/Probability	12	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	27	#DIV/0!

6. FLASH FLOODING		
	2016	2021
1). Historical/Probability	12	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	27	#DIV/0!

7. GRASSLAND, FIELD, OR WOODLAND FIRES		
	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

8. HAZARDOUS MATERIALS		
	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

(OVER →)

Jurisdiction: Orion Community Unit School District #223

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	
2). Vulnerability	12	
3). Severity of Impact	18	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	39	#DIV/0!

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

14. RIVER FLOODING	2016	2021
1). Historical/Probability	6	
2). Vulnerability	6	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	21	#DIV/0!

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	
2). Vulnerability	18	
3). Severity of Impact	18	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	57	#DIV/0!

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	
2). Vulnerability	18	
3). Severity of Impact	6	
4). Population		
A. Population	2	1
B. Population Growth	1	#DIV/0!
Total:	45	#DIV/0!

Jurisdiction: Port Byron

2020 Population	2025 Population		Percent Change 2020-2025
1,733	1,730		-0.17%

1. DAM FAILURE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

2. DROUGHT		
	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	35	39

3. EARTHQUAKE		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	35	39

4. EXPANSIVE SOILS		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

5. EXTREME HEAT		
	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	41	33

6. FLASH FLOODING		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

7. GRASSLAND, FIELD, OR WOODLAND FIRES		
	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	41	33

8. HAZARDOUS MATERIALS		
	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

(OVER →)

Jurisdiction: Port Byron

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	41	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	23	21

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	29	27

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	47	45

14. RIVER FLOODING	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	41	33

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	41	39

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	3	1
Total:	47	45

Jurisdiction: Rapids City

2020 Population	2025 Population		Percent Change 2020-2025
939	916		-2.45%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	32

2. DROUGHT	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	26	38

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	32

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

5. EXTREME HEAT	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	26	32

6. FLASH FLOODING	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	6	6
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	32	26

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	26

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	32	26

(OVER →)

Jurisdiction: Rapids City

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	44

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	32

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	20	20

14. RIVER FLOODING	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	12	6
3). Severity of Impact	12	12
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	32

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	50	44

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	12	18
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	1	1
B. Population Growth	1	1
Total:	38	44

Jurisdiction: Reynolds

2020 Population	2025 Population		Percent Change 2020-2025
489	481		-1.64%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	20

2. DROUGHT	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	38

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	32

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	20

5. EXTREME HEAT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	32

6. FLASH FLOODING	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	20

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	12	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	27	20

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	20

(OVER →)

Jurisdiction: Reynolds

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	39	44

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	18
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	32

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	20

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	20

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	20

14. RIVER FLOODING	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	21	26

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	39	44

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	12	18
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	2	1
B. Population Growth	1	1
Total:	39	50

Jurisdiction: Rock Island

2020 Population	2025 Population		Percent Change 2020-2025
37,847	36,894		-2.52%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

2. DROUGHT	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	28	40

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	34

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	40	34

6. FLASH FLOODING	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	34	22

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	12	18
2). Vulnerability	18	6
3). Severity of Impact	18	18
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	52	46

(OVER →)

9. HUMAN DISEASE PANDEMIC	2016	2021

10. LANDSLIDES	2016	2021

Jurisdiction: Rock Island

1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	40	46

1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

11. LAND SUBSIDENCE		
	2016	**2021**
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

12. LEVEE FAILURE		
	2016	**2021**
1). Historical/Probability	6	6
2). Vulnerability	18	12
3). Severity of Impact	18	18
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	46	40

13. RADIOLOGICAL INCIDENT		
	2016	**2021**
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	22	22

14. RIVER FLOODING		
	2016	**2021**
1). Historical/Probability	18	12
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	34	28

15. SEVERE STORMS COMBINED		
	2016	**2021**
1). Historical/Probability	18	12
2). Vulnerability	12	18
3). Severity of Impact	12	12
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	46	46

16. SEVERE WINTER STORM		
	2016	**2021**
1). Historical/Probability	18	18
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	3	3
B. Population Growth	1	1
Total:	40	46

Jurisdiction: Planning Area (Rock Island County)

2020 Population	2025 Population		Percent Change 2020-2025
144,287	141,029		-2.26%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	33

2. DROUGHT	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	27	39

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	39

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	12	18
3). Severity of Impact	6	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	51

6. FLASH FLOODING	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	12	6
3). Severity of Impact	6	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	33

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	6
B. Population Growth	1	1
Total:	21	25

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	18
2). Vulnerability	12	6
3). Severity of Impact	12	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	45

(OVER →)

Jurisdiction: Planning Area (Rock Island County)

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	33

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	27

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	12	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	33

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	12	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	27	33

14. RIVER FLOODING	2016	2021
1). Historical/Probability	12	18
2). Vulnerability	6	6
3). Severity of Impact	12	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	45

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	12	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	51	57

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	12	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	51	57

***Note: 2016 scores used an averaging and rounding/mode method instead of worksheet. 2021 scores will be more accurate and comprehensive.**

Jurisdiction: Unincorporated Rock Island County

2020 Population	2025 Population		Percent Change 2020-2025
17,335	17,016		-1.84%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	1	2
B. Population Growth	1	1
Total:	20	21

2. DROUGHT	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	1	2
B. Population Growth	1	1
Total:	32	33

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	27

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	12	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	33

6. FLASH FLOODING	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	18	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	51	33

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	27

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	18	6
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	33

(OVER →)

Jurisdiction: Unincorporated Rock Island County

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	27	21

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	12
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	33

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	18	6
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	51	33

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	12
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	39

14. RIVER FLOODING	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	12
3). Severity of Impact	12	12
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	51	45

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	45

16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	45	45

*4A and 4B should be the same value for all hazards. The variation in 2016 scores appears to be an error. The scores should represent unincorporated areas.

Jurisdiction: Rock Island-Milan School District #41

2020 Population	2025 Population		Percent Change 2020-2025
			#DIV/0!

1. DAM FAILURE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

2. DROUGHT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

3. EARTHQUAKE	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

5. EXTREME HEAT	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

6. FLASH FLOODING	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

(OVER →)

9. HUMAN DISEASE PANDEMIC	2016	2021

10. LANDSLIDES	2016	2021

Jurisdiction: Rock Island-Milan School District #41

1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

11. LAND SUBSIDENCE		
	2016	**2021**
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

12. LEVEE FAILURE		
	2016	**2021**
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

13. RADIOLOGICAL INCIDENT		
	2016	**2021**
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

14. RIVER FLOODING		
	2016	**2021**
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

15. SEVERE STORMS COMBINED		
	2016	**2021**
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

16. SEVERE WINTER STORM		
	2016	**2021**
1). Historical/Probability		
2). Vulnerability		
3). Severity of Impact		
4). Population		
A. Population		1
B. Population Growth		#DIV/0!
Total:		#DIV/0!

Jurisdiction: Silvis

2020 Population	2025 Population		Percent Change 2020-2025
7,325	7,140		-2.53%

1. DAM FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

2. DROUGHT	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	39

3. EARTHQUAKE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	33

4. EXPANSIVE SOILS	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

5. EXTREME HEAT	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	33

6. FLASH FLOODING	2016	2021
1). Historical/Probability	18	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	33	21

7. GRASSLAND, FIELD, OR WOODLAND FIRES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

8. HAZARDOUS MATERIALS	2016	2021
1). Historical/Probability	12	12
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	27	27

(OVER →)

Jurisdiction: Silvis

9. HUMAN DISEASE PANDEMIC	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	12	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	39	45

10. LANDSLIDES	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

11. LAND SUBSIDENCE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	18
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	33

12. LEVEE FAILURE	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

13. RADIOLOGICAL INCIDENT	2016	2021
1). Historical/Probability	6	6
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	21

14. RIVER FLOODING	2016	2021
1). Historical/Probability	6	12
2). Vulnerability	6	6
3). Severity of Impact	6	6
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	21	27

15. SEVERE STORMS COMBINED	2016	2021
1). Historical/Probability	18	12
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	57	51

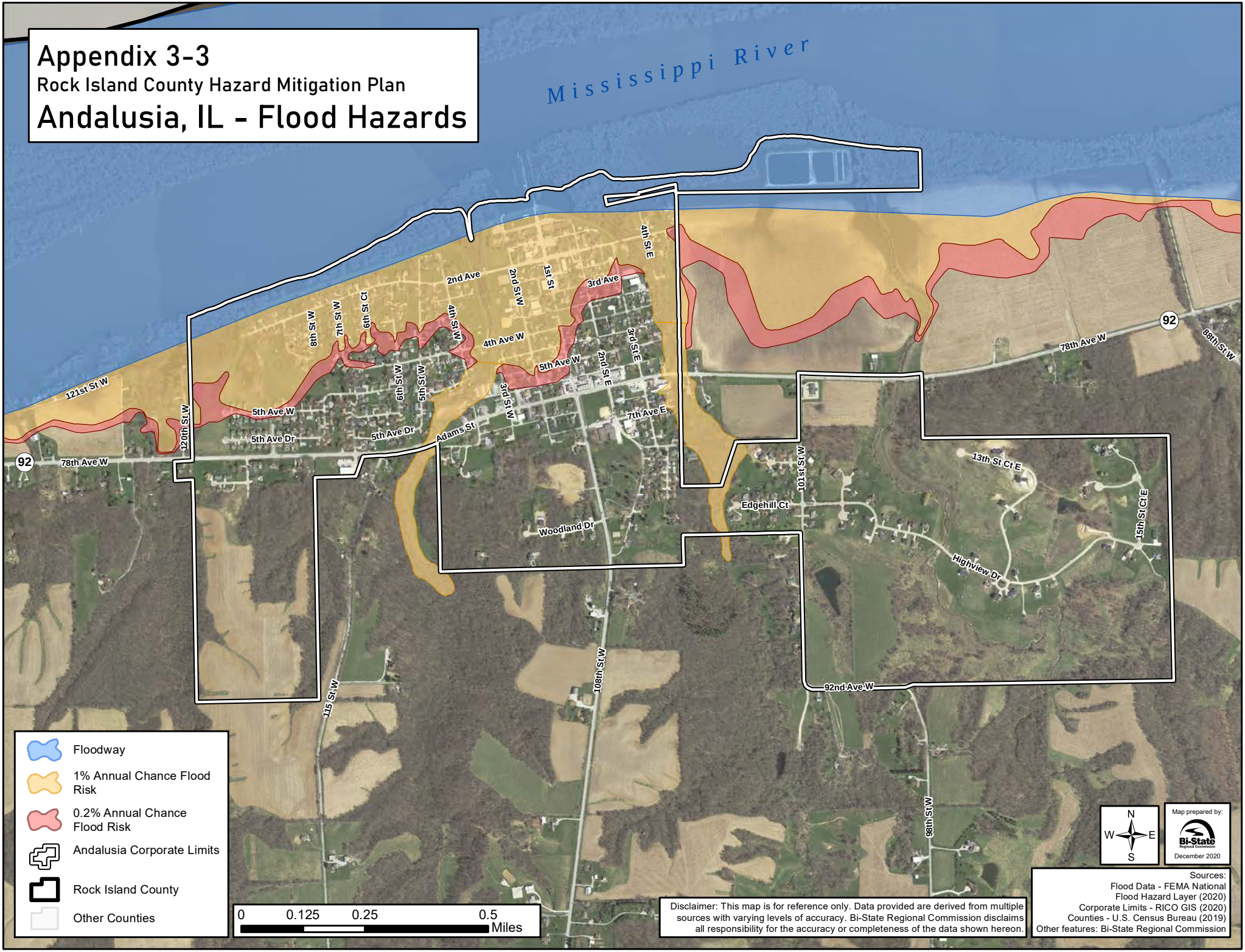
16. SEVERE WINTER STORM	2016	2021
1). Historical/Probability	18	18
2). Vulnerability	18	18
3). Severity of Impact	18	18
4). Population		
A. Population	2	2
B. Population Growth	1	1
Total:	57	57

APPENDIX 3-3 SPECIAL FLOOD HAZARD AREA MAPS

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Andalusia, IL - Flood Hazards



Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

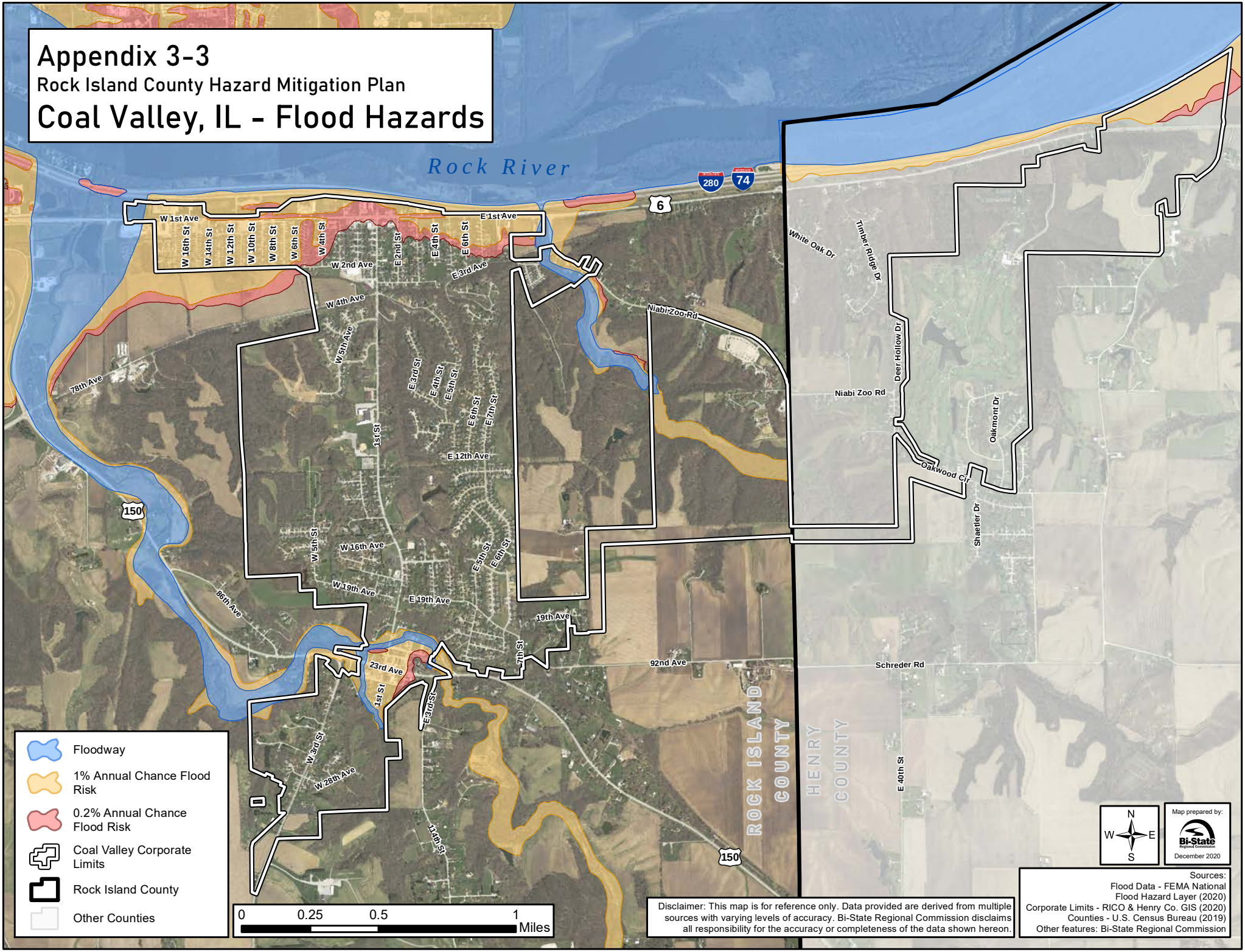
Rock Island County Hazard Mitigation Plan

Carbon Cliff, IL - Flood Hazards

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Coal Valley, IL - Flood Hazards



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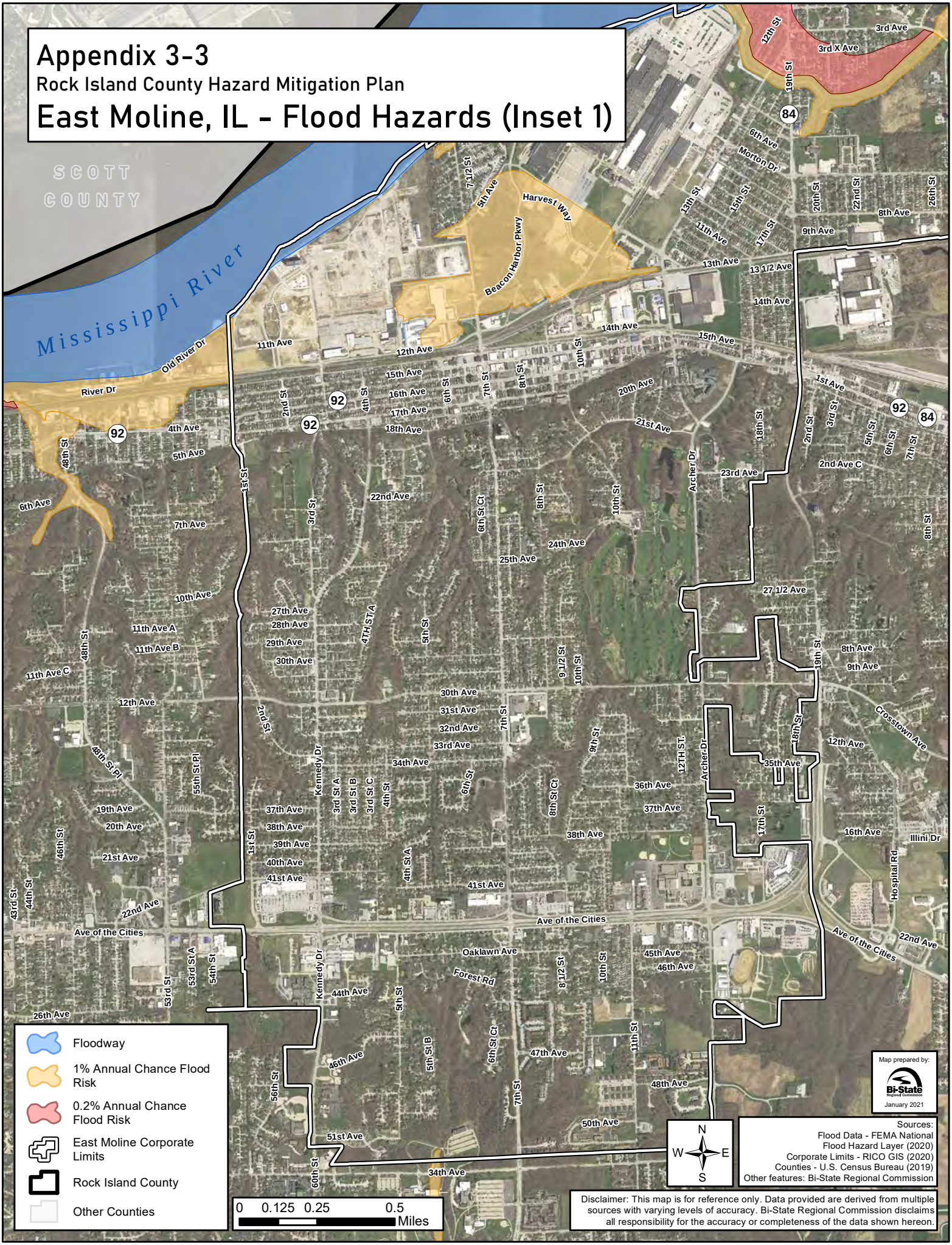
Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO & Henry Co. GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3
Rock Island County Hazard Mitigation Plan
Cordova, IL - Flood Hazards

Appendix 3-3

Rock Island County Hazard Mitigation Plan

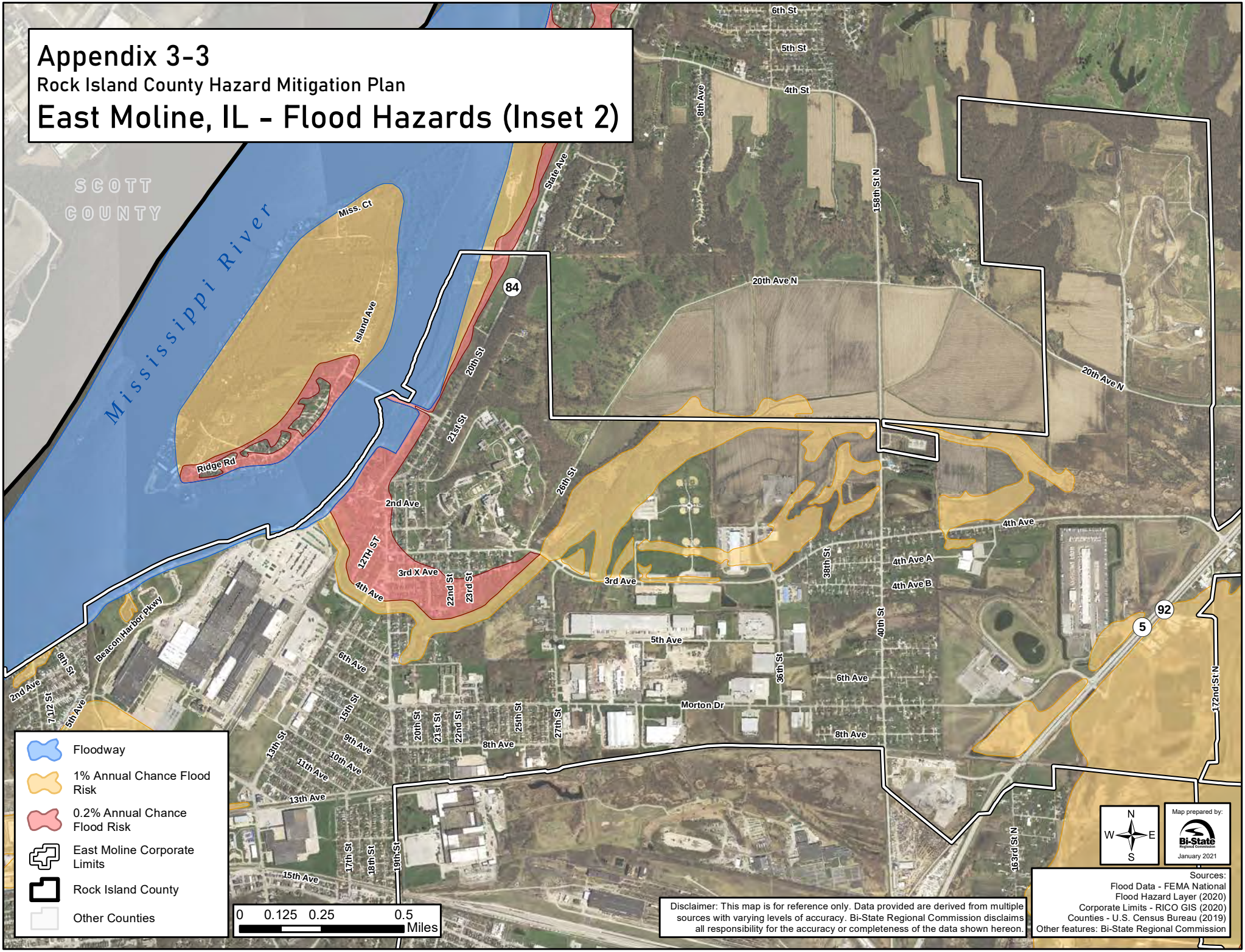
East Moline, IL - Flood Hazards (Inset 1)



Appendix 3-3

Rock Island County Hazard Mitigation Plan

East Moline, IL - Flood Hazards (Inset 2)



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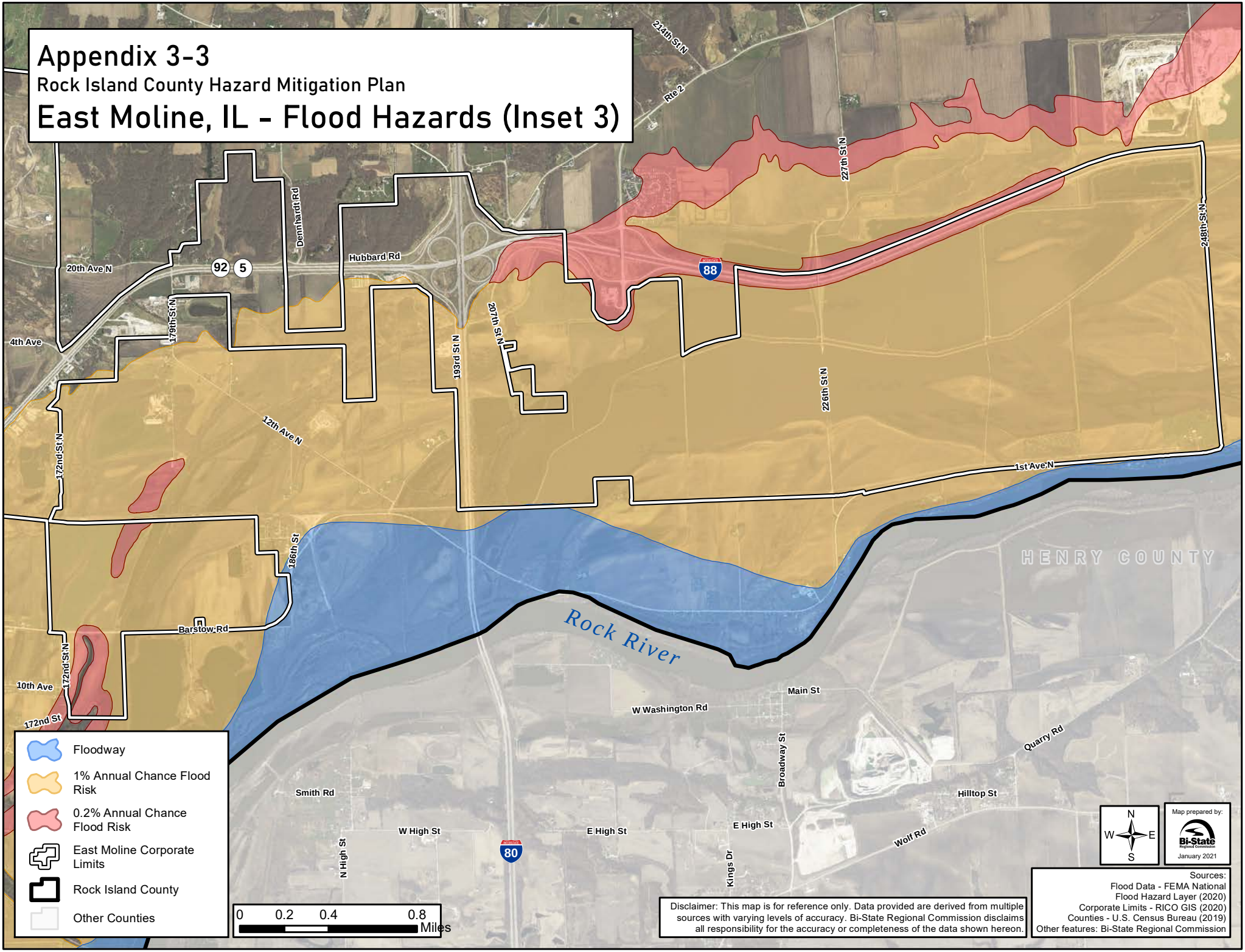
Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

East Moline, IL - Flood Hazards (Inset 3)



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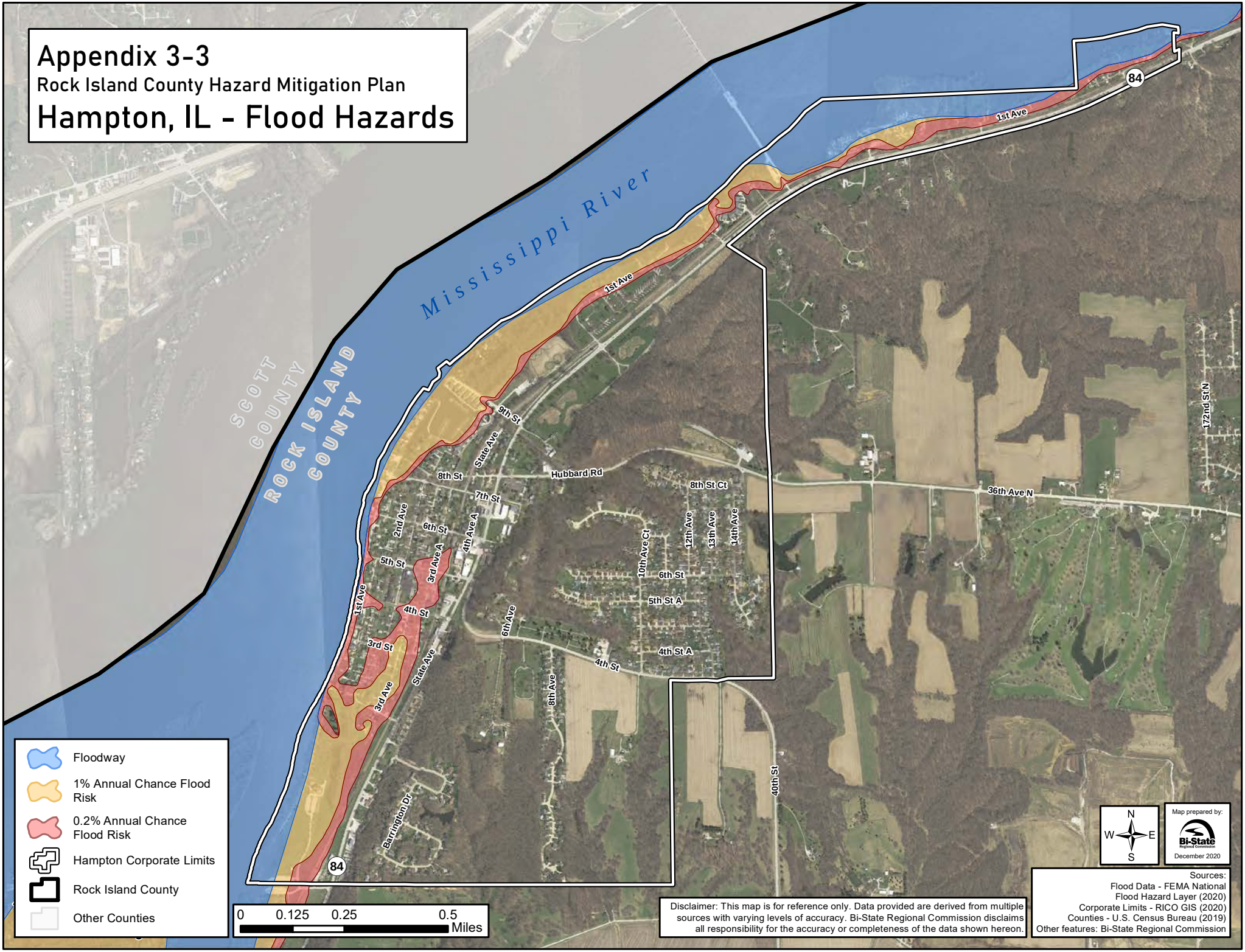
Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Hampton, IL - Flood Hazards



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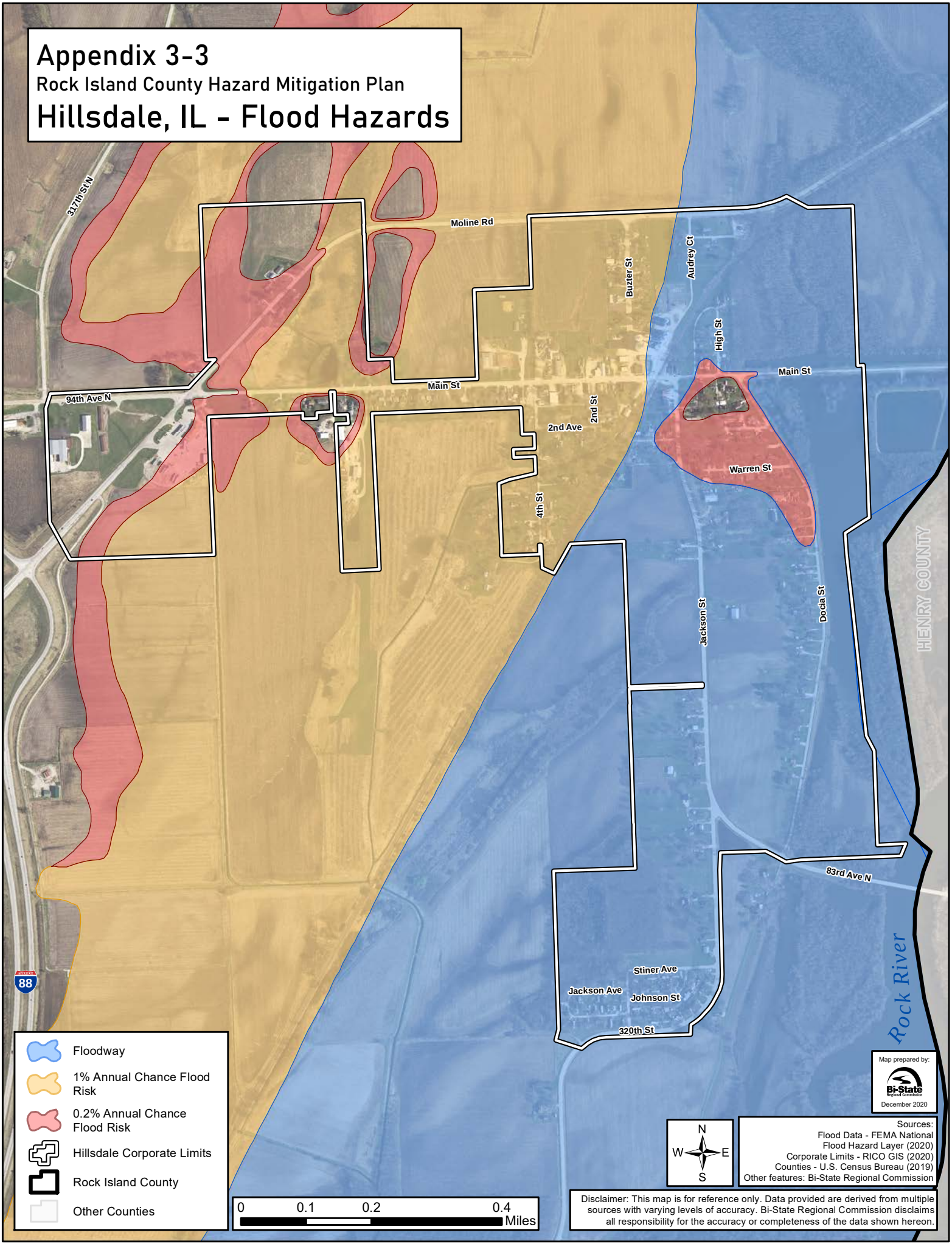
Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

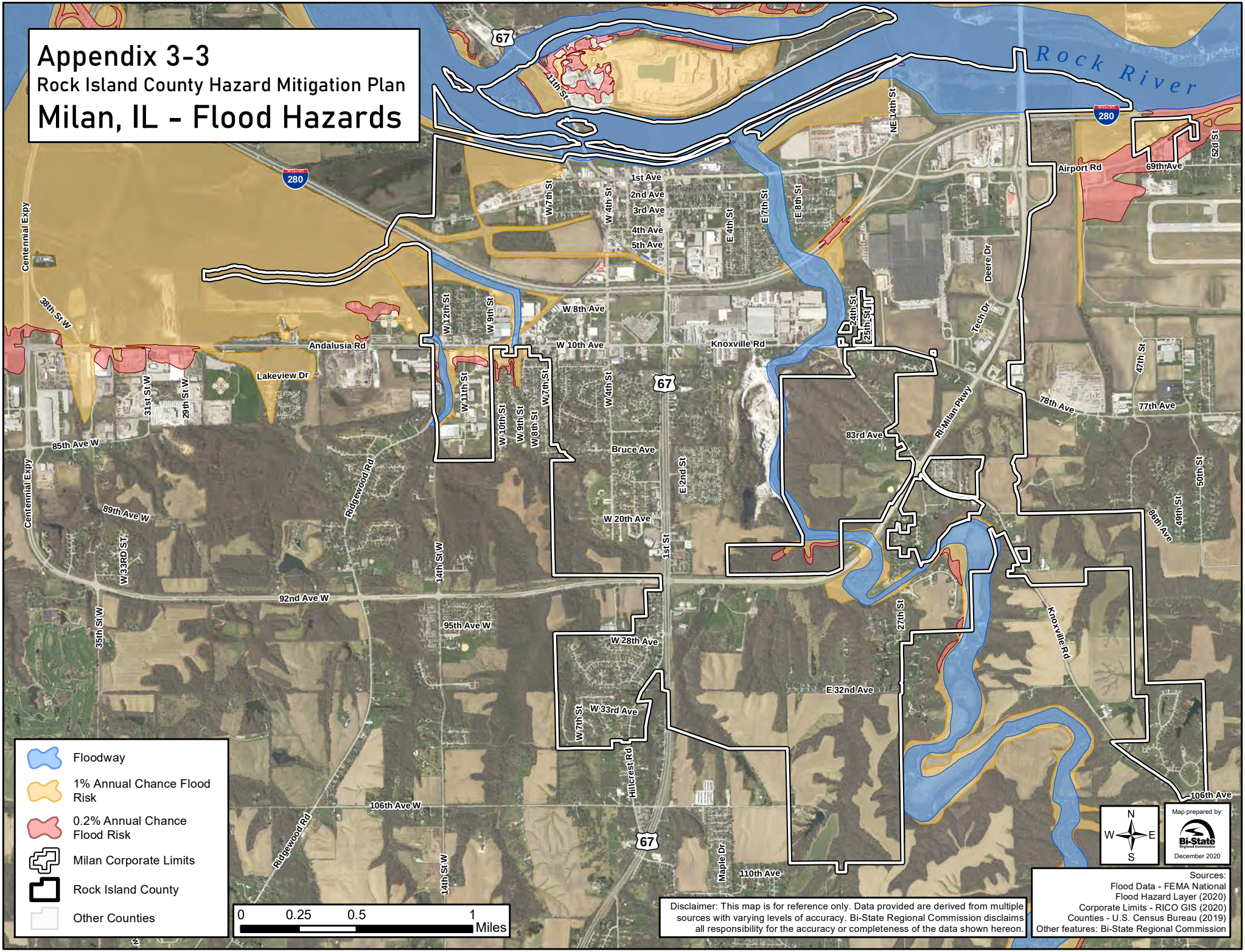
Hillsdale, IL - Flood Hazards



Appendix 3-3

Rock Island County Hazard Mitigation Plan

Milan, IL - Flood Hazards



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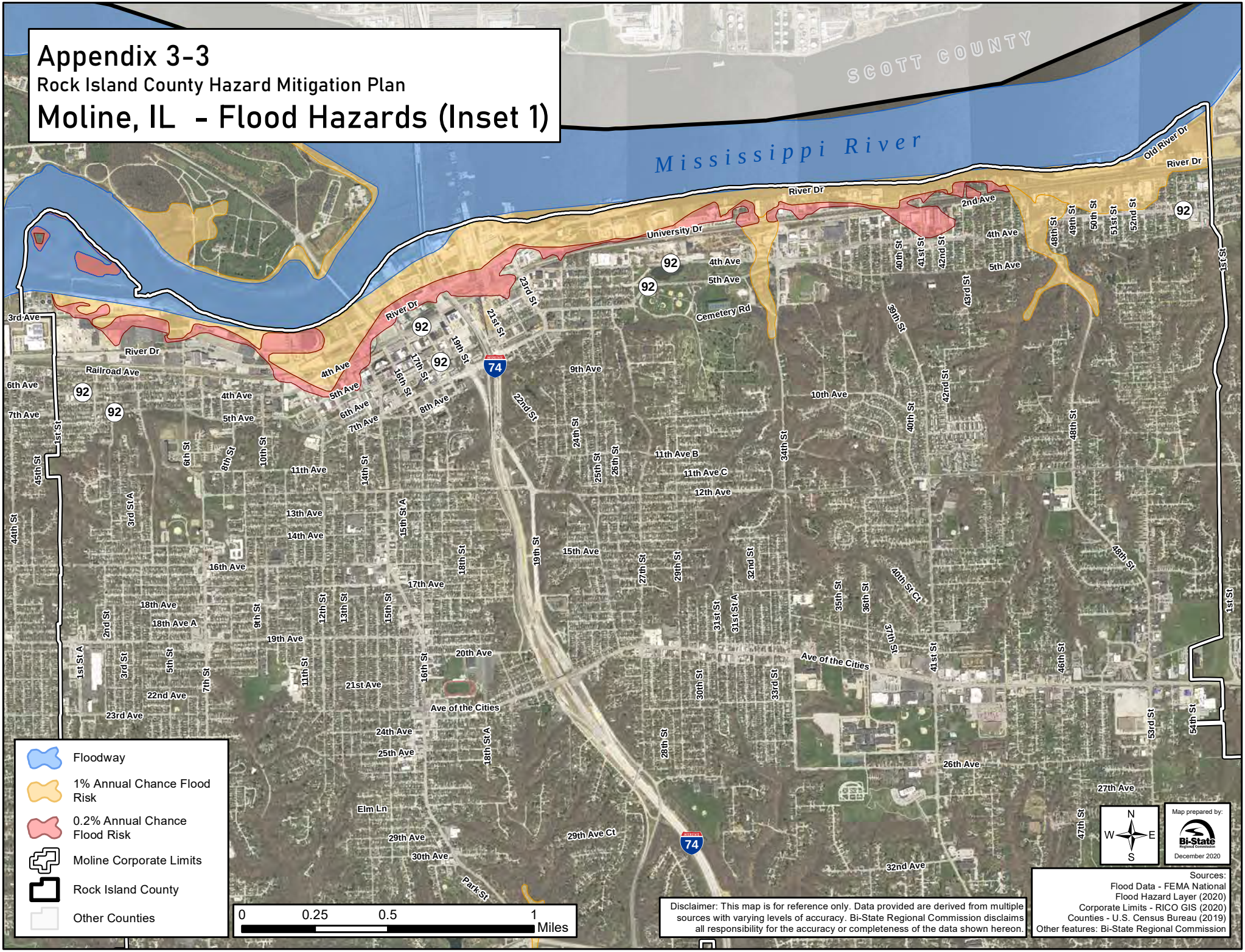
Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Moline, IL - Flood Hazards (Inset 1)



Floodway

1% Annual Chance Flood Risk

0.2% Annual Chance Flood Risk

Moline Corporate Limits

Rock Island County

Other Counties

0 0.25 0.5 1 Miles

N W E S

Map prepared by: Bi-State Regional Commission

December 2020

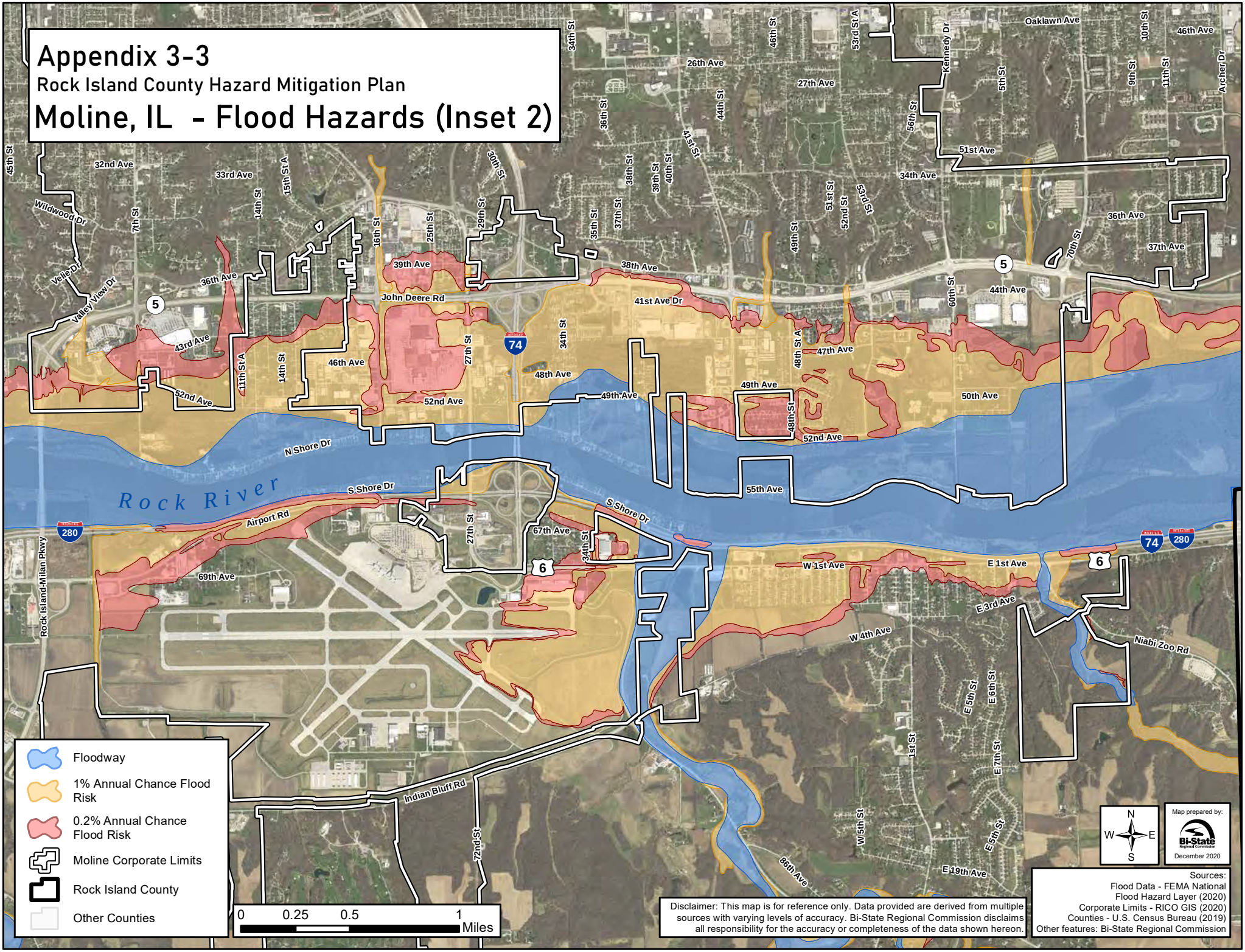
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Moline, IL - Flood Hazards (Inset 2)



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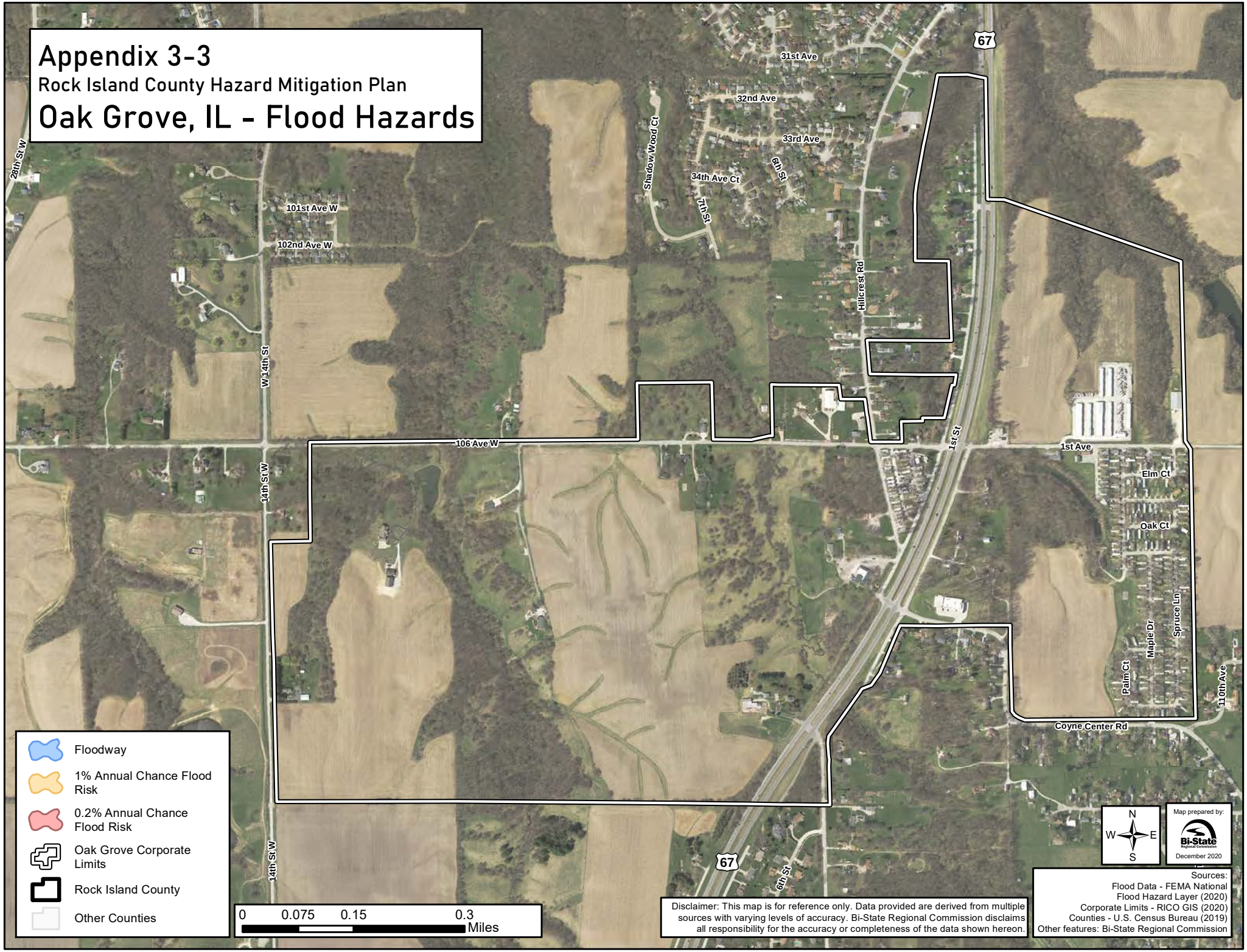
Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Oak Grove, IL - Flood Hazards



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Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

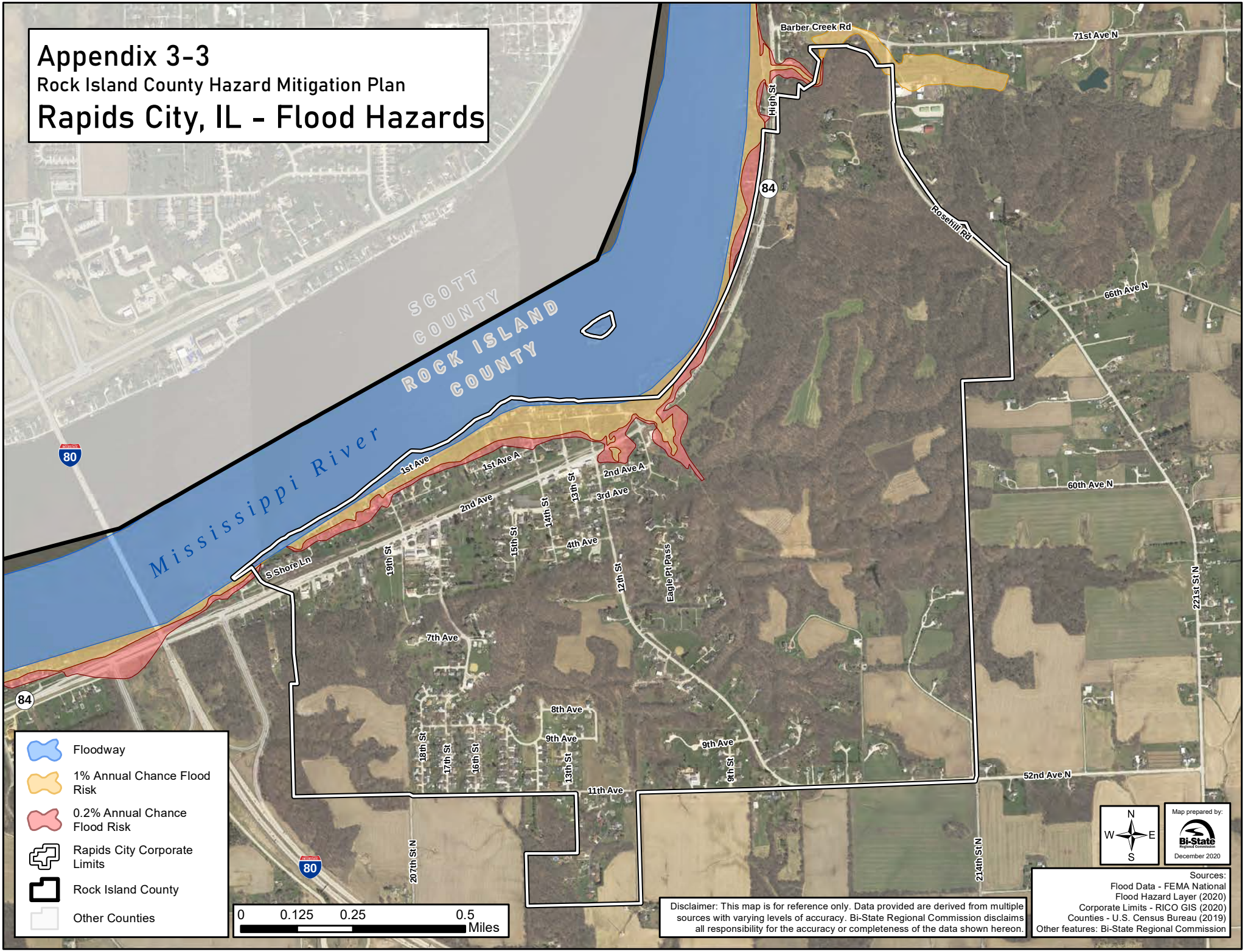
Rock Island County Hazard Mitigation Plan

Port Byron, IL - Flood Hazards

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Rapids City, IL - Flood Hazards



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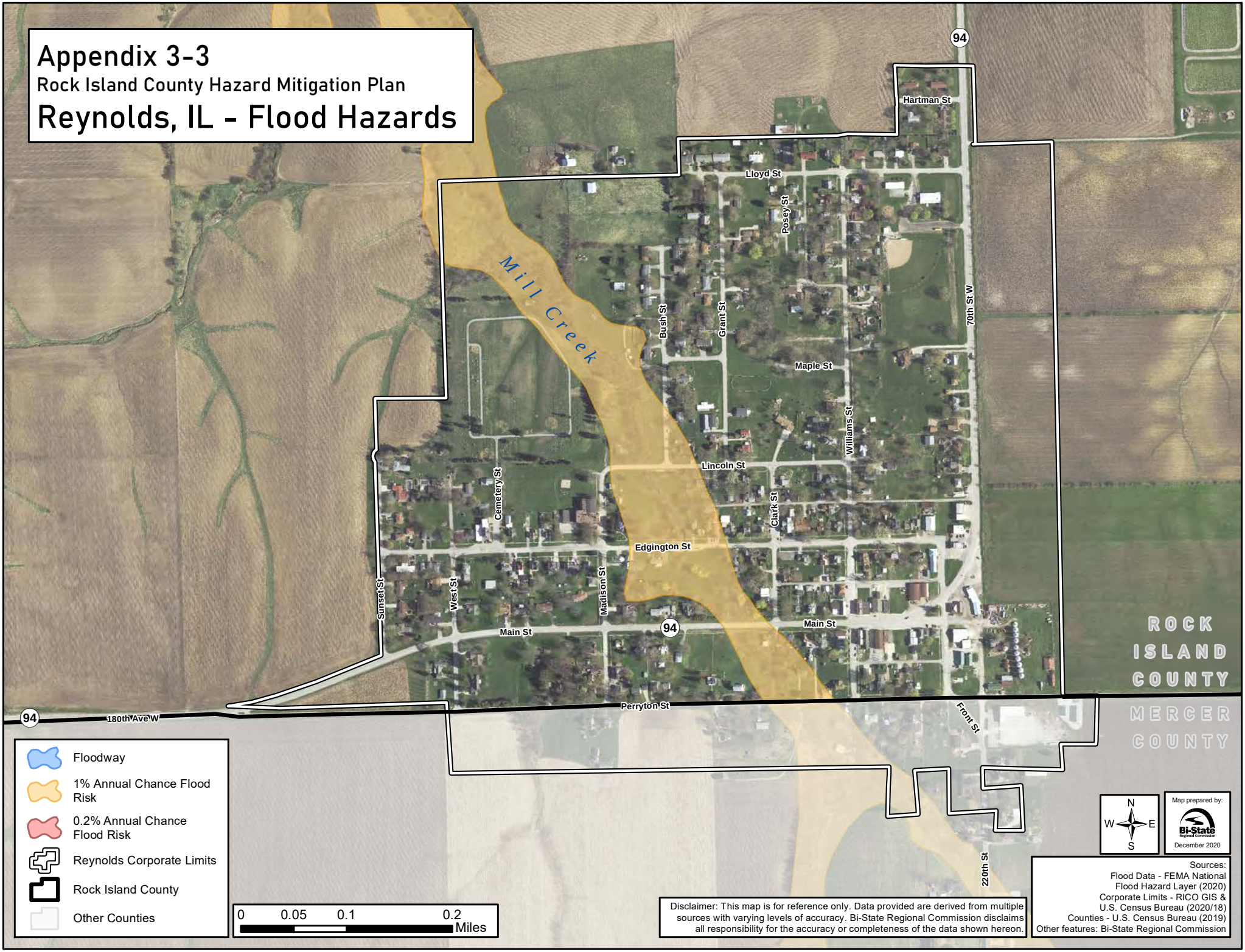
Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

Reynolds, IL - Flood Hazards



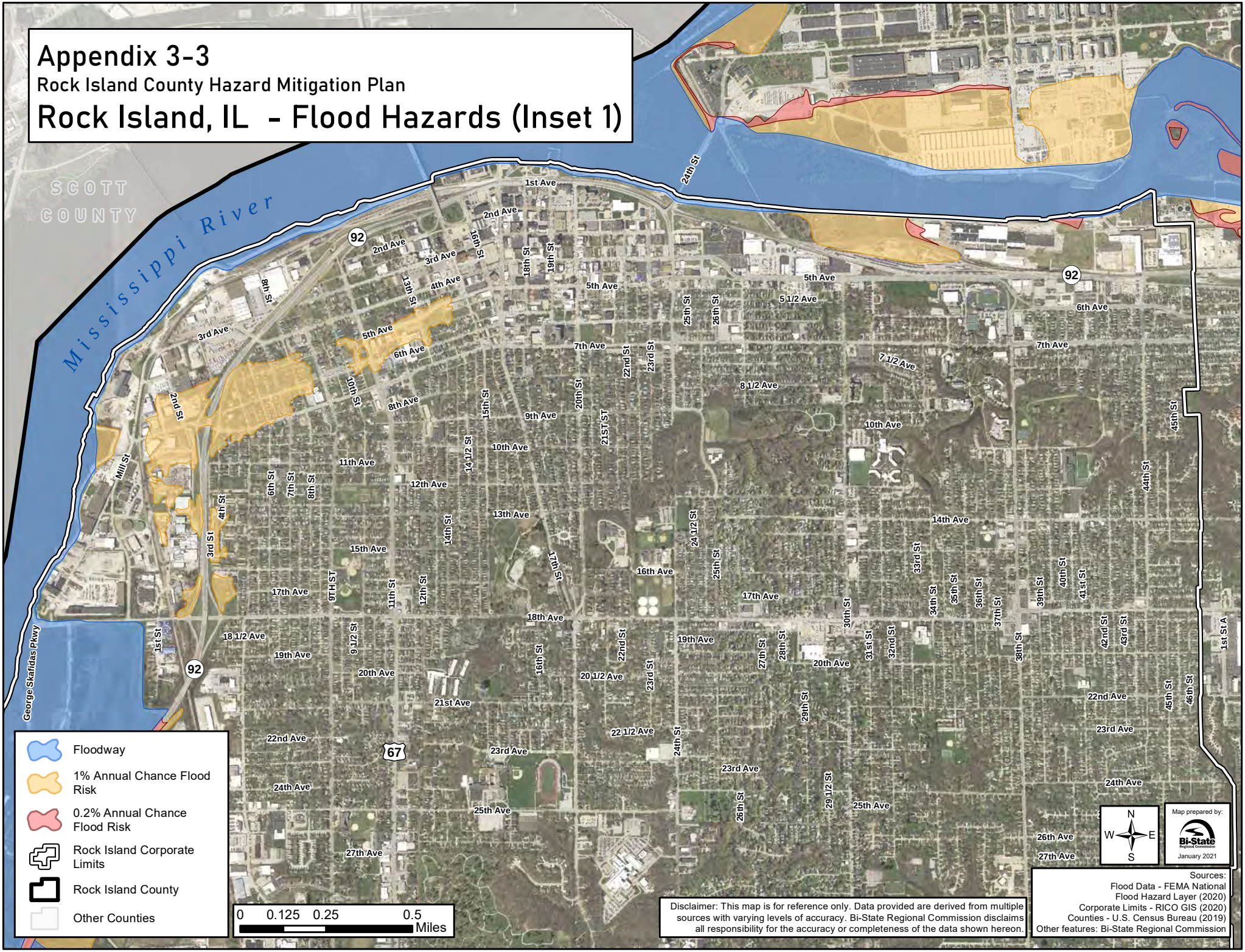
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS & U.S. Census Bureau (2020/18)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

Appendix 3-3

Rock Island County Hazard Mitigation Plan

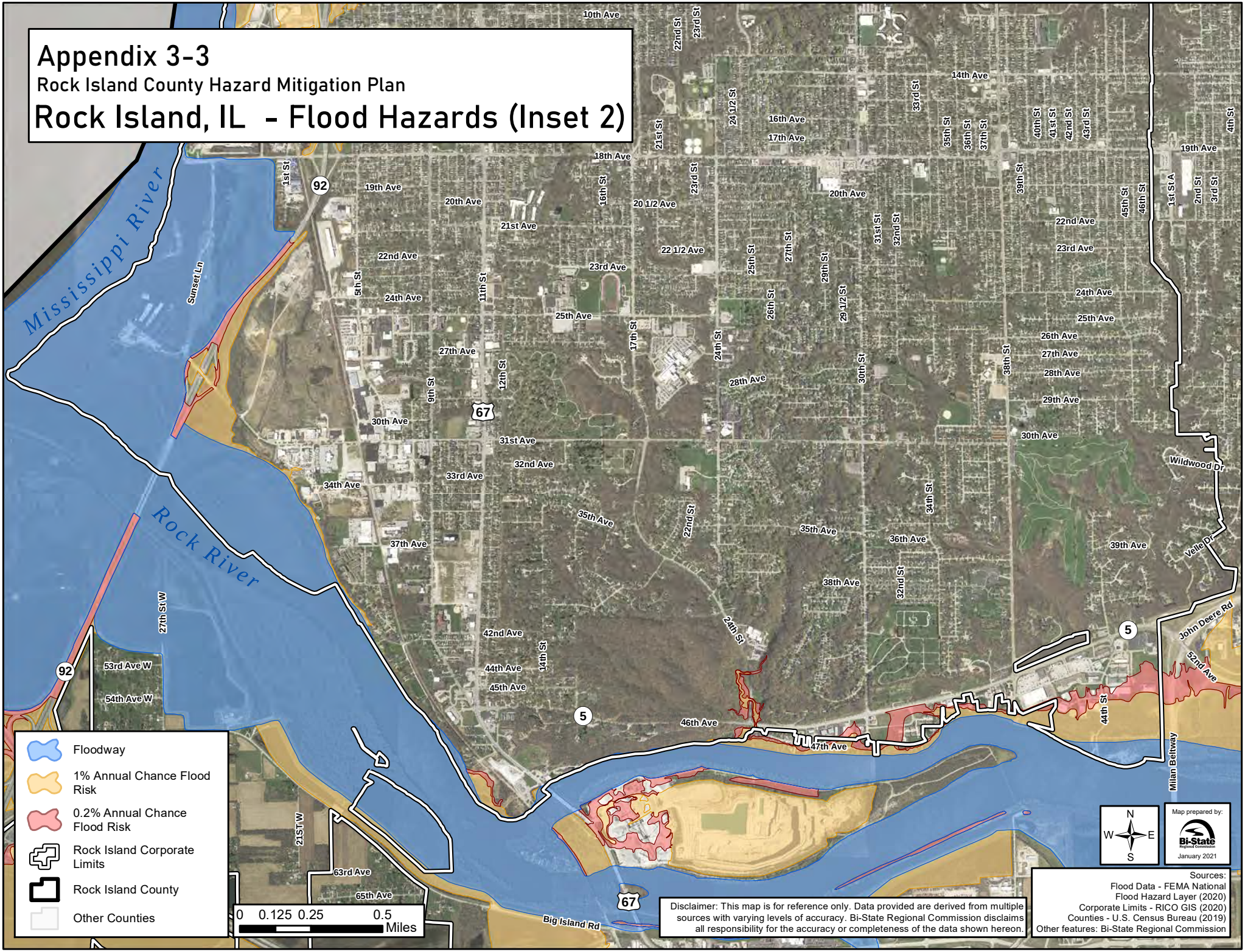
Rock Island, IL - Flood Hazards (Inset 1)



Appendix 3-3

Rock Island County Hazard Mitigation Plan

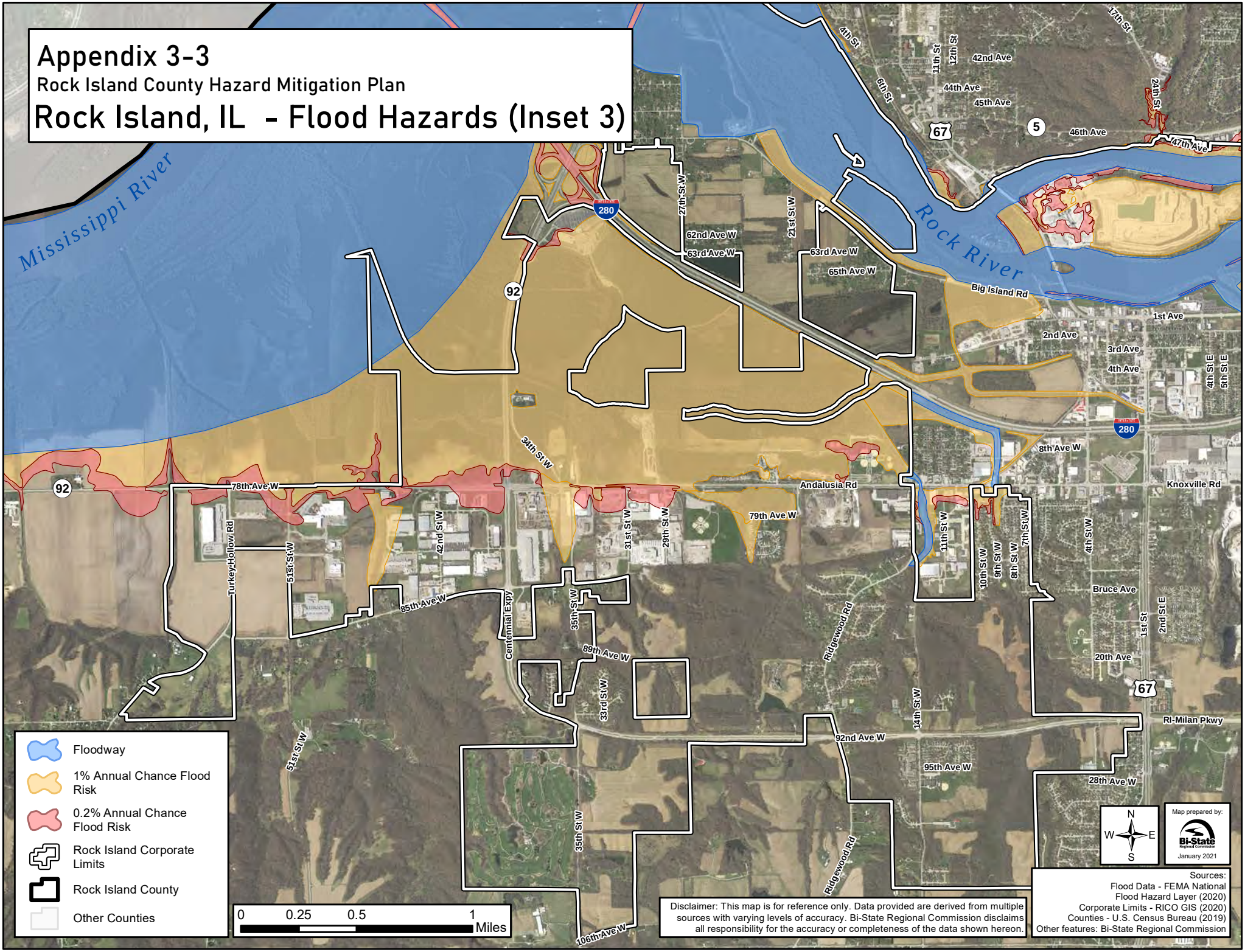
Rock Island, IL - Flood Hazards (Inset 2)



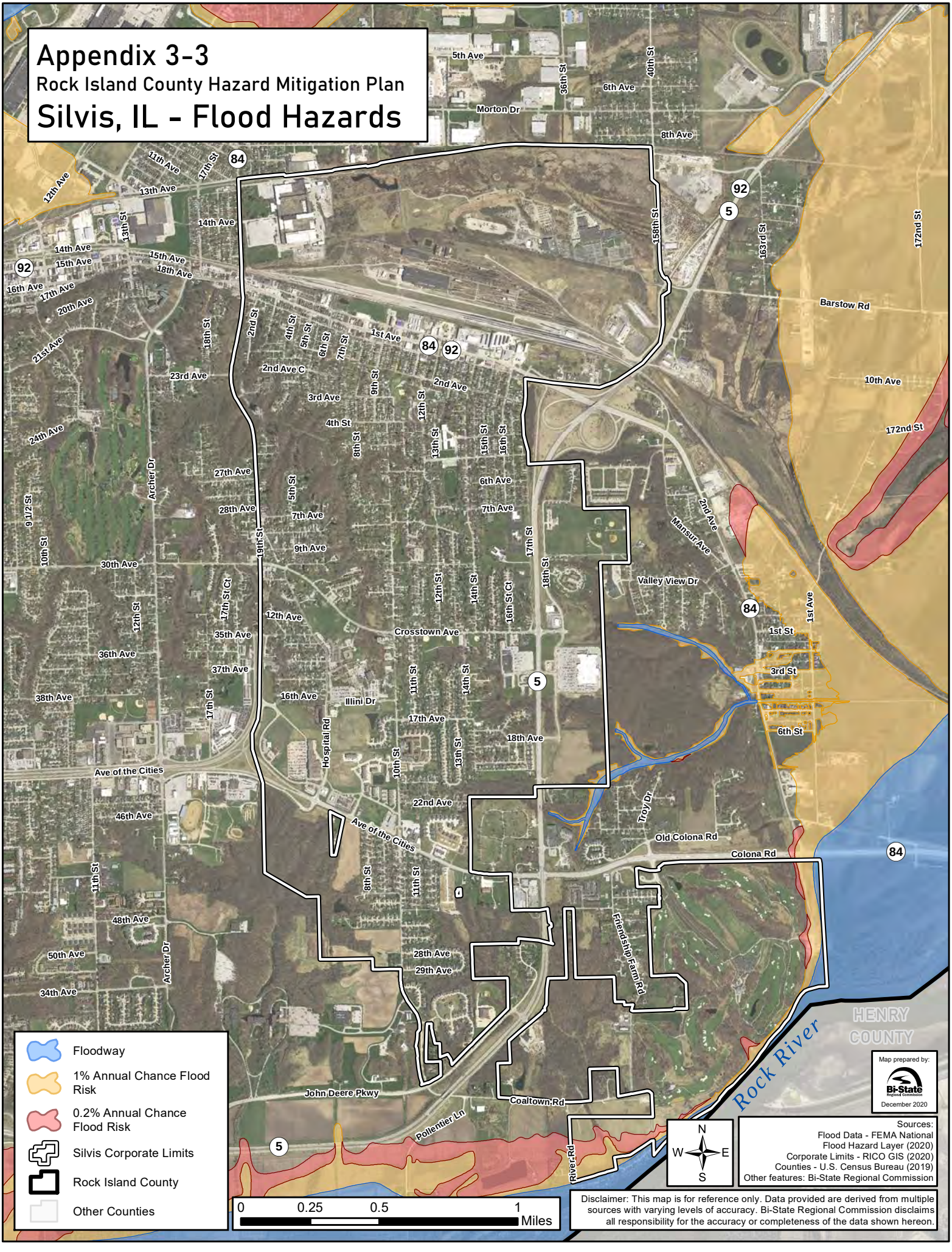
Appendix 3-3

Rock Island County Hazard Mitigation Plan

Rock Island, IL - Flood Hazards (Inset 3)



Appendix 3-3
Rock Island County Hazard Mitigation Plan
Silvis, IL - Flood Hazards



Floodway

1% Annual Chance Flood Risk

0.2% Annual Chance Flood Risk

Silvis Corporate Limits

Rock Island County

Other Counties

0 0.25 0.5 1 Miles

N W E S

Map prepared by: Bi-State Regional Commission December 2020

Sources:
Flood Data - FEMA National Flood Hazard Layer (2020)
Corporate Limits - RICO GIS (2020)
Counties - U.S. Census Bureau (2019)
Other features: Bi-State Regional Commission

APPENDIX 4-1 MITIGATION ACTION TABLES

Community Mitigation Actions

ANDALUSIA	
Action Considered: Obtain levee certification to meet 100-year flood certification guidelines. Possible reconstruction will be needed.	
Comments:	
Benefit:	Assure long-term protection of existing and future development within the protection of the levee system.
Cost/Funding Source:	Costs only estimated at $1,000,000 at this time. Reconstruction needs and final cost estimates will be dependent on levee certification analysis. Major reconstruction needs will require outside funding resources.
Responsible Party:	Maintenance Director
Timeframe for Completion:	2-5 years
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	
Benefit:	Ensures compliance with NFIP and local codes
Cost/Funding Source:	Local
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing
Priority Level:	2

Action Considered: Create a voluntary flood acquisition program and elevation program	
Comments:	
Benefit:	Mitigates flood damage in high risk areas
Cost/Funding Source:	Mitigation Funding (75% FEMA/ 25% Local)
Responsible Party:	Maintenance Director/ County Floodplain Manager
Timeframe for Completion:	Ongoing/ As funding becomes available
Priority Level:	3

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	
Benefit:	Ensures that buildings are constructed and maintained to code requirements

ANDALUSIA	
Cost/Funding Source:	Local
Responsible Party:	Building Inspector
Timeframe for Completion:	Ongoing
Priority Level:	4

Action Considered: Construct safe room at Andalusia Elementary School to provide shelter to vulnerable populations.	
Comments:	This would need to be addressed by Rockridge School District
Benefit:	Provide shelter for students in the event of natural and manmade hazards
Cost/Funding Source:	Mitigation Funding (75% FEMA/ 25% Local)
Responsible Party:	Rockridge School District Superintendent
Timeframe for Completion:	5+ years
Priority Level:	5

Action Considered: Relocate well head out of floodplain and realign distribution system with water tower	
Comments:	Identified as a priority action. Applies to existing and new community assets.
Benefit:	Removes public water supply from threat of flood hazard.
Cost/Funding Source:	Outside funding sources will likely be required due to the substantial cost anticipated.
Responsible Party:	** Illinois Amercian Water** (they purchased our system on May 27, 2020)
Timeframe for Completion:	5+ years
Priority Level:	6

CARBON CLIFF

Action Considered: Alleviate flooding from storm water runoff by designing and installing storm water management improvements encompassing Best Management Practices.	
Comments:	
Benefit:	Assure long-term alleviation from flooding from storm water runoff
Cost/Funding Source:	Costs estimated at Estimated $3.7 million project - Federal and Local Funding - as of 2009 preliminary design plans completed
Responsible Party:	Village President
Timeframe for Completion:	The project began in 2009, and Phase 1 was completed in 2012, and Phase 2 was completed in 2013.
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements.	
Comments:	Village has local Floodplain Ordinance in place
Benefit:	Ensures compliance with NFIP and local codes
Cost/Funding Source:	County Manager
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing
Priority Level:	2

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	Village is currently enforcing Village Ordinances related to building standards
Benefit:	Ensures that buildings are constructed and maintained to code requirements
Cost/Funding Source:	Local
Responsible Party:	Building Inspector
Timeframe for Completion:	Ongoing
Priority Level:	3

Action Considered: Raise 9 properties out of the floodplain.	
Comments:	Carbon Cliff has plans to raise 9 properties out of the floodplain
Benefit:	Mitigates potential flood damage to those 9 properties
Cost/Funding Source:	Still in planning phase; need to assess total cost and potential outside funding sources
Responsible Party:	Local elected official and Village Board

CARBON CLIFF	
Timeframe for Completion:	Ongoing/ As funding becomes available
Priority Level:	4

Action Considered: Reconstruct 1st Avenue culvert which needs upgrading.	
Comments:	Culvert needs upgrading to handle river flooding
Benefit:	Upgrading culvert would increase its capacity to handle more intense river flooding
Cost/Funding Source:	Still in planning phase; need to assess total cost and potential outside funding sources
Responsible Party:	Local elected official and Village Board
Timeframe for Completion:	Ongoing/ As funding becomes available
Priority Level:	5

Action Considered: Bank stabilization east of the river.	
Comments:	
Benefit:	Mitigates potential flood damage along the bank of the river
Cost/Funding Source:	Still in planning phase; need to assess total cost and potential outside funding sources
Responsible Party:	Local elected official and Village Board
Timeframe for Completion:	Ongoing/ As funding becomes available
Priority Level:	6

CARBON CLIFF-BARSTOW SCHOOL DISTRICT #36	
Action Considered: Continue to promote and educate on proper hand washing practices for students and staff.	
Comments:	This is already done within the school.
Benefit:	Proper hand washing to reduce the spead of Covid 19
Cost/Funding Source:	No additional costs
Responsible Party:	School Nurse
Timeframe for Completion:	Ongoing
Priority Level:	1

Action Considered: Install backup generators at Eagle Ridge School.	
Comments:	School is a designated center for disaster relief intervention
Benefit:	Community members will have a place with power for shelter and food
Cost/Funding Source:	District funds generated by 1% sales tax revenue
Responsible Party:	Superintendent and Director of Maintenance
Timeframe for Completion:	Four to Five years
Priority Level:	1

COAL VALLEY

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	Village is currently using (Year), etc. 2012 IBC and IRC as amended by Village Ordinances
Benefit:	Ensures that buildings are constructed and maintained to code requirements
Cost/Funding Source:	Village Funds
Responsible Party:	Building Official officer(s)
Timeframe for Completion:	Already in compliance and update every 3 years
Priority Level:	1

Action Considered: Ensure that mobile homes have adequate tie-downs.	
Comments:	Village uses ICC and IRC code for Mobile Home Parks
Benefit:	Ensures mobile homes are properly secured and installed in case of high water or winds
Cost/Funding Source:	Village funds/ Mobile Home Park owner
Responsible Party:	Building Official
Timeframe for Completion:	Completed
Priority Level:	2

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	Village has local Floodplain Ordinance in place
Benefit:	Ensures compliance with NFIP and local codes
Cost/Funding Source:	Village Funds
Responsible Party:	Director of Roads and Parks
Timeframe for Completion:	Completed
Priority Level:	3

Action Considered: Provide seasonal hazards information for residents in Village's quarterly newsletters	
Comments:	As needed we can apply to our local Newsletter
Benefit:	Keeps residents informed on what to look for and what actions to take in times of hazards

COAL VALLEY

Cost/Funding Source:	Village Funds
Responsible Party:	Village staff
Timeframe for Completion:	On going
Priority Level:	4

Action Considered: Construct safe room at Coal Valley Municipal Building to provide shelter to vulnerable populations.

Comments:	Village Hall is currently a warming and cooling shelter with a backup generator
Benefit:	Provides shelter to residents without services. Look at installing safe room in the future if funds are available
Cost/Funding Source:	Mitigation Funding (FEMA 75%/ Local 25%)
Responsible Party:	Building Official
Timeframe for Completion:	Completed and next 20 years on safe room
Priority Level:	5

CORDOVA

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	Village is currently enforcing Village Ordinances related to building standards
Benefit:	Ensures that buildings are constructed and maintained to code requirements
Cost/Funding Source:	Village Funds
Responsible Party:	Building Official officer(s)
Timeframe for Completion:	Already in compliance
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	Village has local Floodplain Ordinance in place
Benefit:	Ensures compliance with NFIP and local codes
Cost/Funding Source:	Village Funds
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Completed
Priority Level:	2

Action Considered: Purchase generators for emergency backup	
Comments:	Village would like to purchase generators for emergency backup
Benefit:	Back-up generators would assure continuation of essential services during a power outage due to hazard events.
Cost/Funding Source:	Village funds: The cost would be $66,000 for lift station and $71,000 for water tower and well pump based on electrical contractor estimate of site-specific needs.
Responsible Party:	Village Board?
Timeframe for Completion:	As of Summer 2015, 2 of 6 sewer lift stations has had upgrades
Priority Level:	3

Action Considered: New Action…	
Comments:	
Benefit:	

CORDOVA
Cost/Funding Source: **Responsible Party:** **Timeframe for Completion:** **Priority Level:**

EAST MOLINE

Action Considered: Improve floodgates B, C, D, and E on levee system.	
Comments:	
Benefit:	Provides property protection and life saving.
Cost/Funding Source:	Estimated $1,000,000. Capital Improvement Plan
Responsible Party:	City Engineer
Timeframe for Completion:	Years 1-3
Priority Level:	

Action Considered: Automate floodgate and gate wells monitoring system using SCADA.	
Comments:	SCADA is Supervisory Control and Data Acquisition and provides control of remote equipment
Benefit:	Would provide real time information on levee system and levee/pump failures
Cost/Funding Source:	No cost estimate at this time. Funding through Capital Improvement Plan or outside grant source
Responsible Party:	City Engineer
Timeframe for Completion:	Year 2-3
Priority Level:	

Action Considered: Upgrade tornado sirens with SCADA.	
Comments:	SCADA is Supervisory Control and Data Acquisition and provides control of remote equipment
Benefit:	Minimizes delay in sounding siren; can determine if power is lost or battery back-up has died.
Cost/Funding Source:	No cost estimate at this time. Funding through Capital Improvement Plan or outside grant source
Responsible Party:	Fire Chief
Timeframe for Completion:	Year 3
Priority Level:	

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements.	
Comments:	
Benefit:	Assists in reducing or eliminating risk and losses from flood related hazards.
Cost/Funding Source:	No additional costs. Staff Time

EAST MOLINE

Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing; Years 1-5
Priority Level:	2

Action Considered: Promote use and purchasing of NOAA radios to vulnerable populations.	
Comments:	
Benefit:	Provides advanced warning of a hazard event.
Cost/Funding Source:	Approximately $40 per radio. Would be purchased individually
Responsible Party:	Fire Chief
Timeframe for Completion:	Years 1-5
Priority Level:	6

Action Considered: Enforce and update building codes to current International Code Series.	
Comments:	Identified as a priority action. Applies to existing and new community assets.
Benefit:	Ensures both new construction and rehabilitated buildings are safe by a standard set of requirements and guidelines
Cost/Funding Source:	No additional costs. Staff Time
Responsible Party:	Building Official
Timeframe for Completion:	Every 3-6 years
Priority Level:	3

Action Considered: Ensure manufactured homes have adequate tie downs.	
Comments:	
Benefit:	Mitigates vulnerability during tornadoes and high winds
Cost/Funding Source:	No additional costs. Staff time.
Responsible Party:	Building Inspector
Timeframe for Completion:	Ongoing; Years 1-5
Priority Level:	7
Action Considered: Replace/repair Suger Creek Pumps 1-3	
Comments:	
Benefit:	Mitigates flooding/ flash flooding of suger creek into residential, comercial, and public utility areas.
Cost/Funding Source:	Grant/Capitol Improvement Plan $780,000.00
Responsible Party:	City Engineer

EAST MOLINE	
	ongoing 1-5 years
Timeframe for Completion:	
Priority Level:	1

Action Considered: Home buy out and demolition of flood prone residential neighborhood.	
Comments:	
Benefit:	Mitigates flooding/ flash flooding of suger creek into residential, comercial, and public utility areas.
Cost/Funding Source:	Grant-IEMA Hazard Mitigation Grant program
Responsible Party:	City Engineer
Timeframe for Completion:	ongoing 1-5 years
Priority Level:	4

Action Considered : Detention pond construction at site of flood prone neighborhood	
Comments:	
Benefit:	Mitigates flooding/ flash flooding of suger creek into residential, comercial, and public utility areas.
Cost/Funding Source:	Grant-IEMA Hazard Mitigation Grant program
Responsible Party:	City Engineer
Timeframe for Completion:	ongoing 1-5 years
Priority Level:	5

HAMPTON

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	Village is currently enforcing Village Ordinances related to building standards
Benefit:	Ensures that buildings are constructed and maintained to code requirements
Cost/Funding Source:	Local
Responsible Party:	Building Inspector
Timeframe for Completion:	Years 1-5
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	Village has local Floodplain Ordinance in place
Benefit:	Ensures compliance with NFIP and local codes
Cost/Funding Source:	Local
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Years 1-5
Priority Level:	2

Action Considered: Create a voluntary flood acquisition program near the City Park on 8th St	
Comments:	
Benefit:	Mitigates flood damage in high risk areas
Cost/Funding Source:	Mitigation Funding (FEMA 75%/ Local 25%)
Responsible Party:	Chief Elected Official
Timeframe for Completion:	Ongoing/ As funding becomes available
Priority Level:	3

Action Considered: Purchase two warning sirens @ $16,000 each	
Comments:	Identified as a priority action. Applies to both existing and new community assets.
Benefit:	Improve warning system for natural hazards.

HAMPTON	
Cost/Funding Source:	The Village purchased 3 storm sirens at the cost of 38,342.43; through grant funding. Installation costs are unknown.
Responsible Party:	Village Board
Timeframe for Completion:	Completed
Priority Level:	4

HAMPTON SCHOOL DISTRICT #29	
Action Considered: Educate Hampton 29 families on proper handwashing and cleanliness procedures to reduce the spread of infectious disease	
Comments:	The pandemic has caused us to rethink much of what we do to keep our families safe
Benefit:	The ability to remain in school and stay virus free
Cost/Funding Source:	Federal funding Grants etc.
Responsible Party:	Scott McKissick
Timeframe for Completion:	Ongoing
Priority Level:	1

Action Considered: Work with the county on Haz Mat plan to insure the safety of students and staff	
Comments:	
Benefit:	
Cost/Funding Source:	
Responsible Party:	
Timeframe for Completion:	TBD
Priority Level:	2

HILLSDALE

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	Village is currently enforcing Village Ordinances related to building standards
Benefit:	Ensures that buildings are constructed and maintained to code requirements
Cost/Funding Source:	Local
Responsible Party:	Building Inspector
Timeframe for Completion:	Years 1-5
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	Village has local Floodplain Ordinance in place
Benefit:	Ensures compliance with NFIP and local codes
Cost/Funding Source:	Local
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Years 1-5
Priority Level:	2

Action Considered: Exploring levee improvements to meet 100-year flood certification guidelines. Possible reconstruction will be needed.	
Comments:	
Benefit:	Mitigates flood damage in high risk areas
Cost/Funding Source:	Mitigation Funding (FEMA 75%/ Local 25%)
Responsible Party:	Chief Elected Official
Timeframe for Completion:	Ongoing/ As funding becomes available
Priority Level:	3

Action Considered: Upgrade existing control system for local sirens	
Comments:	Identified as a priority action. Applies to both existing and new community assets.
Benefit:	Improve warning system for natural hazards.

HILLSDALE	
Cost/Funding Source:	Costs estimated at $16,000 for each of the two warning sirens.
Responsible Party:	Village Board
Timeframe for Completion:	Ongoing as funding is identified
Priority Level:	4

Action Considered: Design and elevate sewage treatment pond embankments and infrastructure above the base flood elevation.	
Comments:	sewer treatment pond if subject to flooding, raising the elevation deemed most resilient and cost effective approach to address the flood risk
Benefit:	reduce/eliminate flood risk for sewer treatment pond
Cost/Funding Source:	$845,500 Grant application for 80/20 match
Responsible Party:	IEMA /Village of Hillsdale sewer and general fund
Timeframe for Completion:	not known at this time
Priority Level:	Medium priority (high benefit, high cost)

MILAN	
Action Considered: Update levee certification	
Comments:	Added 2 pumps in 2011 that have a 5-6k gallon/min capacity
Benefit:	Protection to Milan residents and compliance with FEMA
Cost/Funding Source:	Village of Milan
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	
Benefit:	Compliance and Protection for Milan residents
Cost/Funding Source:	Local
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing
Priority Level:	2

Action Considered: Establish written procedures for severe weather and hazard eventsEstablish written procedures for severe weather and hazard events	
Comments:	Milan Citizen Corp has on-going community awareness materials, and conducts mock drills.
Benefit:	Community Education/Awareness
Cost/Funding Source:	Citizen Corp
Responsible Party:	Village of Milan along with Citizen Corp
Timeframe for Completion:	Ongoing
Priority Level:	3

Action Considered: Ensure that mobile homes have adequate tie downs	
Comments:	Inspections department conducts a visual set before skirting is allowed
Benefit:	Adherence to local ordinance

MILAN	
Cost/Funding Source:	Local
Responsible Party:	Building Inspector
Timeframe for Completion:	Ongoing
Priority Level:	4

MOLINE

Action Considered: Relocate stormwater pump near 49th Street and construct an earthen berm	
Comments:	Phase I engineering is complete and grants have been applied for.
Benefit:	Reduce/Eliminate flooding for areas north of tracks, prepare for passenger rail.
Cost/Funding Source:	Local funds as match for possible grant funding.
Responsible Party:	Pubilc Works - City Engineer
Timeframe for Completion:	2-5 years
Priority Level:	1

Action Considered: Install two new sluice gates (on 60" pipe and another 84" pipe) and two new pump stations by Moline City Water Department	
Comments:	Increase flood control for property at old I-74 biridge.
Benefit:	Improve capacity and pumping ability for flood waters
Cost/Funding Source:	Unknown/Not identified
Responsible Party:	Public works - City Engineer - Stormwater Utility
Timeframe for Completion:	3-6 years
Priority Level:	2

Action Considered: Install additional stormwater pump at the 16th Street stormwater station to prevent flooding of River Drive near 15th and 16th Streets	
Comments:	Additional pump to increase capacity and relieve downtown flooding during flash flood events.
Benefit:	Increase control of flooding from large rain events.
Cost/Funding Source:	Unknown/Local funding
Responsible Party:	Public works - City Engineer - Stormwater Utility
Timeframe for Completion:	1-3 years
Priority Level:	3

Action Considered: Install/replace rock (rip-rap) on the shoreline in Ben Butterworth Memorial Parkway	
Comments:	Ongoing maintenance of river front along parkway.
Benefit:	Maintain attractive shoreline, reduce erosion, and improved sediment control.

MOLINE

Cost/Funding Source:	Minimal cost / Local funds possibly reimbursed by FEMA
Responsible Party:	Public Works
Timeframe for Completion:	Ongoing
Priority Level:	5

Action Considered: Construct secondary road to provide access to businesses along 48th Avenue

Comments:	Possible partnership with IDOT when I-74 and JD Road intersection is completed.
Benefit:	Provide alternative access to 48th Ave during Rock River flooding
Cost/Funding Source:	Estimate is very preliminary at $3 Million, funding is not determined
Responsible Party:	Public Works - City Engineer
Timeframe for Completion:	4-8 years
Priority Level:	6

Action Considered: Pave the alley parallel to River Drive east of 34th Street to provide secondary access to businesses

Comments:	Project will be included in our planned CIP program.
Benefit:	Provide access to the businesses along River Drive when River Drive is flooded.
Cost/Funding Source:	Preliminary estimate is $50,000, funding will be local.
Responsible Party:	Public Works - City Engineer
Timeframe for Completion:	2-4 years
Priority Level:	4

Action Considered: 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 as they are issued.

Comments:	The City of Moline has historically adopted the model code provided by the Illinois Department of Natural Resources, Division of Water Resources.
Benefit:	Assists in reducing or eliminating risk and losses from flood related hazards.
Cost/Funding Source:	No additional costs. Staff Time
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing; Years 1-5

MOLINE	
Priority Level:	1

Action Considered: Maintain Community Rating System at current class level.	
Comments:	Currently Class 8
Benefit:	Provides Flood Insurance Premium discount for policies within Moline
Cost/Funding Source:	Staff Time
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing: Years 1-5
Priority Level:	4

Action Considered: Secure outside funding to update and enhance City's Emergency Services Preparedness Plan	
Comments:	
Benefit:	Provides coordination of city services; reduces time and resources needed during a hazard event.
Cost/Funding Source:	Has not been identified
Responsible Party:	Fire Chief
Timeframe for Completion:	Year 2
Priority Level:	2

Action Considered: Enforce and update building codes to current International Code Series	
Comments:	Adopt new codes every 3-6 years.
Benefit:	Ensures both new construction and rehabilitated buildings are safe by a standard set of requirements and guidelines
Cost/Funding Source:	No additional costs. Staff Time
Responsible Party:	Building Official
Timeframe for Completion:	Every 3-6 years
Priority Level:	3

Action Considered: Implement voluntary flood acquisition and mitigation programs on both Mississippi and Rock Rivers as needed	
Comments:	Property buyouts may be considered by the City Council upon request. Decisions are dependent upon availibility of funding and property or community beneft (i.e. park/permanent open space)

MOLINE	
Benefit:	Removes structures from floodplain or elevates structures above base flood elevation
Cost/Funding Source:	Increase Cost of Compliance; FEMA grants may be needed
Responsible Party:	Floodplain Manager and Building Official
Timeframe for Completion:	Dependent on need and grant funding availability
Priority Level:	5

Action Considered: New Action…
Comments:
Benefit:
Cost/Funding Source:
Responsible Party:
Timeframe for Completion:
Priority Level:

MOLINE-COAL VALLEY SCHOOL DISTRICT 40	
Action Considered: Continue to promote and educate on proper hand washing practices for students and staff.	
Comments:	This is already done within the schools.
Benefit:	Proper hand washing reduced the spread of infectious disease.
Cost/Funding Source:	No additional costs. Staff Time
Responsible Party:	School Nurses
Timeframe for Completion:	Ongoing
Priority Level:	1

Action Considered: Work with Rock Island County Emergency Management to identify the hazardous substances near schools and create shelter in place or evacuation plans as needed	
Comments:	Will coordinate with Rock Island County EMA
Benefit:	Helps the school district be more aware of their vulnerabilities to hazardous substances near their schools. Planning ahead will help reduce time to respond to a hazardous material incident.
Cost/Funding Source:	No additional costs. Staff Time
Responsible Party:	Director of Operations
Timeframe for Completion:	Year 1-2
Priority Level:	2

Action Considered: Construct safe rooms in new or substantially expanded school buildings as financially feasible.	
Comments:	For new and substantially expanded buildings only
Benefit:	Live saving measure
Cost/Funding Source:	Depends on the number of students and staff in building. Mitigation Funding (75% FEMA/ 25% Local)
Responsible Party:	Director of Operations
Timeframe for Completion:	As projects are discussed.
Priority Level:	3

ORION COMMUNITY UNIT SCHOOL DISTRICT 223	
Action Considered: Install backup generators at Orion High School, Orion Middle School, and Orion Elementary School.	
Comments:	High School is a designated center for disaster relief intervention
Benefit:	Community members will have a place with power for shelter and food
Cost/Funding Source:	District funds generated by 1% sales tax revenue
Responsible Party:	Superintendent and Director of Maintenance
Timeframe for Completion:	OHS is wired to accept a generator
Priority Level:	1

Action Considered: Install safety grate on storm water pipe located at Orion Middle School.	
Comments:	Large drainage ditch produces an amount of water pressure into pipe that is dangerous
Benefit:	Safety precaution will prevent injury to children playing in that retention area after rain
Cost/Funding Source:	District funds generated by 1% sales tax revenue
Responsible Party:	Superintendent and Director of Maintenance
Timeframe for Completion:	Maintenance will be welding cover/cage
Priority Level:	2

Action Considered: Divert storm water runoff at Orion High School from adjacent farm field to designated retention area.	
Comments:	Present runoff configuration washes out adjacent farmers land and causes loss to him
Benefit:	Reduces liability and promotes goodwill with neighbors who own land by the high school
Cost/Funding Source:	District funds generated by 1% sales tax revenue
Responsible Party:	Superintendent and Director of Maintenance
Timeframe for Completion:	Completed
Priority Level:	3

Action Considered: Construct safe room at Orion High School to provide shelter to vulnerable populations.	
Comments:	High School is a designated center for disaster relief intervention

ORION COMMUNITY UNIT SCHOOL DISTRICT 223	
Benefit:	Community members will have a place with power for shelter and food
Cost/Funding Source:	District funds generated by 1% sales tax revenue
Responsible Party:	Superintendent and Director of Maintenance
Timeframe for Completion:	No longer a priority
Priority Level:	4

PORT BYRON

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	This mitigation action was listed in the 2009 plan, and is still being explored by a City Councilmember, albeit now with plans to retrofit the existing village hall to include permanently mounted generator for power outages
Benefit:	Consolidate Village Emergency response functions and technological upgrades in one facility and provide sheltering facilities.
Cost/Funding Source:	Costs estimated at $1.2 million in 2009.
Responsible Party:	Village President
Timeframe for Completion:	Ongoing
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	Village has local Floodplain Ordinance in place
Benefit:	Ensures compliance with NFIP and local codes
Cost/Funding Source:	County Manager
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing
Priority Level:	2

Action Considered: Upgrade existing village hall to include permanently mounted generator for power outages	
Comments:	
Benefit:	Ensures that buildings are constructed and maintained to code requirements
Cost/Funding Source:	Local
Responsible Party:	Building Inspector
Timeframe for Completion:	Completed
Priority Level:	

RAPIDS CITY

Action Considered: Emergency generator for community center - warming/cooling center	
Comments:	Identified as a priority action in 2009
Benefit:	Shelter for vulnerable populations during extreme temperature events & provide shelter for those impacted by disasters
Cost/Funding Source:	Costs have been described as negligible for use of an existing building.
Responsible Party:	Village President
Timeframe for Completion:	Ongoing - Available when deemed needed by Village President
Priority Level:	1

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements	
Comments:	
Benefit:	Ensures compliance with NFIP and local codes / Provides discounts for residents on flood insurance.
Cost/Funding Source:	County Manager
Responsible Party:	Floodplain Manager/ Building Inspector
Timeframe for Completion:	Ongoing
Priority Level:	2

Action Considered: Enforce and keep building codes updated to Rock Island County's current standards.	
Comments:	
Benefit:	Ensures that buildings are constructed and maintained to code requirements avoiding possible hazardous conditions in homes and businesses.
Cost/Funding Source:	Local
Responsible Party:	Building Inspector
Timeframe for Completion:	Ongoing
Priority Level:	3

Action Considered: Local siren system installation for emergencies	
Comments:	Concerns over needing a local siren system for emergency
Benefit:	Improve warning system for natural hazards for all residents to hear within village limits.
Cost/Funding Source:	Funding was provided by a grant from DCEO and the village's general fund.
Responsible Party:	Maintenance is the responsiblilty of the Village and activation of the siren is completed by Rock Island County.
Timeframe for Completion:	Completed

RAPIDS CITY

Priority Level:

Action Considered: Retrofitting existing building near Public Works Dept for sandbag and equipment storage	
Comments:	Opportunity to re-use an existing building to store sandbag material and other materials
Benefit:	Easier access to sand and equipment during flooding and emergencies
Cost/Funding Source:	City is exploring costs and funding sources
Responsible Party:	Village Board
Timeframe for Completion:	Ongoing as funding is identified
Priority Level:	4

Action Considered: Installation of 2 emergency generators for sewage treatment plant in the event of power loss	
Comments:	Concerns over needing emergency generators for sewage treatment in case of power loss.
Benefit:	Prevent water contamination and sewage overflows in residences and businesses.
Cost/Funding Source:	Sewer fund paid for the upgrade.
Responsible Party:	Public Works Department
Timeframe for Completion:	Completed
Priority Level:	

Action Considered: Exploring warning system through web-based list-serve in event of emergency	
Comments:	Opportunity to use smart phones and new technology to warn residents in emergencies
Benefit:	Improve warning system for all types of hazards.
Cost/Funding Source:	Village's General Fund
Responsible Party:	Village President determines when alerts are nessessary then Village Clerk then creates the alert.
Timeframe for Completion:	Completed/Ongoing
Priority Level:	

REYNOLDS

Action Considered: Upgrade water mains by connecting currently unconnected mains to create loops at four locations (Main St, Perryton St, Bush St, and Lloyd St) and add additional fire hydrants.	
Comments:	The Village is pursuing grant funding to complete this project.
Benefit:	Improvements to the Village's water system will assist with fire protection and emergency services as well as improvements in water quality and water system pressure.
Cost/Funding Source:	Estimated cost $125,000/ Grant funding
Responsible Party:	Village Board
Timeframe for Completion:	0-1 years
Priority Level:	1

Action Considered: Enforce and update building codes to Rock Island County's current standards.	
Comments:	None.
Benefit:	Emphasizes good building practices and maintenance of current building stock in the Village.
Cost/Funding Source:	Local Funds
Responsible Party:	Building Inspector
Timeframe for Completion:	Ongoing
Priority Level:	2

Action Considered: Continue NFIP compliance by enforcing local floodplain ordinances based on State of Illinois Model Code, which exceeds NFIP minimum requirements.	
Comments:	None.
Benefit:	Continuing flood plain best practices and allowing residents to obtain flood insurance.
Cost/Funding Source:	Local Funds
Responsible Party:	Zoning Committee
Timeframe for Completion:	Ongoing
Priority Level:	3

CITY OF ROCK ISLAND

Action Considered: Update levee certification	
Comments:	
Benefit:	Maintain reduced flood insurance rates for property in levee protection areas.
Cost/Funding Source:	Cost not determined; local funding possible outside funding
Responsible Party:	Public Works Director
Timeframe for Completion:	Ongoing; Years 1-5
Priority Level:	1

Action Considered: 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	
Comments:	
Benefit:	Reduces or eliminates losses from flood hazards
Cost/Funding Source:	No additional costs for ongoing enforcement
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing; Years 1-5
Priority Level:	3

Action Considered: Enforce and update building codes to current International Code Series	
Comments:	2015 edition of the I-Codes have been adopted
Benefit:	Ensure that construction meets latest standards of safety
Cost/Funding Source:	Staff Time
Responsible Party:	Chief Building Official
Timeframe for Completion:	Every 3-6 Years
Priority Level:	4

Action Considered: Seek funding to undertake rehabilitation or reconstruction of levees as needed to maintain certification	
Comments:	Look into grant possibilities with FEMA or USACE to maintain certification if needed
Benefit:	Makes levee rehabilitation more feasible; protects property and human life
Cost/Funding Source:	Staff Time
Responsible Party:	Public Works Director

CITY OF ROCK ISLAND

Timeframe for Completion:	As needed
Priority Level:	5

Action Considered: Identify critical facilities such as lift stations where backup generators should be installed and purchase as necessary.	
Comments:	
Benefit:	Ensures continuation of essential services
Cost/Funding Source:	Cost not identified; local funding
Responsible Party:	Public Works Director
Timeframe for Completion:	Year 4
Priority Level:	2

Action Considered: Research options to protect sewer systems to the 100-year flood level	
Comments:	Areas around 6th Avenue that are below flood level
Benefit:	Protects sewer system from backing up into homes, causing property damage.
Cost/Funding Source:	Cost not identified; local funding. Outside funding if available.
Responsible Party:	Public Works Director
Timeframe for Completion:	Year 4
Priority Level:	6

Action Considered: Construct safe room where vulnerable populations may not have other sources of shelter as feasible.	
Comments:	Recommended as a priority actions. Applies to new community assets.
Benefit:	Potential life-saving actions
Cost/Funding Source:	Determined by the size of the structure. Outside funding would be required.
Responsible Party:	Building Official
Timeframe for Completion:	Ongoing as projects arise
Priority Level:	7

Action Considered: Ensure manufactured homes have adequate tie downs	
Comments:	
Benefit:	Mitigates vulnerability during tornadoes and high winds
Cost/Funding Source:	No additional costs. Staff time.
Responsible Party:	Chief Building Official
Timeframe for Completion:	Ongoing as projects arise

CITY OF ROCK ISLAND	
Priority Level:	8

Action Considered: Implement voluntary flood acquisition program if need arises	
Comments:	
Benefit:	Reduces or eliminates losses from flood hazards
Cost/Funding Source:	FEMA Hazard Mitigation Grants with local match from city
Responsible Party:	Chief Building Official
Timeframe for Completion:	As needed
Priority Level:	9

ROCK ISLAND-MILAN SCHOOL DISTRICT #41	
Action Considered: During a national pandemic/outbreak, increase awareness, promote and implement safety protocols as suggested by IDPH and RICHD.	
Comments:	This is currently taking place within all RIMSD41 schools and buildings.
Benefit:	Keeps all district stakeholders safe and reduces the spread of infectious diseases.
Cost/Funding Source:	No additional costs to the district.
Responsible Party:	School Nurses
Timeframe for Completion:	Ongoing
Priority Level:	1

Action Considered: Work with Rock Island County Emergency Management to identify any hazardous substances near RIMSD schools and buildings and create shelter in place and/or evacuation plans as needed.	
Comments:	Will coordinate with Rock Island County EMA
Benefit:	Will keep all district stakeholders aware and prepared on how to safely respond to a potential hazardous substance crisis.
Cost/Funding Source:	No additional costs to the district.
Responsible Party:	Chief Financial Officer, Manager of Operations
Timeframe for Completion:	Ongoing update of crisis plan
Priority Level:	2

Action Considered: Construct safe rooms in all new and/or expanded school buildings to provide shelter for vulnerable populations as needed and as financially feasible.	
Comments:	For new and/or expanded school buildings only. Rock Island High School has been a designated center for disaster relief in the past.
Benefit:	Provide community members a safe place with power for shelter as needed.
Cost/Funding Source:	Mitigation Funding that is available, District funds generated by 1% sales tax revenue.
Responsible Party:	Superintendent, Chief Financial Officer, Manager of Operations.
Timeframe for Completion:	Ongoing
Priority Level:	3

ROCK ISLAND COUNTY	
Action Considered: Promote the purchase of NOAA weather radios	
Comments:	
Benefit:	NOAA weather radios provide warning of hazard events
Cost/Funding Source:	Staff Time to promotes use of radios; Individuals will purchase radios
Responsible Party:	EMA Director
Timeframe for Completion:	Years 1-5 - big pushes once annually
Priority Level:	26

Action Considered: Look for more information on hazardous materials incidents for the next plan update and distinguish between fixed site and transportation related incidents	
Comments:	Create a spreadsheet of incidents for easier queries during hazard mitigation plans
Benefit:	Will provide better analysis and assessments in future plans
Cost/Funding Source:	Staff Time
Responsible Party:	EMA Director
Timeframe for Completion:	As spill reports are received
Priority Level:	27

Action Considered: Provide more detail of critical facilities in next plan update include information on critical facilties in floodplain	
Comments:	Refine location/add additional facilities as necessary.
Benefit:	Creates a more robust vulnerability assessment.
Cost/Funding Source:	Staff Time
Responsible Party:	Emergency Management Director and Zoning and Building Director
Timeframe for Completion:	Year 4
Priority Level:	28

Action Considered: Conduct commodity studies for Extremely Hazardous Substances fixed facilities	
Comments:	EMA has received IEMA grants for commodity studies in Rock Island County
Benefit:	Helps EMA and first responders understand routes for materials and the population that could be affected by a spill
Cost/Funding Source:	IEMA funding

ROCK ISLAND COUNTY	
Responsible Party:	EMA Director
Timeframe for Completion:	As funding is available
Priority Level:	29

Action Considered: Identify critical waterways that may be subject to hazardous material spills	
Comments:	Work with Coast Guard, USACE, municipalities and special interest groups
Benefit:	Identifying critical waterways will help emergency response prioritize actions and resources
Cost/Funding Source:	Staff Time
Responsible Party:	EMA Director
Timeframe for Completion:	Year 1 and 2, then ongoing
Priority Level:	5

Action Considered: Coordinate flood warning systems and response	
Comments:	Coordination already exists. Continued coordination is needed to ensure prompt flood response.
Benefit:	More efficient and timely flood preparation to minimize risk to people and property
Cost/Funding Source:	No additional costs. Staff Time.
Responsible Party:	Emergency Management Director and Floodplain Manager
Timeframe for Completion:	Years 1-5 before predicited flooding occurs as well as during flash flood events
Priority Level:	6

Action Considered: Maintain, regularly review, communicate with community partners, and execute county Pandemic Influenza Plan if a pandemic occurs.	
Comments:	
Benefit:	Mitigates effects of a pandemic flu outbreak
Cost/Funding Source:	Staff time. In the event of an outbreak additional funding from State or Federal would be needed
Responsible Party:	Health Department
Timeframe for Completion:	Annual review and maintenance.
Priority Level:	7

Action Considered: Make educational materials about flood areas, regulations, mitigation measures, and insurance limitations for the public
Comments:

ROCK ISLAND COUNTY	
Benefit:	Educates public on where flood areas are, regulations, risks, how to mitigate risks, etc.
Cost/Funding Source:	Staff Time and possible mailing costs
Responsible Party:	EMA Director and Building and Zoning Director
Timeframe for Completion:	Years 1 and 2
Priority Level:	8

Action Considered: Train staff in storm water management and promote local trainings to local governments	
Comments:	
Benefit:	Provides training opportunities to building officials and floodplain managers for best practices and over time will mitigate effects of river and flash flooding
Cost/Funding Source:	No identified at this time
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Annual
Priority Level:	9

Action Considered: Levee Certification; seek funding to undertake rehabilitation or reconstruction of levees as needed for certification	
Comments:	
Benefit:	Provides property protection and life saving.
Cost/Funding Source:	Staff Time to investigate funding opportunities
Responsible Party:	Highway Engineer and Levee District
Timeframe for Completion:	Year 2
Priority Level:	10

Action Considered: Continue acquisition program for Barstow area trailer park.	
Comments:	Currently underway
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grant obtained
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Year 1
Priority Level:	11

ROCK ISLAND COUNTY

Action Considered: Elevate floodprone buildings in Barstow Area or mitigate as necessary	
Comments:	If property becomes substantially damaged, property owner will be required to elevate
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Year 2-5 if funding becomes available
Priority Level:	12

Action Considered: Voluntary acquisition of floodprone properties in Barstow area	
Comments:	
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Year 3-5 if funding and voluntary property owners become available
Priority Level:	13

Action Considered: Elevate floodprone buildings on Campbell's Island or mitigate as necessary	
Comments:	If property becomes substantially damaged, the property owner will be required to elevate
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Year 5 if funding and voluntary property owners become available
Priority Level:	14

Action Considered: Voluntary acquisition of floodprone Campbell's Island properties	
Comments:	
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Year 5 if funding and voluntary property owners become available
Priority Level:	15

ROCK ISLAND COUNTY

Action Considered: Elevate floodprone buildings in First Avenue North or mitigate as necessary	
Comments:	If property becomes substantially damaged, property owner will be required to elevate
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Year 5-7 if funding and voluntary property owners become available
Priority Level:	16

Action Considered: Voluntary acquisition of floodprone First Avenue North properties	
Comments:	
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Years 5-6 if funding and voluntary property owners become available
Priority Level:	17

Action Considered: Elevate floodprone buildings in South Shore Drive or mitigate as necessary	
Comments:	If property becomes substantially damaged, property owner will be required to elevate
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Years 5-6 if funding and voluntary property owners become available
Priority Level:	18

Action Considered: Voluntary acquisition of floodprone South Shore Drive Properties	
Comments:	
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Years 5-6 if funding and voluntary property owners become available
Priority Level:	19

ROCK ISLAND COUNTY

Action Considered: Elevate floodprone buildings in North Shore Drive or mitigate as necessary	
Comments:	If property becomes substantially damaged, property owner will be required to elevate
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Years 5-6 if funding and voluntary property owners become available
Priority Level:	20

Action Considered: Voluntary acquisition of floodprone North Shore Drive Properties	
Comments:	
Benefit:	Mitigates vulnerabilities to flood hazards
Cost/Funding Source:	FEMA HMA grants will be required. Cost estimates completed
Responsible Party:	Building and Zoning Director
Timeframe for Completion:	Years 5-6 if funding and voluntary property owners become available
Priority Level:	21

Action Considered: Voluntary acquisition of floodprone properties on 7th Street, south of 52nd Avenue	
Comments:	
Benefit:	
Cost/Funding Source:	
Responsible Party:	
Timeframe for Completion:	
Priority Level:	

Action Considered: Enforce and update building codes to current International Code Series	
Comments:	Identified as a priority action. Applies to existing and future community assets.
Benefit:	Ensures both new construction and rehabilitated buildings are safe by a standard set of requirements and guidelines
Cost/Funding Source:	No Additional Costs. Staff Time
Responsible Party:	Building and Zoning Director and staff

ROCK ISLAND COUNTY

Timeframe for Completion:	Every 3-6 years
Priority Level:	22

Action Considered: Ensure manufactured homes have adequate tie downs.	
Comments:	Inspected when building permits are pulled for manufactured homes.
Benefit:	Mitigates vulnerability during tornadoes and high winds
Cost/Funding Source:	No additional costs. Staff time.
Responsible Party:	Building and Zoning Director and staff
Timeframe for Completion:	Ongoing; Years 1-5
Priority Level:	23

Action Considered: Construct safe room for vulnerable populations without other sources of shelter in unincorporated Rock Island County	
Comments:	Would require public support
Benefit:	Provides potential life saving measure
Cost/Funding Source:	FEMA funding would be required. Local match not identified
Responsible Party:	Coordinated with RICO EMA and Building and Zoning
Timeframe for Completion:	Year 5 or later depending on funding or
Priority Level:	24

Action Considered: Hold local training on fire code enforcement	
Comments:	Fire code includes codes for hazardous material sites
Benefit:	Potential life saving measure
Cost/Funding Source:	Registration fees to cover most of cost
Responsible Party:	Building and Zoning Director in partnership with ILOWA
Timeframe for Completion:	Annually
Priority Level:	25

Action Considered: Promote the purchase of NOAA weather radios	
Comments:	
Benefit:	NOAA weather radios provide warning of hazard events
Cost/Funding Source:	Staff Time to promotes use of radios; Individuals will purchase radios
Responsible Party:	EMA Director

ROCK ISLAND COUNTY	
Timeframe for Completion:	Years 1-5 - big pushes once annually
Priority Level:	26

Action Considered: Look for more information on hazardous materials incidents for the next plan update and distinguish between fixed site and transportation related incidents	
Comments:	Create a spreadsheet of incidents for easier queries during hazard mitigation plans
Benefit:	Will provide better analysis and assessments in future plans
Cost/Funding Source:	Staff Time
Responsible Party:	EMA Director
Timeframe for Completion:	As spill reports are received
Priority Level:	27

Action Considered: Provide more detail of critical facilities in next plan update include information on critical facilties in floodplain	
Comments:	Refine location/add additional facilities as necessary.
Benefit:	Creates a more robust vulnerability assessment.
Cost/Funding Source:	Staff Time
Responsible Party:	Emergency Management Director and Zoning and Building Director
Timeframe for Completion:	Year 4
Priority Level:	28

Action Considered: Conduct commodity studies for Extremely Hazardous Substances fixed facilities	
Comments:	EMA has received IEMA grants for commodity studies in Rock Island County
Benefit:	Helps EMA and first responders understand routes for materials and the population that could be affected by a spill
Cost/Funding Source:	IEMA funding
Responsible Party:	EMA Director
Timeframe for Completion:	As funding is available
Priority Level:	29

SILVIS

Action Considered: Design and construct 14th Street and 7th Avenue storm water management project	
Comments:	
Benefit:	Project will assist with flooding during heavy rain.
Cost/Funding Source:	Cost not identified at this time. Local funding.
Responsible Party:	Public Works
Timeframe for Completion:	Year 3
Priority Level:	1

Action Considered: Establish written procedures for severe weather hazard events	
Comments:	
Benefit:	Reduces vulnerability to city during hazard events. May identify future mitigation actions from plan.
Cost/Funding Source:	Staff Time
Responsible Party:	City Administrator
Timeframe for Completion:	Year 2
Priority Level:	2

Action Considered: Regularly trim city owned trees	
Comments:	Mid American Energy trims trees near power lines.
Benefit:	Removing unhealthy limbs or those that pose a threat during a hazard event will reduce property damage and reduce the risk of injury or death from fallen trees or downed power lines.
Cost/Funding Source:	Part of regular budget
Responsible Party:	Public Works
Timeframe for Completion:	Seasonally
Priority Level:	3

Action Considered: Enforce and update building codes to current International Code Series	
Comments:	Adopt new codes every 3-6 years.
Benefit:	Ensures both new construction and rehabilitated buildings are safe by a standard set of requirements and guidelines

SILVIS	
Cost/Funding Source:	No additional costs. Staff Time
Responsible Party:	Building Official
Timeframe for Completion:	Every 3-6 years
Priority Level:	4

Action Considered: Ensure manufactured homes have adequate tie downs.	
Comments:	
Benefit:	Mitigates vulnerability during tornadoes and high winds
Cost/Funding Source:	No additional costs. Staff time.
Responsible Party:	Building Inspector
Timeframe for Completion:	Ongoing; Years 1-5
Priority Level:	5

Action Considered: 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.	
Comments:	
Benefit:	Assists in reducing or eliminating risk and losses from flood related hazards.
Cost/Funding Source:	No additional costs. Staff Time
Responsible Party:	Floodplain Manager
Timeframe for Completion:	Ongoing; Years 1-5
Priority Level:	6

APPENDIX 5-1 ANNUAL REPORT UPDATE FORM

ROCK ISLAND COUNTY HAZARD MITIGATION PLAN
ANNUAL UPDATE

REPORTING PERIOD: October 1, _____ TO September 30, _____

JURISDICTION:

_____

CONTACT INFORMATION:

Name/Title:

E-Mail:

Phone:

SECTION 1: PLAN INCORPORATION

Did your jurisdiction attended the annual planning committee meeting? (Y/N) _____

Has the hazard mitigation plan been incorporated into any new planning or land use documents? If yes, please list.

Has the hazard mitigation plan been incorporated into any new zoning documents? If yes, please list.

Has the hazard mitigation plan been incorporated into any new building code documents? If yes, please list.

Has the hazard mitigation plan been incorporated into any grant applications? If yes, please list.

Has any grant funding been received based on mitigation actions? If yes, please list (with amount received).

(OVER) →

SECTION 2: MITIGATION ACTIONS

Has your jurisdiction completed any mitigation actions? If yes, please list.

Has your jurisdiction added any mitigation actions? If yes, please list.

SECTION 3: PUBLIC INVOLVEMENT

How has your jurisdiction kept the public involved with the hazard mitigation plan? Please list.

Has your jurisdiction conducted any public education? If yes, please list.

FORM MUST BE SUBMITTED NO LATER THAN OCTOBER 31ST.

SUBMIT FORM TO: