St. Clair County, Illinois

Multi-Hazard Mitigation Plan

2024 Countywide MHMP Update

FEMA

IEMA

EAST-WEST GATEWAY
Council of Governments

Multi-Hazard Mitigation Plan

St. Clair County, Illinois

Adoption Date: April 29, 2024

Primary Point of Contact
Herbert Simmons
Director
St. Clair County EMA
110 West Washington St.
Belleville, Illinois 62220
Phone: (618) 825-2164
Email: herbert.simmons@co.st-clair.il.us

Secondary Point of Contact
Bryan Whitaker
Assistant Director
St. Clair County EMA
110 West Washington St.
Belleville, Illinois 62220
Phone: (618) 825-2683
Email: bryan.whitaker@co.st-clair.il.us

Acknowledgements

The St. Clair County Multi-Hazard Mitigation Plan would not have been possible without the feedback, input, and expertise provided by the County leadership, citizens, staff, federal and state agencies, and volunteers. We would like to give a special thank you to the citizens not mentioned below who freely gave their time and input in hopes of building a stronger, more progressive County. St. Clair County gratefully acknowledges the following people for the time, energy and resources given to create the St. Clair County Multi-Hazard Mitigation Plan.

St. Clair County Board

Mark Kern – Chairman

Robert Allen Jr. – District 1

G.W. Scott Jr. – District 2

Roy Mosley Jr. – District 3

Harry Hollingsworth – District 4

Lonnie Mosley – District 5 (Vice-Chair)

Marty Crawford – District 6

Courtney Moore – District 7

Steve Gomric – District 8

Ken Easterley – District 9

Scott Greenwald – District 10

Ken Sharkey – District 11

C. Richard Vernier – District 12

Stephen Reeb – District 13

Robert Trentman – District 14

Jerry Dinges – District 15

CJ Baricevic – District 16

Scott Tieman – District 17

Michael O'Donnel – District 18

Phil Henning – District 19

Ed Cockrell – District 20

Andy Bittle – District 21

Susan Gruberman – District 22

Jana Armstrong Moll – District 23

Kevin Dawson – District 24

Richie Meile – District 25

Robert Wilhelm – District 26

Matt Smallheer – District 27

John Coers – District 28

Table of Contents

Multi-Hazard Mitigation Plan 2

Acknowledgements..... 3

Section 1. Introduction..... 7

Section 2. Planning Process..... 8

2.1 Timeline..... 8

2.2 Jurisdiction Participation Information..... 9

2.3 Planning Team Information..... 9

2.4 Public Involvement..... 15

2.5 Neighboring Community Involvement..... 17

2.6 Review of Technical Documents..... 18

2.7 Adoption by Local Government..... 19

2.8 Previous Mitigation Strategies Update..... 19

Section 3. County Profile..... 22

3.1 County Background..... 22

3.2 Demographics..... 23

3.3 Economy and Industry..... 24

3.4 Land Use and Development Trends..... 25

3.5 Climate..... 26

3.6 Topography..... 26

3.7 Major Lakes, Rivers and Watersheds..... 27

Section 4. Risk Assessment 29

4.1 Hazard Identification 29

4.1.1 Existing Plans..... 29

4.1.2 National Hazard Records..... 29

4.1.3 FEMA Disaster Information..... 30
4.1.4 Hazard Ranking Methodology.....32
4.1.5 Risk Priority Index 32
4.1.6 Jurisdictional Hazard Ranking..... 34
4.2 Vulnerability Assessment.....35
4.2.1 Asset Inventory.....35
4.3 Risk Analysis.....37
4.3.1 GIS and Hazus-MH.....37
4.3.2 Tornado Hazard.....38
4.3.3 Winter Storm Hazard.....46
4.3.4 Flooding Hazard.....49
4.3.5 Earthquake Hazard..... 56
4.3.6 Thunderstorm Hazard..... 70
4.3.7 Dam and Levee Failure Hazard.....73
4.3.8 Extreme Heat and Drought Hazard.....80
4.3.9 Ground Failure Hazard..... 87
4.4 Climate Change Impacts on Identified Hazards.....94
Section 5. Mitigation Strategies.....99
5.1 Hazard Mitigation Goals.....99
5.2 Action Steps to Address Natural Disaster Mitigation..... 99
5.2.1 Public Information and Awareness for Mitigation..... 100
5.2.2 Creating Effective Responses to any Natural Disaster..... 102
5.2.3 Mitigation Needed to Prepare for Tornados..... 105
5.2.4 Mitigation Needed to Prepare for Extreme Temperatures, Severe Thunderstorms, Winds, Lightning and Hail..... 106
5.2.5 Mitigation Needed to Prepare for Floods..... 108
5.2.6 Mitigation Needed to Address Risk of Dam/Levee Failure..... 112

5.2.7 Mitigation Needed to Prepare for Earthquakes..... 113
5.2.8 Mitigation Need to Prepare for Wildfires..... 114
5.3 Individual Community Action Strategies..... 115
5.4 Incorporating Plans into other Planning Mechanisms..... 116
5.5 Evaluation and Assessing Changes in Priorities..... 117
5.6 Existing Hazard Mitigation Polices, Programs and Resources..... 118
5.6.1 Successful Mitigation Projects..... 118
5.6.2 National Flood Insurance Program..... 121
5.6.3 Jurisdictional Ordinances..... 125
5.6.4 Mitigation Goals..... 126
5.6.5 Multi-Jurisdictional Mitigation Strategies..... 126
5.7 Community Mitigation Strategies..... 130
Section 6. Plan Implementation and Maintenance..... 155
6.1 Implementation through Existing Programs..... 155
6.2 Monitoring, Evaluation and Updating the MHMP..... 155
Definitions 157
Acronyms..... 159
Appendices..... 161
Appendix A – Municipality Questionnaires
Appendix B – Supporting Documentation
Appendix C – Adopting Resolutions
Appendix D – Historical Hazards
Appendix E – List of Essential Facilities
Appendix F – St. Clair County Flood Maps

Section 1. Introduction

Hazard mitigation is any sustained action to reduce or eliminate long-term risk to human life and property from hazards. The Federal Emergency Management Agency (FEMA) makes reducing hazards one of its primary goals; hazard-mitigation planning, and the subsequent implementation of mitigation projects, measures, and policies is a primary mechanism in achieving FEMA's goal.

The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000). The development of a local government plan is required in order to maintain eligibility for certain federal disaster assistance and hazard mitigation funding programs. In order for the National Flood Insurance Program (NFIP) communities to be eligible for future mitigation funds, they must adopt a MHMP.

In recognition of the importance of planning in mitigation activities, FEMA created Hazus Multi-Hazard (Hazus-MH), a powerful geographic information system (GIS) based disaster risk assessment tool. This tool enables communities of all sizes to estimate losses from floods, hurricanes, earthquakes, and other natural hazards and to measure the impact of various mitigation practices that might help reduce those losses. The Illinois Emergency Management Agency (IEMA) has determined that Hazus-MH should play a critical role in the risk assessments performed in Illinois.

The St. Clair County Emergency Management Agency and the East-West Gateway Council of Governments have joined efforts in developing the update to the County's Multi-Hazard Mitigation Plan. This plan incorporates state-of-the-art hazard analysis, addresses changes in probability and impact of specific hazards, incorporates changes in land-use, population and demographics within the county. Detailed GIS and Hazus-MH Level 2 analyses were performed for the Risk Assessment and sound mitigation strategies were established for each jurisdiction. Any municipality within St. Clair County not explicitly listed as a jurisdiction is covered by this plan as part of the county itself. This document here by serves as the St. Clair County 2024 Multi-Hazard Mitigation Plan.

Section 2. Planning Process

2.1 Timeline

The Multi-Hazard Mitigation Planning process was broken into a series of meetings. These meetings were organized and conducted by members of the East-West Gateway Council of Governments and the St. Clair County Emergency Management Agency. At these meetings, various tasks were completed by the planning team. The planning team also worked individually with each municipality to complete their questionnaire to ensure full compliance with the FEMA standards. This process began in February 2023 and continued through April 2024.

Meeting 1: The purpose of Meeting 1 was to introduce the Multi-Hazard Mitigation Plan process, discuss scheduling and milestones, and organize resources. This meeting included a discussion of roles, responsibilities, decision-making processes, administrative procedures, and communication strategies. Furthermore, this consisted of a review of the critical facilities, assessor's data and pertinent GIS data. The team reviewed the counties historical hazards and identified the appropriate natural hazards to include in the plan and ranked the hazards by potential damages and occurrences.

Meeting 2: This was a group of meetings between St. Clair County Emergency Management Agency staff and members of the municipalities in St. Clair County to complete their Hazard Mitigation questionnaire. These meetings were a combination of in person, telephone and webinar to accommodate the needs of all communities. The communities supplied local knowledge to identify and prioritize mitigation strategies and projects that can address the threats identified in the risk assessment. FEMA requires the plan to contain mitigation strategies specific to each hazard and for each incorporated area within the county.

Meeting 3: This was a public meeting in which the hazards, the mitigation strategies and the individual communities actions were discussed and questions were answered regarding the development of the plan. The communities, county departments, non-for profit organizations, non-governmental organizations and the public were all invited to attend this meeting.

Meeting 4: The planning team prepared the final draft plan and subsequently this plan will be forwarded to the St. Clair County Board for approval.

Meeting 5: This is not a formal meeting of the Planning Tema, but rather the adoption of the approve plan. Once FEMA approves the plan, the plan is returned to the county for formal adoption by the appropriate commissions and town boards. The

communities were afforded the opportunity to adopt the draft plan with the caveat of final approval lies with FEMA.

2.2 Jurisdiction Participation Information

Twenty-six jurisdictions participated in the development of this MHMP with the intent of formally adopting the plan and subsequently fulfilling the requirements od DMA 2000. Various representatives from each jurisdiction were present at the meetings (see Section 2.3 Planning Team Information). Each jurisdiction falls under one of the following categories: County, City, Village, Town, School, or Non-Profit Organization.

Jurisdictions		
St. Clair County	Fairview Heights	O'Fallon
Belleville	Fayetteville	St. Libory
Brooklyn	Freeburg	Sauget
Cahokia Heights	Lebanon	Shiloh
Caseyville	Lenzburg	Smithton
Dupo	Marissa	Summerfield
East Carondelet	Mascoutah	Swansea
East St. Louis	Millstadt	Washington Park
Fairmont City	New Athens	

2.3 Planning Team Information

The Planning Team includes representatives from various county departments, municipalities, and public and private utilities. Members of the Planning Team have a common interest in the County's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage. The following is a list of the primary planning team and the secondary planning team.

Primary Planning Team

Jurisdiction	Name	Title
St. Clair County EMA	Samantha Roland	LEPC Coordinator
St. Clair County EMA	Bryan Whitaker	Assistant Director
East-West Gateway	Jennifer Vuitel	Environment and Community Planning Manager
East-West Gateway	Mary-Grace Lewandowski	Director of Community Planning

Secondary Planning Team

Jurisdiction	Name	Title
City of Belleville	Jennifer Gain Meyer	City Clerk
City of Belleville	Jamie Maitret	Finance Director
City of Belleville	Scott Tyler	Director of Health, Housing and Building
City of Belleville	Scott Saeger	City Engineer
City of Belleville	Clifford Cross	Director of Economic Development, Planning & Zoning
City of Belleville	Stephanie Mills	Fire Chief
City of Belleville	Curt Lougeay	Deputy Fire Chief
City of Belleville	Jason Poole	Director of Public Works
City of Belleville	Matthew Eiskant	Chief of Police
Village of Brooklyn	Vera Banks	President of the Board
City of Cahokia Heights	James W Nold	Senior Project Manager
City of Cahokia Heights	Curtis McCall Sr	Mayor
City of Cahokia Heights	DeMario Helm	Deputy Mayor
City of Cahokia Heights	Francella Jackson	Chief of Staff
City of Cahokia Heights	LaMar D Genrty	Economic Development Director
City of Cahokia Heights	Bob Darnell	Director of Code Enforcement
Village of Caseyville	G.W. Scott Sr	Mayor
Village of Caseyville	Brian Rader	Public Works Superintendent
Village of Caseyville	Tamara Ammann	Treasurer
Village of Caseyville	Phil Little	Zoning Administrator
Village of Caseyville	Doug Stewart	Village Attorney
Village of Dupo	Dawn Keys	Village Trustee
Village of East Carondelet	Herbert Simmons	Mayor
Village of East Carondelet	Jon Kremer	Village Engineer
City of East St. Louis	Charles Powell	Mayor
City of East St. Louis	Robert Betts	City Manager
City of East St. Louis	Jason Blackmon	ESDA Director
City of East St. Louis	Matt Missey	City Engineer
Village of Fairmont City	Michael Suarez	Mayor
Village of Fairmont City	Robert Allen	Fire Chief
City of Fairview Heights	CJ Beyersdorfer	EMA Director
City of Fairview Heights	John Harty	EMA Deputy Director
Village of Fayetteville	Brian Funk	Village President

Jurisdiction	Name	Title
Village of Freeburg	Eugene Kramer	ESDA Coordinator
Village of Freeburg	Matt Trout	Village Administrator
Village of Freeburg	Tim Pruett	Village Engineer
City of Lebanon	Luanne Holper	City Clerk
City of Lebanon	Cody Terry	Superintendent of Streets
City of Lebanon	Penny Zimmerman	Superintendent of Water/Sewer
City of Lebanon	Cheri Wright	Mayor
City of Lebanon	Michele Davis	Accountant
City of Lenzburg	John Hoffman	Fire Chief
Village of Marissa	Laura McMahon	Mayor
Village of Marissa	Chad Easton	Village Administrator
Village of Marissa	Donna Stewart	Village Collector
City of Mascoutah	Jesse Calton	Public Works Director
City of Mascoutah	Jeremy Gottschammer	EMS Supervisor
City of Mascoutah	Sal Elkott	City Engineer
City of Mascoutah	Cody Hawkins	City Manager
Village of Millstadt	Jan Burke	Clerk
Village of New Athens	Joe Behnken	Mayor
Village of New Athens	Arlene Geppert	Co-Coordinator ESDA
Village of New Athens	Devin Brown	Co-Coordinator ESDA
Village of New Athens	Chris Remick	Superintendent of Public Works
Village of New Athens	Tim Buehler	Chief of Police
Village of New Athens	Stan Ruhmann	Fire Chief
City of O'Fallon	Chad Truran	Building Official / Floodplain Manager
City of O'Fallon	Justin Randall	Community Development Director
City of O'Fallon	Jeff Taylor	Public Works Director
City of O'Fallon	Grant Litteken	Asst. City Administrator
City of O'Fallon	Brad White	Fire Chief
City of O'Fallon	Kirk Brueggeman	Police Chief / Director of Public Safety
Village of St. Libory	Robert Stroder	Mayor
Village of Shiloh	Brenda Kern	Village Clerk
Village of Shiloh	Sean Schneider	Director of Building and Zoning
Village of Shiloh	Chris Etling	Director of Public Works
Village of Shiloh	Rich Wittenauer	Chief of Police
Village of Shiloh	Tracey Kennet	Chief Financial Officer

Jurisdiction	Name	Title
Village of Sauget	Thomas P Weis	City Engineer
Village of Smithton	Kari Speir	Village Administrator
Village of Smithton	Jason Neff	Police Chief
Village of Smithton	Dean Klein	Public Works Supervisor
Village of Summerfield	Dean Zurleine	Mayor
Village of Summerfield	T Bequette	Village Clerk
Village of Swansea	Ben Schloesser	Village Administrator
Village of Swansea	Chris Tell	Fire Chief
Village of Swansea	Matt Blomberg	Police Chief
Washington Park	Leonard Moore	Mayor
Washington Park	Courtney Hoffman II	Village Consultant
US Army Corps of Engineers	Shawn Sullivan	Engineer
City of East St Louis	Lana Murphey	
Resident	Angie Kenaugh	
East-West Gateway	Carol Lawrence	
Senator Ducksworth Office	Edward York	
Rep Nikki Budzinski Office	Kevin Brooks	
IEMA	Jared Runyan	Recovery Division
St Clair County	Debra Moore	County Administrator
St. Clair County Health Dept	Kara Rosenkranz	Emergency Response Coordinator
NAACP (East St Louis)	Kevin Harris	
Equity Legal Services	Mavara Hill	
City of East St Louis	Derrick Burns	Fire Chief
St. Clair County 911	Teresa Klucker	Executive Assistant

The DMA 2000 planning regulations require that Planning Team members from each jurisdiction actively participate in the MHMP process. The Planning Team was actively involved in the following components:

- Attending the MHMP Meetings
- Providing available assessment and parcel data and historical hazard information
- Reviewing and providing comments on the draft plans
- Coordinating and participating in the public input process
- Coordinating the formal adoption of the plan

2.4 Public Involvement

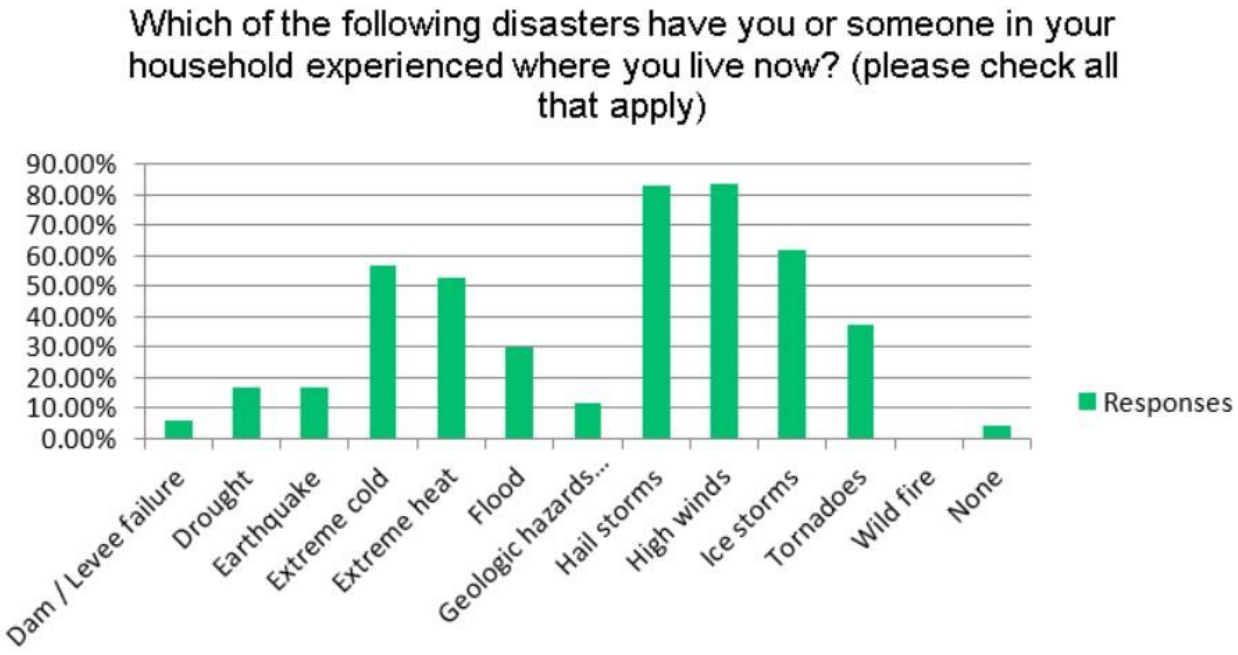
Public involvement was divided into two (2) phases. The first was a public survey that was distributed via email and social media with an online portal to complete the surveys. The

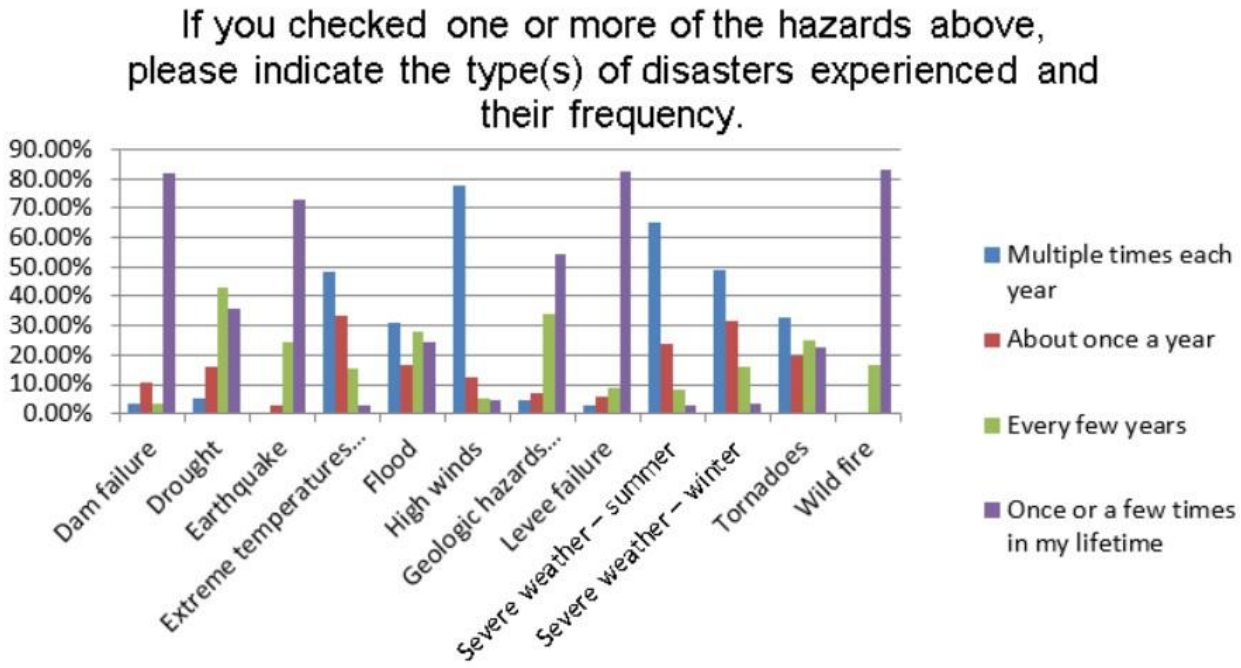
second method was through a public meeting which was held on Wednesday April 17, 2024 and a copy of the slide presentation and the sign in sheets are attached as an appendix to this plan. This public survey was provided to groups throughout St. Clair County to solicit feedback from all parts of the community. This was also provided to our long-term recovery committee and distributed through their contacts in some of the most disadvantaged communities that have been faced with the most repetitive events. See Appendix B for distribution information.

Public Participation Survey Results

As part of the St. Clair County Hazard Mitigation Plan development, a 17-question online public survey was developed. The County chose to focus on online outreach efforts due to experience with poor to no turn out at public meetings. The online survey, which was also promoted by the County's many civic, religious, and social partners, was a surprising success given the freshman effort had a limited, three-week time frame. There were 240 respondents, representing 31 zip codes throughout the county.

When asked which natural disasters they or someone they know have experienced, over 80 percent reported experiencing hailstorms and high winds, just over 60 percent reported experiencing ice storms, over 50 percent have experienced extreme cold and/or heat, and almost 40 percent have experienced tornadoes.





Based on the severity and frequency of their occurrence, the respondents were asked to select the top three hazards they believed to be the greatest threat to their community. Tornadoes and high winds tied as the greatest perceived threat. Severe winter weather was the second most selected response, closely followed by severe summer weather. Of the 240 respondents, 78 percent feel they are adequately informed about the risks of natural hazards.

Most of the respondents said that their street, home, or business does not regularly flood during periods of heavy rainfall, while 20 percent said they do have regular flooding. When asked if their property is located within a flood plain, 162 people said they did not, 21 said they did, and the remaining said they were not sure. This survey provided the opportunity to select what mitigation project types they believe should be focused on to help minimize or even eliminate the impacts caused by natural disasters. The top three answers were: fixing infrastructure, such as improving drainage systems; ensuring facilities such as fire, police, and medical services are protected from natural disasters; and working to protect utilities such as electricity and communications.

Types of Mitigation Project Types Local Government Agencies Should Focus On	Percentage of Respondents Who Selected Each Option (They Could Select More Than One)
Ensure essential facilities such as police, fire, emergency medical services, hospitals, schools, etc. are protected from natural disasters	66.81%
Replace inadequate or vulnerable low water crossings	26.38%
Fix infrastructure, such as improving drainage systems	74.47%
Work on protecting utilities (electricity, communications, water/wastewater facilities, etc.)	64.68%
Install or improve protective structures, such as floodwalls or levees	29.79%
Buyout flood prone properties and maintain as open space	20.00%
Strengthen codes, ordinances, and plan to require building standards that withstand natural disasters	31.91%
Inform property owners of ways they can reduce damage to their properties	37.45%
Assist vulnerable property owners with securing funding to reduce damage to their property(s)	39.15%
Other	2.98%

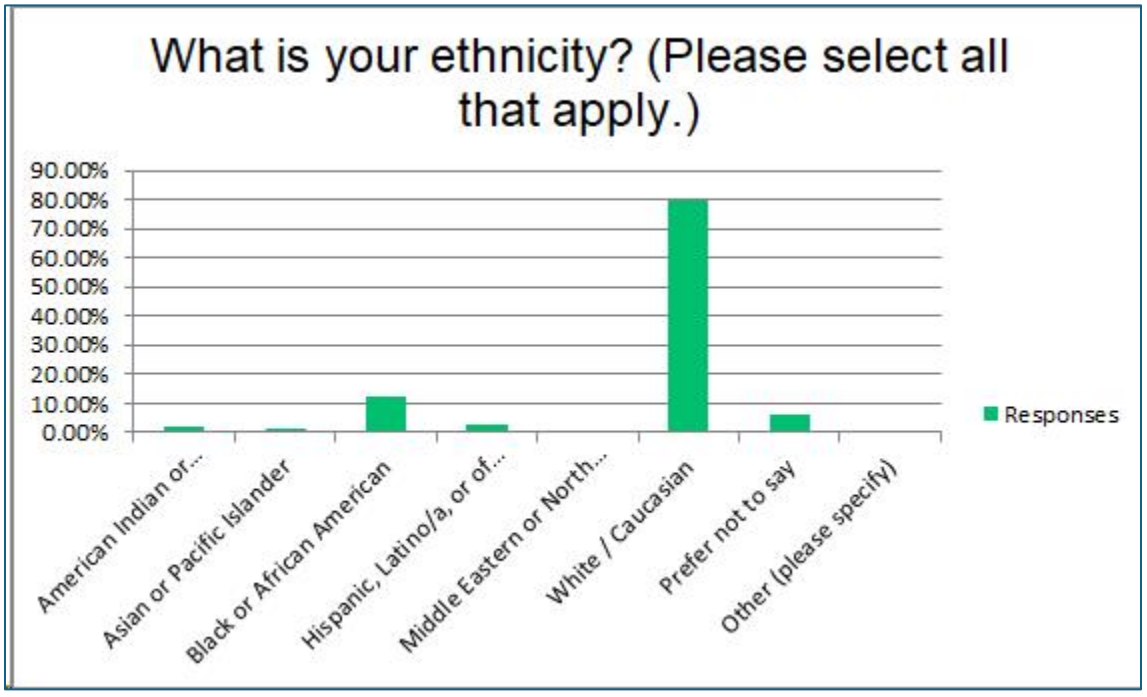
Of the open-ended responses, there was a common preference for more communication from city and county officials and staff regarding not only natural disasters in progress, but also mitigation efforts, and changing risk levels.

Respondent information

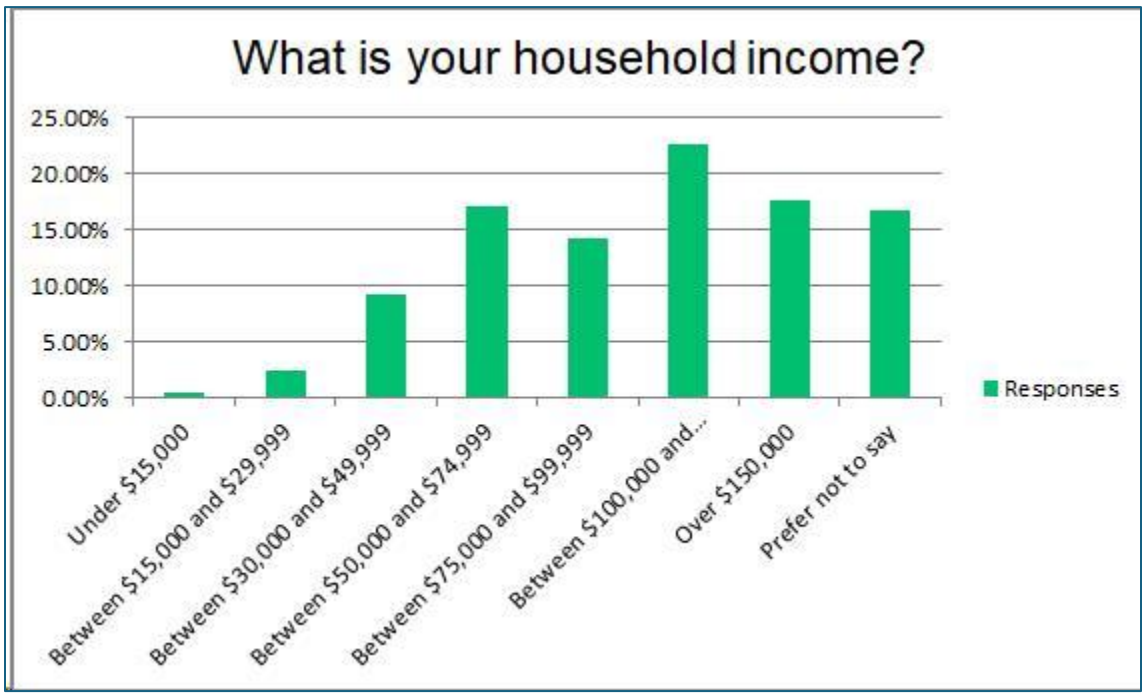
Thirty-one of St. Clair County's zip codes were represented in the survey responses in 237 useable responses (out of 240). A small number of partial or non-existent zip codes are not included in the results. Most areas of the county had some type of representation, with the largest percentage (18.03%) coming from 62221, while several areas had just one respondent.

Public Survey Responses by Zip Code					
Zip code	Percent of total responses	Zip code	Percent of total responses	Zip code	Percent of total responses
62010	0.43%	62225	0.43%	62258	5.15%
62025	1.29%	62226	6.87%	62260	4.29%
62201	0.86%	62231	0.43%	62264	1.72%
62203	0.86%	62232	0.43%	62265	0.43%
62205	1.29%	62234	9.44%	62269	9.44%
62206	1.29%	62239	2.58%	62282	1.29%
62207	0.43%	62240	3.86%	62285	3.86%
62208	10.30%	62243	1.72%	62289	0.43%
62220	6.01%	62254	1.29%	62293	0.43%
62221	18.03%	62255	0.43%	62298	0.43%
62223	6.01%				

Of the survey respondents, the majority identified as white/Caucasian with almost 80% choosing this option. Just over twelve percent listed Black or African American.



Almost fifty percent of respondents gave their age between 40 – 59, while twenty eight percent were in the 60 – 74 range. Household income responses varied considerably.



Of the respondents, twenty eight percent had a bachelor's degree while a further twenty five percent had a graduate degree. No one identified as having less than a high school diploma. Forty-five percent of people lived in a two-person household, while thirty percent had three or four people living in their homes. The remaining respondents had either just one person or five or more. Eighty five percent of people did not consider themselves as having a disability while the remaining either had a disability or preferred not to say.

The full survey results are included in the appendix of supplemental documentation.

2.5 Neighboring Community Involvement

The planning team invited participation from various representatives of county government, local city and town governments, community groups, local businesses, and universities. The planning team also welcomed participation from neighboring counties to obtain their involvement in the planning process.

Contact	Neighboring Jurisdiction	Title/Organization
Fred Patterson	Madison County	EMA Director
Chance Kness	Clinton County	EMA Coordinator
Matt Bierman	Washington County	EMA Coordinator
Michael Hoelscher	Randolph County	EMA Coordinator
Kevin Scheibe	Monroe County	EMA Director

Section 2.6 Review of Technical Documents

The St. Clair County Planning Team identified technical documents from key agencies to assist in the planning process. These documents include land use plans, comprehensive plans, emergency response plans, municipal ordinances, and building codes. The following technical data, reports, and studies were utilized:

- Federal Emergency Management Agency
    - Developing the Mitigation Plan (April 2003)
    - Mitigation Idea (January 2003)
    - Local Mitigation Planning Handbook
    - Flood Insurance Study (Dec 2011)
- United State Census Bureau
    - County Profile Information
    - 2020 Census Data
    - American Community Survey (2009-2013)
- United States Geological Survey
    - Earthquake data
- United States Army Corps of Engineers
    - National Inventory of Dams
    - National Levee Database
- NOAA National Climatic Data Center
    - Climate Data
- NOAA / National Weather Service Storm Prediction Center
    - Severe Weather Data
- Illinois Emergency Management Agency
    - 2013 Illinois Natural Hazard Mitigation Plan
- Illinois Environmental Protection Agency
    - 2014 303d Listed Waters and Watershed Maps
- Illinois State Water Survey
    - Climate Data
- Illinois Department of Natural Resources
    - Repetitive Loss Data
    - Dam and Levee Data
- Illinois State Geological Survey
    - *Panno, et al, 1997*, Karst Regions of Illinois
    - *Bauer, 2008*, Planned Coal Mine Subsidence in Illinois: A Public Information Booklet
- Geologic Sources
    - Illinois Coal Association

    - *White, 1998* Geomorphology and Hydrology of Karst Terrains, Journal of Quaternary Science
- St. Clair County
    - County Emergency Operations Plan
    - 2023 Assessment Records
    - 2023 Countywide GIS Parcel Database
- The U.S. Global Change Research Project – Climate Mapping for Resilience (CRMA) https://globalchange.gov/resources.cmra-climate-mapping-resilience-and-adaption
- https://livingatlas.arcgis.com/assessment-tool/home/
- How the climate crisis may be changing the way tornadoes behave https://www.cnn.com/2022/12/14/us/climate-change-affecting-tornadoes-xpn/index.html
- Shifting Snow in the Warming US - https://www.climatecentral.org/climate-matters/shifting-snow-in-the-warming-u.s
- Flood Risks Affects Over A Billion People. Climate Change Could Make it Worse - https://www.weforum.org/agenda/2022/09/flood-risk-billion-people-climate-change-worsen/
- Global Extreme Heat in June 2024 Strongly linked to Climate Change - https://www.climatecentral.org/report/global-heat-review-june-2024
- Has Climate Change Really Made Thunderstorms More Powerful? - https://www.scientificamerican.com/article/has-climate-change-really-made-thunderstorms-more-powerful/
- Can Climate Change Affect Earthquakes, or are the Connections Shaky? - https://science.nasa.gov/earth/climate-change/can-climate-affect-earthquakes-or-are-the-connections-shaky/

2.7 Adoption by Local Government

Upon IEMA and FEMA approval, the Planning Team presented and recommended the plan to the County Board for formal adoption. The plan was formally adopted by the St. Clair County Board on April 29, 2024. The planning team worked with the County and its jurisdictions to ensure all parties formally adopted the plan. Appendix C contains the Adopting Resolutions for each participating jurisdiction.

2.8 Previous Mitigation Strategies Update

Strategy	**Status**
Devote a section of website to hazard mitigation	Completed

Equip Critical Facilities with Back Up Generators	On-Going
Promote Disaster Resilience through Workshops, Education Materials, and Planning Guides	On-Going
Establish an Incident Management Team	Completed
Enhance Emergency Communications System Infrastructure	On-Going
Develop and Maintain Comprehensive Plan to Incorporate Natural Hazards	Completed
Create Additional Heating / Cooling Shelters	Completed
Improve EMA Training, Staff, Resources and Equipment	On-Going
Distribute NOAA Weather Radios	Completed
Institute Replacement Plan for Outdated or Out-of-Production Weather Radios	Deferred
Develop Mutual Aid Agreements	Completed
Develop Social Media Techniques to Provide Critical Weather Updates and Disseminate Critical Information	Completed
Develop Vulnerable Populations List	Completed
Develop Alternative Traffic Routes	Deferred
Compile and Publicize Location of Safe Rooms and/or Shelters	Deferred
Incentivize Hazard Mitigation	Deferred
Establish Liaison / Groups that Meet Regularly to Discuss Hazard Mitigation	Completed
Establish Local Emergency Planning Committee	Completed
Acquire Portable Lighting for Mass Casualty Preparation	Completed
Improve Public Education on Premise Alert Program	Deferred
Install Inertial Valves in Critical Facilities	Deferred
Develop Plan for Storage and Care of Pets During Disaster	Completed
Maintain Emergency Response Plan	Completed
ISO Rating Maintenance	On-Going
Require the Construction of Safe Rooms within new Public Buildings	Deferred
Construct New Safe Rooms	On-Going
Provide Jurisdiction Wide Warning Siren Coverage	Completed
Enhance Ordinances to Exceed Minimum Construction Standards	On-Going
Develop Ordinance to Require New Development to Place all New Utility lines underground	Deferred
Retrofit Structures to Withstand High Winds	On-Going
Incorporate Weather Resistant Features in New Construction	On-Going
Anchor Manufactured Homes and Exterior Attachments and Incorporate Local Inspections	Deferred
Purchase Tree Trimming Equipment	On-Going
Install Signs that Direct Traffic toward Shelters and Safe Travel Routes	Deferred
Purchase De-Icing Chemicals	Completed
Purchase Snow Fences	Completed

Establish a network of 4wd / Off-Road Vehicles to Access Stranded People	Completed
Develop Ordinances to Require New Development to Place all New Utility Lines Underground	Deferred
Purchase Snow Removal and De-Icing Equipment	Completed
Institute a Buy-Out Program for Repetitive Loss Properties	On-Going
Conduct Watershed Analysis of Runoff Drainage Systems to Predict Insufficient Capacities in Storm Drain / Natural Creek Systems	Completed
Update Flood Map	On-Going
Encourage Developers to Contribute to Preserve Open Space	On-Going
Wetland Restoration	Deferred
Adopt the International Building Code and International Residential Code	Deferred
Develop Dam/Levee Failure Emergency Action Plans	On-Going
Install backflow valves and sump pumps in critical facilities	On-Going
Regularly Perform Drainage System Maintenance	On-Going
Maintain Participating Status in NFIP by enforcing the Flood Damage Prevention Ordinance	Completed
Culvert Replacement	On-Going
Install Pumping Stations in Levee Systems	Completed
Develop Subdivision Ordinance to require Proper Storm Water Infrastructure Design and Construction	Deferred
Maintain a List of Flood Prone Structures	Completed
Provide Information to Residents on Structural and Non-Structural Retrofitting and other earthquake education	Completed
Perform Detailed Engineering Studies of Bridges and Buildings	On-Going
Retrofit / Harden Critical Facilities	On-Going
Map and Assess Community Vulnerability to Seismic Hazards	Deferred
Maintain Earthquake Emergency Action Plan	Completed
Adopt the 2009 International Existing Building Code or the latest applicable standard for the design of buildings retrofits for the seismically vulnerable buildings	On-Going
Install automatic shutoff valves	On-Going
Retrofit unreinforced masonry structures	Deferred
Educate farmers on soil and water conservation practices	On-Going
Develop a wildland urban interface code	Deferred
Enforce water use restrictions during periods of drought	On-Going
Enforce strict burn ordinances	Completed
Audit Water Loss and Incentivize Water Reuse	Deferred
Retrofit Water Supply Systems	Deferred
Map and assess vulnerable areas	On-Going
Manage Development in Vulnerable Areas	On-Going

Stabilize Vulnerable Areas	On-Going
Maintain a List of Buildings Constructed Over Underground Mines	On-Going
Develop a Specially Engineered Pipeline in areas subject to faulting	Deferred
Develop / Improve Mining Regulations	On-Going

Section 3. County Profile

Section 3.1 County Background

Founded in 1790 by a proclamation by Arthur St. Clair, the first governor of the Northwest Territory, St. Clair County predates the establishment of Illinois. County Lines were re-established during the creation of the Indiana Territory and again as part of the Illinois Territory when it was proclaimed as one of the two original counties of Illinois along with Randolph. Various other counties were cut out of the area that St. Clair County held until its border was brought to its present size in 1827.

The Village of Cahokia, founded as a French-Canadian Mission in 1696, was named the county seat when St. Clair was first established, but in 1814 the seat was transferred to Belleville, which had been created for that purpose. Bellville was incorporated as a village in 1819 and became a city in 1850. Major immigration in the mid-19th century followed revolutions in Germany resulting in much of the population having German heritage. It is now the most populous city south of Springfield in Illinois.

St. Clair County is located in the southwestern region of Illinois. It is bordered on the north by Madison, on the northeast by Clinton County, on the east by Washington County, on the South by Randolph County, on the southwest by Monroe County, and on the west by St. Louis, Missouri (Figure 3.1).

Figure 3-1 St. Clair County and Surrounding Region

Section 3.2 Demographics

According to the U. S. Census Bureau, St. Clair County's 2020 population was 247,969, a decrease of 7.1% from 2010. The population is spread throughout twenty-eight municipalities: Belleville, Brooklyn, Cahokia Heights, Caseyville, Collinsville, Columbia, Dupo, East Carondelet, East St. Louis, Fairmont City, Fairview Heights, Fayetteville, Freeburg, Lebanon, Lenzburg, Marissa, Mascoutah, Millstadt, New Athens, New Baden, O'Fallon, Sauget, Shiloh, Smithton, St. Libory, Summerfield, Swansea, and Washington Park. Table 3.1 displays the breakdown of population by municipality from the 2020 Census.

Table 3-1 St. Clair County 2020 Population by Municipality

Municipality	**2020 Population**	**Percent of County**
St. Clair County	247,969	100.00%
Belleville	40,329	16.26%
O'Fallon	31,977	12.89%
East St. Louis	17,435	7.03%
Collinsville	23,622	9.52%
Fairview Heights	15,983	6.45%
Cahokia Heights	24,906	10.04%
Swansea	13,871	5.59%

Shiloh	14,882	6.00%
Columbia	10,909	4.39%
Mascoutah	8,530	3.44%
Lebanon	4,546	1.83%
Freeburg	4,473	1.83%
Caseyville	4,391	1.77%
Washington Park	2,471	0.99%
Dupo	3,774	1.52%
Millstadt	3,897	1.57%
Smithton	3,890	1.57%
New Baden	3,352	1.35%
Fairmont City	2,151	0.87%
New Athens	1,855	0.75%
Marissa	1,732	0.70%
Brooklyn	620	0.25%
St. Libory	606	0.24%
East Carondelet	369	0.15%
Summerfield	343	0.15%
Lenzburg	446	0.18%
Fayetteville	290	0.12%
Sauget	130	0.05%

Section 3.3 Economy and Industry

St. Clair County's major employers and number of employees are listed in Table 3-2. The largest employers are Scott Air Force Base, Memorial Hospital, St. Elizabeth Hospital, and Southwestern Illinois College. Military, Health, and Education are the largest employing sectors in St. Clair County, followed by Railroad and Manufacturing. Many members of the labor force are in the county due to Scott Airforce base or the industrialized area across from St. Louis. Interstate 64 traverses the north portion of the county and Interstate 255 crosses the northwest corner. The 2022 median household income in the county is $68,915, compared to the Illinois state average of $78,433.

Table 3-2 St. Clair County's Major Employers

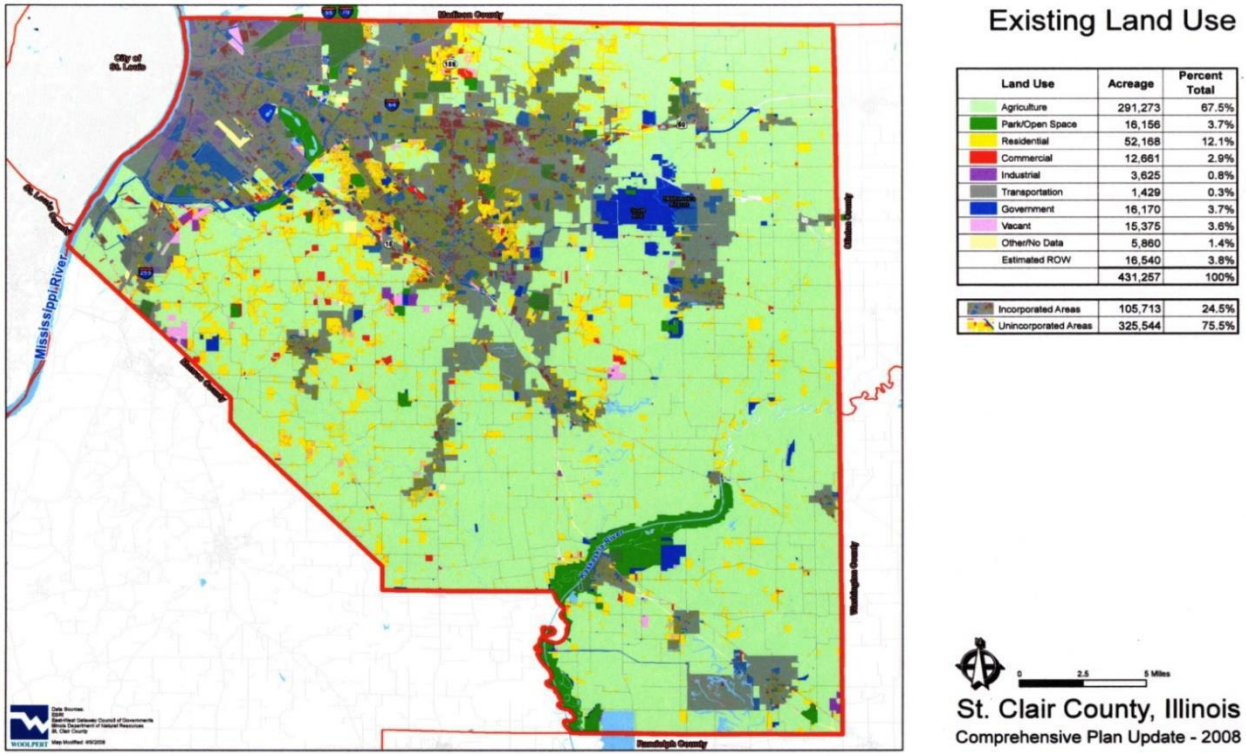
Company Name	Employees	Industry
Protestant Memorial Medical Center	1975	General Medical
Southwestern IL College	1400	Junior College
Bond Drug Company LLC	1333	Pharmacies and Drug Retailer
Bond Drug Company of IL LLC	960	Pharmacies and Drug Retailer
Metro East Services Inc	700	General Medical
St. Elizabeth's Hospital	596	General Medical
GMAC Mortgage LLC	570	Real Estate Credit
McKendree University	550	Colleges, Univesities
Cabofil Inc	500	Plate Work Manufacturing
Caritas Family Solutions	500	Business Associations

Ingram Barge Company	450	Inland Water Freight Transport
SSM Healthcare	401	Offices of Physicians
Allsup, LLC	375	Process, Phsyical Distribution and Logistics
R&L Transfer Inc	363	General Freight
Belleville Shoe Company	350	Footware Merchant
Hubbell Wiegmann Inc	350	Electrical Apparatus
Walmart Inc	343	Department Stores
Touchette Regional Hospital	335	General Medical
US Province of The Missionary Oblates	318	Religious Organizations
Holzhauer Motorsports	314	All Other Automotive
Professional Transportation	311	LineHaul Railroads
Afton Chemical Corp	292	All Other Basic Chemical
Earl L Henderson Trucking	280	General Freight
Home Depot	269	Home Centers
Mortgage Research Center	259	Real Estate Credit
Allsup Inc	250	Telemarketing
Walmart Inc	247	Department Stores
Texas Roadhouse	240	Full Service Restaurants
HSHS Medical Group	238	General Medical
Wexford Health Solutions	232	Family Planning Centers
Wexford Health Inc	232	Family Planning Centers
Integrated IT Corporation	231	Engineering Services
Advancepierre Foods Inc	224	Perishiable Prepared Food
Gmni Inc	216	Full Service Restaurants
Caciss LLC	209	Custom Computer Programming
Walmart Inc	201	Department Stores
Cerro Flow Products	200	Copper, Rolling, and Alloying
Empire Comford Systems Inc	200	Sporting and Athletic Goods
All Car Automotive Warehouse Inc	200	Motor Vehicle Supplies

Section 3.4 Land Use and Development Trends

Agriculture has been the dominant land use in the county for decades and continues to play a vital role in the county's economy despite population migration in the county. Figure 3.2 displays the current land use in St. Clair County. Corn and soybeans are the primary crops, followed by winter wheat and other small grains and hay. Residential is the second largest land use in the county in terms of impact. The largest municipality within the county is Belleville (40,329), according to the U.S. Census Bureau 2020 population estimates. Industrial and Commercial land uses are found within the high-density municipal areas but are also found in the urban low/medium density land use areas or in the urban open space. Most new development is expected to take place in urban open spaces surrounding the most populace municipalities of the county along the Interstate 64 corridor.

Figure 3-2 Lane Use in St. Clair County



Section 3.5 Climate

St. Clair County's climate is typical of Southwestern Illinois. The variables of temperature, precipitation, and snowfall can vary greatly from one year to the next. As early as October and extending as late as April, winter temperatures can fall below freezing. According to the National Climatic Data Center (NCDC), on average the lowest normal winter temperature, occurring in January is 25°F. In the summer, the average high is around 89°F. Average annual precipitation is 41 inches per year.

Section 3.6 Topography

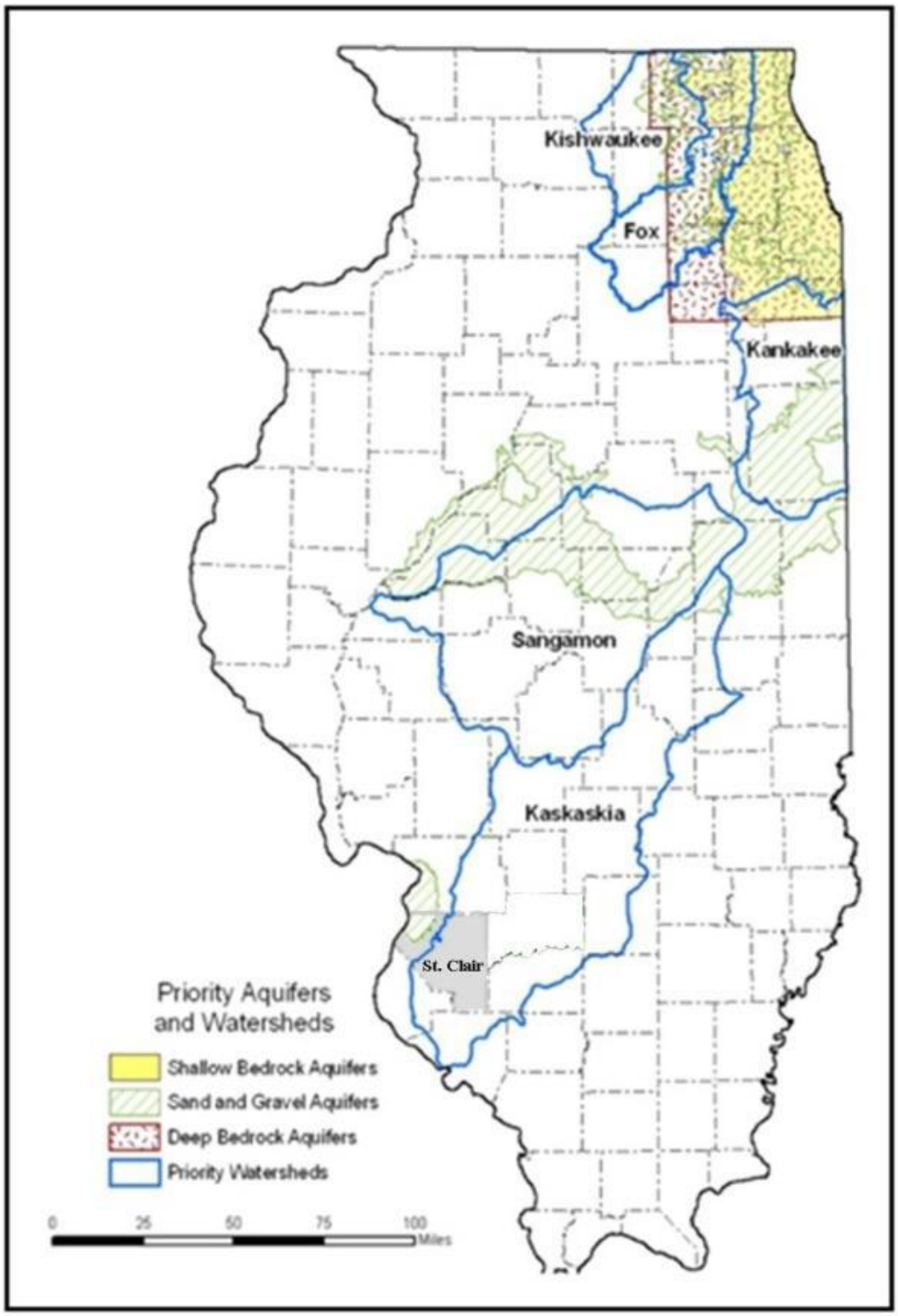
St. Clair County is situated in flat to gently rolling topography of the Central Lowland Province, Springfield Plan sub-section of the Till Plains Section physiographic division of Illinois. Figure 3-3 depicts the terrain within St. Clair County. During the Illinoian Glaciation, it was covered by sheets of ice. Deposited glacial drift debris and glacial till left the land basically flat with a pattern of elongated ridges when the glaciers receded. Elevations in the county range from 335 feet above mean sea level in the southwest near the Mississippi River to 692 feet above sea level. Much of the soils form in loess, windblown material that covers much of the glacial till plains. The remainder of the soils formed in alluvial material transported by water and deposited on flood plains during periods of flooding. Near the surface lie thick layers of limestone, with coal seams

underlying the same at different depths. There is a variety of soil, being black and loamy at some points, and at others (under timber) undeniably clayey.

Section 3.7 Major Lakes, Rivers and Watersheds

St. Clair County is drained by two rivers: the Mississippi River and the Kaskaskia; and two streams: Silver Creek and Richland Creek. In addition, the Cahokia Diversion Canal and the Harding Ditch and Canal provide assistance in drainage through the American Bottoms floodplain, where runoff originating from the bluff areas to east of the American Bottoms contribute markedly to flooding, ponding, and soil wetness problems. As a result, levees are subject to over-topping, under-seepage, and adjacent areas are subject to inundation. Figure 3-4 depicts the intersection of the Kaskaskia River Watershed and St. Clair County. St. Clair County is divided by two major watersheds: Lower Kaskaskia and Cahokia-Joachim, Illinois, Missouri.

Figure 3-4 Intersection of the Kaskaskia River Watershed and St. Clair County



Section 4. Risk Assessment

The goal of mitigation is to reduce future hazard impacts including loss of life, property damage, disruption to local and regional economies, and the expenditure of public and private funds for recovery. Sound mitigation requires rigorous risk assessment. A risk assessment involves quantifying the potential loss resulting from a hazard by assessing the vulnerability of buildings, infrastructure, and people. This assessment identifies the characteristics and potential consequences of a hazard, how much the hazard could affect the community, and the impact on community assets. This risk assessment consists of three components—hazard identification, vulnerability assessment, and risk analysis.

Section 4.1 Hazard Identification

Section 4.1.1 Existing Plans

The Planning Team identified technical documents from key agencies to assist in the identification of potential hazards. Several other documents were used to profile historical hazards and guide the Planning Team during the hazard ranking exercise. Section 2-6 contains a complete list of the technical documents utilized to develop this plan.

Section 4.1.2 National Hazard Records

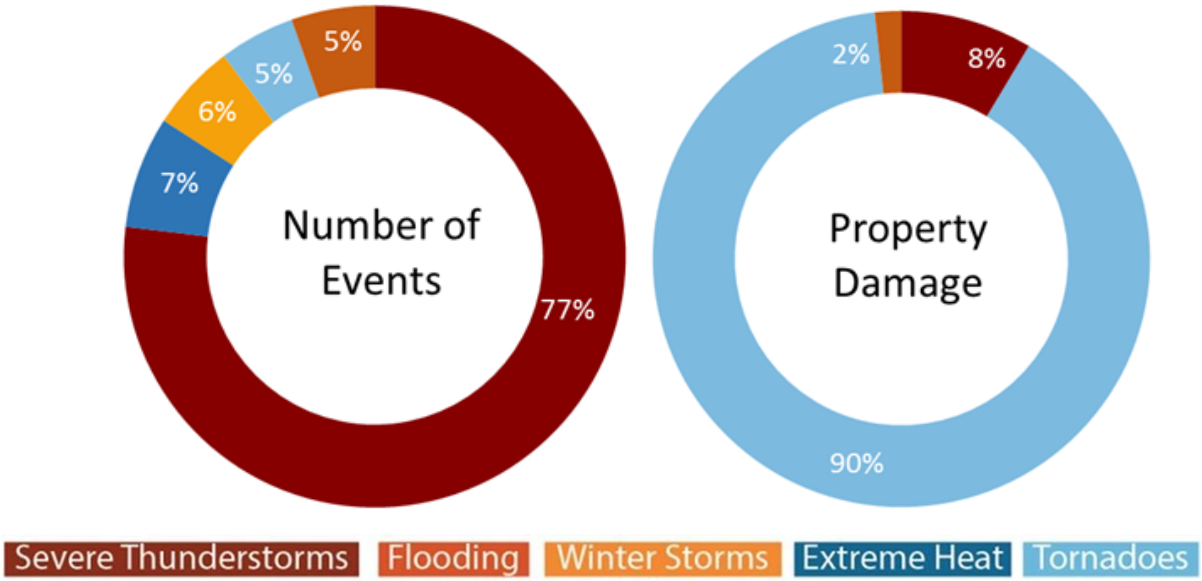
To assist the Planning Team, historical storm event data from the National Climatic Data Center (NCDC) was complied. NCDC records are estimates of damages reported to the National Weather Service from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses.

The NCDC database included 444 reported meteorological events in St. Clair County from 1950-2017 (the most updated information as of the date of this plan). The following hazard-profile sections each include a summary table of events related to each hazard type. Table 4-1 summarizes the meteorological hazards reported for St. Clair County. Figure 4-1 summarize the relative frequency of NCDC reported meteorological hazards and the percent of total damage associated with each hazard for St. Clair County. Full details of individual hazard events are on the NCDC website. In addition to NCDC data, Storm Prediction Center (SPC) data associated with tornadoes, strong winds, and hail was mapped using SPC recorded latitudes and longitudes. Appendix D includes a map of these events.

Table 4-1 Summary of Meteorological Hazards Reported by the NCDC for St. Clair County

Hazards	Start	End	Events	Damage	Deaths	Injuries
Tornado	1950	2023	43	$11.687 mil	12	124
Winter Storm	1950	2023	21	0	0	0
Flooding	1950	2023	51	$18.323 mil	0	0
Thunderstorm	1950	2023	388	$1.430 mil	2	22
Extreme Heat/Drought	1950	2023	32	0	5	0

Figure 4-1 Distribution of NCDC Meteorological Hazards for St. Clair County



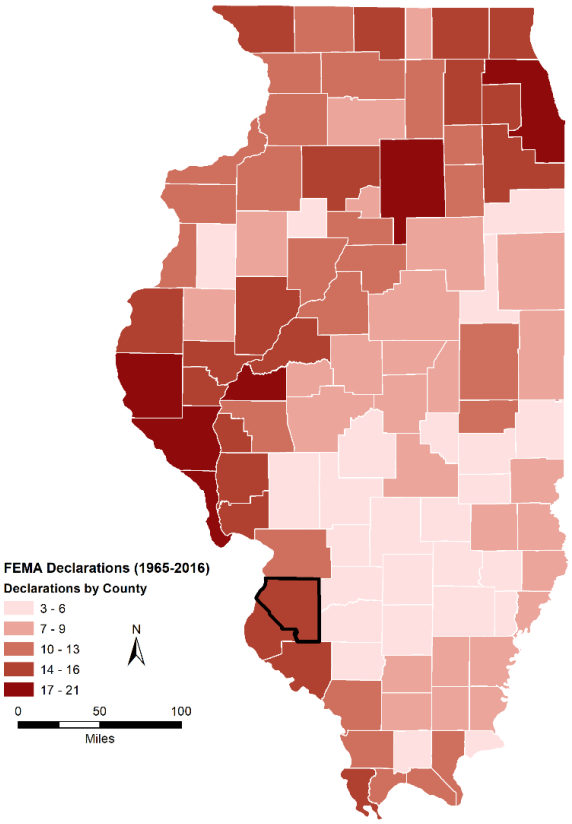
Section 4.1.3 FEMA Disaster Information

Since 1957, FEMA has declared 58 major disasters and 9 emergencies for the State of Illinois. Emergency declarations allow states to access FEMA funds for Public Assistance (PA); disaster declarations allow for even more PA funding, including Individual Assistance (IA) and the Hazard Mitigation Grant Program (HMGP). St. Clair County has received federal aid for 16 declared disasters and 1 emergency since 1965. Table 4-2 lists specific information for each disaster declaration in St. Clair County. Figure 4-2 depicts the number of disasters and emergencies that have been declared for the State of Illinois and St. Clair County since 1965. In the previous five (5) years, there have not been any State declared disasters in St. Clair County that did not rise to the Federal Disaster Declaration level.

Table 4-2 Details of FEMA Declared Emergencies and Disasters in St. Clair County

Declaration Number	Date of Declaration	Description
DR-4676	7/26/2022	Severe Storms and Flooding
DR-4489	3/16/2020	COVID-19
DR-0461	6/1/2019	Severe Storms and Flooding
DR-1771	6/24/2008	Severe Storms and Flooding
DR-1681	2/9/2007	Severe Winter Storms
EM-3230	9/7/2005	Hurricane Katrina Evacuations
DR-1416	5/21/2022	Severe Storms and Flooding
DR-1112	5/6/1996	Severe Storms and Flooding
DR-1053	5/30/1995	Severe Storms and Flooding
DR-1025	4/26/1994	Severe Storms and Flooding
DR-997	7/9/1993	Severe Storms and Flooding
DR-776	10/7/1986	Severe Storms and Flooding
DR-684	6/6/1983	Severe Storms, Tornadoes, and Flooding
DR-583	4/30/1979	Severe Storms and Flooding
DR-373	4/26/2007	Severe Storms and Flooding
DR-276	8/30/1969	Heavy Rains and Flooding
DR-242	6/5/1968	Tornadoes, Severe Storms and Flooding

Figure 4-2 FEMA Declared Emergencies and Disasters in Illinois



Section 4.1.4 Hazard Ranking Methodology

Based on Planning Team input, national datasets, and existing plans, the St. Clair County Planning Team developed and ranked a list of hazards. These hazards ranked the highest based on the Risk Priority Index discussed in Section 4.1.5.

St. Clair County Hazard List	
Tornadoes	Severe Thunderstorms
Winter Storms	Dam / Levee Failure
Flooding	Earthquakes
Extreme Heat / Drought	Ground Failure / Mine Subsidence

Section 4.1.5 Risk Priority Index

The Risk Priority Index (RPI) quantifies risk as the product of hazard probability and magnitude so Planning Team members can prioritize mitigation strategies for high-risk-priority hazards. Planning Team members use historical hazard data to determine the probability, combined with knowledge of local conditions to determine the possible severity of a hazard. Tables 4-3 and 4-4 display the criteria the Planning Team used to quantify hazard probability and magnitude. Furthermore the risk priority index evaluated

the Climate Change factors identified in Extreme Heat, Drought, Wildfire, Flooding and Costal Inundation as they impacted the hazards.

Table 4-3 Hazard Probability Ranking

Probability	**Characteristics**
4 – Highly Likely	Event is probable within the next calendar year. This even has occurred, on average, once every 1-2 years in the past
3- Likely	Event is probable within the next 10 years Event has a 10-50% chance of occurring in any given year This event has occurred, on average, once every 3-10 years in the past
2 – Possible	Event is probable within the next 50 years Event has a 2-10% change of occurring in any given year This event has occurred, on average, once every 10-50 years in the past
1 – Unlikely	Event is probable within the next 200 years Event has a 0.5-2% chance of occurring in any given year This event has occurred, on average, once every 50-200 years in the past

Table 4-4 Hazard Severity Ranking

Magnitude/Severity	**Characteristics**
8-Catastophic	Multiple deaths Complete shutdown of facilities for 30 or more days More than 50% of property is severely damaged
4 – Critical	Injuries and/or illnesses result in permanent disability Complete shutdown of critical facilities for at least 14 days More than 25% of property is severely damaged
2 – Limited	Injuries and/or illnesses do not result in permanent disability Complete shutdown of critical facilities for more than seven days More than 10% of property is severely damaged
1 – Negligible	Injuries and/or illnesses are treatable with first aid Minor quality of life lost Shutdown of critical facilities and services for 24 hours or less Less than 10% of property is severely damaged

The product of hazard probability and magnitude is the RPI. The Planning Team members ranked specified hazards based on the RPI, with larger numbers corresponding to greater risk. After evaluating the calculated RPI, the Planning Team adjusted the ranking to better

suit the County. Table 4-5 identifies the RPI and adjusted ranking for each hazard specified by the Planning Team.

Table 4-5 St. Clair County Hazard Priority Index and Ranking

Hazard	Probability	Magnitude/Severity	Risk Priority Index	Rank
Tornadoes	4	4	16	1
Winter Storms	4	2	8	2
Flooding	4	2	8	3
Earthquake	2	4	8	4
Thunderstorms	4	1	4	5
Dam/Levee Fail	2	2	4	6
Extreme Heat	4	1	4	7
Ground Failure	2	1	2	8

4.1.6 Jurisdictional Hazard Ranking

Each jurisdiction was asked to create its own RPI because hazard susceptibility may differ by jurisdiction. During the five-year review of the plan, the Planning Team will update this table to ensure these jurisdictional rankings accurately reflect each community's assessment of these hazards. Table 4-6 lists the jurisdictions and their respective hazard rankings (Ranking 1 being the highest concern). The individual jurisdictions made these rankings at Meeting 1 or outside of meetings.

Jurisdiction	Tornado	Winter Storm	Flooding	Earthquake	Thunderstorm	Dam/Levee Failure	Extreme Heat	Ground Failure
Belleville	5	2	4	6	1	7	3	8
Brooklyn	1	2	3	4	5	6	7	8
Cahokia Heights	4	5	1	7	3	2	6	8
Caseyville	1	2	3	4	5	6	7	8
Dupo	1	6	7	3	4	2	5	8
East Carondelet	1	2	3	4	5	6	7	8
East St Louis	1	2	3	4	5	6	7	8
Fairmont City	1	2	3	4	5	6	7	8
Fairview Heights	3	1	8	4	2	7	5	6
Fayetteville	1	2	3	4	5	6	7	8
Freeburg	1	3	6	4	2	7	5	8
Lebanon	1	5	3	4	2	-	-	6

Lenzburg	1	2	3	4	5	6	7	8
Marissa	6	2	3	1	4	8	5	7
Mascoutah	2	4	3	5	1	7	6	8
Millstadt	2	3	6	4	1	8	5	7
New Athens	4	7	1	5	3	6	2	8
O'Fallon	1	2	3	4	5	6	7	8
St. Libory	1	2	3	4	5	6	7	8
Sauget	2	7	4	1	5	3	6	8
Shiloh	4	1	5	7	2	8	6	3
Smithton	1	2	4	6	3	8	5	7
Summerfield	1	5	3	4	2	-	-	6
Swansea	1	2	7	8	4	5	6	3
Washington Park	1	2	3	4	5	6	7	8

Section 4.2 Vulnerability Assessment

Section 4.2.1 Asset Inventory

Processes and Sources for Identifying Assets

Before meeting one, the Planning Team used their resources to update a list of critical facilities from state resources. Local GIS data was used to verify the locations of all critical facilities. GIS analysts incorporated these updates and corrections to the Hazus-MH data tables prior to performing the risk assessment. The updated Hazus-MH inventory contributed to a Level 2 analysis, which improved the accuracy of the risk assessment. St. Clair County also provided local assessment and parcel data to estimate the actual number of buildings susceptible to damage for the risk assessment.

Essential Facilities List

Table 4-7 identifies the number of essential facilities identified in St. Clair County. Essential facilities are a subset of critical facilities. Appendix E include a comprehensive list of the essential facilities in St. Clair County.

Facility	**Number of Facilities**
EOC	9
Fire Stations	65
Police Stations	38
Medical Care	9
Schools	153

Facility Replacement Costs

Table 4-8 identifies facility replacement costs and total building exposure. St. Clair County provided local assessment data for updates to replacement costs. Tax-exempt properties such as government buildings, schools, religious and non-profit structures were excluded from this study because they do not have an assessed value. Table 4-8 also includes the estimated number of buildings within each occupancy class.

Table 4-8 St. Clair County's Building Exposure

General Occupancy	Estimated Total Buildings	Total Building Exposure
Residential	88,598	$10,283,199,658
Agriculture	697	$51,055,005
Commercial	7,057	$2,484,126,142
Industrial	562	$381,397,534
Total:	**96,914**	**$13,199,778,339**

Future Development

St. Clair County is expected to see a modest increase in population due to the expansion of existing distribution centers, light industry, and the creation of new opportunities in the service industry such as retail stores, restaurants, and hotels. Expansion is expected to take place along the Interstate 64 corridor.

Community Vulnerability to Hazards – Ranked from 1-8

Jurisdiction	Tornado	Winter Storm	Flooding	Earthquake	Thunderstorm	Dam/Levee Failure	Extreme Heat	Ground Failure
Belleville	5	2	4	6	1	7	3	8
Brooklyn	1	2	3	4	5	6	7	8
Cahokia Heights	4	5	1	7	3	2	6	8
Caseyville	1	2	3	4	5	6	7	8
Dupo	1	6	7	3	4	2	5	8
East Carondelet	1	2	3	4	5	6	7	8
East St Louis	1	2	3	4	5	6	7	8
Fairmont City	1	2	3	4	5	6	7	8
Fairview Heights	3	1	8	4	2	7	5	6
Fayetteville	1	2	3	4	5	6	7	8
Freeburg	1	3	6	4	2	7	5	8

Lebanon	1	5	3	4	2	-	-	6
Lenzburg	1	2	3	4	5	6	7	8
Marissa	6	2	3	1	4	8	5	7
Mascoutah	2	4	3	5	1	7	6	8
Millstadt	2	3	6	4	1	8	5	7
New Athens	4	7	1	5	3	6	2	8
O'Fallon	1	2	3	4	5	6	7	8
St. Libory	1	2	3	4	5	6	7	8
Sauget	2	7	4	1	5	3	6	8
Shiloh	4	1	5	7	2	8	6	3
Smithton	1	2	4	6	3	8	5	7
Summerfield	1	5	3	4	2	-	-	6
Swansea	1	2	7	8	4	5	6	3
Washington Park	1	2	3	4	5	6	7	8

Section 4.3 Risk Analysis

Section 4.3.1 GIS and Hazus-MH

The third step in the risk assessment is the risk analysis, which quantifies the risk to the population, infrastructure, and economy of the community. The hazards were quantified using GIS analyses and Hazus-MH where possible. This process reflects a Level 2 Hazus-MH analysis. A level 2 Hazus-MH analysis involves substituting selected Hazus-MH default data with local data and improving the accuracy of model predictions.

Updates to the default Hazus-MH data include:

- Updating the Hazus-MH defaults, critical facilities, and essential facilities based on the most recent available data sources.
- Reviewing, revising, and verifying locations of critical and essential point facilities with local input.
- Applying the essential facility updates (schools, medical care facilities, fire stations, police stations, and EOCs) to the Hazus-MH model data.
- Updating Hazus-MH reports of essential facility losses.

The following assumptions were made during analysis:

- Hazus-MH aggregate data was used to model the building exposure for all earthquake analyses. It is assumed that the aggregate data is an accurate representation of St. Clair County.
- The analyses were restricted to the county boundaries. Events that occur near the county boundaries do not contain damage assessments from adjacent counties.

- For each tax-assessment parcel, it is assumed there is only one building that bares all the associated values (both structure and content).
- For each parcel, it is assumed that all structures are wood-framed, one-story, slab-on-grade structures, unless otherwise stated in assessment records. These assumptions are based on sensitivity analyses of Hazus and regional knowledge.

Depending upon the analysis options and the quality of data the user inputs, Hazus-MH generates a combination of site-specific and aggregated loss estimates. Hazus-MH is not intended as a substitute for detailed engineering studies; it is intended to serve as a planning aid for communities interested in assessing their risk to flood-, earthquake-, and hurricane-related hazards. This plan does not fully document the processes and procedures completed in its development, but this documentation is available upon request. Table 4-9 indicates the analysis type (i.e. GIS, Hazus-MH, or historical records) used for each hazard assessment.

Table 4-9 Risk Assessment Tool Used for Each Hazard

Hazard	**Risk Assessment Tool(s)**
Tornadoes	GIS Based
Severe Thunderstorm	Historical Records
Flooding	Hazus-MH
Winter Storms	Historical Records
Drought / Extreme Heat	Historical Records
Earthquakes	Hazus-MH
Dam/Levee Failure	Historical Records
Ground Failure / Mine Subsidence	GIS Based / Historical Records

Section 4.3.2 Tornado Hazard

Hazard Definition

Tornadoes are violently rotating columns of air extending from thunderstorms to the ground. Funnel clouds are rotating columns of air not in contact with the ground; however, the violently rotating column of air can reach the ground quickly and become a tornado. If the funnel cloud picks up and blows debris, it has reached the ground and is a tornado.

Tornadoes are a significant risk to Illinois and its citizens. Tornadoes can occur at any time on any day. The unpredictability of tornadoes makes them one of Illinois' most dangerous hazards. Tornado winds are violently destructive in developed and populated areas. A wind velocity of 200 miles per hour results in a pressure of 102.4 pounds per square foot—a load that exceeds the tolerance limits of most buildings. Thus, it is easy to understand why tornadoes can devastate the communities they hit.

Tornadoes are classified according to the Enhanced Fujita tornado intensity scale. The Enhanced Fujita scale ranges from intensity EF0, with effective wind speeds of 40 to 70 miles per hour, to EF5 tornadoes, with effective wind speeds of over 260 miles per hour. Table 4-10 outlines the Enhanced Fujita intensity scale.

Table 4-10 Enhance Fujita Tornado Rating

Enhanced Fujita Number	Estimated Wind Speed	Path Width	Path Length	Description of Destruction
0 Gale	40-72 mph	6-17 yards	0.3-0.9 miles	Light damage, some damage to chimneys, branches broken, signboards damaged, shallow-rooted trees blown over.
1 Moderate	73-112 mph	18-55 yards	1.0-3.1 miles	Moderate damage, roof surfaces peeled off, mobile homes pushed off foundations, attached garages damaged
2 Significant	113-157 mph	56-175 yards	3.2-9.9 miles	Considerable damage, entire roofs torn from frame houses, mobile homes demolished, boxcars pushed over, large trees snapped or uprooted
3 Severe	158-206 mph	176-566 yards	10-31 miles	Severe damage, walls torn from well-constructed houses, trains overturned, most trees in forests uprooted, heavy cars thrown about
4 Devastating	207-260 mph	0.3-0.9 miles	32-99 miles	Complete damage, well-constructed houses leveled, structures with weak foundations blown off for some distance, large missiles generated
5 Incredible	261-318 mph	1.0 – 3.1 miles	100-315 miles	Foundations swept clean, automobiles become missiles and thrown for 100 yards or more, steel-reinforced concrete structures badly damaged.

Previous Occurrences of Tornadoes

There have been several occurrences of tornadoes in St. Clair County during recent decades. The National Climatic Data Center (NCDC) database reported 30 tornadoes/funnel clouds in St. Clair County since 1950. Table 4-11 identifies NCDC-recorded tornadoes that caused damage, death, or injury in St. Clair County. Additional details of individual hazard events are on the NCDC website.

The most damaging tornado event occurred in February 1956 when a strong tornado touched down near the junction of the Mississippi River, St. Clair County, and Monroe County, moving 31.6 miles eastnortheast across the entire breadth of St. Clair County and ending just after passing into Clinton County. Six people were killed while twenty were injured. Damage was approximately $2.5 million.

Table 4-11 NCDC Recorded Tornadoes that Caused Damage, Death, or Injury in St. Clair County

Date	Scale	Deaths	Injuries	Property Damage ($)
5/24/1952	F1	0	0	25.00k
10/6/1955	F1	0	0	250.00k
10/6/1955	F1	0	0	25.00k
2/25/1956	F4	6	20	2.5m
9/15/1956	F2	0	0	25.00k
4/25/1957	F2	0	0	25.00k
4/5/1958	F3	1	8	250.00k
5/31/1958	F1	0	0	2.5k
6/1/1958	F1	0	0	2.5k
9/24/1961	F2	0	1	25.00k
8/3/1967	-	0	0	2.5k
5/15/1968	F3	4	60	250.00k
3/20/1976	F2	0	0	250.00k
5/1/1983	F2	0	20	2.5m
4/3/1984	F0	0	0	250.00k
11/15/1988	F2	0	0	250.00k
11/15/1988	F3	0	0	2.5m
11/26/1990	F0	0	0	25.00k
7/4/1992	F1	0	0	2.5m
5/18/1995	F0	0	0	4.30k
4/19/1996	F0	0	0	5.00k
6/24/2000	F1	0	2	0.00k
6/10/2003	F2	0	2	0.00k
4/2/2006	F2	1	11	0.00k
6/12/2019	F0	0	0	10.00k
5/19/2022	F0	0	0	10.00k
4/15/2023	F1	0	0	0.00k
4/15/2023	F0	0	0	0.00k
4/15/2023	F0	0	0	0.00k
4/15/2023	F1	0	0	0.00k
Total:		**12**	**124**	**11.687M**

*NCDC records are estimates of damage compiled by the National Weather Service from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses related to a given weather event.

Geographic Location of Tornado Hazard

The entire county has the same risk of tornado occurrence. Tornadoes can occur at any location within the county.

Hazard Extent for Tornado Hazard

Historical tornadoes generally moved from southwest to northeast across the county, although many other tracks are possible, from more southerly to northerly directions. The extent of the hazard varies in terms of the size of the tornado, its path, and its wind speed.

Risk Identification for Tornado Hazard

Based on historical information, the probability of future tornadoes in St. Clair County is highly likely. The county should expect tornadoes with varying magnitudes to occur in the future. Tornadoes ranked as the number one hazard according to the St. Clair County Planning Team's risk assessment.

Risk Priority Index				
Probability	X	Magnitude	=	RPI
4	X	4	=	16

Vulnerability Analysis for Tornado Hazard

Tornadoes can occur within any area in the county; therefore, the entire county population and all buildings are vulnerable to tornadoes. To accommodate this risk, this plan considers all buildings located within the county as vulnerable. Tables 4-7 and 4-8 display the existing buildings and critical infrastructure in St. Clair County.

Critical Facilities

All critical facilities are vulnerable to tornadoes. Critical facilities are susceptible to many of the same impacts as any other building within the jurisdiction. These impacts vary based on the magnitude of the tornado but can include structural failure, damaging debris (trees or limbs), roofs blown off or windows broken by hail or high winds, and loss of facility functionality (e.g., a damaged police station will no longer be able to serve the community). Table 4-7 lists the types and number of essential facilities for the entire county and Appendix F displays a large format map of the locations of all critical facilities within the county.

Building Inventory

Table 4-8 lists the building exposure in terms of types and numbers of buildings for the entire county. The buildings within the county can all expect the same impacts, similar to those discussed for critical facilities. These impacts include structural failure, damaging debris (trees or limbs), roofs blown off or windows broken by hail or high winds, and loss of building function (e.g., damaged home will no longer be habitable, causing residents to seek shelter).

Infrastructure

The types of infrastructure that could be impacted during a tornado include roadways, utility lines/pipes, railroads, and bridges. Since the county's entire infrastructure is vulnerable, it is important to emphasize that any number of these structures could become damaged during a tornado. The impacts to these structures include impassable roadways, broken or failed utility lines (e.g., loss of power or gas to community), and railway failure from broken or impassable rail lines. Bridges could fail or become impassable, causing risk to motorists.

GIS-based Tornado Analysis

Two tornado scenarios were conducted for St. Clair County with paths across northern and middle cities. The following analysis quantifies the anticipated impacts of tornadoes in the county in terms of numbers and types of buildings and infrastructure damaged.

GIS-overlay modeling was used to determine the potential impacts of an EF4 tornado. The analysis used two hypothetical paths based upon the F4 tornado event that run for 24 miles: one going through East St. Louis and Fairview Heights, the other going through Bellville and Scott AFB. Table 4-12 depicts tornado damage curves and path widths utilized for the modeled scenarios. The damage curve is based on conceptual wind speeds, path winds, and path lengths from the Enhanced-Fujita Scale guidelines.

Table 4-12 Tornado Path and Damage Curves

Fujita Scale	Path Width (feet)	Maximum Expected Damage
5	2,400	100%
4	1,800	100%
3	1,200	80%
2	600	50%
1	300	10%
0	150	0%

Degrees of damage depend on proximity to the path centerline within a given tornado path. The most intense damage occurs within the center of the damage path, with decreasing amounts of damage away from the center. To model the EF4 tornado, a tornado path were created in GIS with buffers added (damage zones) around the tornado paths. Table 4-13 and Figure 4-3 illustrate the zone analysis. Figure 4-4 depicts the selected hypothetical tornado paths.

Table 4-13 EF4 Tornado Zones and Damage Curves

Zone	Buffer (feet)	EF 4 Damage Curve
1	0-150	100%
2	150-300	80%
3	300-600	50%
4	600-900	10%

Figure 4-3 EF4 Tornado Analysis (Damage Curves) Using GIS Buffers

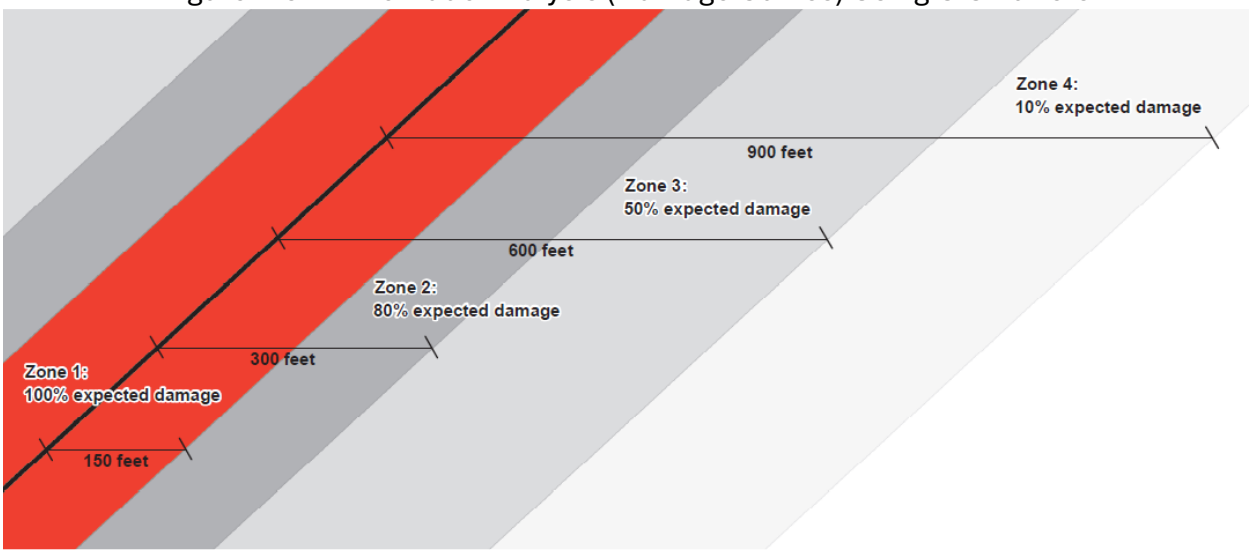
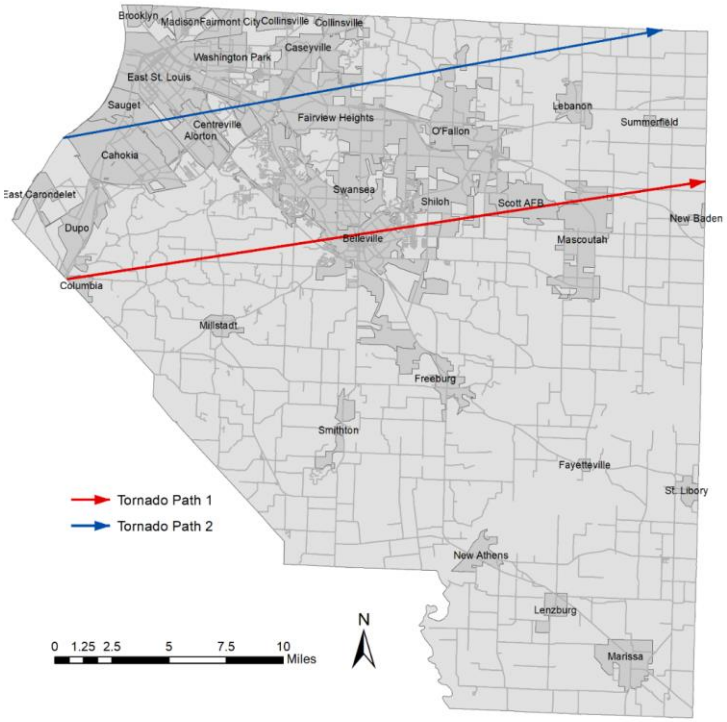


Figure 4-4 Modeled Tornado Tract for St. Clair County



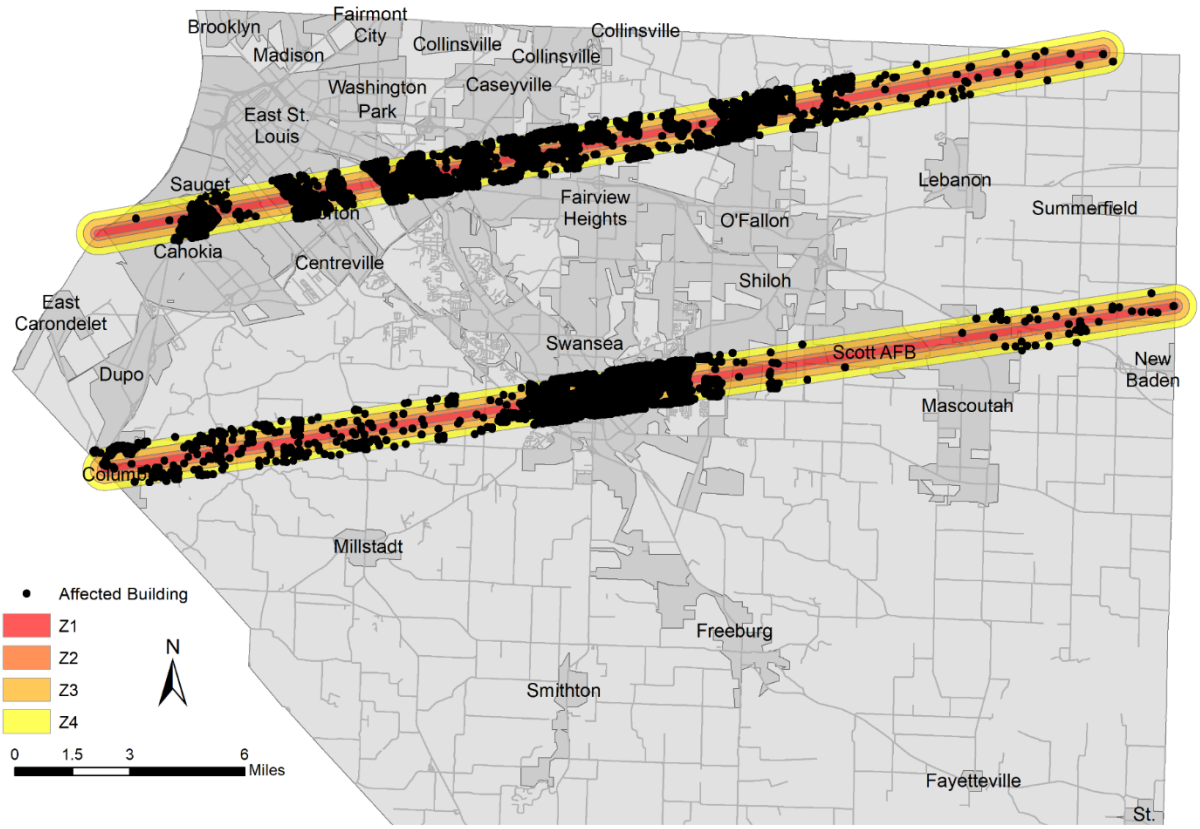
Modeled Impacts of the EF 4 Tornado

The GIS analysis estimates that the modeled EF 4 tornado damage 7,006 buildings for Path 1 and 6,527 for Path 2. The estimated building looses are approximately $13,183,688,146 for Path 1 and $2,993,171,935 for Path 2. The building losses are an estimate building replacement costs multiplied by the damage percent. Table 4-14 and Figures 4-5 show the results of the EF3 tornado analysis.

Table 4-14 Estimated Building Loss by Occupancy Type

Occupancy	Zone 1	Zone 2	Zone 3	Zone 4
Residential (Path 1)	$118,708,628	$103,928,036	$122,685,476	$21,939,012
Agriculture (Path 1)	$526,890	$89,458	$390,240	$24,400
Commercial (Path 1)	$4,256,105,518	$14,403,221	$8,520,570,329	$14,297,450
Total (Path 1)	**$4,376,396,848**	**$121,005,437**	**$8,648,965,502**	**$37,320,359**
Residential (Path 2)	$118,507,739	$103,449,924	$133,795,078	$28,279,038
Agriculture (Path 2)	$837,894	$44,362	$51,873	$41,057
Commercial (Path 2)	$4,817,430	$4,456,320	$2,127,402,419	$426,875,993
Total (Path 2)	**$140,265,450**	**$121,553,764**	**$2,275,029,502**	**$456,323,219**

Figure 4-5 Building Inventory Affected by the EF4 Tornado



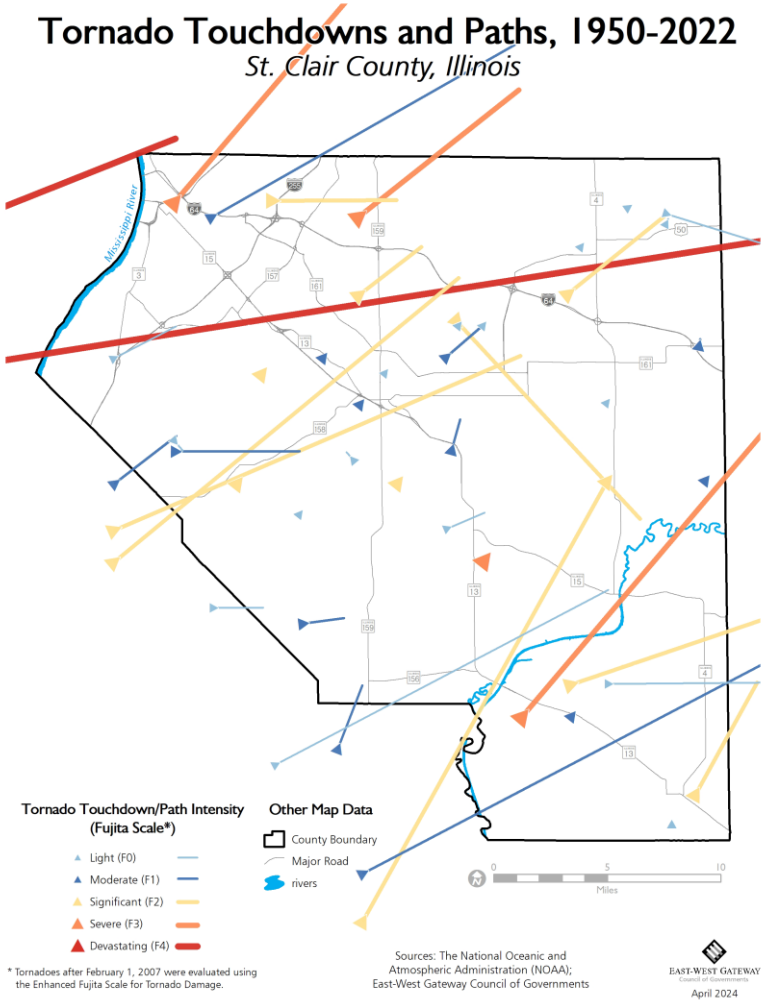
Vulnerability to Future Assets / Infrastructure for Tornado Hazard

The entire population and all buildings are at risk because tornadoes can occur anywhere within the state, at any time. Furthermore, any future development in terms of new construction within the county is at risk. Table 4-8 includes the building exposure for St. Clair County. All essential facilities in the county are at risk. Appendix E includes a list of the essential facilities in St. Clair County and Appendix F displays a large format map of the locations of all critical facilities within the county.

Suggestions for Community Development Trends

Preparing for severe storms will be enhanced if local officials sponsor programs and initiatives to address severe storm preparedness. It is suggested that new structures in the county should be built with more sturdy construction, and existing structures may be hardened to lessen the potential impacts of severe weather. Additional warning sirens can warn the community of approaching storms to ensure the safety of St. Clair County residents and minimizing property damage by allowing them time to move vehicles into covered areas. Additional NOAA Weather Alert Radio Receivers having S.A.M.E feature can warn a member and/or members of the community of an approaching storm specific to the county area to ensure the safety of the resident similar to that of a smoke detector application to fire dangers. These Weather Alert Radios should be issued and used by all schools, churches, hospitals, nursing homes, childcare facilities, and any other area where large numbers of persons are in place. These Weather Alert Radio Receivers are sent radio signals to activate their built-in siren oscillators to warn of a tornado by the local National Weather Service Office in St. Charles, MO

Figure 4-6 Tornado Touchdowns and Paths 1950-2022 for St. Clair County, Illinois



Section 4.3.3 Winter Storm Hazard

Hazard Definition of Winter Storm Hazard

Severe winter weather consists of various forms of precipitation and weather conditions. This may include one or more of the following: freezing rain, sleet, heavy snow, blizzards, icy roadways, extreme low temperatures, and strong winds. These conditions can cause human health risks such as frostbite, hypothermia, or death and cause property damage and disrupt economic activity.

Ice or sleet, even in small quantities, can result in hazardous driving conditions and can cause property damage. Sleet involves raindrops that freeze completely before reaching the ground. Sleet does not stick to trees and wires. Ice storms, on the other hand, involve liquid rain that falls through subfreezing air and/or onto sub-freezing surfaces, freezing on contact with those surfaces. The ice coats trees, buildings, overhead wires, and roadways, sometimes causing extensive damage.

Ice storms are some of the most damaging winter storms in Illinois. Ice storms occur when moistureladen Gulf air converges with the northern jet stream causing freezing rain that coats power and communication lines and trees with heavy ice. Strong winds can cause the overburdened limbs and cables to snap; leaving large sectors of the population without power, heat, or communication.

Rapid accumulation of snow, often accompanied by high winds, cold temperatures, and low visibility, characterize significant snowstorms. A blizzard is categorized as a snow storm with winds of 35 miles per hour or greater and/or visibility of less than one-quarter mile for three or more hours. Strong winds during a blizzard blow falling and fallen snow, creating poor visibility and impassable roadways. Blizzards potentially result in property damage.

Blizzards repeatedly affect Illinois. Blizzard conditions cause power outages, loss of communication, and transportation difficulties. Blizzards can reduce visibility to less than one-quarter mile, and the resulting disorientation makes even travel by foot dangerous if not deadly.

Severe cold involves ambient air temperatures that drop to 0° F or below. These extreme temperatures can increase the likelihood of frostbite and hypothermia. High winds during severe cold events can enhance the air temperature's effects. Fast winds during cold weather events can lower the wind chill factor (how cold the air feels on your skin). As a result, the time it takes for frostbite and hypothermia to affect a person's body will decrease.

Previous Occurrence of Winter Storm Hazard

The NCDC database reported 21 winter storm and extreme cold events for St. Clair County since 1950. The most recent reported event occurred in January of 2017. An Ice Storm hit parts of West Central and Southwest Illinois on Martin Luther King Holiday Weekend. Ice amounts ranged from 0.25 to 0.40 inch. Impacts were limited to scattered power outages and transportation slow-downs. Many problems were averted as most schools and businesses closed on Friday, the first day of the event. There are no NCDC-recorded winter storm events that caused damage, death, or injury in St. Clair County.

Geographic Location of Winter Storm Hazard

Severe winter storms are regional in nature. Most of the NCDC data are calculated regionally or in some cases statewide.

Hazard Extent of Winter Storm Hazard

The extent of the historical winter storms varies in terms of storm location, temperature, and ice or snowfall. A severe winter storm can occur anywhere in the county. Based on the ever-changing climate trends within St. Clair County. We have seen an increase in the amounts of precipitation both in the form of rainfall and snow. Furthermore, a more serious and threatening event would be the increase in ice storm events affecting all municipalities within St. Clair County. Based on the extend of impact and the amount of damage they can cause Winter Storm intensity could be measured as low (minimal community impact and damage), medium (impacts on travel, closure of educational facilities, minor damage) and high (stoppage of non-essential travel, closure of major commerce and significant damage). We are seeing more storms in the medium and high level which could have a negative impact in the future.

Risk Identification of Winter Storm Hazard

Based on historical information, the probability of future winter storms in St. Clair County is highly likely. The county should expect winter storms with varying magnitudes to occur in the future which could shut down roads and limit access to emergency facilities.

Rick Priority Index				
Probability	X	Magnitude	=	RPI
4	X	2	=	8

Vulnerability Analysis of Winter Storm Hazard

Winter storm impacts are equally likely across the entire county; therefore, the entire county is vulnerable to a winter storm and can expect impacts within the affected area. To accommodate this risk, this plan considers all buildings located within the county as vulnerable. Tables 4-7 and 4-8 display the existing buildings and critical infrastructure in St. Clair County.

Critical Facilities

All critical facilities are vulnerable to winter storms. A critical facility will encounter many of the same impacts as other buildings within the county. These impacts include loss of gas or electricity from broken or damaged utility lines, damaged or impassable roads and railways, broken water pipes, and roof collapse from heavy snow. Table 4-7 lists the types and number of essential facilities for the entire county and Appendix F displays a large format map of the locations of all critical facilities within the county.

Building Inventory

Table 4-8 lists the building exposure in terms of types and numbers of buildings for the entire county. The impacts to the general buildings within the county are similar to the damages expected to the critical facilities. These include loss of gas or electricity from broken or damaged utility lines, damaged or impassable roads and railways, broken water pipes, and roof collapse from heavy snow.

Infrastructure

During a winter storm, the types of potentially impacted infrastructure include roadways, utility lines/pipes, railroads, and bridges. Since the county's entire infrastructure is vulnerable, it is important to emphasize that a winter storm could impact any structure. Potential impacts include broken gas and/or electricity lines or damaged utility lines, damaged or impassable roads and railways, and broken water pipes.

Potential Dollar Losses from Winter Storm Hazard

According to the NCDC, St. Clair County has not incurred direct financial damages relating to winter storm events during the time the database has been maintained (1950-present). NCDC records are estimates of damage compiled by the National Weather Service from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses related to a given weather event. As a result, the potential dollar losses for a future event cannot be narrowly constrained for St. Clair County.

Vulnerability to Future Assets/Infrastructure for Winter Storm Hazard

Any new development within the county will remain vulnerable to these events.

Suggestions for Community Development Trends

Because winter storm events are regional in nature, future development across the county will also face winter storms.

Section 4.3.4 Flooding Hazard

Hazard Definition for Flooding

Flooding is a significant natural hazard throughout the United States. The type, magnitude, and severity of flooding are functions of the magnitude and distribution of precipitation over a given area, the rate at which precipitation infiltrates the ground, the geometry and hydrology of the catchment, and flow dynamics and conditions in and along the river channel. Floods are classified as one of two types in this plan: upstream floods or downstream floods. Both types of floods are common in Illinois.

Upstream floods, also called flash floods, occur in the upper parts of drainage basins and are generally characterized by periods of intense rainfall over a short duration. These floods arise with very little warning and often result in locally intense damage, and sometimes loss of life, due to the high energy of the flowing water. Flood waters can snap trees, topple buildings, and easily move large boulders or other structures. Six inches of rushing water can upend a person; 24 inches can easily carry off a car. Generally, upstream floods cause severe damage over relatively localized areas. Urban flooding is a type of upstream flood. Urban flooding involves the overflow of storm drain systems and can result from inadequate drainage combined with heavy rainfall or rapid snowmelt. Upstream or flash floods can occur at any time of the year in Illinois, but they are most common in the spring and summer months.

Downstream floods, sometimes called riverine floods, refer to floods on large rivers at locations with large upstream catchments. Downstream floods are typically associated with precipitation events that are of relatively long duration and occur over large areas. Flooding on small tributary streams may be limited, but the contribution of increased runoff may result in a large flood downstream. The lag time between precipitation and time of the flood peak is much longer for downstream floods than for upstream floods, generally providing ample warning for people to move to safe locations and, to some extent, secure some property against damage. Riverine flooding on the large rivers of Illinois generally occurs during either the spring or summer.

Previous Occurrences of Flooding

The NCDC database reported 51 flooding events in St. Clair County. The most significant flood events occurred in July 2023. In 2000, Heavy rain caused localized flooding in Fairview Heights. A 30 by 35 foot section of roof on a department store at a shopping mall collapsed under the weight of about 3 inches of rain. About a foot of water on Route 159 stranded several motorists. Property damages were estimated at $200,000. Table 4-18 identifies NCDC-recorded flooding events that caused damage, death, or injury in St. Clair County.

Table 4-18 NCDC-recorded Flooding Events that caused Death, Damage or Injury in St. Clair County

Location	Date	Deaths	Injuries	Property Damage
Fairview Heights	7/15/2000	0	0	200.00k
Freeburg	5/26/2008	0	0	20.00k
Fairmont City	6/6/2008	0	0	1.00k
	Total:	**0**	**0**	**223k**

*NCDC records are estimates of damage compiled by the National Weather Service from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses related to a given weather event.

Other occurrences of flooding have been reported including several floods in downtown New Athens. The Kaskaskia River has flooded several times over the years. Major floods on record that caused property damage occurred in 1915, 1943, 1950, and 1961. Since the completion of a levee in 1968 there have been significant flooding of the Kaskaskia in 1993, 1996, and 2008 and two floods in the past three years. Due to the levee, flooding has had minimal impact on the village

There are 62 structures in St. Clair County that have experienced repetitive losses due to flooding. FEMA defines a repetitive loss structure as a structure covered by a contract of flood insurance issued under the NFIP that has suffered flood loss damage on two or more occasions during a 10-year period that ends on the date of the second loss, in which the cost to repair the flood damage is ≥ 25% of the market value of the structure at the time of each flood loss.

The Illinois Emergency Management Agency and Illinois Department of Natural Resources was contacted to determine the location of repetitive loss structures in St. Clair County. Records indicate that there are 62 repetitive loss structures within the county. The total amount paid for building replacement and building contents for damage to these repetitive loss structures is $703,837.09. Table 4-19 describes the repetitive loss structures for each jurisdiction.

Table 4-19 Repetitive Loss Structures for each Jurisdiction in St. Clair County

Jurisdiction	Number of Properties	Total Losses	Total Building Payments	Total Contents Payments	Structure Type
St Clair County	16	39	$630,879.93	93,162.29	14 Single Family / 1 Business / 1 Other Residential
Belleville	2	5	$15,421.94	$3,008.48	2 Single Family
Cahokia Heights	3	9	$52,978.17	$552.48	3 Single Family
Caseyville	1	2	$11,610.85	$0.00	1 Single Family

Centreville	2	5	$17,076.15	$7,000.00	2 Single Family
Dupo	1	2	$21,875.23	$0.00	1 Other Residential
East Carondelet	4	8	$44,701.21	$20,003.96	4 Single Family
East St Louis	31	84	$653,074.12	$158,835.07	29 Single Family / 1 Other Residential / 1 2-4 Family
O'Fallon	1	2	$67,445.58	$84,281.08	1 Business
Swansea	1	2	$14,571.11	$0.00	1 Single Family

Geographic Location of Flooding

Most riverine flooding in Illinois occurs during either the spring or summer and is the result of excessive rainfall and/or the combination of rainfall and snowmelt. Flash flooding of low-lying areas in Illinois can occur during any time of the year but tends to be less frequent and more localized between mid-summer and early winter.

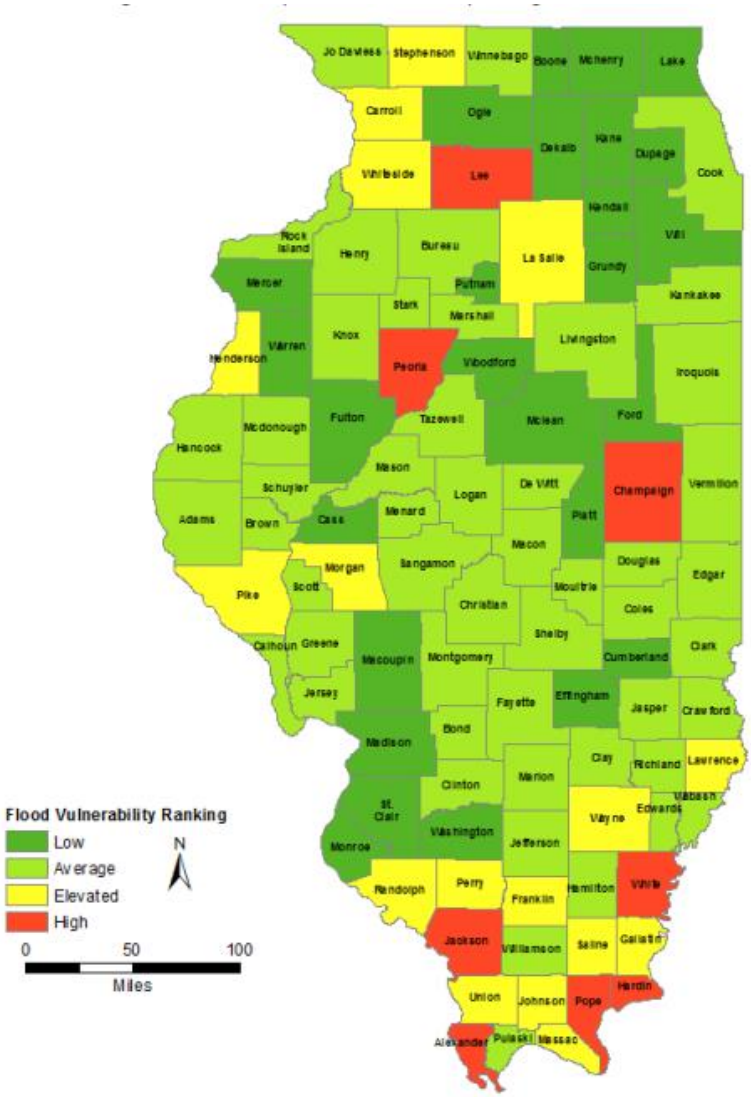
Hazard Extent for Flooding

All floodplains are susceptible to flooding in St. Clair County. The floodplain of concern is for the 100-year flood event which is defined as areas that have a 1% chance of flooding in any given year. However, flooding is dependent on various local factors including, but not limited to, impervious surfaces, amount of precipitation, river-training structures, etc. The 100-year flood plain covers approximately 15% of St. Clair County.

Vulnerability Analysis for Flooding

The 2013 Illinois Hazard Mitigation Plan analyzed a variety potential natural hazards including vulnerability to flooding. A Flood Vulnerability Index (FVI) was calculated for all counties and jurisdictions in Illinois. FVI combines Hazus-based estimates of flood exposure and loss with the widely utilized Social Vulnerability Index (SoVI). The highest vulnerability scores and vulnerability ratings were generally in rural counties and communities located along Illinois's large rivers (i.e., Mississippi, Green, Illinois, Kaskaskia, Rock and Ohio Rivers). Figure 4-12 displays the Flood Vulnerability Ratings for the 102 Counties in Illinois. The vulnerability ratings are categorically representations (low, average, elevated, or high) of the flood vulnerability index. St. Clair County has an Average Flood Vulnerability Rating and ranks 76 out of the 102 Counties in Illinois in terms of loss estimation according to Hazus-MH for floods.

Figure 4-12 County Flood Vulnerability Rating for Illinois



Because all floodplains are susceptible to flooding in St. Clair County; therefore, the population and all buildings located within the floodplain are vulnerable to flooding. To accommodate this risk, this plan considers all buildings located within 100-year flood plain as vulnerable.

Risk Identification for Flood Hazard

Based on historical information and the Flood Vulnerability Rating, future occurrence of flooding in St. Clair County is highly likely. According to the Risk Priority Index (RPI) and County input, flooding is ranked as the number four hazard.

Risk Priority Index				
Probability	X	Magnitude	=	RPI
4	X	2	=	8

Critical Facilities

All critical facilities within the floodplain are vulnerable to floods. An essential facility will encounter many of the same impacts as other buildings within the flood boundary. These impacts can include structural failure, extensive water damage to the facility, and loss of facility functionality (e.g., a damaged police station cannot serve the community). Appendix E include a list of the essential facilities in St. Clair County and Appendix F displays a large format map of the locations of all critical facilities within the county.

Building Inventory

All buildings within the floodplain are vulnerable to floods. These impacts can include structural failure, extensive water damage to the facility, and loss of facility functionality (e.g., damaged home will no longer be habitable, causing residents to seek shelter). This plan considers all buildings located within 100-year flood plain as vulnerable.

Infrastructure

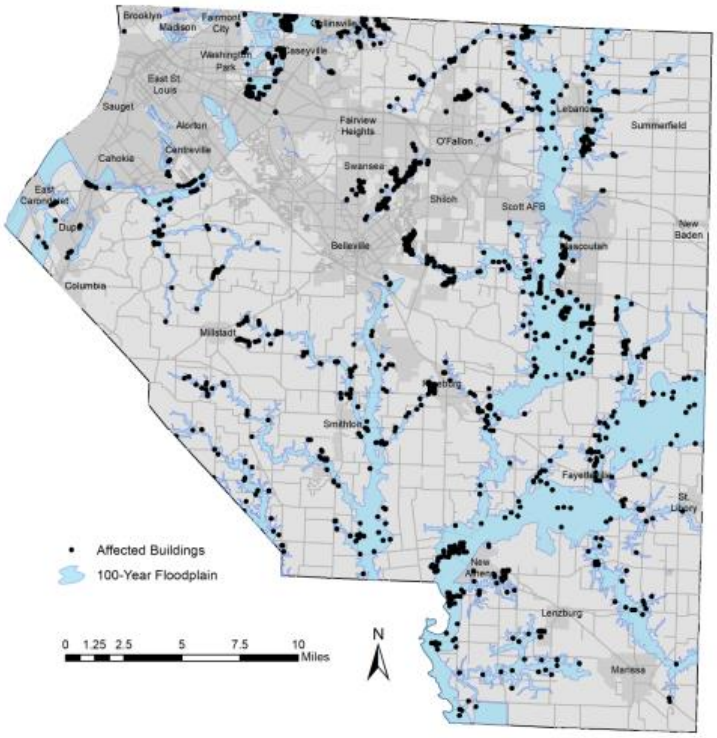
The types of infrastructure potentially impacted by a flood include roadways, utility lines/pipes, railroads, and bridges. Since an extensive inventory of the infrastructure is not available for this plan, it is important to emphasize that a flood could damage any number of these items. The impacts to these items include: broken, failed, or impassable roadways; broken or failed utility lines (e.g., loss of power or gas to community); or railway failure from broken or impassable railways. Bridges could also fail or become impassable, causing risk to motorists.

Hazus-MH Flood Analysis

Hazus-MH was utilized to generate the flood depth grid for a 100-year return period and made calculations by clipping the USGS one-third-arc-second DEM (~10 m) to the flood boundary. Next, HazusMH was used to estimate the damages for St. Clair County by utilizing a detailed building inventory database created from assessor and parcel data.

According to this analysis, there are 1,992 buildings located in the St. Clair County 100-year floodplain. The estimated damage to these structures is $6 billion. It should be noted that the results should be interpreted as degrees of loss rather than exact number of buildings exposed to flooding. Figure 4-13 depicts the building inventory within the 100-year.

Figure 4-13 Building Inventory Located within the 100-year Floodplain in St. Clair County



Vulnerability Analysis to Future Assets

Flooding may affect nearly any location within the county; therefore all buildings and infrastructure are vulnerable. Table 4-8 includes the building exposure for St. Clair County. All essential facilities in the county are at risk. Appendix E include a list of the essential facilities in St. Clair County and Appendix F displays a large format map of the locations of all critical facilities within the county. Currently, the municipal planning commission reviews new developments for compliance with the local flood zoning ordinance. At this time, no new construction is planned with the 100-year floodplain.

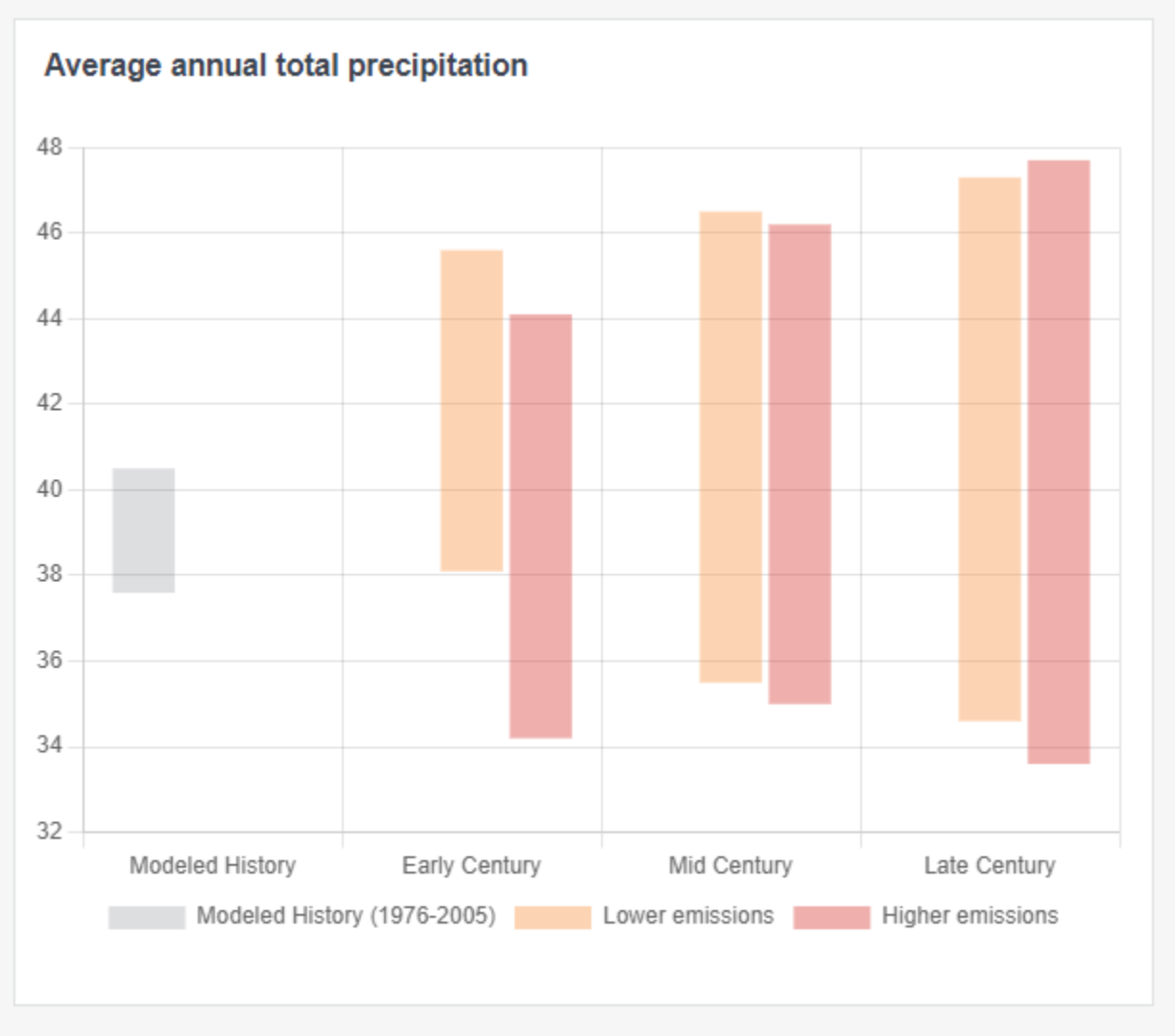
Suggestions for Community Development Trends

Reducing floodplain development is crucial to reducing flood-related damages. Areas with recent development may be more vulnerable to drainage issues. Storm drains and sewer systems are usually most susceptible to drainage issues. Damage to these can cause back-up of water, sewage, and debris into homes and basements, causing structural and mechanical damage as well as creating public health hazards and unsanitary conditions.

Climate Change Impacts

A review of the Climate Mapping for Resilience and Adaptation was conducted for St. Clair County to determine the impacts of climate change on St. Clair County as it related to flooding. The charts below show the results of that review and the impact within St. Clair County.

Climate Projections	Early Century		Mid Century		Late Century	
	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
Average Annual Total Precipitation	40.5 inches	40.2 inches	40.7 inches	41.1 inches	40.5 Days	41.8 Days
Days per year with precipitation	160.7 Days	159.9 Days	159.5 Days	158.3 Days	159.1 Days	155.5 Days
Maximum number of consecutive wet days	11.0 Days	11.0 Days	11.0 Days	10.9 Days	11.0 Days	10.8 Days
Annual days with total precipitation >1 inch	5.6 Days	5.7 Days	5.8 Days	6.2 Days	5.9 Days	6.8 Days
Annual days with total precipitation >2 inches	0.6 Days	0.6 Days	0.6 Days	0.7 Days	0.6 Days	0.9 Days
Annual days with precipitation >3 inches	0.1 Days	0.1 Days	0.1 Days	0.1 Days	0.1 Days	0.2 Days
Annual days that exceed 99th percentile precipitation	6.5 Days	6.6 Days	6.8 Days	7.5 Days	7.0 Days	8.4 Days
Days with maximum temperature below 32F	13.2 Days	12.8 Days	10.9 Days	9.8 Days	9.1 Days	5.0 Days



Section 4.3.5 Earthquake Hazard

Hazard Definition

An earthquake is the shaking of the earth caused by the energy released when large blocks of rock slip past each other in the earth's crust. Most earthquakes occur at tectonic plate boundaries; however, some earthquakes occur in the middle of plates, for example the New Madrid Seismic Zone or the Wabash Valley Fault System. Both of these seismic areas have a geologic history of strong quakes, and an earthquake from either seismic area could possibly affect Illinois counties. There may be other, currently unidentified faults in the Midwest also capable of producing strong earthquakes. Constant monitoring of seismic activity can be obtained for the St. Clair County area from the Earth and Atmospheric Sciences Department of St. Louis University.

Strong earthquakes can collapse buildings and infrastructure, disrupt utilities, and trigger landslides, avalanches, flash floods, fires, and tsunamis. When an earthquake occurs in a populated area, it may cause death, injury, and extensive property damage. An earthquake might damage essential facilities, such as fire departments, police departments, and hospitals, disrupting emergency response services in the affected area. Strong earthquakes may also require mass relocation; however, relocation may be impossible in the short-term aftermath of a significant event due to damaged transportation infrastructure and public communication systems.

Earthquakes are usually measured by two criteria: intensity and magnitude (M). Earthquake intensity qualitatively measures the strength of shaking produced by an earthquake at a certain location and is determined from effects on people, structures, and the natural environment. Earthquake magnitude quantitatively measures the energy released at the earthquake's subsurface source in the crust, or epicenter. Table 4-20 provides a comparison of magnitude and intensity, and Table 4-21 provides qualitative descriptions of intensity, for a sense of what a given magnitude might feel like.

Table 4-20 Comparison of Earthquake Magnitude and Intensity

Magnitude (M)	**Typical Maximum Modified Mercalli Intensity**
1.0-3.0	I
3.0-3.9	II-III
4.0-4.9	IV-V
5.0-5.9	VI-VII
6.0-6.9	VII-IX
7.0 and higher	VIII or Higher

Table 4-21 Abbreviated Modified Mercalli Intensity Scale

Mercalli Intensity	**Description**
I	Not felt except by a very few under especially favorable conditions.
II	Felt only by a few people at rest, especially on upper floors of buildings.
III	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibrations similar to passing of a truck. Duration estimated.
IV	Felt indoors by many, outdoors by a few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls

	make a cracking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably.
V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks my stop.
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures, considerable damage in poorly 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, and 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.
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.

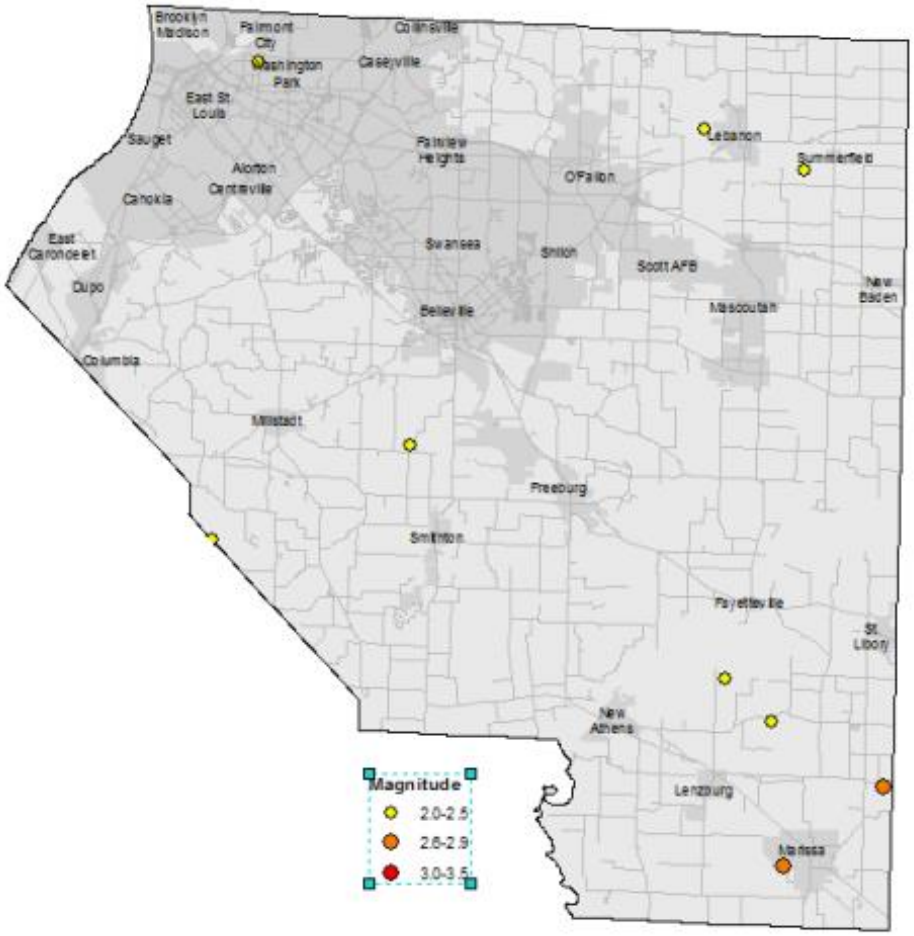
Previous Occurrences for Earthquakes

Historically, the most significant seismic activity in Illinois is associated with New Madrid Seismic Zone. The New Madrid Seismic Zone produced three large earthquakes in the central U.S. with magnitudes estimated between 7.0 and 7.7 on December 16, 1811, January 23, 1812, and February 7, 1812. These earthquakes caused violent ground cracking and volcano-like eruptions of sediment (sand blows) over an area >10,500 km2 , and uplifted a 50 km by 23 km zone (the Lake County uplift). The shaking was felt over a total area of over 10 million km2 (the largest felt area of any historic earthquake). The United States Geological Survey (USGS) and the Center for Earthquake Research and Information (CERI) at the University of Memphis estimate the probability of a repeat of the 1811-1812 type earthquakes (M7.5-8.0) is 7%-10% over the next 50 years (USGS Fact Sheet 2006-3125).

Earthquakes measured in Illinois typically vary in magnitude from micro seismic events of M=1-3 to larger events up to M=5.4. Figure 4-14 depicts geologic and earthquake epicenter map of St. Clair County. The most recent earthquake greater than M3 in Illinois—as of the

date of this report—was a M3.8 event on September 19, 2017, approximately 8 miles west of Mt Carmel in Wabash County. The last earthquake in Illinois to cause minor damage occurred on April 18, 2008 near Mt. Carmel, IL and measured 5.2 in magnitude. Earthquakes resulting in more serious damage have occurred about every 70 to 90 years and are historically concentrated in southern Illinois.

Figure 4-14 Notable Earthquakes in St. Clair County

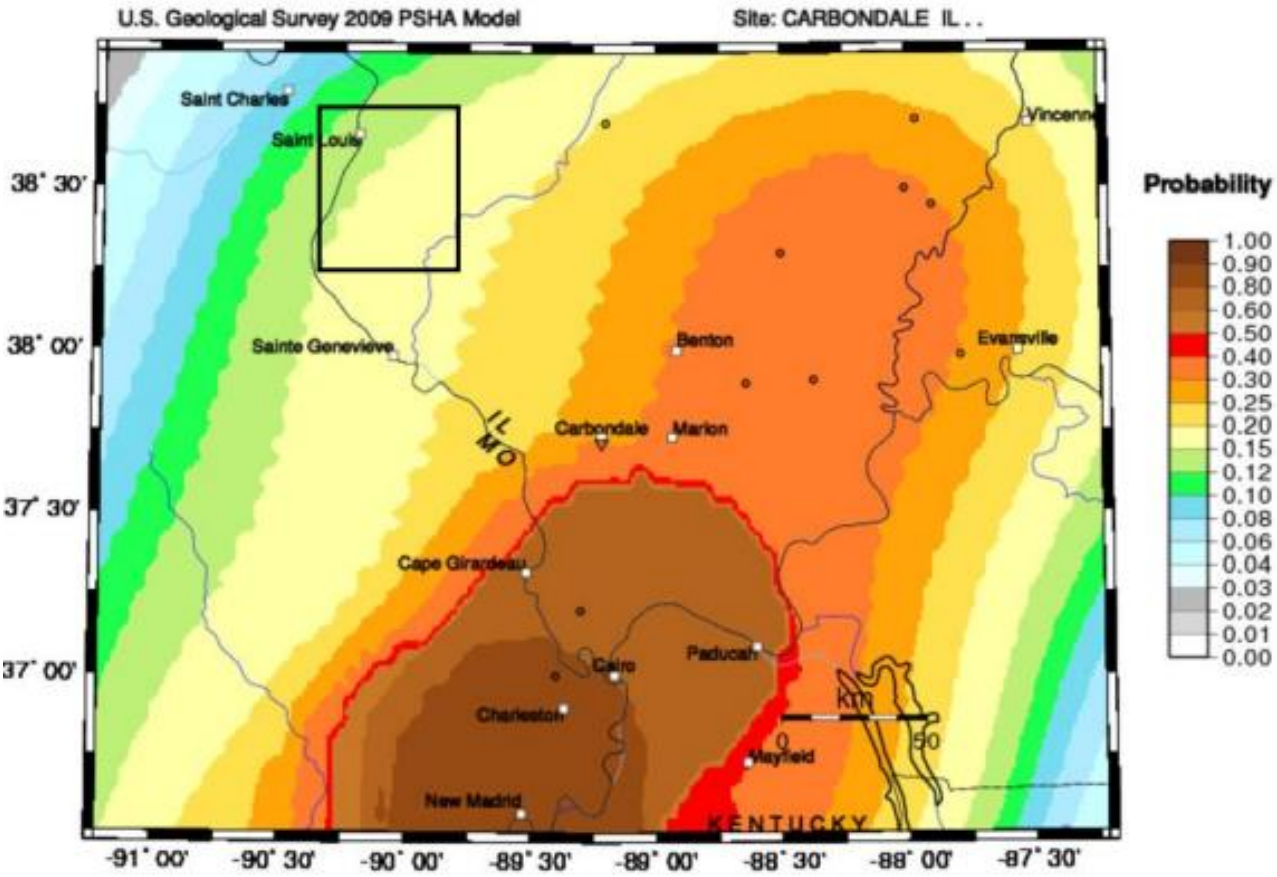


Geographic Location for Earthquake Hazard

St. Clair County is situated in the northwest quarter of the Sparta Shelf which is bounded on the west by the Waterloo-Dupo Anticline, on the east by the Du Quoin Monocline, and on the south by the Ste. Genevieve Fault Zone. Since 1974, the epicenters of 9 small earthquakes (M2.1-M3.2) have been recorded in St. Clair County (see Figure 4-15). The seismogenic potential of the structures in the surrounding area is unknown, and the geologic mechanism related to the minor earthquakes in inter-plate regions is poorly understood.

The two most significant zones of seismic activity in Illinois are the New Madrid Seismic Zone and the Wabash Valley Fault System. Return periods for large earthquakes within the New Madrid System are estimated to be ~500–1000 years; moderate quakes between magnitude 5.5 and 6.0 can recur within approximately 150 years or less. The Wabash Valley Fault System extends nearly the entire length of southern Illinois and has the potential to generate an earthquake of sufficient strength to cause damage between St. Louis, MO and Indianapolis, IN. While large earthquakes (>M7.0) experienced during the New Madrid Events of 1811 and 1812 are unlikely in St. Clair County, moderate earthquakes (≤ 6.0M) in or in the vicinity of St. Clair County are probable. The USGS estimates the probability of a moderate M5.5 earthquake occurring in St. Clair County within the next 500-years at approximately 12-20% (Figure 4-15).

Figure 4-15 Probability of M5.5 Earthquake Occurring in Southern Illinois within the Next 500 Years



Hazard Extent for Earthquake Hazard

Earthquake effects are possible anywhere in St. Clair County. One of the most critical sources of information that is required for accurate assessment of earthquake risk is soils data. The National Earthquake Hazards Reduction Program (NEHRP) compliant soils map

was provided by FEMA for the analysis. This map identifies the soils most susceptible to failure.

Risk Identification for Earthquake Hazard

Based on historical information and current USGS and SIU research and studies, future earthquakes in St. Clair County are possible, but large (>M7.0) earthquakes that cause catastrophic damage are possible. According to the St. Clair County Planning Team's assessment, earthquakes are ranked as the number five hazard.

Risk Priority Index				
Probability	X	Magnitude	=	RPI
2	X	4	=	8

Vulnerability Analysis for Earthquake Hazard

Earthquakes could impact the entire county equally; therefore, the entire county's population and all buildings are vulnerable to an earthquake. To accommodate this risk, this plan considers all buildings located within the county as vulnerable. Tables 4-7 and 4-8 display the existing buildings and critical infrastructure in St. Clair County.

Critical Facilities

All critical facilities are vulnerable to earthquakes. Critical facilities are susceptible to many of the same impacts as any other building within the jurisdiction. These impacts include structural failure and loss of facility functionality (e.g., a damaged police station will no longer be able to serve the community). Table 4-7 lists the types and number of essential facilities for the entire county and Appendix F displays a large format map of the locations of all critical facilities within the county.

Building Inventory

Table 4-8 lists the building exposure in terms of types and numbers of buildings for the entire county. The buildings within the county can expect similar impacts to those discussed for critical facilities. These impacts include structural failure and loss of building function which could result in indirect impacts (e.g., damaged homes will no longer be habitable causing residents to seek shelter).

Infrastructure

During an earthquake, the types of infrastructure that shaking could impact include roadways, utility lines/pipes, railroads, and bridges. Since an extensive inventory of the infrastructure was not available for use in the earthquake models, it is important to emphasize that any number of these items could become damaged in the event of an earthquake. The impacts to these items include broken, failed, or impassable roadways, broken or failed utility lines (e.g., loss of power or gas to community), and railway failure from broken or impassable railways. Bridges could also fail or become impassable, causing risk to motorists.

Hazmus-MH Earthquake Analyses

Existing geological information was reviewed prior to the Planning Team selection of earthquake scenarios. A Magnitude 5.5 probabilistic earthquake scenario was performed to provide a reasonable basis for earthquake planning in St. Clair County. The other two scenarios included a Magnitude of 7.7 with the epicenter located on the New Madrid Fault Zone and a Magnitude 7.1 with the epicenter located on the Wabash Valley Fault Zone.

The earthquake-loss analysis for the probabilistic scenario was based on ground-shaking parameters derived from U.S. Geological Survey probabilistic seismic hazard curves for the earthquake with the 500- year return period. This scenario evaluates the average impacts of a multitude of possible earthquake epicenters with a magnitude typical of that expected for a 500-year return period. The New Madrid Fault Zone runs along the Mississippi River through Arkansas, Tennessee, Missouri, Kentucky and southern Illinois. The Wabash Valley Fault Zone runs through Southeastern Illinois, Western Kentucky and Southwest Indiana. This represents a realistic scenario for planning purposes.

The earthquake hazard modeling scenarios performed:

- Magnitude 5.5 probabilistic earthquake epicenter in St. Clair County
- Magnitude 7.7 event along the New Madrid Fault Zone
- Magnitude 7.1 event along the Wabash Valley Fault Zone

This report presents two types of building losses: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

Results for M 5.5 Earthquake Scenario

The results of the M5.5 probabilistic earthquake scenario are depicted in Tables 4-22, 4-23, and Figure 4- 16. Hazus-MH estimates that approximately 566 buildings will be at least moderately damaged. This is over 1.00% of the total number of buildings in the St. Clair County. It is estimated that 4 building would be damaged beyond repair.

The total building related losses are approximately $32.76 million dollars. It is estimated that 28% of the losses are related to the business interruption of the region. By far, the largest loss is sustained by the residential occupancies which make up over 64% of the total loss

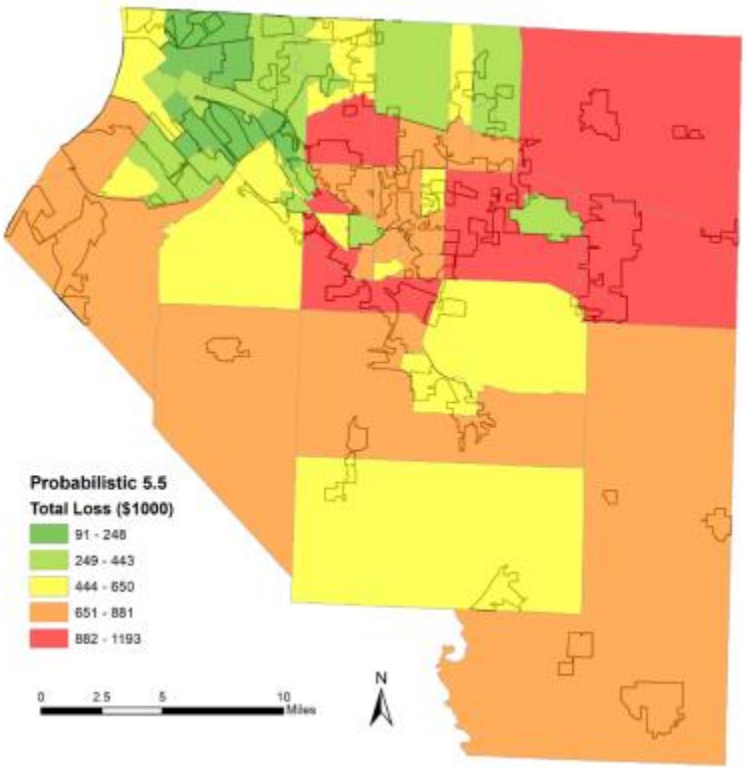
Table 4-22 M 5.5 Earthquake Damage Estimates by Building Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	%	Count	%	Count	%	Count	%	Count	%
Agriculture	392	0.38	12	0.69	5	0.88	1	1.14	0	0.62
Commercial	4,670	4.52	131	7.38	42	8.31	5	10.36	0	6.91
Educational	214	0.21	6	0.35	2	0.42	0	0.52	0	0.54
Governmental	183	0.18	4	0.25	1	0.27	0	0.32	0	0.30
Industrial	1,117	1.08	32	1.78	11	2.09	1	2.59	0	1.44
Other Residential	11,957	11.58	406	22.79	126	24.70	5	8.84	0	5.48
Religion	518	0.60	17	0.93	6	1.15	1	1.47	0	1.28
Single Family	84,143	81.46	1,173	65.84	317	62.19	39	74.76	4	83.43
Total:	**103,294**		**1,782**		**510**		**52**		**4**	

Table 4-23 M 5.5 Earthquake Estimates of Building Economic Losses (in Millions of Dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Other	Total
Income Losses	Wage	0.00	0.10	1.37	0.04	0.16	1.67
	Capital	0.00	0.04	1.15	0.03	0.04	1.26
	Rental	0.67	0.47	0.67	0.02	0.06	1.89
	Relocation	2.31	0.41	0.94	0.11	0.55	4.31
	Subtotal	**2.98**	**1.01**	**4.13**	**0.20**	**0.81**	**9.13**
Capital Stock Losses	Structural	4.29	0.91	1.43	0.33	0.63	7.59
	Non-Structural	7.75	2.09	1.90	0.40	0.90	13.04
	Content	1.46	0.32	0.66	0.22	0.30	2.95
	Inventory	0.00	0.00	0.01	0.03	0.00	0.05
	Subtotal	**13.49**	**3.32**	**4.00**	**0.98**	**1.84**	**23.63**
	Total	**16.47**	**4.34**	**8.12**	**1.18**	**2.65**	**32.76**

Figure 4-16 St. Clair County M 5.5 Earthquake Building Economic Losses



Results for M7.7 New Madrid Earthquake

The results of the M7.7 New Madrid earthquake scenario are depicted in Tables 4-24, 4-25, and Figure 4- 17. Hazus-MH estimates that approximately 1,113 buildings will be at least moderately damaged. This is over 1.00% of the buildings in the county. It is estimated that 50 buildings would be damaged beyond repair.

The total building related losses are approximately $201.45 million dollars. It is estimated that 8% of the losses are related to the business interruption of the region. The largest loss is sustained by the residential occupancies which make up over 66% of the total loss.

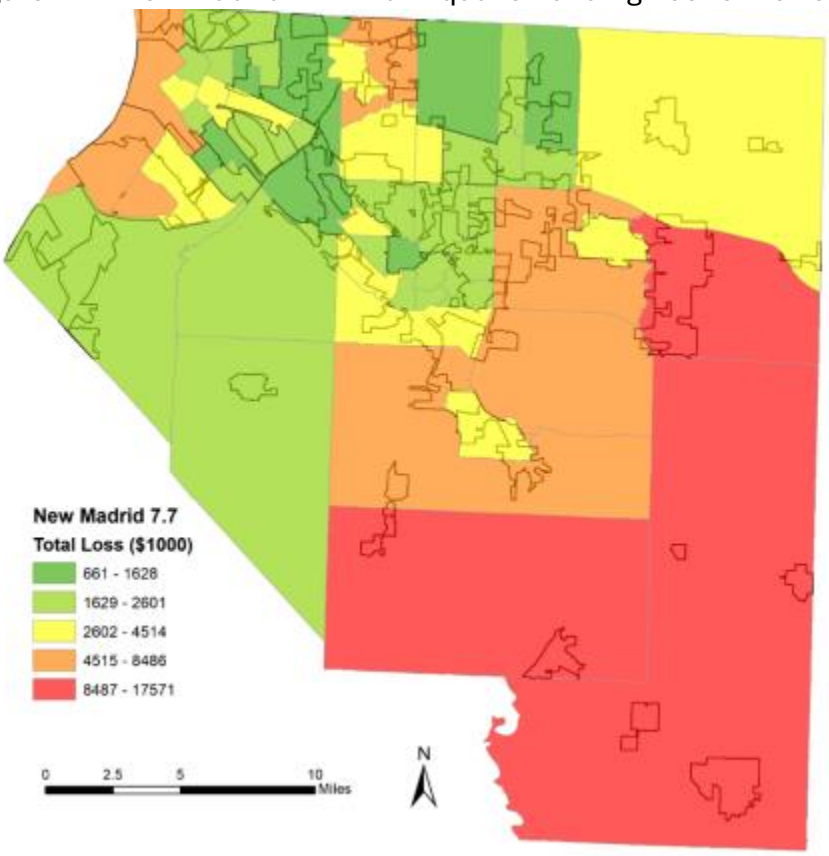
Table 4-24 New Madrid M7.7 Earthquake Damage Estimates by Building Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	%	Count	%	Count	%	Count	%	Count	%
Agriculture	333	0.33	51	1.54	23	2.80	2	0.87	0	0.26
Commercial	4,539	4.49	227	6.81	67	8.19	14	5.68	2	4.55
Educational	2.5	0.20	13	0.40	3	0.41	1	0.27	0	0.26
Governmental	167	0.16	16	0.49	5	0.60	1	0.31	0	0.29
Industrial	1,068	1.06	66	1.97	23	2.78	4	1.48	0	0.99
Other Residential	11,076	10.95	993	29.83	385	47.13	34	13.77	5	10.88
Religion	605	0.60	26	0.78	7	0.86	2	0.90	0	0.86
Single Family	83,204	82.22	1,937	58.17	304	37.23	189	76.72	41	81.91
Total:	**101,198**		**3,330**		**817**		**247**		**50**	

Table 4-25 M 7.7 Earthquake Estimates of Building Economic Losses (in Millions of Dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Other	Total
Income Losses	Wage	0.00	0.16	1.91	0.11	0.43	2.61
	Capital	0.00	0.07	1.68	0.07	0.09	1.92
	Rental	1.15	0.91	1.05	0.05	0.18	3.71
	Relocation	4.93	1.07	1.40	0.26	1.20	8.86
	Subtotal	**6.45**	**2.22**	**6.04**	**0.49**	**1.90**	**17.10**
Capital Stock Losses	Structural	10.21	2.15	2.46	0.87	1.61	17.29
	Non-Structural	57.98	17.30	16.35	6.52	7.91	106.05
	Content	30.38	6.28	12.28	4.87	6.10	59.91
	Inventory	0.00	0.00	0.29	0.74	0.07	1.09
	Subtotal	**98.57**	**25.73**	**31.38**	**12.99**	**15.68**	**184.35**
	Total	**105.02**	**27.95**	**37.42**	**13.49**	**17.58**	**201.45**

Figure 4-17 New Madrid M7.7 Earthquake Building Economic Losses



Results M 7.1 Magnitude Wabash Valley Earthquake – General Building Stock

The results of the Wabash Valley M7.1 earthquake scenario are depicted in Tables 4-26, 4-27, and Figure 4-18. Hazus-MH estimates that approximately 136 buildings will be at least moderately damaged. It is estimated that 1 building would be damaged beyond repair.

The building-related losses are approximately $23.23 million dollars. It is estimated that 7% of the losses are related to the business interruption of the region. By far, the largest loss is sustained by the residential occupancies which make up over 64% of the total loss.

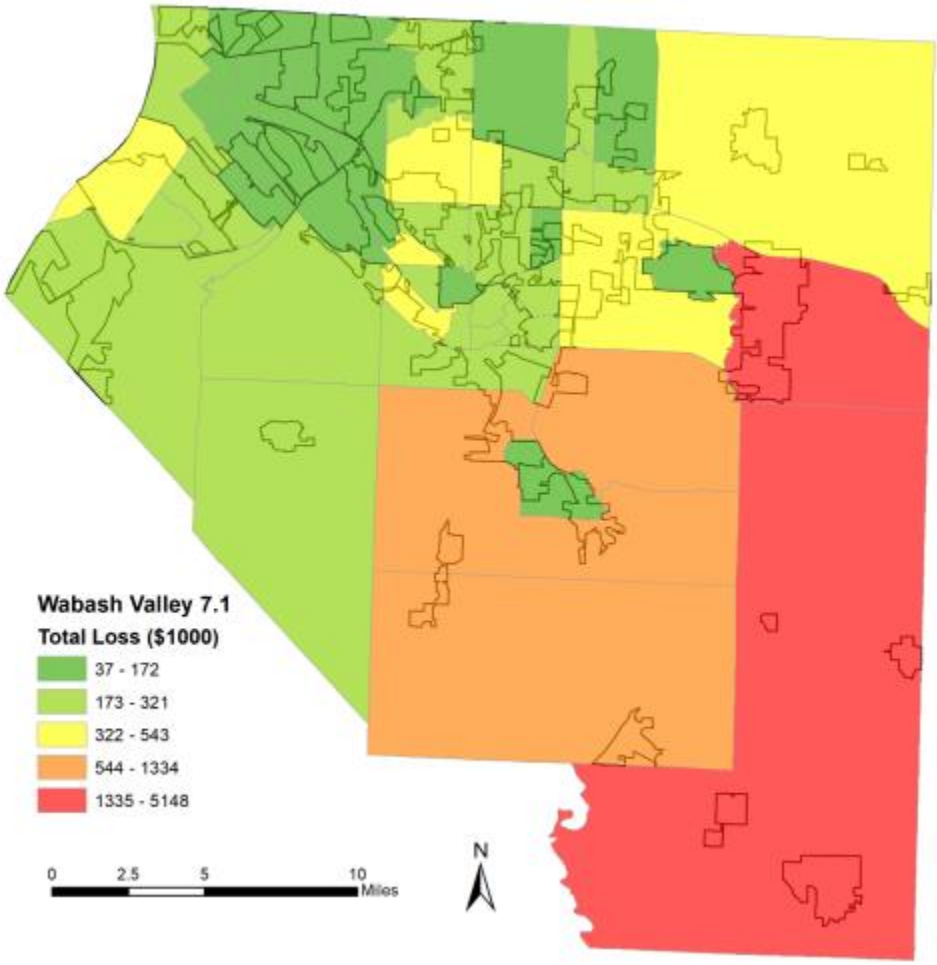
Table 4-26 Wabash Valley 7.1 Magnitude Earthquake Damage Estimates by Building Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	%	Count	%	Count	%	Count	%	Count	%
Agriculture	398	0.37	16	1.59	4	2.94	0	1.89	0	0.65
Commercial	4,769	4.56	70	6.83	10	7.58	1	6.13	0	4.73
Educational	219	0.21	3	0.33	0	0.25	0	0.26	0	0.26
Governmental	186	0.18	2	0.22	0	0.20	0	0.20	0	0.20
Industrial	1,139	1.09	19	1.86	3	2.37	0	1.73	0	1.14
Other Residential	12,089	11.57	344	33.54	59	47.16	1	11.13	0	7.93
Religion	630	0.60	9	0.92	1	0.93	0	0.64	0	0.49
Single Family	85,058	81.41	562	54.70	49	38.55	7	78.02	1	84.60
Total:	**104,476**		**1,027**		**126**		**9**		**2**	

Table 4-27 M 7.1 Wabash Valley Earthquake Estimates of Building Economic Losses (in Millions of Dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Other	Total
Income Losses	Wage	0.00	0.02	0.21	0.01	0.05	0.29
	Capital	0.00	0.01	0.19	0.01	0.01	0.22
	Rental	0.14	0.08	0.16	0.01	0.01	0.39
	Relocation	0.39	0.11	0.14	0.03	0.08	0.74
	Subtotal	**0.53**	**0.22**	**0.70**	**0.05**	**0.14**	**1.64**
Capital Stock Losses	Structural	1.12	0.26	0.33	0.11	0.19	2.10
	Non-Structural	6.74	1.62	2.01	0.89	0.89	12.15
	Content	3.76	0.57	1.47	0.64	0.74	7.18
	Inventory	0.00	0.00	0.04	0.10	0.02	0.16
	Subtotal	**11.71**	**2.46**	**3.85**	**1.73**	**1.83**	**21.58**
	Total	**12.24**	**2.68**	**4.55**	**1.78**	**1.98**	**23.23**

Figure 4-18 Wabash Valley M 7.1 Scenario Building Economic Losses



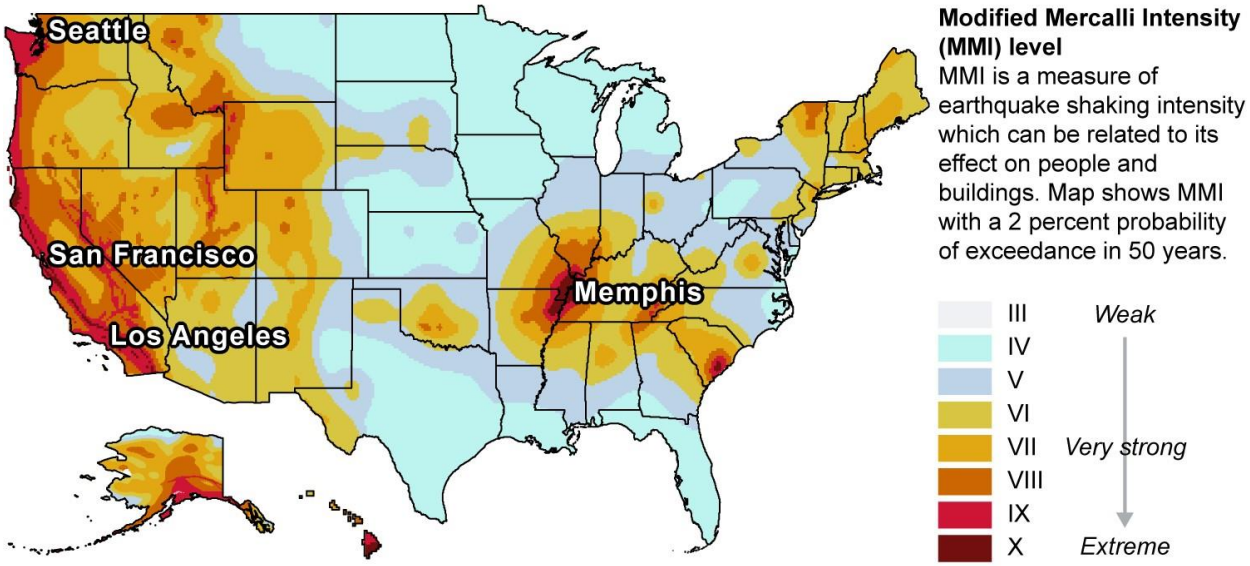
Vulnerability to Future Assets / Infrastructure for Earthquake Hazard

New construction, especially critical facilities, should accommodate earthquake mitigation design standards.

Suggestions for Community Development Trends

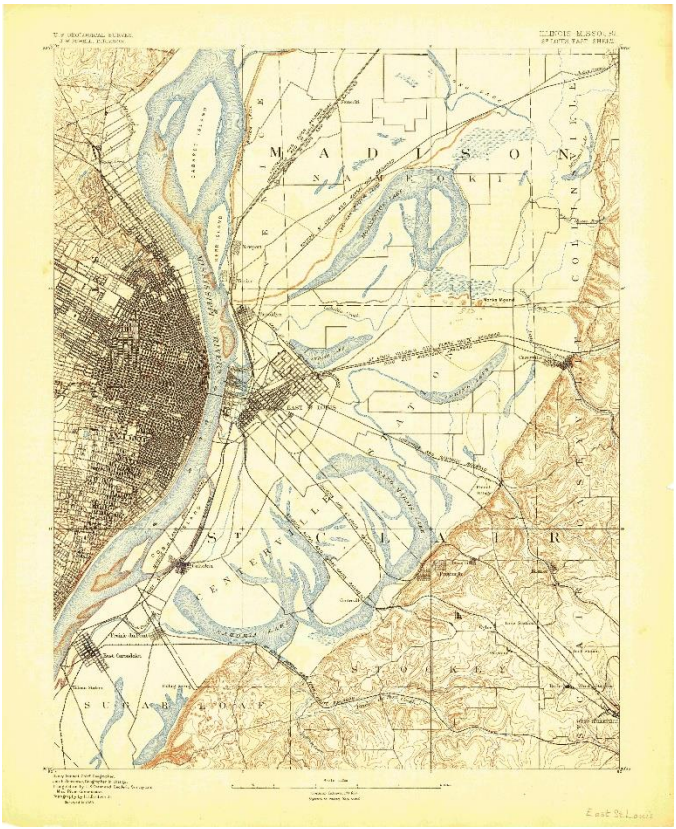
Community development should occur outside of the low-lying areas in floodplains with a water table within five feet of grade that is susceptible to liquefaction. It is important to harden and protect future and existing structures against the possible termination of public services and systems including power lines, water and sanitary lines, and public communication.

Figure 4-19 MMI Level Earthquake Intensity



Source: GAO presentation of U.S. Geological Survey mapping; MapInfo (map). | GAO-16-680

Figure 4-20 Topography Map



Section 4.3.6 Severe Thunderstorm Hazard

Hazard Defined

Severe thunderstorms are weather events with one or more of the following characteristics: strong winds, large and damaging hail, and frequent lightning. Severe thunderstorms most frequently occur in Illinois during the spring and summer months but can occur at any time. A severe thunderstorm's impacts can be localized or can be widespread in nature. A thunderstorm is classified as severe when it meets one or more of the following criteria:

Hail 0.75 inches or greater in diameter

Hail is a possible product of a strong thunderstorm. Hail usually falls near the center of a storm, but strong winds occurring at high altitudes in the thunderstorm can blow the hailstones away from the storm center, resulting in damage in other areas near the storm. Hailstones range from pea-sized to baseball-sized, and some reports note hailstones larger than softballs. F

Frequent and dangerous lightning

Lightning is a discharge of electricity from a thunderstorm. Lightning is often perceived as a minor hazard, but lightning damages many structures and kills or severely injures numerous people in the United States each year.

Wind speeds greater than or equal to 58 miles per hour

Straight-line winds from thunderstorms are fairly common in Illinois. Straight-line winds can cause damage to homes, businesses, power lines, and agricultural areas, and may require temporary sheltering of individuals who are without power for extended periods of time.

Previous Occurrences of Thunderstorm Hazard

The National Climatic Data Center (NCDC) database reported 191 hailstorms, 7 lightning events, and 388 severe thunderstorm and in St. Clair County since 1950. Table 4-28 identifies selected NCDC recorded storms that caused death, injury, or over $10,000 of damage in St. Clair County. Additional details of individual hazard events are on the NCDC website. Several storms have caused damage in the county over the last five years without being recorded in this database. See Appendix D for more information.

Table 4-28 Selected NCDC-Recorded Severe Thunderstorms that Caused Major Damage, Death or Injury in St. Clair County

Location	Date	Deaths	Injuries	Property Damage
St. Clair Co	11/15/1989	1	20	0.00k
Belleville	8/23/1993	0	0	50.00k
Floraville	4/15/1994	0	0	50.00k
New Athens	4/15/1994	0	0	50.00k
Mascoutah	5/16/1995	0	0	15.00k
Belleville	7/28/1996	0	0	20.00k
St. Clair Co	9/26/1996	0	0	50.00k
Millstadt	6/21/1997	0	0	10.00k
Freeburg	6/21/1997	0	0	50.00k
Fairview Heights	6/11/1999	0	0	100.00k
Paderborn	2/24/2001	1	0	0.00k
East St. Louis	9/8/2001	0	0	600.00k
Belleville	6/10/2002	0	1	0.00k
Lebanon	6/11/2002	0	1	0.00k
Cahokia	7/22/2002	0	0	30.00k
Smithton	5/10/2007	0	0	10.00k
Mascoutah	7/29/2021	0	0	20.00k
Caseyville	8/29/2021	0	0	15.00k
Swansea	10/24/2021	0	0	50.00k
Douglas	5/19/2022	0	0	50.00k
Belleville	5/19/2022	0	0	60.00k
Lebanon	5/19/2022	0	0	50.00k
Monsanto (Sauget)	6/17/2022	0	0	20.00k
Centreville	2/22/2023	0	0	20.00k
Shiloh	4/5/2023	0	0	20.00k
	Totals	**2**	**22**	**1.655 M**

*NCDC records are estimates of damage compiled by the National Weather Service from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses related to a given weather event. Other occurrences have been reported including severe storms causing damage in Smithton in September of 2014 and $92,000 of damages to the sewage treatment plant July 2016.

Geographic Location of Thunderstorm Hazard

The entire county has the same risk for occurrence of thunderstorms. They can occur at any location within the county.

Hazard Extent of Thunderstorm Hazard

The extent of the hypothetical thunderstorms depends upon the extent of the storm, the wind speed, and the size of hail stones. Thunderstorms can occur at any location within the county. St. Clair County is experiencing various climate change results in the Severe Thunderstorm Category. We are seeing a high frequency of non-river related flash flooding coming from storms that become stationary over the area and produce record breaking rainfall in short periods of time. Additionally, the increasing amount of thunderstorms which can cause significant damage to private property and infrastructure are also increasing. Storms are categorized as non-severe and severe. The severe could include lighting, thunder, wind and tornados. We are seeing a tremendous increase in the amount of "Severe" thunderstorms and related impacts.

Risk Identification for Thunderstorm Hazard

Based on historical information, the occurrence of future high winds, hail, and lightning is highly likely. The County should expect high winds, hail, and lightning of widely varying magnitudes in the future. According to the St. Clair County Planning Team's assessment, severe thunderstorms are ranked as the number six hazard.

Risk Priority Index				
Probability	X	Magnitude	=	RPI
4	X	1	=	4

Vulnerability Analysis for Thunderstorm Hazard

The entire county's population and all buildings are vulnerable to a severe thunderstorm and can expect the same impacts within the affected area. To accommodate this risk, this plan considers all buildings located within the county as vulnerable. Tables 4-7 and 4-8 display the existing buildings and critical infrastructure in St. Clair County.

Building Inventory

Table 4-8 lists the building exposure in terms of types and numbers of buildings for the entire county. The buildings within the county can expect impacts similar to those discussed for critical facilities. These impacts include structural failure, damaging debris (trees or limbs), roofs blown off or windows broken by hail or high winds, fires caused by lightning, and loss of building functionality (e.g., a person cannot inhabit a damaged home, causing residents to seek shelter).

Infrastructure

A severe thunderstorm could impact roadways, utility lines/pipes, railroads, and bridges. Since the county's entire infrastructure is vulnerable, it is important to emphasize that a severe thunderstorm could damage any number of these structures. The impacts to these structures include impassable roadways, broken or failed utility lines (e.g., loss of power or

gas to community), or impassable railways. Bridges could become impassable causing risk to motorists.

Potential Dollar Losses from Thunderstorm Hazard

According to the NCDC, St. Clair County has incurred approximately $1,106,000 in damages relating to thunderstorms, including hail, lightning, and high winds since 1950. NCDC records are estimates of damage compiled by the National Weather Service from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses related to a given weather event. As a result, the potential dollar losses for a future event cannot be narrowly constrained; however, based on average property damage in the past decade it is estimated that St. Clair County incurs property damages of approximately $2,600 per year related to severe thunderstorms.

Vulnerability to Future Assets / Infrastructure for Thunderstorm Hazard

All future development within the county and all communities will remain vulnerable to severe thunderstorm events.

Suggestions for Community Development Trends

Local officials should enhance severe storm preparedness if they sponsor a wide range of programs and initiatives to address the overall safety of county residents. It is suggested that the county should build new structures with more sturdy construction, and harden existing structures to lessen the potential impacts of severe weather. Additional warning sirens can warn the community of approaching storms to ensure the safety of St. Clair County residents and minimizing property damage.

Section 4.3.7 Dam and Levee Failure Hazard

Hazard Defined for Dam and Levee Failure

Dams are structures that retain or detain water behind a large barrier. When full or partially full, the difference in elevation between the water above the dam and below creates large amounts of potential energy, creating the potential for failure. The same potential exists for levees when they serve their purpose, which is to confine flood waters within the channel area of a river and exclude that water from land or communities land-ward of the levee. Dams and levees can fail due to either: 1) water heights or flows above the capacity for which the structure was designed; or 2) deficiencies in the structure such that it cannot hold back the potential energy of the water. If a dam or levee fails, issues of primary concern include loss of human life/injury, downstream property damage, lifeline disruption

(of concern would be transportation routes and utility lines required to maintain or protect life), and environmental damage.

Many communities view both dams and levees as permanent and infinitely safe structures. This sense of security may very well be false, leading to significantly increased risks. Both downstream of dams and on floodplains protected by levees, security leads to new construction, added infrastructure, and increased population over time. Levees in particular are built to hold back flood waters only up to some maximum level, often the 100-year (1% annual probability) flood event. When that maximum is exceeded by more than the design safety margin, then the levee will be overtopped or otherwise fail, inundating communities in the land previously protected by that levee. It has been suggested that climate change, land-use shifts, and some forms of river engineering may be increasing the magnitude of large floods and the frequency of levee-failure situations.

In addition to failure that results from extreme floods above the design capacity, levees and dams can fail due to structural deficiencies. Both dams and levees require constant monitoring and regular maintenance to assure their integrity. Many structures across the U.S. have been under-funded or otherwise neglected, leading to an eventual day of reckoning in the form either of realization that the structure is unsafe or, sometimes, an actual failure. The threat of dam or levee failure may require substantial commitment of time, personnel, and resources. Since dams and levees deteriorate with age, minor issues become larger compounding problems, and the risk of failure increases.

Previous Occurrences of Dams and Levee Failures in St. Clair County

While there have been some levee breeches and controlled releases on levees in other counties and along the Mississippi River there have been no reported breaches within St. Clair County. There are many dams along the Mississippi River but there have not been any uncontrolled releases in them.

Geographic Location of Dams and Levees in St. Clair County

The U.S. Army Corps of Engineers maintains the National Inventory of Dams (NID) which identified 60 dams in St. Clair County. According to NID records, sixteen dams in St. Clair County are classified as high hazard and nineteen dams have Emergency Action Plans (EAP). Table 4-29 lists the dams located in St. Clair County and their respective classification level.

Table 4-29 St. Clair County Dam Inventory

Dam Name	River or Stream	Hazard Classification	EAP Prepared
St. Clair County Retention Pond 1 Dam	Wolf Branch Creek	High	Yes
Roactown Lake Dam	Trib Douglas Creek	Low	No
Turkey Hill Lake Dam	Hazel Creek	Low	No
Kaskaskia Island Wildlife Area Lake Dam	Trib Kaskaskia River	Low	No
Horner Park Dam	Trib Silver Creek	Low	No
Heitmans Pond Dam	Trib Negro Hollow	Significant	Yes
Baldwin Plant Cooling Lake	Little Doza Creek	High	Yes
Freedom Farm Lake Dam	Trib Herbers Branch	Low	No
Far Oaks Lake Dam	Trib Little Canteen Creek	Significant	No
Marissa Reservoir Dam	Trib Mud Creek	Significant	No
Peabody/River King Lake	Herbers Branch	Low	No
Wildwood Lake Estates Dam	Trib West Fork Richland Crk	Significant	Yes
New West Fork Club Lake	Trib West Fork Richland Crk	Low	No
Mueth Lake Dam	Trib Prairie Du Long Creek	Low	No
Lake Christine Dam	Trib Richland Creek	High	Yes
Bell Lake 2 Dam	Trib Douglas Creek	Low	No
Bierbell Lake Dam	Trib Silver Creek	Low	No
Clovertowne Lake Dam	Trib Negro Hollow Creek	Low	No
Millstadt Sportsmans Club	Trib Douglas Creek	Low	No
Chenot Lake Dam	Trib Loop Creek	High	Yes
Marissa Recreation Association North Lake	Trib Mud Creek	Significant	No
Justamir Association Lake	Trib Prairie Du Long Creek	Low	No
Peabody/Randolph Plant Slurry Pond Dam	Trib Doza Creek	Low	No
Schwebel Brothers Dam	Trib Kaskaskia River	Low	No
Marissa Recreation Area South Lake Dam	Trib Mud Creek	Significant	No
Heartland Oaks 1 Dam	Trib Richland Creek	Low	No
Heitmans Pond 2 Dam	Trib Negro Hollow	High	No
Inez Lake Dam	Trib Richland Creek	Significant	Not Required
Heartland Oaks 2 Dam	Trib Richland Creek	Low	No
Spring Lake Road Dam	Trib Douglas Creek	Significant	No
Teagle Lake Dam	Trib Ogles Creek	Low	No
Silver Bay LLC Lake Dam	Trib Silver Creek	Low	No
Eckert Lake Dam	Trib Prairie Du Pont Creek	High	No
Davis Lake Dam	Trib Prairie Du Pont Creek	High	Yes
Smithton Sportsmans Club	Trib West Fork Richland Crk	Low	No
Stonehendge Lake Dam	Prairie Du Long Creek	Significant	Yes
Venice Station New Ash Pond	Mississippi River – Off stream	Significant	No
Bell Lake 1 South Dam	Trib Douglas Creek	Low	No
Stonewolf Golf Course	Trib Little Canteen Creek	High	Yes
Bell Lake 1 East Dam	Trib Douglas Creek	Low	No
Scott Air Force Base Pond	Trib Silver Creek	Low	Not Required
Fairwood Lake Dam	Engle Creek	High	Yes
Marissa WWTP Basin		Significant	Yes
Twin Lake Dam	Trib Wolf Branch	Significant	No

Memorial East Campus Lake	Trib Rock Springs Branch	Low	No
Ravenwood Lake Dam	Trib Richland Creek	Significant	Yes
McGraw Lake Dam	Trib Silver Creek	Low	No
Timber Lake Dam	Trib Wolf Branch	Significant	No
Woodfield Lake Estates	Trib Richland Creek	High	Yes
Weslake Dam	Trib Negro Hollow Shoenberger Cir	Significant	No
Arrowwood Lake Dam	Trib West Fork Richland Crk	Low	Yes
Arenas Dam	Trib Wolf Branch	Significant	No
Willow Wood Lake Dam	Trib West Fork Richland Crk	Low	No
Lawrence Lake Dam	Trib Negro Hollow Creek	High	Yes
Lake Lorraine Dam	Trib Richland Creek	High	Yes
Russell Funk Dam	Trib Rock Spring Branch	High	No
Lake Stolberg Dam	Trib Richland Creek	High	Yes
Ravenel Lake Dam	Trib Richland Creek	High	Yes
Crystal Lake Dam	Wolf Branch Creek	Significant	Yes
Gebhardt Lake Dam	Trib Richland Creek	High	Not Required

A review of the US Army Corps of Engineers National Levee Database and IDNR records revealed three levee systems within St. Clair County. Table 4-30 lists the levees located in St. Clair County and their respective U.S. Army Corps of Engineers (USACE) levee system inspection rating. The approximate location of the levee system is shown in Figure 4-19.

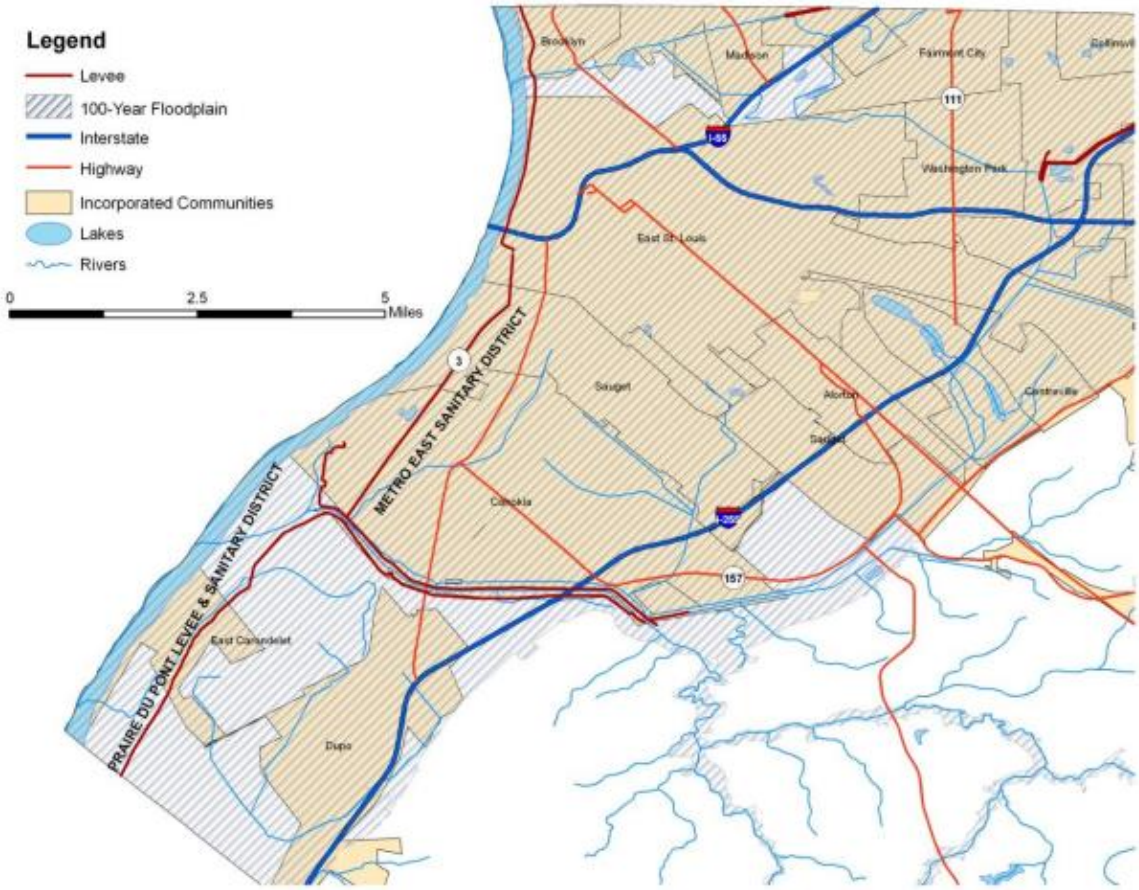
Table 4-30 St. Clair County Levee Inventory

Levee System	Levees District	Length (miles)	USACE Levee System Inspection Rating*
Village of New Athens System	Village of New Athens	1.31	Minimally Acceptable
Prairie Du Pont/Fish Lake System	Fish Lake Drainage & Levee District No. 8, Prairie Du Pont Levee &Sanitary District	15.46	Unacceptable ǂ
MESD/Chain of Rocks East Levee System	Metro East Sanitary District, Usace, St. Louis District	35.07	Unacceptable ǂ

*Each levee segment receives an overall segment inspection rating of Acceptable, Minimally Acceptable, or Unacceptable. If a levee system comprises one or more levee segments (if there are different levee sponsors for different parts of the levee) then the overall levee system rating is the lowest of the segment ratings.

ǂ This rating is pending reevaluation of the levee system after extensive work done by the Southwestern Illinois Flood Prevention District Council. For details of this work, see Section 5.1.1 Successful Mitigation Projects.

Figure 4-19 Location of Levee Systems within St. Clair County



Hazard Extent for Dam and Levee Failure

Dams are assigned a low hazard potential classification which means that failure or incorrect operation of the dam will result in no human life losses and no economic or environmental losses. Losses are principally limited to the owner's property. A significant hazard classification means that failure or incorrect operation results in no probable loss of human life; however, dam or levee failure can cause economic loss, environmental damage, and disruption of lifeline facilities. Significant hazard potential dams are often located in predominantly rural or agricultural areas, but could be located in populated areas with a significant amount of infrastructure. A high hazard potential classification means that failure or incorrect operation has the highest risk to cause loss of human life and to significantly damage buildings and infrastructure.

According to NID records, sixteen dams in St. Clair County are classified as high hazard and nineteen dams have Emergency Action Plans (EAP). An EAP is not required by the State of Illinois but is recommended in the 2003 Illinois Dam Safety & Inspection Manual.

The U.S. Army Corps of Engineers conducts two types of levee inspections: routine and periodic. Both Routine and Periodic Inspections result in a final inspection rating for operation and maintenance. The rating is based on the levee inspection checklist, which includes 125 specific items dealing with operation and maintenance of levee embankments, floodwalls, interior drainage, pump stations, and channels. Each levee segment receives an overall segment inspection rating of Acceptable, Minimally Acceptable, or Unacceptable. If a levee system comprises one or more levee segments (if there are different levee sponsors for different parts of the levee) then the overall levee system rating is the lowest of the segment ratings.

Risk Identification for Dam and Levee Failure

Based on operation and maintenance requirements and local knowledge of the dams and levees in St. Clair County, the County EMA considers the probability of failure unlikely and the severity limited. If a high-hazard dam failed, the magnitude and severity of the damage could be great. The warning time and duration of the dam failure event would be very short.

Based on input from the Planning Team, future occurrence of dam or levee failure in St. Clair County is unlikely. According to the Risk Priority Index (RPI) and County input, flooding by dam or levee breach is ranked as the number seven hazard.

Risk Priority Index				
Probability	X	Magnitude	=	RPI
1	X	2	=	2

Vulnerability Analysis for Dam and Levee Failure

An Emergency Action Plan (EAP) is required to assess the effect of dam failure on these communities. To be considered creditable, flood protection structures on FEMA's flood maps, levee owners must provide documentation to prove the levee meets design, operation, and maintenance standards for protection against the 1% annual probability flood.

All floodplains are susceptible to flooding in St. Clair County; therefore, the population and all buildings located within the floodplain are vulnerable to dam and levee failure. To accommodate this risk, this plan considers all buildings located within 100-year flood plain as vulnerable. Failure of dams and levees in the planning area would result in those floodplains adjacent to or downstream to have the greatest impact.

To help clarify the potential impacts from dam and levee failure, the gap in lack of inundation maps must be closed and perhaps identified as a mitigation action for this hazard by communities.

Critical Facilities

All critical facilities within the floodplain are vulnerable to dam and levee failure. An essential facility will encounter many of the same impacts as other buildings within the flood boundary. These impacts can include structural failure, extensive water damage to the facility, and loss of facility functionality (e.g., a damaged police station cannot serve the community). Table 4-7 lists the types and number of critical facilities for the entire county and Appendix F displays a large format map of the locations of all critical facilities within the county.

Building Inventory

All buildings within the floodplain are vulnerable to floods as a result of dam and/or levee failure. These impacts can include structural failure, extensive water damage to the facility, and loss of facility functionality (e.g., damaged home will no longer be habitable, causing residents to seek shelter). This plan considers all buildings located within 100-year flood plain as vulnerable.

Infrastructure

The types of infrastructure potentially impacted by a flood include roadways, utility lines/pipes, railroads, and bridges. Since an extensive inventory of the infrastructure is not available for this plan, it is important to emphasize that a flood could damage any number of these items. The impacts to these items include: broken, failed, or impassable roadways; broken or failed utility lines (e.g., loss of power or gas to community); or railway failure from broken or impassable railways. Bridges could also fail or become impassable, causing risk to motorists.

Hazus-MH Flood Analysis

See Section 4.3.4 Flooding Hazard for the results of the Hazus-MH Flood Analysis.

Vulnerability to Future Assets / Infrastructure for Dam and Levee Failure

Flooding as a result of dam or levee failure may affect nearly any location within the county; therefore all buildings and infrastructure downstream from dams and levees are vulnerable. Table 4-8 includes the building exposure for St. Clair County. All essential facilities in the county are at risk. Appendix E include a list of the essential facilities in St. Clair County and Appendix F displays a large format map of the locations of all critical facilities within the county. Currently, the municipal planning commission reviews new developments for compliance with the local flood zoning ordinance. At this time no new construction is planned with the 100-year floodplain.

Suggestions for Community Development Trends

Reducing floodplain development is crucial to reducing flood-related damages. Areas with recent development may be more vulnerable to drainage issues. Storm drains and sewer systems are usually most susceptible to drainage issues. Damage to these can cause back-up of water, sewage, and debris into homes and basements, causing structural and mechanical damage as well as creating public health hazards and unsanitary conditions.

To help lower the risks of dam and levee failure, mitigation actions can be identified in order to map the levee failure or dam breach zones in a community.

Section 4.3.8 Drought and Extreme Heat Hazard

Hazard Definition for Drought Hazard

Drought is a normal climatic phenomenon that can occur across the state of Illinois and within St. Clair County. The meteorological condition that creates a drought is below-normal rainfall over a sustained period of time. Excessive heat can lead to increased evaporation, which enhances drought conditions. Droughts can occur in any month. Drought differs from normal arid conditions found in low-rainfall areas. Drought is the consequence of a reduction in the amount of precipitation over an undetermined length of time (usually a growing season or longer).

The severity of a drought depends on location, duration, and geographical extent. Additionally, drought severity depends on the water supply, usage demands by human activities, vegetation, and agricultural operations. Droughts will affect the quality and quantity of crops, livestock, and other agricultural assets. Droughts can adversely impact forested areas leading to an increased potential for extremely destructive forest and woodland fires that could threaten residential, commercial, and recreational structures.

Drought conditions are often accompanied by extreme heat, which is defined as temperatures that exceed the average high for the area by 10°F or more and lasts for several weeks. Such extreme heat can have severe implications for humans. Below are common terms associated with extreme heat:

- Heat Wave
    - Prolonged period of excessive heat often combined with excessive humidity.
- Heat Index
    - A number, in degrees Fahrenheit, which estimates how hot it feels when relative humidity is added to air temperature. Exposure to full sunshine can increase the heat index by 15°F.
- Heat Cramps
    - Muscular pains and spasms due to heavy exertion. Although heat cramps are the least severe, they are often the first signal that the body is having trouble with heat.
- Heat Exhaustion
    - Typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to decrease to the vital organs, resulting in a form of mild shock. If left untreated, the victim's condition will worsen. Body temperature will continue to rise, and the victim may suffer heat stroke.

- Heat and Sun Stroke
    - A life-threatening condition. The victim's temperature control system, which produces sweat to cool the body, stops working. The body's temperature can rise so high that brain damage and death may result if the body is not cooled quickly.

Previous Occurrence for Drought and Extreme Heat

The NCDC database reported 38 drought/heat wave events in St. Clair County since 1950. The most recent recorded event occurred in August 2023 from the 20th through the 23rd. High temperatures rose to 101 degrees with Heat Index up to 122 degrees. Table 4-31 identifies NCDC-recorded drought/heat wave events that caused damage, death, or injury in St. Clair County.

Table 4-31 NCDC-Recorded Extreme Heat Events that Caused Death, Damage or Injury

Date	Deaths	Injuries	Property Damage
8/4/2007	1	0	$0
7/10/2011	1	0	$0
7/17/2011	2	0	$0
7/16/2012	1	0	$0
Totals:	**5**	**0**	**$0**

Geographic Location for Drought and Extreme Heat

Droughts are regional in nature. Most areas of the United States are vulnerable to the risk of drought and extreme heat.

Hazard Extent for Drought and Extreme Heat

The extent of droughts or extreme heat varies both depending on the magnitude and duration of the heat and the range of precipitation. As the affects of climate change greatly impact the region which includes all municipalities in St. Clair County were are seeing a tremendous increase in the amount of days with severe heat warning and the effects of those events. The extent of these events are classified by the National Weather Service as the more mild "Heat Advisory" and the more severe "Heat Warning." While both are impactful on the members of the community and the infrastructure were are experiencing a rise in both categories. Therefore, the intensity of Extreme Heat is greatly increasing. With the extreme heat also comes drought. This can impactful on water supply issues and also on the many agricultural components within St. Clair County.

Risk Identification for Drought and/or Extreme Heat

Based on historical information, the occurrence of future droughts and/or prolonged extreme heat is highly likely. The County should expect extreme heat and prolonged periods of less than average rainfall in the future. According to the St. Clair County Planning Team's assessment, drought and/or extreme heat are ranked as the number eight hazard.

Risk Priority Index				
Probability	X	Magnitude	=	RPI
4	X	1	=	4

Vulnerability Analysis for Drought and Extreme Heat

Drought and extreme heat are a potential threat across the entire county; therefore, the county is vulnerable to this hazard and can expect impacts within the affected area. According to FEMA, approximately 175 Americans die each year from extreme heat. Young children, elderly, and hospitalized populations have the greatest risk. The entire population and all buildings are at risk. To accommodate this risk, this plan considers all buildings located within the county as vulnerable. Tables 4-7 and 4-8 display the existing buildings and critical infrastructure in St. Clair County. Even though the exact areas affected are not known, a discussion of the potential impacts are detailed below.

Critical Facilities

All critical facilities are vulnerable to drought. A critical facility will encounter many of the same impacts as any other building within the jurisdiction, which should involve little or no damage. Potential impacts include water shortages, fires as a result of drought conditions, and residents in need of medical care from the heat and dry weather. Table 4-7 lists the types and number of critical facilities for the entire county and Appendix F displays a large format map of the locations of all critical facilities within the county.

Building Inventory

Table 4-8 lists the building exposure in terms of types and numbers of buildings for the entire county. The buildings within the county can expect similar impacts to those discussed for critical facilities. These impacts include water shortages, fires as a result of drought conditions, and residents in need of medical care from the heat and dry weather.

Infrastructure

During a drought, the risk to infrastructures is primarily associated with fire, which could result from hot, dry conditions.

Potential Dollar Losses from Drought and Extreme Heat

According to the NCDC, St. Clair County has not incurred damages related to drought and extreme heat events during the time the database had been maintained (1950-present). NCDC records are estimates of damage compiled by the National Weather Service from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses related to a given weather event. As a result, the potential dollar losses for a future event cannot be reliably constrained.

Vulnerability to Future Assets / Infrastructure from Drought / Extreme Heat Hazard

Future development will remain vulnerable to droughts. Typically, some urban and rural areas are more susceptible than others. For example, urban areas are subject to water shortages during periods of drought. Excessive demands of densely populated areas put a limit on water resources. In rural areas, crops and livestock may suffer from extended periods of heat and drought. Dry conditions can lead to the ignition of wildfires that could threaten residential, commercial, and recreational areas.

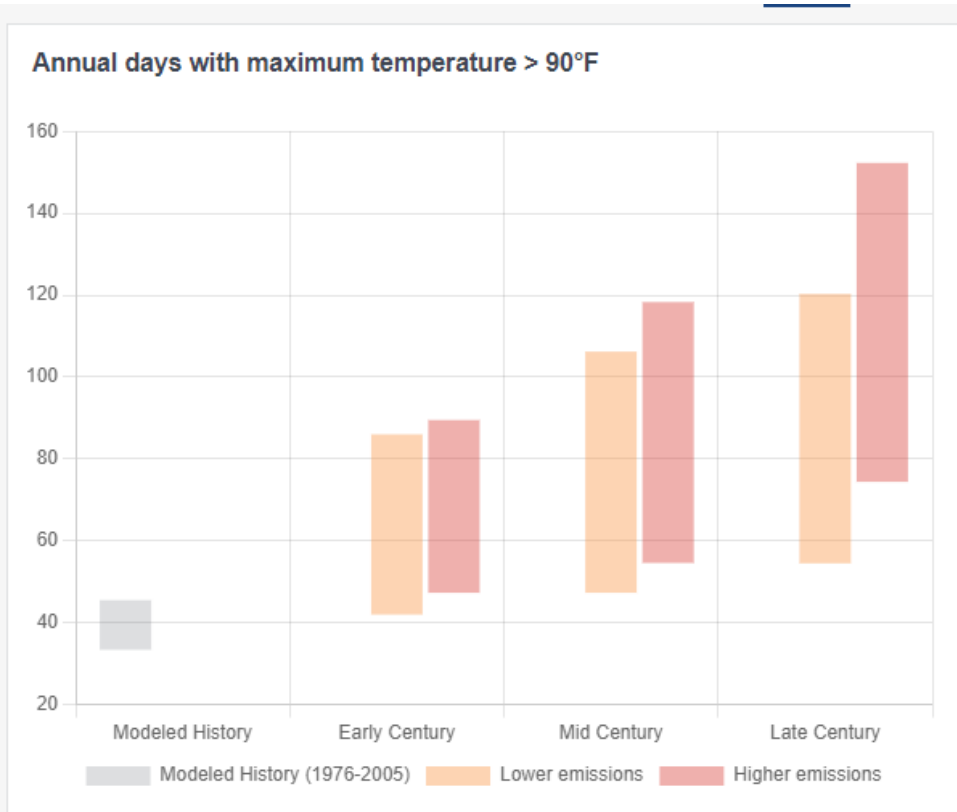
Suggestion of Community Development Trends

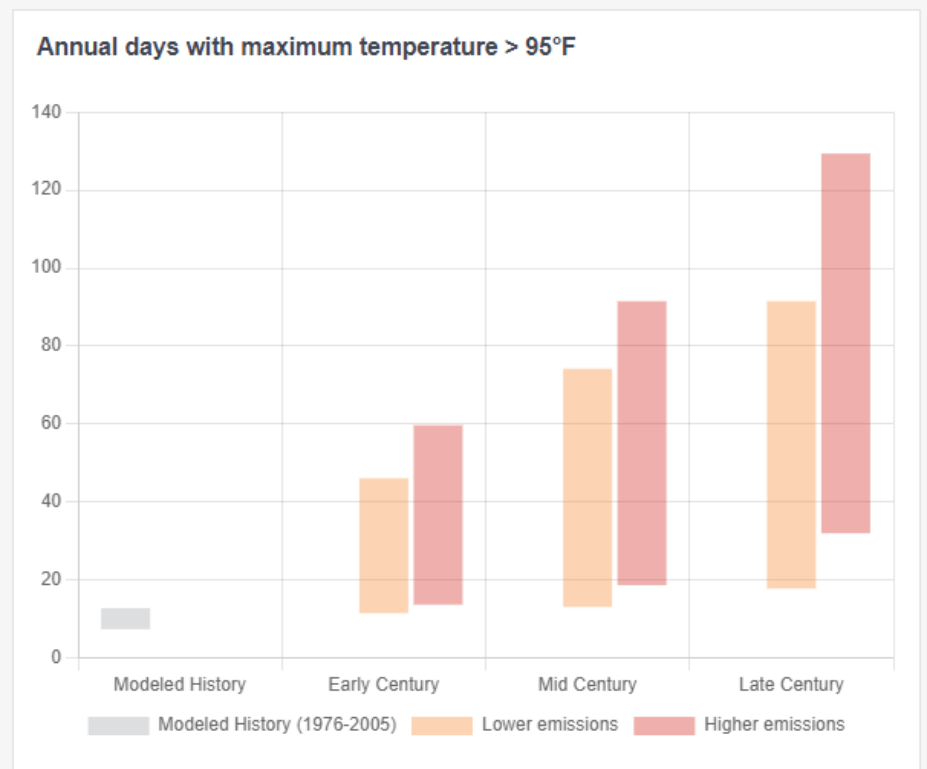
Because droughts and extreme heat are regional in nature, future development is susceptible to drought. Although urban and rural areas are equally vulnerable to this hazard, those living in urban areas may have a greater risk from the effects of a prolonged heat wave. The atmospheric conditions that create extreme heat tend to trap pollutants in urban areas, adding contaminated air to the excessively hot temperatures and creating increased health problems. Furthermore, asphalt and concrete store heat longer, gradually releasing it at night and producing high nighttime temperatures. This phenomenon is known as the "urban heat island effect."

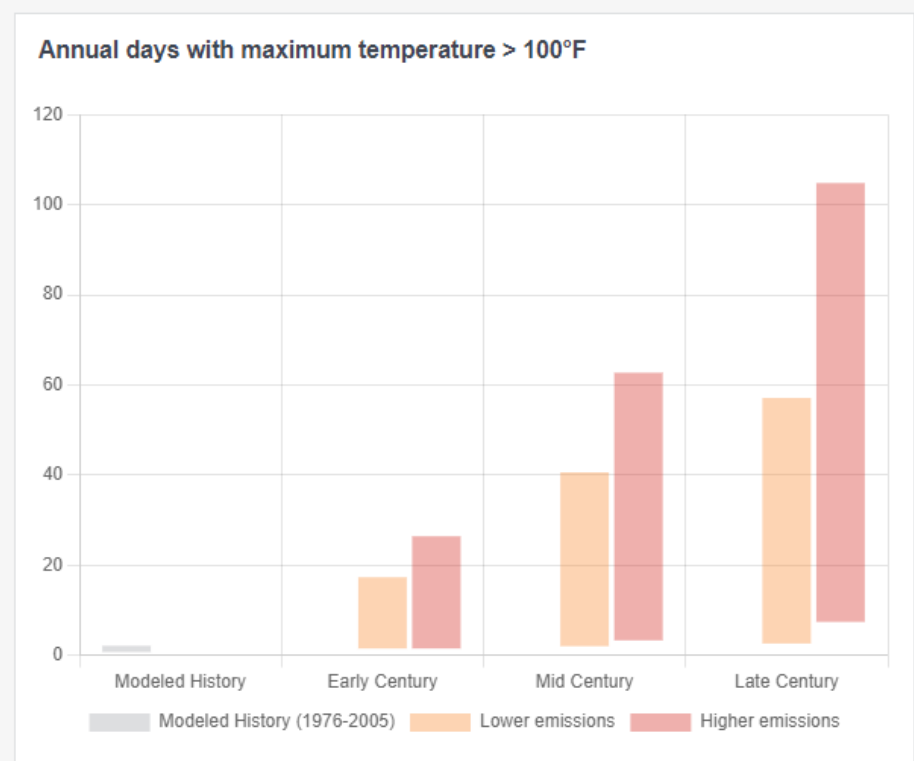
Local officials should address drought and extreme heat hazards by educating the public on steps to take before and during the event—for example, temporary window reflectors to direct heat back outside, staying indoors as much as possible, and avoiding strenuous work during the warmest part of the day.

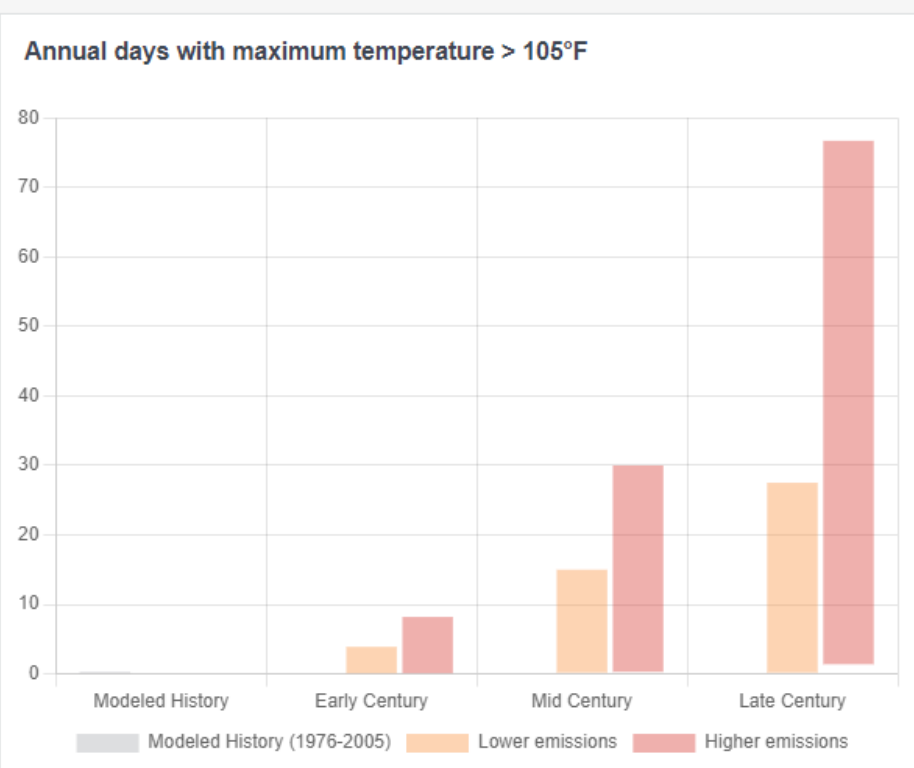
Climate Change Impacts

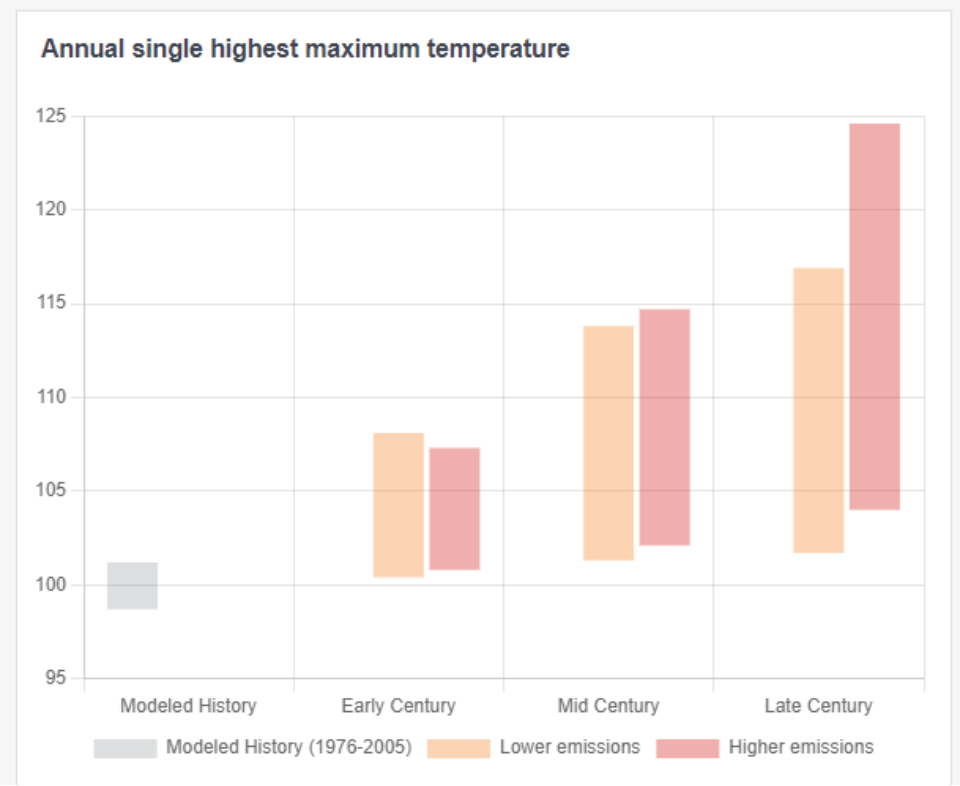
A review of the Climate Mapping for Resilience and Adaptation was conducted for St. Clair County to determine the impacts of climate change on St. Clair County as it related to Extreme Heat and Drought. The graphs below show the results of that review and the impact within St. Clair County.

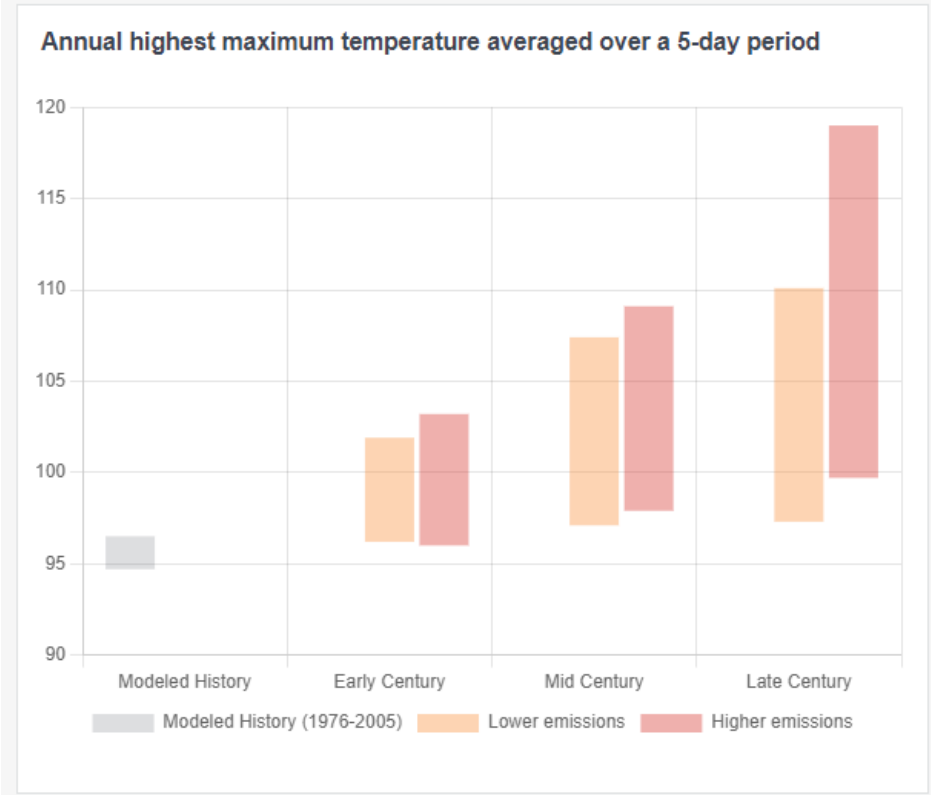

Annual days with maximum temperature > 90°F
160
140
120
100
80
60
40
20
Modeled History
Early Century
Mid Century
Late Century
Modeled History (1976-2005)
Lower emissions
Higher emissions

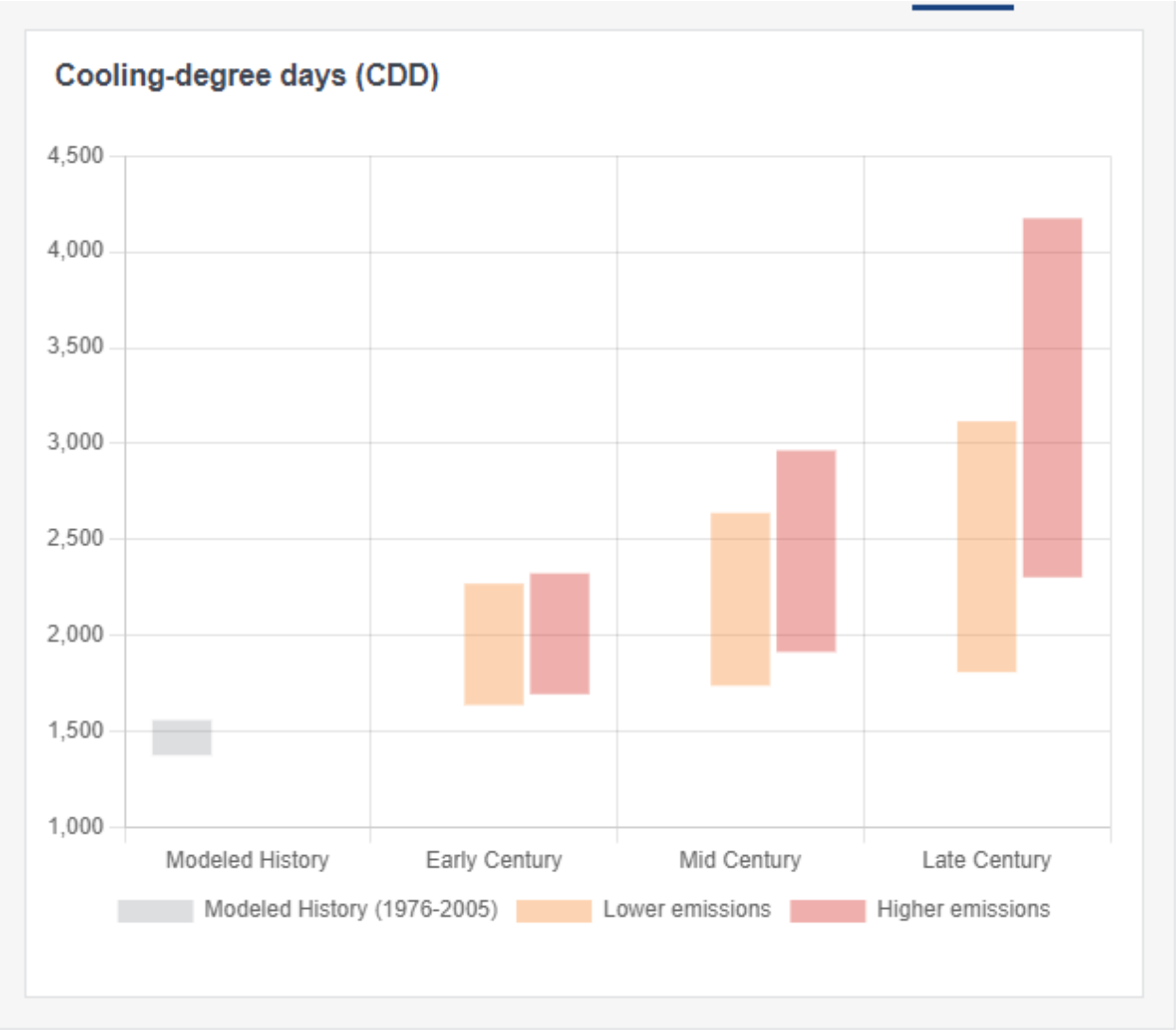

Annual days with maximum temperature > 95°F
140
120
100
80
60
40
20
0
Modeled History
Early Century
Mid Century
Late Century
Modeled History (1976-2005)
Lower emissions
Higher emissions


Annual days with maximum temperature > 100°F
120
100
80
60
40
20
0
Modeled History
Early Century
Mid Century
Late Century
Modeled History (1976-2005)
Lower emissions
Higher emissions


Annual days with maximum temperature > 105°F
80
70
60
50
40
30
20
10
0
Modeled History
Early Century
Mid Century
Late Century
Modeled History (1976-2005)
Lower emissions
Higher emissions


Annual single highest maximum temperature
125
120
115
110
105
100
95
Modeled History
Early Century
Mid Century
Late Century
Modeled History (1976-2005)
Lower emissions
Higher emissions


Annual highest maximum temperature averaged over a 5-day period
120
115
110
105
100
95
90
Modeled History
Early Century
Mid Century
Late Century
Modeled History (1976-2005)
Lower emissions
Higher emissions



Section 4.3.9 Ground Failure

Hazard Definition

According to the USGS, the term ground failure is generally referred to landslides, liquefaction, lateral spreads, and any other process that affects the stability of the ground. In Illinois, ground failure is typically associated with subsidence of the land surface related to soluble rock (karst), sink holes, or underground mining.

Subsidence Related to Karst Features

Subsidence can occur on land located over soluble bedrock. The land over such bedrock often has topography characteristic of past subsidence events. This topography is termed "karst." Karst terrain has unique landforms and hydrology found only in these areas. Bedrock in karst areas are typically limestone, dolomite, or gypsum. In Illinois, limestone

and dolomite (carbonate rocks) are the principle karst rock types. 9% of Illinois has carbonate rock types close enough to the ground surface to have a well-developed karst terrain. The area in Illinois in which the karst terrain is most developed is the southern and southwestern part of the state (Panno, et al., 1997). The karst feature most associated with subsidence is the sinkhole.

Sinkhole Formation and Collapse

A sinkhole is an area of ground that has no natural external surface drainage—when it rains, all of the water stays inside the sinkhole and typically drains into the subsurface. Sinkholes can vary from a few feet to hundreds of acres and from less than one to more than 100 feet deep. Typically, sinkholes form slowly, so that little change is seen during a lifetime, but they also can form suddenly when a collapse occurs. Such a collapse can have a dramatic effect if it occurs in a populated setting.

Sinkholes form where rainwater moves through the soil and encounters soluble bedrock. The bedrock begins to dissolve along horizontal and vertical cracks and joints in the rock. Eventually, these cracks become large enough to start transporting small soil particles. As these small particles of soil are carried off, the surface of the soil above the conduit slumps down gradually, and a small depression forms on the ground surface. This depression acts like a funnel and gathers more water, which makes the conduit still larger and washes more soil into the conduit.

Sudden collapse of a sinkhole occurs where the soil close to the ground surface does not initially slump down, but instead forms a bridge. Beneath that surface cover, a void forms where the soil keeps washing into the conduit. These voids are essentially shallow caves. Over time, the void enlarges enough that the weight of the overlying bridge can no longer be supported. The surface layer then suddenly collapses into the void, forming a sinkhole.

The process of forming a conduit and a soil bridge usually takes years to decades. However this natural process can be aggravated and expedited by human activities. Since the process of forming a sinkhole depends on water to carry soil particle down into the karst bedrock, anything that increases the amount of water flowing into the subsurface can accelerate sinkhole formation process. Parking lots, streets, altered drainage from construction, and roof drainage are a few of the things that can increase runoff.

Collapses are more frequent after intense rainstorms. However, drought and altering of the water table can also contribute to sinkhole collapse. Areas where the water table fluctuates or has suddenly been lowered are more susceptible to sinkhole collapse. (White, 1988)

Underground Mining and Subsidence

Underground mines have been used extensively in Illinois to extract coal, lead, zinc, fluorites, shale, clay stones, limestone, and dolomite. When mining first began in Illinois,

land over mined areas was sparsely populated. If the ground subsided, homes or other structures were seldom damaged. As towns and cities expanded over mined-out areas, subsidence damage to structures became increasingly more common. The most common underground mines in Illinois are coal mines. A recent study in Illinois has found that about 333,100 housing units were located over or adjacent to 839,000 acres mined for coal (Bauer, 2008).

Illinois has abundant coal resources. All or parts of 86 of 102 counties in the state have coal bearing strata. As of 2007, about 1,050,400 acres (2.8% of the state) have been mined. Of that total, 836,655 acres are underground mines (Bauer, 2008). Illinois ranks first among all U.S. states for reserves of bituminous coal (Illinois Coal Association, 1992).

There are two fundamental underground mining methods used in Illinois: high-extraction methods such as long-wall and low-extraction room-and pillar mining. High-extraction methods remove almost all of the coal in localized areas. For modern mining practices, subsidence associated with high-extraction methods is planned and regulated by state and federal authorities. The subsurface subsides above the mine within several days or weeks after the coal has been removed. Subsidence of the over-burden above the mined-out area can continue up to seven years after subsurface removal, depending on the local geologic conditions (Bauer, 2008). The initial ground movements associated with this mining, which tend to be the largest, diminish rapidly after a few months. After subsidence has decreased to a level that no longer causes damage to structures, the land may be suitable for development. The maximum amount of subsidence is proportional to the amount of material extracted and the depth between the mining and the surface. In general, over the centerline of the mine panel, subsidence can be 60 to 70% of the extracted material (e.g., 10ft of material extracted would cause a maximum subsidence of six to seven feet; Bauer, 2006).

For low-extraction techniques such as room-and-pillar mining, miners create openings (rooms) as they work. Enough of the coal layer is left behind in the pillars to support the ground surface. In Illinois this system of mining extracts 40% to 55% of the coal resources in modern mines and up to 75% in some older mines. Based on current state regulations, room-and-pillar mines in operation after 1983 that do not include planned subsidence must show that they have a stable design. Although these permitting requirements have improved overall mine stability, there are no guarantees that subsidence will not occur above a room-and-pillar mine in the future. In general, if coal or other mined resources have been removed from an area, subsidence of the overlying material is always a possibility (Bauer, 2006).

In Illinois, subsidence of the land surface related to underground mining undertakes two forms: pit subsidence or trough (sag) subsidence. Pit subsidence structures are generally six to eight feet deep and range from two to 40 feet in diameter. Pit subsidence mostly occurs over shallow mines that are <100 feet deep and where the overlying bedrock is <50

feet thick and composed of weak rock materials such as shale. The pit is produced when the mine roof collapses and the roof fall void works its way to the surface. These structures form rapidly. If the bedrock is only a few feet thick and the surface material are unconsolidated (loose), these material may fall into adjacent mine voids, producing a surface hole deeper than the height of the collapse mine void. Pit subsidence can cause damage to a structure if it develops under the corner a building or support post of a foundation or other critical location. Subsidence pits should be filled to ensure that people or animals don't fall into these structures (Bauer, 2006).

Trough (or "sag") subsidence forms a gentle depression over a broad area. Some trough subsidence may be as large as a whole mine panel (i.e. several hundred feet long and a few hundred feet wide). Several acres of land may be affected by a single trough event or feature. As discussed above, the maximum vertical settlement is 60% to 70% of the height of material removed (e.g., two to six feet). Significant troughs may develop suddenly (in a few hours or days) or gradually over a period of years. Troughs originate over places in mines where pillar has collapsed, producing downward movement at the ground surface. These failures can develop over mines of any depth. Trough subsidence produces an orderly pattern of tensile features (tension cracks) surrounding a central area of possible compression features. The type and extent of damage to surface structures relate to their orientation and position within a trough. In the tension zone, the downward-bending movements that develop in the ground may damage buildings, roads, sewer and water pipes, and other utilities. The downward bending of the ground surface causes the soil to crack, forming the tension cracks that pull structures apart. In the relatively smaller compression zone, roads my buckle and foundation walls may be pushed inward. Buildings damaged by compressional forces typically need their foundations rebuilt and leveled (Bauer, 2006).

Previous Occurrences of Ground Failure

Many instances of subsidence have affected the county in the last decades with one recent incident occurring September 2017 when Wolf Branch Middle School evacuated after mine subsidence damaged numerous parts of the 15 year-old building, keeping the school from being able to use the kitchen serving areas or band room.

A school in O'Fallon, Joseph Arthur Middle School, built in 2007 is being monitored after a crack developed in the floor of a hallway in 2013. Further assessments were made after the crack got bigger in 2016.

Belle Valley North Elementary School in Belleville had to demolish eight classrooms and a multipurpose room used as a gym and cafeteria after damage was noticed in 2007. In 2012 students were moved to a building constructed where no mines have been detected.

A grocery store in Belleville suffered severe damage in 2023 which led to its closure.

Geographic Location for Ground Failure

Illinois is usually associated with either underground mining or collapse of soil into crevice in underlying soluble bedrock. Areas at risk for subsidence can be determined from detailed mapping of geologic conditions or detailed mine maps.

Hazard Extent for Ground Failure

The extent of ground failure hazard in St. Clair County is a function of where current development is located relative to (1) areas of past and present underground mining, and (2) areas of soluble bedrock. St. Clair County is a county in which mines exist throughout the county and within the municipalities. The increased amount of subsidence issues create an extent on which communities are having harder times predicting and responding to ground failure. Municipalities have surveys completed to determine what areas are under-mined and the impacts of building commerce above them. On several occasions, critical facilities have been impacted by the failures.

Risk Identification for Ground Failure

Based on St. Clair County EMA's assessment, the occurrence of future ground failure is possible and the severity negligible. According to the St. Clair County Planning Team's assessment, ground failure is ranked as the number nine hazard.

Risk Priority Index				
Probability	X	Magnitude	=	RPI
2	X	1	=	2

Vulnerability Analysis for Ground Failure

The county is primarily susceptible to underground mining. A large portion of the county is undermined and there are many buildings on top of the undermined areas. To accommodate this risk, this plan considers all buildings located within the county as vulnerable. Tables 4-7 and 4-8 display the existing buildings and critical infrastructure in St. Clair County.

Critical Facilities

Any critical facility built above highly soluble bedrock could be vulnerable to ground failure. A critical facility will encounter the same impacts as any other building within the affected area. These impacts include damages ranging from cosmetic to structural. Buildings may sustain minor cracks in walls due to a small amount of settling, while in more severe cases, the failure of building foundations can cause cracking of critical structural elements. Table 4-7 lists the types and number of critical facilities for the entire county and Appendix F displays a large format map of the locations of all critical facilities within the county.

Building Inventory

Table 4-8 lists the building exposure in terms of types and numbers of buildings for the entire county. The buildings within the county can expect similar impacts to those discussed for critical facilities, ranging from cosmetic to structural. Buildings may sustain minor cracks in walls due to a small amount of settling, while in more severe cases, the failure of building foundations causes cracking of critical structural elements.

Infrastructure

In the area of St. Clair County potentially affected by ground failure, the types of infrastructure that could be impacted include roadways, utility lines/pipes, railroads, and bridges. The risk to these structures is primarily associated with land collapsing directly beneath them in a way that undermines their structural integrity. The impacts to these items include broken, failed, or impassable roadways; broken or failed utility lines (i.e. loss of power or gas to community); and railway failure from broken or impassable railways. In addition bridges could fail or become impassable causing risk to traffic.

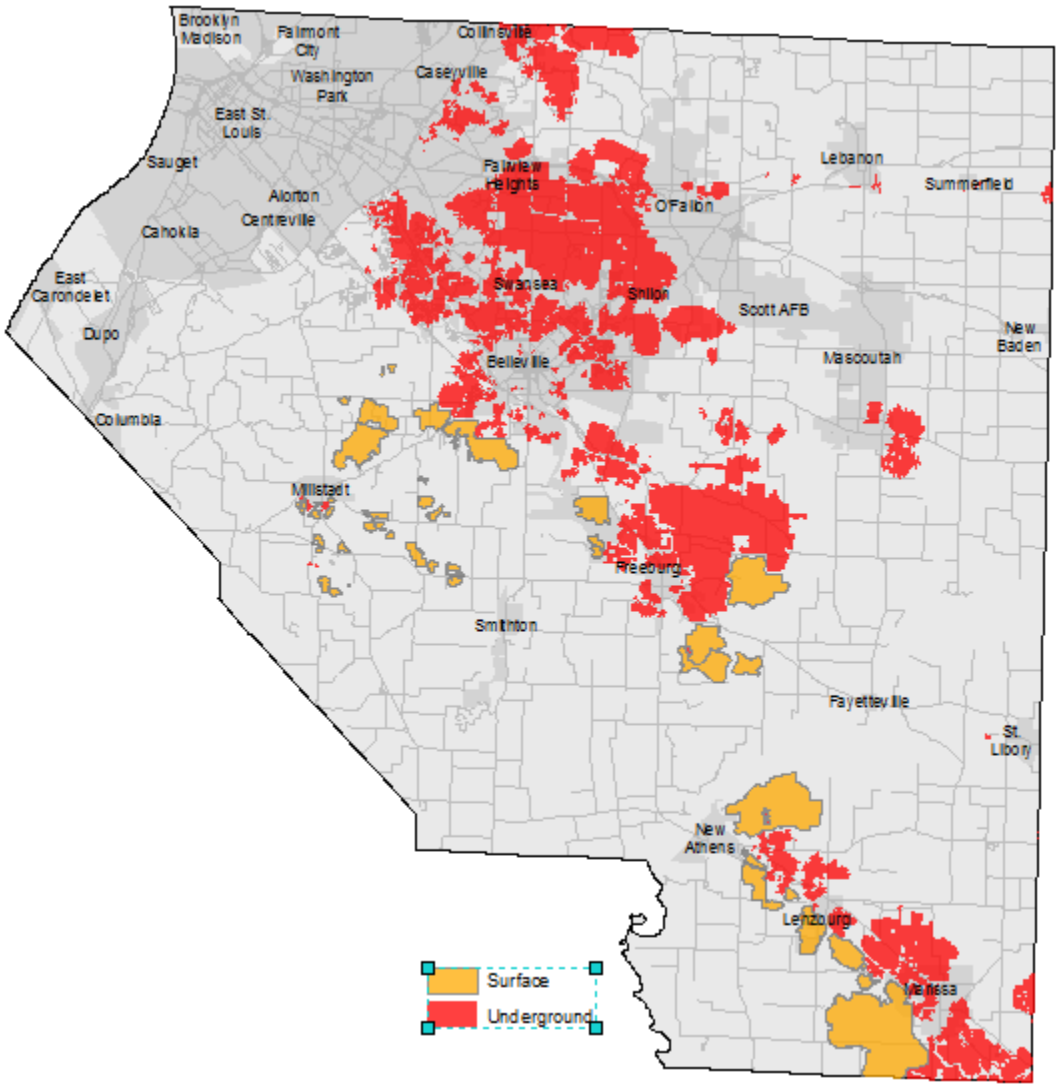
GIS-Based Analysis for Ground Failure

This section provides an overview of the ground failure hazards in Illinois in general and a discussion of the potential subsidence risk for St. Clair County. Ground failure in Illinois is usually associated with either underground mining or collapse of soil into crevice in underling soluble bedrock. Areas at risk for ground failure can be determined from detailed mapping of geologic conditions or detailed mine maps.

The Mine Subsidence Insurance Act of 1979 created subsidence insurance as part of an Illinois homeowner's policy. Homeowners in any of the Illinois counties undermined by approximately 1% or more automatically have mine subsidence insurance as a part of their policy, unless coverage is waived in writing. Mine subsidence insurance is especially important for homes located near or over mines that operated before the 1977 Surface Mine Control and Reclamation Act. The companies that operated these mines may no longer be in business (Bauer, 2006).

Figure 4-20 shows the distribution of surface and underground mines in St. Clair County. Analysis of the GIS data layer of active and abandoned coal mines in Illinois obtained from the IDNR revealed that large areas of St. Clair County been undermined. The undermined areas are generally found around Fairview Heights, Shiloh, Swansea, and Freeburg. Comparison of St. Clair County local assessment and parcel data with IDNR GIS layer of active and abandoned underground-coal mines was performed. This analysis revealed that approximately 14% of the county is undermined including 3,094 buildings with a total replacement cost of $32 billion.

Figure 4-20 Distribution of Surface and Underground Mines in St. Clair County



Vulnerability to Future Assets / Infrastructure for Ground Failure

New buildings and infrastructure placed on undermined land or on highly soluble bedrock will be vulnerable to ground failure.

Suggestions of Community Development Trends

Abandoned underground mine subsidence may affect several locations within the county; therefore buildings and infrastructure are vulnerable to subsidence. Continued development will occur in many of these areas. Newly planned construction should be reviewed with the historical mining maps to minimize potential subsidence structural damage.

References:

Bauer, R.A. 2008. Planned Coal Mine Subsidence in Illinois: A Public Information Booklet, Circular 569, Illinois Department of Natural Resources and Illinois Geologic Survey, Springfield, Illinois. http://www.isgs.illinois.edu/sites/isgs/files/files/c573.pdf, last accessed, August 28, 2017.

Bauer, R.A. 2006. Mine Subsidence in Illinois: Facts for Homeowners, Circular 573, Illinois Department of Natural Resources and Illinois Geologic Survey, Springfield, Illinois. https://www.illinois.gov/iema/Mitigation/Documents/Link_Mine_Subsidence_Facts_Homeowners.pdf, last accessed, August 28, 2017.

Illinois Coal Association. 1992. Illinois coal facts: Springfield, Illinois, 64p.

Panno, S.V., Weibel, C.P., Li, W. 1997, Karst Regions of Illinois. Open File Series 1997-2. Illinois Geologic Survey, Champaign, Illinois, 42 p.

White, B.W. 1988. Geomorphology and Hydrology of Karst Terrains. Oxford University Press, 463p.

Section 4.4 Impacts of Climate Change on Identified Hazards

Tornado

As severe weather events intensify, occur more often and exacerbate the country's growing economic toll, science is running to keep up to answer emerging questions of whether climate change is worsening every single disaster.

But unlike heat waves, floods and hurricanes, scientific research about the connection between the climate crisis and tornadoes has not been as easy to make; though climate researchers say uncertainty doesn't mean it is unlikely, and experts are already seeing changes in how recent tornado outbreaks are behaving.

What's clear, experts say, is that these weather events, no matter how severe, are occurring against the backdrop of human-caused climate change; it just all comes down to discerning how a warming planet is altering weather patterns, including geographical location and frequency, as well as severity.

Scientists say the short-lived scale of tornadoes, coupled with an extremely inconsistent and unreliable historical record, makes connecting outbreaks to long-term, human-caused climate change extremely tough.
Scientists have warned that the rise in greenhouse gas emissions in the atmosphere is drastically changing the climate system, causing the jet stream — fast-flowing air currents in the upper atmosphere that influence day-to-day weather — to behave oddly.

As the climate crisis accelerates and further research continues to establish its connection with tornadoes, more people will be vulnerable to the most severe consequences of extreme weather events. And experts say cities shouldn't put off adaptation plans any longer, and that they should use available climate research and treat them as part of the larger emergency response system.

Winter Storm

Between 1970-2019, snowfall decreased in the spring and fall for most of the U.S. Winter showed a mixed record with more snowfall in some cold northern regions.

Climate change can affect the timing, location, and amount of snowfall—as well as spring snowmelt patterns—in complex ways.

Fewer freezes. Winter is the fastest warming season for most of the U.S., and the number of days with temperatures below 32°F is expected to continue to decline over the coming decades.

More moisture. Our warming atmosphere holds about 4% more moisture per 1°F of temperature rise. But where that moisture falls, and whether it falls as rain or snow, is largely based on the season and region.

In almost all areas of the U.S., snow is decreasing in the fall and spring, according to a Climate Central analysis of snowfall data from 1970–2019. Over this period:
Fall snowfall (before December 1) decreased in every region of the country with available data.

Spring snowfall (after March 1) decreased in all regions except for the Northeast and the East North Central regions. Winter showed a mixed record, with increased snow in North Central regions, and decreasing snow in southern regions.

Flooding

Flooding is among the leading climatic threats to people's livelihoods, affecting development prospects worldwide – and floods can also reverse years of progress in poverty reduction and development. While the threat is already substantial, climate

change and rapid urbanization in flood zones are likely to further drive up flood risks. The latest Intergovernmental Panel on Climate Change report affirms the urgency of addressing the intensifying impacts of climate change and ensuring the adaptation and resilience of the most vulnerable.
Estimates show that 1.81 billion people, or 23% of the world population, are directly exposed to flood depths greater than 0.15 meters in a 1-in-100-year flood event, thus posing significant risk to lives and livelihoods. Of these, 89% live in low- and middle-income countries. Moreover, 780 million flood-exposed people live on less than $5.50 a day, and 170 million flood-exposed people live in extreme poverty (on less than $1.90 a day). In short, 4 in every 10 people exposed to flood risk globally live in poverty.

With next to no savings and limited access to support systems, the poorest households often experience the most devastating long-term consequences of floods. The study systematically assess where high flood risks and poverty coincide. Findings show that flooding is likely to cause the most detrimental impacts on livelihoods and well-being.

Extreme Heat / Drought

More than 60% of the world population faced extreme heat that was made at least three times more likely by climate change during June 2024. In June 2024, extreme temperatures soared around the world. Every heat wave in the world is now made stronger and more likely to happen by climate change, caused by burning oil, gas and coal, and deforestation. Climate Central's Climate Shift Index (CSI) determines the influence of climate change on temperatures around the globe

Until carbon pollution ends, heat waves everywhere will continue to become hotter and more dangerous.

Severe Thunderstorms

Rising global temperatures due to climate change means warmer air, which allows it to hold more moisture, roughly 7% more moisture per 1°C of warming. This boosts the chance of thunderstorms, leading to more violent storms and more lightning strikes. And the intense downpours will lead to localized flash flooding.

But as is often the case, the impact of climate change on thunderstorms will be more complex, altering seasonal norms and potentially leading to fewer storms for some places that currently rely on the storm's rainfall for agriculture.

Because moisture and warmth are crucial to thunderstorms, they occur more often in the spring and summer, particularly in humid areas. They are most likely to happen during the afternoon and evening hours. During winter, you may experience thundersnow, an unusual thunderstorm that occurs when snow (or graupel or hail) falls instead of rain.

Dam / Levee Failure

Thousands of U.S. dams could pose a growing threat to nearby communities as the climate changes, a USA TODAY analysis of climate and dam data found. They are in places that make them likely to harm people or property if they fail, and they face increased risk of failing because river-swelling rainfalls have become more common, testing the limits of these structures.

Engineering experts who assess failed dams say many problems go unnoticed because rules require only visual inspections, not deep exams of a dam's current structure and historical problems.

John France, an engineer who worked on the Edenville Dam failure investigation and others, said climate change has challenged what engineers thought they knew about the floods dams would have to endure. "The methods that we've been using have been based on past performance, assuming that they are going to continue to happen," he said. "Now the science is telling us, with the climate changing, that is probably not true."

Earthquake

There are lots of myths about earthquakes. A common one is that there's such a thing as "earthquake weather" — certain types of weather conditions that typically precede earthquakes, such as hot and dry, or dry and cloudy. The myth stems from the Greek philosopher Aristotle, who proposed in the 4th century B.C. that earthquakes were caused by trapped winds escaping from subterranean caves. He believed the large amounts of air trapped underground would make weather on Earth's surface before a quake hot and calm.

With the advent of seismology — the study of earthquakes — we now know that most quakes are caused by tectonic processes — forces within the solid Earth that drive changes in the structure of Earth's crust, primarily the rupture of underground rock masses along faults (linear zones of weakness). We also know that most earthquakes occur far beneath Earth's surface, well beyond the influence of surface temperatures and conditions. Finally, we know the statistical distribution of earthquakes is approximately equal across all types of weather conditions. Myth busted.

In fact, according to the U.S. Geological Survey, the only correlation that's been noted between earthquakes and weather is that large changes in atmospheric pressure caused by major storms like hurricanes have been shown to occasionally trigger what are known as "slow earthquakes," which release energy over comparatively long periods of time and don't result in ground shaking like traditional earthquakes do. They note that while such large low-pressure changes could potentially be a contributor to triggering a damaging earthquake, "the numbers are small and are not statistically significant."

In order to make any connection between climate and earthquakes, says Lundgren, you first have to determine what kinds of tectonic processes might be related to climate phenomena. Scientists know earthquakes can be triggered or inhibited by changes in the amount of stress on a fault. The largest climate variable that could change fault stress loads is surface water in the form of rain and snow. Lundgren says several studies have supported such correlations. But there's a catch.

"Typically, where we've seen these types of correlations is in microseismicity -- tiny earthquakes with magnitudes less than zero, far smaller than humans can feel," he said.

"Those occur quite frequently." Lundgren cited work by his colleague Jean-Philippe Avouac at Caltech and others, who've found a correlation between the amount of microseismicity in the Himalaya and the annual monsoon season. During the summer months, large amounts of precipitation fall on the Indo-Gangetic Plain, which encompasses the northern regions of the Indian subcontinent. This increases stress loads on Earth's crust there and decreases levels of microseismicity in the adjacent Himalaya. During the winter dry season, when there's less water weight on Earth's crust in the plain, Himalayan microseismicity peaks.

Ground Failure / Mine Subsidence

Forecasts indicate that climate hazards such as heavy precipitation, drought, and heat will get more frequent and intense, increasing the physical challenges to mining operations. Widespread decarbonization efforts across industries could create major shifts in commodity demand for the mining industry. And the mining sector, responsible for 4 to 7 percent of greenhouse gas (GHG) emissions globally, will also face pressure from governments, investors, and society to reduce emissions. Scope 1 and Scope 2 CO2 emissions from the sector (those incurred through mining operations and power consumption, respectively) amount to 1 percent, and fugitive methane emissions from coal mining are estimated at 3 to 6 percent.[1] A significant share of global emissions—28 percent—would be considered Scope 3 (indirect) emissions, including the combustion of coal.

The abandoning of mines due to other climate changes greatly increases the probability of subsidence issues in the future.

Section 5 Mitigation Strategies

The goal of mitigation is to reduce the future impacts of a hazard, including property damage, disruption to local and regional economies, and the amount of public and private funds spent to assist with recovery. Throughout the planning process, the St. Clair County Planning Team worked to identify existing hazard mitigation policies, develop mitigation goals, and create a comprehensive range of mitigation strategies specific to each jurisdiction. This work provides a blueprint for reducing the potential loses identified in the risk assessment (section 4). The surveys sent to communities included this as section 4 and therefore some of the references to mitigation strategies on their worksheets reference section 4.... and are actually 5...

5.1 Hazard Mitigation Goals

Requirement 44 CFR §201.6(c)(3)(i), the Plan includes goals to reduce/avoid long-term vulnerabilities to the identified hazards.

The regional goals for the Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

5.2 Action Steps to address Natural Disaster Mitigation

Requirement 44 CFR §201.6(c)(3)(ii)), the Plan identifies and analyzes a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure.

Requirement 44 CFR §201.6(c)(3)(iii), the Plan contains an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction.

Requirement 44 CFR §201.6(c)(4)(ii), the Plan describes a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate.

See Appendix E for individual jurisdiction mitigation strategies. This plan addresses two related aspects of hazard mitigation, the actions that reduce the impact of the immediate disaster, and actions that can reduce the harmful aftereffects of a natural disaster. These actions were reviewed by the Working Group and formed the basis for the hazard mitigation

plan workshops held in seven locations in the region. Representatives from participating municipalities and school districts prioritized each existing and proposed action as high, medium, or low and further described whether work on current action is on-going, complete, or deferred (which can indicate not yet begun or not applicable). These priority rankings are in the spreadsheets in Section 4.6.

The list of actions with description is below, followed by the spreadsheet which identifies the priorities for each of the responding communities. The communities prioritized the action steps or delegated their planning to their county emergency management agencies, which prioritized based on the needs of communities they represent throughout their county. The school districts that did not attend the workshops delegated their planning to EducationPlus.

This list of numbered actions provides a framework for collaboration and planning that will continue through the five years of this plan update. Community leaders can also use the list to compare priorities with other communities in the region.

5.2.1 Public Information and Awareness for Mitigating Natural Disasters

Problem Statement: Two problems are relevant to any type of natural disaster mitigation:
a poorly informed public and a poorly prepared public. A common concern is that the public is poorly informed about how to respond to a serious disaster. Since the ability to respond quickly to a disaster can greatly reduce the risk to human life or injury, the community needs a well-informed public, a plan for both individual response and responsibility, and coordinated agency response to a given disaster. The problem of building awareness is high when there have been no recent disasters, and the public and volunteer agencies can be complacent and unprepared when an event occurs. Engaging volunteers who can be prepared is an important step in addressing any or all of the potential hazards the region faces. Special populations have specific needs and challenges and agencies can work to help them be prepared. Likewise communities that train volunteers to respond to disasters can minimize the secondary impact of a disaster.

A. **Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.** Public awareness and preparation can be important to addressing both pre-disaster preparation and warning and post-disaster impacts. It is in this general area that this region has seen the most significant progress during the last five years. Organizations that have been involved in long term recovery planning and action have now come together both as regional and local Community Organizations Active in Disaster (COAD) that are making great strides to inform the public of disasters

and prepare for immediate response in order to reduce the immediate impact. Municipal governments and school districts have a unique opportunity to link hazard mitigation efforts with the COADs to support overall disaster planning, prevention, and response. The cost to jurisdictions is low cost based on current initiatives while the benefits to the public can be high.

1. **Continue to expand and strengthen Community Organizations Active in Disaster (COADs).** COADs are identifying requirements and responsible parties to address each type of need. Through county and city emergency management, STARRS, and St. Louis Area Regional Coalition of COADs (SLARCC), EWG continues to inform municipalities and school districts of the importance of the COADs, how to become involved and bring active COADs into their communities, and how to promote involvement in the COADs of local social service organizations. While some seed money for organizing work is definitely helpful, this activity relies primarily on voluntary organizations. Costs to municipalities are low because they can join initiatives already underway in each county and the benefits of active engagement are high. The success of COAD involvement minimized the impact of ending of the All Ready Campaign included in the 2015 – 2020 St. Louis Regional Hazard Mitigation Plan.

2. **Participate and support emergency training for citizen volunteers**. The City of St. Louis, St. Charles, and St. Louis Counties are fully involved in participating and supporting Community Emergency Response Teams (CERT). County and local governments have been involved in training volunteers to assist in natural disaster response for many years. Training initiatives under CERT have strengthened the program and offer unique opportunities to inform citizens of hazard mitigation as well as hazard response actions. Trained volunteers who are aware of risks before natural disaster strikes can be valuable resources in advance preparation as well as valuable aids to reduce impact when a disaster hits by helping to identify the populations impacted and in need of assistance. Costs are low, and the benefit of training volunteers can mean reduced costs to local government for staff in times of disaster.

3. **Educate the public, local government staff, and elected officials about relevant hazards**. With the support of STARRS, the emergency managers in each county and the not-for-profit organizations involved in SLARCC, local governments can expand training for public awareness and preparation. As a part of the 2019 planning process, EWG encouraged communities to put Hazard Mitigation Planning on the agenda of the elected boards and councils. Costs can vary widely, but education and training is available for low cost. Additionally, training the public for natural disasters benefits by highlighting steps that individuals can take including, building safe rooms, having weather radios with backup power supplies, and having a ‘go kit’ with necessary emergency supplies.

4. **Alternative media.** As traditional forms of media and messaging become less effective methods of reaching and sustaining public awareness, it becomes even more important for counties, municipalities, and school districts to use social media to promote awareness and emergency messaging. Most social media platforms are free, which minimizes cost, while benefits include reaching younger and non-traditional audiences.

5. **Promote awareness about the 211 Service**. United Way has a rapid information sharing system through a 211 phone information line. By way of benefits, United Way is able to refer regional residents to agencies who can help them prepare for disasters. In addition, they can connect residents to agencies and resources to assist them after a disaster. Local governments can encourage use of this service by publicizing it in newsletters, on their websites, and social media. The cost to promote this service is low and can be incorporated into other public messages.

6. **Promote use of green infrastructure techniques to property owners**. Green Infrastructure is a cost-effective, resilient approach to managing wet weather impacts that, while a very useful tool for municipal planning, can also benefit individual property owners by reducing flooding. There are many guides already available for free, so this is a low-cost activity for municipalities with benefits for residents and local governments.

5.2.2 Creating Effective Response to Any Natural Disaster

Problem Statement: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments and school districts face challenges in meeting this expectation. Many response efforts must begin with good communication, especially to provide advance notice of a disaster whenever possible. In addition, public facilities are often the best locations to provide relief to people in need immediately following a disaster, so communities must be prepared to make cost-effective preparations in advance of a natural disaster. Communications among departments and between emergency management, police, fire, ambulance, and health departments as well as communications among communities affected can be stressed during a disaster, especially if normal electric power sources are cut off. Therefore, planning for effective warning systems, and for effect communications immediately following a disaster is a high priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.

1. **Build safe rooms that can also serve as relief centers**. Construction of a new local government or school district facility is a useful time to design and build safe rooms that can withstand tornado or earthquake and also serve as a refuge for citizens who lose their homes or who lost power in an extreme temperature event. The cost to build safe rooms is very high; in many cases it is prohibitive. Cost to staff such facilities is also a concern of local governments and school districts. The benefits of having safe rooms can include reduced loss of life and protection for vulnerable populations. Relief centers, like evacuation shelters, should also have provisions which include caring for pets. Multiple pet care trailers are available in the region, including those owned by Jefferson County, St. Louis County, and STARRS.

2. **Create and improve early warning systems for all disasters, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc**. All counties and the City of St. Louis have adopted emergency communication systems for contacting the public. Additionally, municipalities also continue to adopt one or more of these systems to assist in communications. There are also apps that alert people for general emergency alerts, earthquakes, first aid, hurricanes, floods, and tornado watches and warnings, such as American Red Cross's Tornado app (http://www.redcross.org/mobile-apps/tornado-app) (which also has alert apps for the other above-mentioned emergencies. Because these initiatives are already developed, the additional costs for individual communities is low. Benefits include better and faster communication with citizens.

3. **Integrate communications systems to provide rapid communication and response**. This action item has been on-going since the first plan, and it is nearly complete in the St. Louis region through the work and leadership of the STARRS program. The cost is high, but the expense is being covered in large part by STARRS through U.S. Department of Homeland Security grant funding, thus benefitting local jurisdictions without the financial burden.

4. **Conduct risk assessments and mitigation planning for all natural disasters.** Counties, local governments, school districts, and other agencies can conduct and utilize specific risk assessments and mitigation planning to update operation and planning procedures to meet identified risks and reduce losses of life and property.

   Most local governments and school districts have assessments in place, and this plan serves as a reminder that such assessments need to be reviewed and updated, preferably on an annual basis. Most assessments are already part of emergency operation plans; however, this mitigation action emphasizes the importance including assessments of natural hazards in planning. As with risk

assessments, mitigation planning at the local level and its incorporation into development planning and mitigation strategies benefits all residents. For assessments and mitigation planning, costs vary widely depending on need, whether an assessment has been done in the past, and whether a plan is already a part of the ongoing community activity. Benefits include more prepared and resilient jurisdictions.

5. **Review opportunities for joint purchases of supplies and equipment.** Local governments and school districts can implement joint purchase agreements where possible. A number of communities are purchasing road salt through cooperative agreements that ensure supply and lower costs. Cooperative planning for auxiliary power may also have potential payback for communities. Go kits, or disaster preparedness kits, for the public are also another possibility for cooperative purchases. There is an initial cost of time and effort to identify opportunities, but the long-term impact or benefit will be a net gain by reducing costs of supplies.

6. **Acquire necessary equipment to secure lives and property.** This includes generators for powering emergency operations centers, essential services, and relief centers and shelters; pumps for removing water from inside areas protected by sandbags, levees, flood walls, and other barriers; as well as other types of equipment as needed. Costs vary depending on equipment, although large capacity generators and pumps with adequate capacity can be expensive. Maintenance of pumps, generators, and other powered supplies can be written into emergency operation plans to help ensure regular maintenance and testing take place. The benefits of generators depend on use, but can include reduced impact from flooding, care and comfort of displaced residents, and uninterrupted emergency operations.

7. **Adopt current building codes**. When current building codes are adopted and enforced by state and local jurisdictions, these standards reduce the loss of life and property, as well as save energy and lower construction costs. They also protect the structural integrity of the building while protecting an owner's investments in the property. Building codes are generally updated every three years. These updates introduce new technologies and methods, respond to new findings, research, and assessments following catastrophic events, and replace outdated provisions with new, more cost-effective methods. Adoption and enforcement of current building codes every three years is a low cost, high benefit mitigation strategy that prioritizes public safety and property loss reduction.

8. **Integrate Hazard Mitigation Plan into local plans**. A hazard mitigation plan should not be considered stand-alone document but rather an integral resource

to inform a jurisdiction's other plans and development mechanisms, including comprehensive, long range, capital improvement, flood zone development, environmental, sub-division, and economic development to name a few. Incorporating the hazard mitigation plan into local plans is a low cost, high benefit mitigation strategy that promotes resiliency and provides an important connection between community development, public safety, and risk management.

5.2.3 Mitigation Needed to Prepare for Tornados

Problem Statement: Because tornados can strike quickly and unexpectedly, communities must be prepared in advance with emergency shelters both to provide protection to school populations and other groups that might be at greater risk in a tornado event and also to provide shelter immediately following a severe event, where people may have lost their homes or where homes have been made unsafe. Communication is also important to help citizens to know when to take shelter and how to shelter.

A. Tornado preparation. Local governments and school districts should cooperate to enhance community safety. In addition to the actions described in the problem statement above, four specific steps are recommended for tornado mitigation.

1. **Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations.** Local governments and school district can designate existing facilities that are already constructed, or they can build new facilities and prepare advance plans for staffing of such facilities. Communities have indicated that staffing facilities in a timely manner is an ongoing challenge, and this is an area where regional cooperation can assist in solving this challenge. This cost is high and often prohibitive for school districts and local governments. Critical municipal and infrastructure operations are already written into emergency operation plans as are evacuation facilities. The benefits of having safe rooms can include reduced loss of life and protection for vulnerable populations.

2. **Develop and maintain early warning systems to target specific, vulnerable communities.** For example, MoDOT developed a connection with the National Weather Service and is using highway lighted traffic sign boards to convey information. Schools located outside of municipalities frequently do not have the necessary proximity to hear emergency sirens and must use other methods and tools to ensure student safety, including utilizing weather apps from their respective county emergency management agency, the Red Cross, and/or local television media. Communities can also promote use of apps for cell phone users. STARRS continues to explore regional solutions to support these

initiatives, including through their Interoperable Communications Core Group, the St. Louis Regional Digital Microwave Backbone System, and maintenance of the St. Louis Regional Tactical Interoperable Communications Plan. The regional solution holds the most promise for providing a lower cost option for local governments and school districts, while helping protect lives and property. Early warning systems are integrated into existing emergency operation plans.

3. **Retrofit one- and two-family residences.** Seek funding to retrofit for one- and two-family residences for high winds and tornados. The costs for retrofitting residences can be expensive although some non-structural retrofits can cost significantly less. Benefits include reduced damages during wind events.

4. **Infrastructure and essential building retrofit.** Retrofit existing infrastructure and essential buildings to address wind shear and projectile damage from tornadic and high wind events. Much like for residences, larger buildings and infrastructure are costly to retrofit. Retrofitting essential buildings and infrastructure as funding becomes available can be written into a city's master plan. Benefits include reduced damages and greater potential to maintain operational ability during wind events.

5.2.4 Mitigation Needed to Prepare for Extreme Temperatures, Severe Thunderstorm Winds, Lightning, and Hail

Problem Statement: Although heat and cold, hail, lightning, and thunderstorm winds present different kinds of problems, these extreme weather and temperature events tend to hit low income communities and the elderly harder than the general population. These events also tend to be regional, and therefore broad-based planning is more effective in addressing these challenges. When power is disrupted through storms (sometimes accompanied by high demand for electricity especially in heat waves), extreme hot or cold weather can rapidly put very large numbers of citizens at risk. Severe storms can produce lightning, hail, and high winds, which can be devastating to people and property. Developing a response plan in advance is therefore paramount to effective management of that risk.

A. Prepare for extreme weather and temperatures (heat and cold, hail, thunderstorms, or lightning). The most serious problems arise when extreme weather is accompanied by power outages. Local government can provide both advance preparation and rapid response.

1. **Create and support neighborhood initiatives.** Communities should prepare for and respond quickly to extreme weather. Local governments should encourage neighborhood watch programs to check in on the elderly or special needs populations; provide training and support for neighborhood organizations

and promote neighborhood resiliency. Support organizations already exist in some counties and can be a catalyst for developing grassroots initiatives. This is a low-cost program for most local governments that benefits vulnerable populations.

2. **Establish relief centers and encourage the public and pets to use the centers.** The key element identified by a number of municipalities is the need to have both the center and the operational plan for the center in place. Additionally, people will frequently stay in harm's way if they cannot take their pets to an evacuation or relief center. Residents can call 211 to find the locations of heating/cooling centers in their area. Staffing costs may be substantial and a barrier for some communities, although the benefits can include protection of lives. Relief centers are already part of many emergency operation plans.

3. **Utilization of green space and tree canopy.** Maintain or increase tree canopy and greenspace where possible to mitigate heat island effect. The density of buildings and roads in urbanized areas contributes significantly to the heat island effect. This impact can then strain electrical grids and increase heat related illness and mortality. The benefits of increasing or maintaining tree and vegetation cover include lower surface and air temperatures through providing shade and cooling through evapotranspiration. Trees and vegetation can also reduce stormwater runoff, which can help reduce flooding risk. Many cities already have city-guided or volunteer tree planting efforts and tree preservation ordinances are a low-cost method for maintaining tree canopies. Use of green space and tree canopy preservation is low cost and can be part of a city's development plan.

4. **Building codes.** Adopt or strengthen applicable building codes to mitigate potential damage to roofs from wind, hail, and other weather hazard events. Aside from the costs of training staff, building code adoption is generally a low-cost method for cities and counties. The costs of the actual engineering, structural adaptations, and supplies, however, can come at a greater cost to the builder. The benefits include structures that can withstand impact from severe weather.

5. **Infrastructure retrofit.** Retrofit infrastructure to maintain operability during weather hazard events including wind shear, airborne projectiles, heavy rain events, and resilience to extreme temperatures, as well as others. This is a high cost option for cities and schools, as meeting the necessary building standards to resist projectile damage, for example, are quite high. The benefit of retrofit is having a safer structure that can withstand more severe weather, thus protecting property value and the lives of those within.

5.2.5 Mitigation Needed to Prepare for Floods

Problem Statement: Because flood risk areas are identified, communities can move to reduce risk both for humans and property by effective advance planning. In addition to mapping flood risk areas, educating citizens about the nature of the risk and the appropriate actions to reduce risk is a critical part of the plan. An area that is flood prone, but where a flood has not occurred in recent years can be especially high risk because property owners can become complacent and unprepared should a flood occur. Flash flooding on small streams is also a serious risk, because there are many properties next to streams where development has already taken place and where flood waters are rarely seen. Another risk lies in areas protected by dams or levees, where the public assumes property is safe because it is protected by these structures. Failure of a dam or levee can create a very high hazard, due to the speed with which water can inundate a previously protected area. Due to their specialized risk, mitigation actions for dams and levees are addressed in Section 4.2.6 below.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.

1. **Protect stream buffers from development and create setback requirements along streams**. Most of the larger municipalities have already implemented stream buffer ordinances, or intend to do so, in part to meet National Pollutant Discharge Elimination System (NPDES) Phase II standards. Other communities can implement stream development setbacks or buffer ordinances which benefit by reducing the risk of flash flood damage to property, especially along smaller streams which tend to experience flash flooding. The cost is low in most cases. Stream buffers can be written into development plans, master plans, and stormwater management plans.

2. **Municipalities should use floodplain best management practices (BMP)**. Specifically, municipalities can prohibit building permits for residences within flood plains. Costs may vary widely, but communities with extensive flood plain areas will have greater costs through loss of property tax revenue; and communities with more legacy development in flood plains can expect greater cost to improve safety of properties. Flood plain BMPs can be written into development plans, master plans, and stormwater management plans at low cost. Benefits include reduced property damage.

3. **Join or maintain participating status in National Flood Insurance Program (NFIP) and join FEMA Community Rating System (CRS)**. **Adopt Floodplain Management Plans when feasible.** NFIP, managed by FEMA, enables homeowners, business owners, and renters in participating communities to

purchase federally backed flood insurance. This insurance offers an alternative to disaster assistance to meet the escalating costs of repairing flood damage to buildings and their contents. Participating communities agree to adopt and enforce flood plain management ordinances to reduce future flood damage. Communities that want in enhance flood protection and already have developed property in flood plains can join the FEMA Community Rating System (CRS) and work to implement best practices. See Section 2.9.1 for more information on CRS. There are costs associated with staff time to fill out the paperwork and track aspects of the program, but some costs are already part of doing businesses for local governments. The benefits of maintaining NFIP status include the availability of flood insurance, while CRS participation can lower the cost of flood insurance through multiple levels of discounts. USACE, as part of the Silver Jackets program continues to develop Floodplain Management Plans in flood-prone watersheds in the region. Integration of plan strategies can reduce community flooding and damages.

4. **Use Green Infrastructure / Nature Based Solutions to manage stormwater where it falls**. Municipalities and counties have control over land use decisions. The use of green infrastructure and nature based solution requirements in new and renewed construction permits can facilitate capture and temporary storage of rainwater where it falls and help to reduce flash flooding and erosion. Additionally, protection of open spaces, floodplain development restrictions or prohibitions, and stormwater management plans are all helpful tools to help communities benefit by reducing costs of water damage from flooding and flash flood events. If added to development requirements this tool is low cost to municipal governments. Use of green infrastructure can be written into development plans, master plans, and stormwater management plans. It can also be incorporated into Requests for Proposals and Requests for Qualifications for city, school district, and special district projects. There are excellent resources available with information to assist local jurisdictions with floodplain planning and mitigation using green infrastructure. USACE has two floodplain management plans in the region. The Upper Joachim Creek Floodplain Management Plan and Lower Meramec Floodplain Multi-Jurisdictional Floodplain Management Plan offer detailed approaches to enhancing community resilience to flooding while preserving and enhancing natural floodplain functions. The Healthy Watershed Options for Floodplain Management, Lower Meramec Watershed, written by Wichita State University and funded by EPA, provides information on green infrastructure, cost benefit analysis, and funding barriers and solutions for flooding. Although the aforementioned plans focus primarily on the Lower Meramec, the suggestions and guidance are applicable anywhere flooding is a concern.

5. **Restore floodplains and streams.** Restoring the function of flood plains can provide benefits of flood risk reduction and improve water quality and habitat for fish and wildlife. Floodplains and wetlands of a river or stream system provides capacity for storing stormwater runoff, reducing the number and severity of floods, and minimizing non-point source pollution. Floodplain and stream restoration projects can stand alone or be combined with buy outs and protection of open spaces to maximize the flood risk reduction benefits of those efforts. Flood plain and stream bank restoration can have some upfront costs, which vary depending on the scale of the projects, however, long term costs are low. Restoration of flood plains and streams can be written into development plans, master plans, and stormwater management plans.

6. **Buy out frequently flooded properties**. The cost of insurance and claims is an on-going burden usually borne by individual property owners and federal taxes, but the cost of serving homeowners during a flood is shouldered by local governments. Reducing flood damage through buyouts can benefit by providing more resources for other needs at the local level and reducing repetitive losses. Buyouts are a high cost solution. Some communities may use flood buy-out funds from FEMA to purchase frequently flooded properties, but the matching cost requirement is still substantial and is often serious hurdle to overcome. Additionally, bought-out properties can never be developed again, which can impact local tax rolls. Flood buyouts can become part of a city's master plan, thus formalizing its commitment to reducing repetitive losses in flood prone areas.

7. **Retrofit or reconstruct infrastructure.** Retrofitting or reconstructing infrastructure in flood-prone areas benefits by resisting damage and maintaining usability during hazard events. Not all infrastructure can be removed from flood-prone areas and retrofitting is one method to address the issue and reduce, if not eliminate, recurring losses or costs due to flooding. Retrofitting and reconstruction also include road-stream and low-water crossings, which can be designed to have less environmental impact. Costs of retrofitting are dependent on the size of the structure(s) but can be costly.

8. **Structure elevation.** Elevating structures in flood-prone areas can benefit by greatly reducing damage during flood events. Elevating structures in flood-prone areas which cannot be moved to new locations is another method to address the issue of recurring losses or costs due to flooding. It can be costly to elevate a structure, depending on size and soil conditions. Structural elevation can become part of a city's development plan.

9. **Removal of public structures.** County and local governments have the ability to lead by example on the importance of moving or relocating public structures

from areas of repetitive loss due to flooding. Relocating structures can be costly, to the point where demolition and reconstruction outside of the flood plain is more cost effective, however, it depends on the structure. Removal of public structures can become part of a city's master plan, thus formalizing its commitment to reducing repetitive losses in flood prone areas. Doing so benefits governments by eliminating repetitive losses.

10. **Dry flood proofing historic buildings.** When removal or relocation of historic or unique buildings from flood-prone locations is not feasible, dry flood proofing can help mitigate future damage. Benefits of dry flood proofing include protecting important buildings, which contribute to the quality of life and potential for visitors to an area. However, this can be a significant cost for local municipalities.

11. **Dry flood proofing non-residential structures.** When non-residential structures in flood-prone areas cannot be removed or relocated, dry flood proofing can help mitigate future damage. Dry flood proofing can be a significant cost for local municipalities but can be beneficial by reducing repetitive losses.

12. **Localized and non-localized flood risk reduction.** Communities can benefit by reducing damage and protecting life by engaging in localized and non-localized flood risk reduction projects. Localized flooding can be caused by numerous factors, including flash flooding. Projects to help mitigate this type of flooding do not have to be large in scope and can include green infrastructure solutions; some of which can be low cost especially when rolled into larger infrastructure projects. Flood risk reduction projects can be part of an effective stormwater management plan.

13. **Soil stabilization.** Soil stabilization can be an important and beneficial component in preventing future damage to buildings and infrastructure. Long lasting rain events and wildfires can contribute to the lack of slope stability, which is frequently necessary to maintain critical infrastructure and transportation corridors. Soil stabilization is costly, although depending on the degree of the slope, less expensive techniques, such as vegetation management, can be used.

14. **Post-disaster code enforcement.** In the event of a natural disaster, post-disaster code enforcement is an important part of recovery and can prove beneficial and help mitigate future damage and loss of life by ensuring rebuilt structures are built to the appropriate construction code. Code enforcement staff are generally already in place; however, disasters tend to reallocate the priorities of counties and municipalities alike. Additionally, the sheer number of inspections needed to respond to rebuilding after a large-scale flooding disaster,

may exceed the capacity of the jurisdiction. The costs of reassigning and training new staff do come with some costs.

5.2.6 Mitigation Needed to Address Risk of Failure in Dams and Levees

Problem Statement: Like any structure, a dam or levee must be maintained to reduce risk of failure. Failure can be catastrophic, since those downstream, or protected behind, may be suddenly inundated. Regular inspections of dams and levees can go a long way in identifying shortcomings and deficiencies so that they can be addressed in a timely manner. In addition, many dam owners are unaware of the need to maintain a dam and their liabilities and responsibilities. Owners of dams may be unaware of the risks, liability, and repair needs. Local governments can play an important role in requiring inspection of dams, and in educating dam owners about their responsibilities.

A. Reduce risk of dam or levee failure.

1. **Encourage annual inspection of dams and levees.** For dams and levees not covered under state permitting requirements, local governments can identify key structures and contact owners to encourage external inspection or implement their own inspection programs. Most communities have few structures to inspect, so costs will be relatively low, although initial training costs may be considerable. Benefits include reduced risk of impacts from dam failure.

2. **Improve structural integrity of dams, using incentives where possible**. Improving the structural integrity of dams can benefit by significantly reducing their risk of failure and potential loss of life and property downstream. The costs of improvement are high to implement, especially if it includes incentives for dam owners.

3. **Educate owners about responsibilities and liabilities**. Counties and cities should provide dam and levee owners with information about the need to maintain level of service of any dam or levee. This limited outreach has low costs to implement and can provide benefits through better maintained levees and dams.

4. **Rehabilitation of eligible high hazard potential dams.** High hazard potential dams are those dams where failure or mis-operation will likely result in loss of life. Recognizing where high hazard potential dams are located and seeking rehabilitation funds as appropriate is an important component in protecting life and property downstream. With funding assistance, this activity can be within reach of communities that own dams and benefits by reducing risk.

5. **Emergency contact list for levees.** Each county's emergency management agency should maintain list of emergency contacts for levees and update the list annually. These lists would be beneficial by enabling county staff to contact a levee owner or levee district when signs of failure are recognized by the public and called into 911. This also has the potential to shorten the time between recognizing early signs of levee failure and appropriate remedies. There are staff time costs associated with annual maintenance of an emergency contact list, however, that cost is relatively low.

5.2.7 Mitigation Needed to Prepare for Earthquakes

Problem Statement: Although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake. All four counties and the City of St. Louis are at risk from shaking should the New Madrid Fault Zone or some other nearby fault become active. The City of St. Louis and St. Louis County are Level VIII on the Modified Mercalli Intensity Scale, which measures the intensity of shaking during an earthquake. Jefferson and St. Charles Counties are a level VII shake risk, while Franklin County is level VI. A Level VIII event can cause substantial damage to poorly built buildings. What communities can do is to be prepared with effective communications systems in the event of widespread power outages, and with effective construction ordinances that require buildings to be constructed to withstand earthquakes. In addition, the public should be generally unaware of the risk and what individuals can do to be prepared in advance as well as immediately after an earthquake.

A. Prepare for earthquakes.

1. **Improve early warning systems**. The benefits of an accurate early warning earthquake system would have tremendous value to the preservation of life, if not property. However, due to high cost and technical challenges, this is not yet feasible.

2. **Review and update building codes**. Regionally most municipalities and counties have moved to the 2009, 2012, or 2015 building codes (the City of St. Louis has adopted the 2018 code). Based on past experience, within the next five years most communities will move to the next standard. This mitigation activity is low cost but requires regional and local cooperation to be successful as communities seek to have similar requirements for new construction. Updated building codes provide multiple safety features for building occupants.

3. **Maintain integrated communications systems for rapid response**. The regional microwave communications system is complete, and the equipment has been turned over to the counties for their use and maintenance. Operations

and maintenance and training should be low cost to communities, while the benefits of integrated communication continue to enhance emergency operations.

4. **Promote student, individual, and household preparation.** School districts should continue compliance with RSMo §160.451, §160.435, §160.455, and §160.457 as applicable. Cities should encourage owners of older homes to make structural and non-structural improvements and encourage all residents to develop emergency kits and to participate in the annual Great ShakeOut: (http://www.shakeout.org/centralus/). Costs for this action falls mainly on homeowners and can vary widely. Cost to communities directly is low. Maintaining awareness of the dangers surrounding earthquakes has the potential to reduce loss of life.

5. **Infrastructure retrofit**. When feasible, communities can seek funding for the modification of existing buildings and infrastructure to mitigate damage and protect life during an earthquake event. The costs of infrastructure retrofit are generally quite high and can be beyond the ability of most municipalities to afford without assistance, however, the benefits can include maintaining operability during an earthquake event and protecting lives.

6. **Structural and non-structural retrofit of existing buildings.** Retrofitting buildings is an effective way for communities and school districts to reduce damage from earthquakes. Although structural retrofitting can be costly, some non-structural retrofitting techniques, such as securing bookshelves, lockers, and audio-visual equipment, can be both economical and quickly implemented. The benefits of structural and non-structural retrofit include maintaining operability during an earthquake event and protecting lives.

5.2.8 Mitigation Needed to Prepare for Wildfires

Problem Statement: Although wildfire can be a serious threat, the region does not typically experience wildfires that affect significant acreage or large numbers of people. In order to maintain a low risk of wildfire, a coordinated effort to respond to any fire is more important than special planning for the very unusual event. With improve communications, and with equipment that can be shared easily among jurisdiction, emergency service, police, and fire districts are better able to coordinate rapid response.

A. Prepare for and contain wildfires.

1. **Continue coordinated response efforts among fire districts and fire departments to address any fire.** While not a major problem in most communities, the primary reason fire is not a large concern is that fire districts

already coordinate response efforts effectively to address any kind of fire. Continued cooperation has low additional cost because this service is provided largely by existing fire district operations and benefits communities through effective response and reduced property losses.

2. **Restrict open burning**. Most municipalities and counties in the region restrict open burning and require permits for special circumstances. This has a low cost to implement and has the potential to reduce accidental fires.

3. **Vegetation management.** Use vegetation management in appropriate locations can benefit by reducing fuel loads near critical infrastructure, municipal operations, schools, commercial corridors, and residential structures. In many cases, existing staff can be used for vegetation management, making this a low-cost activity in most situations.

4. **Fire-resistant building retrofit.** Retrofit buildings and critical infrastructure to be fire-resistant where wildfires are likely to occur. In the few areas where buildings abut a wildland interface and fire risk is high, retrofitting buildings to be more resistant to fires can be a useful and beneficial activity. As in most retrofit situation, costs are high.

5.3 Individual Community Action Strategies

Requirement 44 CFR §201.6(c)(3)(iv), the Plan contains an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction.

Individual mitigation strategies for participating jurisdictions can be found in Appendix E. All community representatives that attended a workshop were asked to complete the priorities worksheet. Where municipalities have authorized the county emergency management officials to be their representatives in the plan development, the county priorities also represent the municipal priorities. In St. Louis County a large percentage of municipalities have contracted with the county for planning and ordinance development, and in St. Charles County, most of the smaller communities contract for emergency management services through the county, therefore, county priorities effectively represent these municipalities Communities with smaller staff capacity are generally supported by the county emergency management agencies, and this is an important factor in developing a regional hazard mitigation plan. In Franklin and Jefferson Counties, emergency managers already work closely with municipalities and collaborate on many strategies.

Likewise the school districts were represented in the planning by EducationPlus, the Cooperating School Districts office. Those attending one of the workshops filled out

their own priorities, but most went with the regional priorities as identified by Education Plus. This approach enables to more focused approach from the regional level and serve to build awareness and steady progress.

The spreadsheet at the end of this section details the priorities and current state of actions for participating municipalities and school districts. Those which do not appear individually are represented by the county plan priorities.

5.3.1 City Ranking Risks Summary

All of the cities representatives that participated in the hazard mitigation workshops were asked to complete a ranking exercise about current and proposed risk mitigation activities that affect their communities. They indicated that improving the early warning systems for all-natural disasters is a high priority. Integrating communications systems for rapid response and conducting risk assessments were also high priority public strategies to support disaster risk mitigation.

When asked about tornado specific mitigation actions, developing early warning systems for vulnerable communities was more of a priority than building safe rooms in schools and communities. Overall there was little interest in building more safe rooms as a risk mitigation strategy for any disaster. Flood specific actions supported by the majority of the workshop participants include the implementation of floodplain best management practices and the use of green infrastructure to manage stormwater.

A list of proposed grant-eligible mitigation activities that have not previously been in the hazard mitigation plan was also included in the ranking exercise. Adding generators to the Plan, which can reduce risks associated with any natural disaster, had universal support from the cities and school districts. The workshop participants would also like to see infrastructure retrofitting for tornados and/or earthquakes put into the hazard mitigation plan. There was not much interest in including more grant-eligible mitigation actions for wildfires and dam failures. Of all of the potential mitigation activities targeting flooding both participating in the National Flood Insurance Program and strengthening post-disaster code enforcement had the highest inclusion priority. A summary of results from the ranking exercise can be found below in section 5.6.

5.4 Incorporating Plans into other planning mechanisms over the next five-year period

Requirement 44 CFR §201.6(c)(4)(ii), the Plan describes a process by which local governments will integrate the requirements of the mitigation plan into other

planning mechanisms, such as comprehensive or capital improvement plans, when appropriate.

In addition to the plans mentioned under various mitigation strategies in Section 5.2, over the next five years, local communities working with the county emergency managers, the COADs, and STARRS will be able to address the specific actions and incorporate relevant actions into other local government activities. The specific actions and priorities identified are already included in the STARRS plans and in many of the county and municipal planning initiatives. The Hazard Mitigation Plan is also included in the regional OneSTL plan adopted by East-West Gateway's Board of Directors in December 2013. With an annual review and presentation at the STARRS meetings, and with an annual presentation at the SLARCC meetings this plan should advance more completely than in previous periods.

Furthermore, the St. Clair County Emergency Operations Plan is updated every other year and will serve as a mechanism for all municipalities and the county to ensure the mitigation strategies continue to be developed and are implemented as funding becomes available.

Each participating jurisdiction adopts the mitigation strategy of incorporating the hazard mitigation plan into their local planning mechanisms as feasible. Additionally, each participating county and municipal jurisdiction commits to evaluating adopting the most current building codes if they have not already done so. (Section 5.2.2, numbers 7 and 8)

5.5 Evaluation and assessing changes in priorities

Requirement 44 CFR §201.6(d)(3), revise the Plan to reflect changes in priorities.

This five-year plan update is based on the changing conditions in the region. The advancement of STARRS and the regional security initiative to form COADs is the single most important advance in the last five years. This opportunity is now available to all municipalities and provides a means to address a wide range of issues in community preparedness and education at low cost to governments and school districts while at the same time building the capacity of non-profit and religious organizations to respond to natural disasters. Built into this plan is an annual review of the plan at the regional level through STARRS and all emergency response agencies.

Furthermore, jurisdictions have had the opportunity to reassess their priorities and many did during the planning and outreach stage plan development. Summarized on spreadsheet, the results below include lists of mitigation actions for municipalities and school districts to prioritize for their jurisdiction. Those rankings, H = high, M = medium, and L = low represent the priority placed on the action by the

individual jurisdiction. H indicates the action item is seen as particularly important, while M is less so and L is the lowest priority.

Actions were ranked O = ongoing, C = complete, or D = deferred, indicating the responding jurisdiction was continuing with an action, had finished, due to time, funding, need, and/or priorities, elected not to do that given action.

Actual copies of the scoresheets filled out by cities during the workshops can be found in Appendix A.

Section 5.6 Existing Hazard Mitigation Polices, Programs and Resources

This section documents each jurisdictions existing authorities, policies, programs and resources related to hazard mitigation and the ability to improve these existing policies and programs. It is important to highlight the work that has been completed in St. Clair County that pertains to hazard mitigation. In addition, the following information also provides an evaluation of these abilities to determine whether they can be improved in order to more effectively reduce the impact of future hazards.

Section 5.6.1 Successful Mitigation Projects

To be successful, mitigation must be a recurrent process that is continually striving to lessen the impact of natural hazards within the county. St. Clair County has made great strides to improve its ability to mitigation against future hazards. The following are projects that have been successfully completed prior to the development of the St. Clair County 2024 Multi-Hazard Mitigation Plan.

Furthermore, all municipalities are covered by the St. Clair County Emergency Operations Plan which is updated every other year to maintain accreditation with the Illinois Emergency Management Agency. This plan is a tool utilized to ensure compliance with ongoing hazards and recommending mitigation strategies to reduce hazards. By sharing this collaborative responsibility, this allows the county to maintain oversight of local mitigation strategies and share those with surrounding communities that might also benefit from this type of strategy. This allows us as a region to expand and improve our overall mitigation efforts and allows us to work regionally to improve on any identified gaps or limitations. Should the county be unable to fully support the efforts, elevation to the Illinois Emergency Management Agency would be done to solicit subject matter experts and/or specific needed equipment to complete a mitigation strategy.

Prairie Du Pont and Metro-East Sanitary District Levee Overhaul

Following FEMA's August 2007 announcement that the levees protecting the area no longer met the agency's requirements due to US Army Corps of Engineers (USACE) reduced confidence in the 74-mile levee system's ability to withstand a 100-year flood, the three counties behind the levees (Madison, St. Clair, and Monroe) joined together to upgrade the levees before the area would be declared a Special Flood Hazard Area. In January 2009, the three counties enacted a ¼ percent sales tax to fund the project with little or no federal assistance, and in June of the same year formed the Southwestern Illinois Flood Prevention District Council (SIFPDC) to facilitate collaboration between each county's Flood Prevention District. Working closely with USACE to ensure plans followed current engineering Standards for a 100- year flood, the SIFPDC spent $140 million improving the levee systems from 2013 to 2017. As work for the 100-year flood protection was completed in sections, the SIFPDC submitted certification packages to FEMA in hopes that there will be a hasty reevaluation of the levees and that FEMA will not declare the area a Special Flood Hazard Area (SFHA). With work completed for the 100-year flood protection, local

leaders are turning their focus to the ultimate goal of 500-year flood protection. For more information, see the SIFPDC website www.floodpreventiondistrict.org

According to the *stltoday.com* article "Levee fixes are on schedule, Metro East officials say", some sections of the levee have experienced some "unique geological conditions" such as boulders and cobbles wider than the planned trenches causing some delays in those parts. Despite the set-backs, recently tested new relief wells and other defenses can withstand the pressure of a 100-year flood.

Improvements to water mains in the Emerald Mound/Lebanon area

The following water main improvements have been made. Part of the justification to upgrade these water mains was for improved water flow for firefighting purposes.

- Install a larger main from the elevated water tower to the McKendree University campus. McKendree built new on campus dorms and increased water flow was needed to provide adequate supply for the fixed sprinkler systems and Fire Dept. The project was completed in 2010. Funding was provided by the City of Lebanon and McKendree University.

-Belleville Street in Lebanon water line replacement. This project increased water flow to a part of the City which includes a nursing home and numerous multi-family dwellings. The project was funded by the City of Lebanon and completed October 2011.

- Alton Street in Lebanon water line replacement. This project increased water flow to part of the City which includes McKendree University's main campus. The project was completed July 2014 and was City funded.

- Schuetz Street in Lebanon water line replacement. This project increased water flow to part of the City which includes both the elementary school, the high school, and a multi-occupant 2 story building, and a 3 story multi-occupant building for the use of the elderly and disabled. The project was completed in July 2014 and was City funded.

- Summerfield Street in Lebanon water line replacement. This project increased water flow to part of the City which includes newly renovated dormitories for McKendree University and an area proposed for the construction of more dormitories. The project was funded by an IGD Block Grant and was completed August 2016.

- Improvements to the water ground storage tank and pumping system. This project insured continued use of the storage tank and pumping system to provide a large supply of water at adequate pressure for large scale fire fighting operations. Completed December 2016 and was City funded.

Further improvements have been identified and will be implemented in the coming years.

City of Lebanon Generator Purchase

The City Of Lebanon completed installation of a fixed generator at the police station with automatic startup capability during early 2017. The project cost $7,500 and was funded by the City of Lebanon.

New Athens Inspection of Levee

The Village of New Athens regularly inspects the levee and tests the pumps that are part of the levee system using local funds.

Freeburg Severe Storm Mitigation Projects

The Village of Freeburg has completed many projects to mitigate against storm damage including:

-Tree trimming to mitigate power outages during ice and wind storms.

-Installation and testing of an additional outdoor tornado siren unit, radio controlled, to the newly

annexed area north of Freeburg.

-Obtaining additional NOAA Weather Alert Radios to issue to our area's Houses of Worship.

-Installation of outside antennas for the local high

Section 5.6.2 National Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program (NFIP) to help provide a means for property owners to financially protect themselves. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the NFIP. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding. This section covers the County's NIFP status, flood insurance policy and claim statistics, repetitive loss structures, and Community Rating System status.

NFIP Status

In St. Clair County, twenty-six incorporated communities participate in the NFIP. Table 5-1 includes a summary of information for St. Clair County participation in the NFIP. The Villages of Lenzburg and Marissa were both mapped with a flood risk but were sanctioned on November 5, 2004. Sanctioned communities do not qualify for flood-related Federal disaster assistance for acquisition, construction, or reconstruction purposes in Special Flood Hazard Areas. This may have serious consequences for the community's real

estate market and economic viability, as each federally regulated lender must notify the purchaser or lessee that Federal disaster assistance is not available for that property in the event of a flood. St. Clair County will continue to provide information to its non-participating jurisdictions regarding the benefits of the National Flood Insurance Program.

The community of Millstadt is mapped as Non-Special Flood Hazard Areas (NSFHA). NSFHA areas have a moderate-to-low risk flood zone and are not in any immediate danger from flooding caused by overflowing rivers or hard rains. However, it's important to note that structures within a NSFHA are still at risk. In fact, nearly 1 in 4 NFIP flood claims occur in these moderate- to low-risk areas.

Table 5-1 Information on St. Clair County's Participation in the NFIP

Community	Participate in the NFIP	Initial Flood Hazard Boundary Map Identified	Initial FIRM Identified	Current Effective Map Date	Agency NFIP Position	Manager Name
Belleville	Yes	5/3/1974	11/19/1980	11/5/2003	Economic Development	Cliff Cross
Brooklyn	Yes	3/1/1974	3/28/1980	11/5/2003	Village Clerk	Wendall Marshall
Cahokia Heights	Yes	3/29/1974	10/17/1978	11/5/2003	Dir Code Enforcement	Robert Darnell
Caseyville	Yes	12/10/1976	3/16/1981	11/5/2003	Zoning	Phillip Little
Collinsville	Yes	5/24/1974	2/18/1981	2/18/1981	Engineer	Troy Turner
Dupo	Yes	5/3/1974	2/4/1981	11/5/2003	City Clerk	Mark Nadler
East Carondelet	Yes	5/3/1974	3/2/1981	11/5/2003	Engineer	Jon Kremer
East St Louis	Yes	11/16/1973	11/1/1979	11/5/2003	City Manager	Robert Betts
Fairmont City	Yes	10/8/1976	3/28/1980	11/5/2003	Public Works	Roger Juenger

Fairview Heights	Yes	4/2/1976	6/3/1978	11/5/2003	Land Use	Dallas Alley
Fayetteville	Yes	2/22/1974	6/15/1981	11/5/2003	Village Clerk	Mindy Arbogast
Freeburg	Yes	3/22/1974	1/18/1980	11/5/2003	Engineer	Matt Trout
Lebanon	Yes	11/16/1973	7/2/1981	11/5/2003	City Clerk	Luanne Holper
Mascoutah	Yes	3/1/1974	6/15/1981	11/5/2003	City	Jesse Carlton
Millstadt	Yes	3/28/1975	11/5/2003	NFSHA	Zoning Board	Mike Wegescheide
New Athens	Yes	3/22/1974	3/23/1984	11/5/2003	Superintendent	Chris Remick
New Baden	Yes	5/24/1974	9/4/1986	8/2/2007	Village Clerk	Terri State-Crane
O'Fallon	Yes	2/22/1974	10/15/1982	11/5/2003	Community Development	Justin Randall
Sauget	Yes	12/13/1974	8/1/1980	11/5/2003	City Clerk	Rachel Williams
Shiloh	Yes		11/5/2003	11/5/2003	Public Works	Chris Etling
Smithton	Yes	3/29/1974	6/25/1976	11/5/2003	Engineer	Scott Saeger
St. Libory	Yes	9/6/1974	2/25/1983	11/5/2003	Village Clerk	Kaylan Litteken
Summerfield	Yes	5/3/1974	8/10/1979	11/5/2003	Village	James Hauer
Swansea	Yes	4/5/1974	12/1/1980	11/5/2003	Building & Zoning	Joseph Iliff
Washington Park	Yes	10/8/1976	6/15/1979	11/5/2003	Village Clerk	Anthony Nesbit
Lenzburg	No		11/5/2003	11/5/2003	City Clerk	Rebecca Young
Marissa	No		11/5/2003	11/5/2003	Zoning	Dan Seiber
St. Clair County	Yes	5/21/1976	12/15/1981	11/5/2003	Building & Zoning	Anne Markezich

NFIP status and information are documented in the Community Status Book Report updated on 8/30/2016.
NSFHA – No Special Flood Hazard Area
(M) – No Elevation Determined – All Zone A, C and X

Flood Insurance Policy and Claim Statistics

As of September 30, 2017, 1,500 households paid flood insurance, insuring $280,605,000 in property value. The total premiums collected for the policies amounted to $1,339,100. Since the establishment of the NFIP in 1978, 1,135 flood insurance claims were filed in St. Clair County, totaling in $3,857,077.24 in payments. Table 5-2 summarizes the claims since 1978.

The lack of participation in NFIP by the Village of Lenzburg and the Village of Marissa can be found in the respective city questionnaires attached in Appendix A.

Table 5-2 Policy and Claim Statistics for Flood Insurance in St. Clair County

Community	Total Losses	Closed Losses	Open Losses	CWOP Losses	Payments ($)
Belleville	41	28	0	13	$165,099.01
Brooklyn	5	2	0	3	$4,144.71
Cahokia Heights	169	81	0	88	$312,483.82
Caseyville	30	18	0	12	$117,857.57
Dupo	126	112	0	14	$70,646.59

East Carondelet	37	29	0	8	$155,582.90
East St Louis	473	306	1	166	$1,536,813.28
Fairview Heights	9	4	0	5	$9,710.69
Freeburg	2	2	0	0	$15,957.47
Lebanon	3	2	0	1	$41,794.32
Mascoutah	4	4	0	0	$10,875.35
Millstadt	1	1	0	0	$332.00
New Athens	9	6	0	3	$24,979.90
O'Fallon	14	8	0	6	$305,208.78
Sauget	3	2	0	1	$113,833.22
Shiloh	2	1	0	1	$6,024.38
St. Clair County	197	158	0	39	$930,140.38
Summerfield	2	2	0	0	$18,710.13
Swansea	8	4	0	4	$16,882.74

*NFIP policy and claim statistics since 1978 until the most recently updated date of 6/30/2016. Closed Losses refer to losses that are paid; open losses are losses that are not paid in full; CWOP losses are losses that are closed without payment; and total losses refers to all losses submitted regardless of status. Lastly, total payments refer to the total amount paid on losses.

Repetitive Loss Structures

There are 62 structures in St. Clair County that have experienced repetitive losses due to flooding, two of which are considered Severe Repetitive Loss Structures. FEMA defines a repetitive loss structure as a structure covered by a contract of flood insurance issued under the NFIP that has suffered flood loss damage on two or more occasions during a 10-year period that ends on the date of the second loss, in which the cost to repair the flood damage is ≥ 25% of the market value of the structure at the time of each flood loss. Currently there are over 122,000 Repetitive Loss properties nationwide.

The Illinois Emergency Management Agency and Illinois Department of Natural Resources was contacted to determine the location of repetitive loss structures in St. Clair County. Records indicate that there are no repetitive loss structures within the county. Table 5-3 describes the repetitive loss structures for each jurisdiction.

Table 5-3 Repetitive Loss Structures for Each Jurisdiction in St. Clair County

Jurisdiction	Number of Properties	Total Losses	Total Building Payments	Total Contents Payments	Structure Type
St Clair County	16	39	$630,879.93	93,162.29	14 Single Family / 1 Business / 1 Other Residential
Belleville	2	5	$15,421.94	$3,008.48	2 Single Family
Cahokia Heights	3	9	$52,978.17	$552.48	3 Single Family
Caseyville	1	2	$11,610.85	$0.00	1 Single Family

Centreville	2	5	$17,076.15	$7,000.00	2 Single Family
Dupo	1	2	$21,875.23	$0.00	1 Other Residential
East Carondelet	4	8	$44,701.21	$20,003.96	4 Single Family
East St Louis	31	84	$653,074.12	$158,835.07	29 Single Family / 1 Other Residential / 1 2-4 Family
O'Fallon	1	2	$67,445.58	$84,281.08	1 Business
Swansea	1	2	$14,571.11	$0.00	1 Single Family

Community Rating System Status

St. Clair County and its incorporated areas do not participate in the NFIP'S Community Rating System (CRS). The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance. More than 1,200 communities from all 50 states participate in the CRS. Although joining the CRS is free, completing CRS activities and maintain a CRS rating will require a degree of commitment from the community, including dedicating staff. Joining the CRS could be one way St. Clair County or its incorporated communities improve their existing floodplain management policies and further reduce the flood hazard risk.

Statutory Requirements for Repetitive Loss / Substantial Damage / Improvement Properties

All municipalities in St. Clair County adopted the latest guidance and maps in 2003 with consistent language regarding the Substantially Damaged properties. This language is located in Chapter 13 of the St. Clair County Code and appliable to all municipalities within St. Clair County.

Those lands within the jurisdiction of the County that are subject to inundation by the base flood. The floodplains of the Ash Creek, Canteen Creek, Catawba Creek, Douglas Creek, Engel Creek, Engel Creek Ditch, Hog River, Kaskaskia River, Little Canteen Creek, Little Silver Creek, Loop Creek, Mississippi River, Ogels Creek, Ogels Creek Tributary, Prairie Du Pont Diversion Channel, Richland Creek, Schoenberger Creek No. 1, Schoenberger Creek No. 2, Silver Creek, West Fork of Richland Creek, and Wolf Branch are generally identified as such on the Flood Insurance Rate Maps of St. Clair County prepared by the Federal Emergency Management Agency and dated November 5, 2003. Floodplain also includes those areas of known flooding as identified by the community that may not be identified on the Flood Insurance Rate Maps of St. Clair County.

“REPETITIVE LOSS” means flood related damages sustained by a structure on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each such flood event on the average equals or exceeds twenty-five percent (25%) of the market value of the structure before the damage occurred.

“SUBSTANTIAL DAMAGE” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed forty percent (40%) of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination.

“SUBSTANTIAL IMPROVEMENT” means any reconstruction, rehabilitation, addition, or improvement of a structure, the cost of which equals or exceeds forty percent (40%) of the market value of the structure before the improvement or repair is started, or increases the floor area of the structure by more than 20%. “Substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or (2) any alteration of a structure listed on the National Register of Historic Places or the Illinois Register of Historic Places.

In addition to the damage prevention requirements of Section 13-1-6, all buildings located in the floodplain shall be protected from flood damage below the flood protection elevation.

Section 5.6.3 Jurisdiction Ordinances

Hazard Mitigation related ordinances, such as zoning, burning, or building codes, have the potential to reduce the risk from known hazards. These types of regulations provide many effective ways to address resiliency to known hazards. Table 5-4 list St. Clair County’s current ordinances that directly pertain, or can pertain, to hazard mitigation. It is important to evaluate the local building codes and ordinances to determine if they have the ability to reduce potential damages caused by future hazards. The St. Clair County Planning Team worked to identify gaps in the current list of ordinances and suggested changes/additions in Section 5.3.

Table 5-4 St. Clair County Jurisdiction Ordinances

Community	Zoning	Storm Water	Flood	Subdivision	Buring	Seismic	Erosion	Land Use	Building Codes

Belleville	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Cahokia	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Dupo	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Fairview Heights	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Freeburg	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Lebanon	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Mascoutah	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Millstadt									
New Athens	Yes	Yes	Yes	Yes			Yes	Yes	Yes
O'Fallon	Yes	No	Yes	Yes		No	Yes	Yes	Yes
Sauget	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Shiloh	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Smithton	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Swansea	Yes	Yes	Yes	Yes			Yes	Yes	Yes

The adoption of new ordinances, including the adoption of new development standards or the creation of hazard-specific overlay zones tied to existing zoning regulations, present opportunities to discourage hazardous construction and manage the type and density of land uses in areas of known natural hazards. Adopting and enforcing higher regulatory standards for floodplain management (i.e., those that go beyond the minimum standards of the NFIP) is another effective method for minimizing future flood losses, particularly if a community is experiencing growth and development patterns that influence flood hazards in ways that are not accounted for on existing regulatory floodplain maps. Revisions to existing building codes also present the opportunity to address safe growth. Many state and local codes are based off national or industry standard codes which undergo routine evaluations and updates. The adoption of revised code requirements and optional hazard-specific standards may help increase community resilience.

Section 5.6.4 Mitigation Goals

In Section 4 of this plan, the risk assessment identified St. Clair County as prone to several hazards. The Planning Team members understand that although they cannot eliminate hazards altogether, St. Clair County can work towards building disaster-resistant communities. Below is a generalized list of goals, objectives, and actions. The goals represent long-term, broad visions of the overall vision the county would like to achieve for mitigation. The objectives are strategies and steps that will assist the communities in attaining the listed goals.

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Section 5.6.5 Multi-Jurisdictional Mitigation Strategies

After reviewing the Risk Assessment, the Mitigation Planning Team was presented with the task of individually listing potential mitigation activities using the FEMA STAPLEE evaluation criteria (see table 5- 6). FEMA uses their evaluation criteria STAPLEE (stands for social, technical, administrative, political, legal, economic and environmental) to assess the developed mitigation strategies. Evaluating possible natural hazard mitigation activities provides decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

Table 5-6. FEMA's STAPLEE Evaluation Criteria

Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the community's social and cultural values.
Technical	Mitigation actions are technically most effective if they provide a long-term reduction of losses and have minimal secondary adverse impacts.
Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, comply with federal, state, and local environmental regulations, and are consistent with the community's environmental goals, have mitigation benefits while being environmentally sound.

Table 5-7 contains a comprehensive range of specific mitigation actions and projects for each jurisdiction, with an emphasis on new and existing buildings and infrastructure. At least two identifiable mitigation action items have been addressed for each hazard listed in

the risk assessment. Each of the incorporated communities within and including St. Clair County was invited to participate in brainstorming sessions in which goals, objectives, and strategies were discussed and prioritized. Each participant in these sessions was armed with possible mitigation goals and strategies provided by FEMA, as well as information about mitigation projects discussed in neighboring communities and counties.

All potential strategies and goals that arose through this process are included in Table 5-7. The mitigation strategies are arranged by hazard they directly address. In some cases, certain mitigation strategies can address all hazards. If provided by the jurisdiction, each mitigation strategy contains specific details pertaining to the implementation, responsible and/or organizing agency, and potential funding source. Potential funding sources are identified by Federal, State, Local, or Private.

The municipalities and St. Clair County plan to utilize future grants funds made available from the Hazard Mitigation Grant Program, Community Development Block Grants, Special Flood Hazard Grants, and any other applicable grants funds to complete the projects listed as mitigation strategies. Below is a list of some of the available funding readily available to the communities:

Building Resilient Infrastructure and Communities

FEMA's Building Resilient Infrastructure and Communities (BRIC) annual grant program supports SLTTs as they implement hazard mitigation projects to reduce the risks from disasters and natural hazards. The program is authorized by the Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act).

The BRIC program aims to categorically shift the federal focus away from reactive disaster spending and toward proactive investment in community resilience. FEMA funds BRIC with a 6% set-aside from federal post- disaster grant funds, such as Public Assistance and Individual Assistance grants. As a competitive grant program, applicants can apply on an annual basis.

Flood Mitigation Assistance Program

Flood Mitigation Assistance (FMA) grants provide funding to states, local communities, tribes and territories to reduce or eliminate the risk of repetitive flood damage to buildings insured under the National Flood Insurance Program (NFIP). The program is authorized by Section 1366 of the National Flood Insurance Act.

FEMA distributes funds annually to develop community or individual flood mitigation projects. These grants address community flood risk for the purpose of reducing National Flood Insurance Program (NFIP) flood claim payments and to mitigate the risk of flooding to individual flood insured structures. In addition, funding is also used for technical assistance and management costs.

Flood Mitigation Assistance Swift Current

The Flood Mitigation Assistance Swift Current (Swift Current) effort provides funding to mitigate buildings insured through the National Flood Insurance Program (NFIP) after a

major disaster declaration following a flood-related disaster event to reduce risk against future flood damage.

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) provides funding to SLTT governments so they can rebuild in a way that reduces, or mitigates, future natural disaster losses in their communities. The program is authorized by Section 404 of the Stafford Act.

HMGP funding is authorized with a Presidential Major Disaster Declaration. A governor or tribal chief executive may request HMGP funding throughout the state, tribe or territory when submitting a disaster declaration. The amount of funding made available to the applicant is based on the estimated total Federal assistance. The formula generally gives 15% of the total federal assistance amount provided for recovery from the presidentially declared disaster and is determined by the FEMA-approved Hazard Mitigation Plan. Through HMGP, FEMA allows states to access up to 10% and local governments up to 5% of their HMGP award for management and administration costs, there is a lot of opportunity to access funding for mitigation planning and management. Management costs are any indirect costs and administrative expenses that are reasonably incurred by a Grantee or subgrantee in administering a grant or subgrant award.

Pre-Disaster Mitigation Program

The Pre-Disaster Mitigation (PDM) program makes federal funds available to state, local, tribal and territorial governments to plan for and implement sustainable cost-effective measures designed to reduce the risk to individuals and property from future natural hazards, while also reducing reliance on federal funding from future disasters. This funding is offered in addition to funds provided through other FEMA grant programs for projects that will support growing mitigation needs nationwide.

Responsible Departments

The individual communities have a variety of responsible departments based on the mitigation strategy selected. The majority rely with the Village/City Engineer and can be further assigned the Public Works departments as needed. Furthermore, the respective City/Village Finance Departments are responsible for the determination of funding / grant applications. Finally, the County can be utilized as a conduit for applying for state/federal grants and multi-jurisdictional projects for the betterment of the region. Those type of projects would be managed by the St. Clair County Emergency Management Agency.

Section 5.7 Community Mitigation Strategies

*When city questionnaires were distributed hazards were listed as Section 4. That has changed and all references to section 4 should action be Section 5.

St. Clair County Hazard Mitigation Plan Summary						
Critical facilities	50					
Tax valuation (total)	$4,860,301,344					
5-year development trend	Stable					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2012	2012	2012	
Adoption of 2021 IBC	TBD					
Flooding	Yes	Years: 2022, 2019, 2006, 2003, 1993				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	Yes	20				
RL/SRL	No					
At risk populations in flood zone(s)	Yes	10% of population				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	Yes					
Ground failure areas	Yes	Unknown number				
Critical facilities in ground failure areas	Yes					
At risk populations in ground failure areas	Yes	10% of population				
Levees	Yes	3, affecting 5% of population				
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	25% of population				
Completed hazard mitigation activities	Yes					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes	County Emergency Operations Plan				
Emergency capabilities	PD = Multiple	FD = N/A				
Emergency powers	Yes	Pass ordinances, declare emergency, order evacuations, curfew.				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP					
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	Emergency Management
Tornado	4.3.1	High	$5,000,000	Future grants	Year 5	Emergency Management
Winter storms	4.4.1	High	$500,000	Local funds, future grants	Year 1	Emergency Management
Extreme heat/drought	4.5.1	High	$500,000	Local funds, future grants	Year 1	Emergency Management
Severe thunderstorms	4.6.1	High	$100,000	Local funds, future grants	Years 1 - 5	Public Works, Emergency Management
Flood	4.7.1	High	$15,000,000	Federal grants	Years 1 -3	Emergency Management
Dam/levee failure	4.8.1	High	$0	N/A	Years 1 - 5	Emergency Management
Earthquakes	4.9.1	High	TBD	Future grants	Ongoing	TBD
Ground failure	4.10.0	High	TBD	General funds, future grants	Ongoing	TBD

NP -not provided; N/A - not applicable; TBD - to be determined

City of Belleville Hazard Mitigation Plan Summary						
Critical facilities	36					
Tax valuation (total)	$771,634,575					
5-year development trend	3% overall					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2006 IBC	1988 and all editions since	2014			
Adoption of 2021 IBC	2024					
Flooding	Yes	Years: 1957, 2022				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	No					
RL/SRL	No					
At risk populations in flood zone(s)	Yes	10% of population				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	No					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	No					
Ground failure areas	Yes	22,000 parcels, ~25% of city				
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	Yes	10% of population				
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	10% of population				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Will incorporate in 2024 with adoption of 20-year comprehensive plan					
Emergency capabilities	PD = 74	FD = 63				
Emergency powers	Ordinance 8436-2020					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$5,000	General revenue fund	6 months	Communications
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	Planning
Tornado	4.3.6	High	$100,000	Grant	Year 1	St. Clair County Emergency Management
Winter storms	4.4.2	Medium	$50,000	General revenue fund	Years 1 - 5	Emergency Management
Extreme heat/drought	4.5.3	Low	$0	N/A	Years 1 - 5	Communications, Code
Severe thunderstorms	4.6.5	High	$100,000	Grant funding services	Year 1	Fire
Flood	4.7.2	High	$1,000	General revenue fund	6 months	Planning
Flood	4.7.8	High	$0	N/A	6 months	GIS
Dam/levee failure	4.8.4	Low	$0	N/A	Years 1 - 3	Planning
Earthquakes	4.9.2	Low	$1,000	General revenue fund	Years 1 - 2	Building and Development
Ground failure	4.10.1	High	$0	N/A	Year 1	Building and Development

NP - not provided; N/A - not applicable

Village of Brooklyn Hazard Mitigation Plan Summary						
Critical facilities	9					
Tax valuation (total)	$1,810,955					
5-year development trend	Increase in residential and commercial					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2012	2012	2012	
Adoption of 2021 IBC	2024					
Flooding	Yes	Years: 2019, 2020, 2021, 2022, & 2023				
Floodplain development allowed	NP					
Critical facilities in flood zone(s)	9					
RL/SRL	Yes	Years: 2019, 2020, 2021, 2022, & 2023				
At risk populations in flood zone(s)	Yes	100% of population				
NFIP participation	No	Reason: Too expensive or unavailable				
NFIP minimum floodplain management criteria	N/A					
Latest FIRM adopted	N/A					
NFIP designee appointed	N/A					
Substantial improvement/damage provision	N/a					
Ground failure areas	NP					
Critical facilities in ground failure areas	NP					
At risk populations in ground failure areas	NP					
Levees	Yes	How many critical facilities: 5				
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	100%					
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Emergency Operations Plan, Capital Improvement Plan					
Emergency capabilities	PD = 12	FD = 17				
Emergency powers	Yes: Declare emergency, order evaluation, and declare curfew					
Hazard ranking complete	Yes					

Mitigation Strategies						
Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP					
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	Planning
Tornado	4.3.6	High	$100,000	Future grant funding	Years 3 - 5	Public Works
Winter storms	4.4.1	High	$500,000	Future grant funding	Years 3 - 5	Public Works
Extreme heat/drought	4.5.1	High	$500,000	Future grant funding	Years 2 - 4	Public Works
Severe thunderstorms	4.6.5	High	$100,000	NP	Years 2 - 3	Public Works
Flood	4.7.12	High	$500,000	Future grant funding	Years 2 - 8	Public Works
Dam/levee failure	4.8.5	High	$100,000	County grant funding	Years 1 - 2	Public Works
Earthquakes	4.9.7	High	$100,000	Future grant funding	Years 1 - 3	Public Works
Ground failure	4.10.1	High	$0	N/A	Years 1 - 2	Public Works

NP - not provided; N/A - not applicable

City of Cahokia Heights Hazard Mitigation Plan Summary						
Critical facilities	20					
Tax valuation (total)	$351,306,708					
5-year development trend	5% over all growth in all sectors					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2021	2021	2021	2021	2021	
Adoption of 2021 IBC	2024					
Flooding	Yes	Every year, including 2022				
Floodplain development allowed	Yes	Most of the city is within 100 year flood plain				
Critical facilities in flood zone(s)	20					
RL/SRL	Yes	Years: all				
At risk populations in flood zone(s)	65% - 97% of population					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	Yes					
Ground failure areas	No					
Critical facilities in ground failure areas	N/A					
At risk populations in ground failure areas	N/A					
Levees	Yes	100% of population				
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	100% of population				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes - Emergency Operations Plan					
Emergency capabilities	PD = 22	FD = 55				
Emergency powers	Yes					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1	High	$0	Local	Years 1 - 5	Administration
Effective response	4.2.3	High	$0	Local	Years 1 - 5	Administration
Tornado	4.3.7	High	Unknown	Federal, state, and local funds	Years 1 - 5	Code Enforcement, Street, Parks, and Environmental
Winter storms	4.4	High	Unknown	Federal, state, and local funds	Years 1 - 5	Street and Parks
Extreme heat/drought	4.5.1	High	Unknown	Federal, state, and local funds	Years 1 - 5	Administration
Severe thunderstorms	4.6	High	Unknown	Federal, state, and local funds	Years 1 - 5	Administration, PD, Code, Street, Parks, Environmental
Flood	4.7.2	High	$0	N/A	Years 1 - 5	Code, Street, Water & Sewer
Dam/levee failure	NP					
Earthquakes	NP					
Ground failure	NP					

NP -not provided; N/A - not applicable

Village of Caseyville Hazard Mitigation Plan Summary						
Critical facilities	18					
Tax valuation (total)	$74,299,594					
5-year development trend	10% - 15% increase					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2011	2012	2012	
Adoption of 2021 IBC	2025					
Flooding	Yes	Years: 1993, 1995, 2008, 2015, 2018, 2022, 2023				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	12					
RL/SRL	Yes	Years: 1993, 1995, 2018, 2022, 2023				
At risk populations in flood zone(s)	Yes	30% of population				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	Yes					
Ground failure areas	Yes	2 - 3 mine shafts, 3 areas of potential ground failure				
Critical facilities in ground failure areas	Yes	5				
At risk populations in ground failure areas	Yes	40% of population				
Levees	Yes	2				
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	10% of population				
Completed hazard mitigation activities	Yes	Levee repairs, updated sirens & notification systems				
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes	Capital Improvement Plan, Emergency Operations Plan, Master Plan				
Emergency capabilities	PD = 18	FD = 18				
Emergency powers	Yes	Emergency declarations, declare curfew				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$30,000	Unknown	3 - 6 months	Administration
Effective response	4.2.3	High	$0	General fund	Years 1 - 5	NP
Tornado	4.3.7	Medium	$50,000	NP	3 - 6 months	Public Works, Fire, PD
Winter storms	4.4.3	Medium	$500,000	NP	Year 1	Public Works
Extreme heat/drought	4.5.4	Medium	$1,000,000	NP	Years 3 -5	Public Works
Severe thunderstorms	4.6.1	Medium	$200,000	NP	3 months	Public Works
Flood	4.7.2	NP	$0	N/A	Years 1 - 5	Administration
Flood	4.7.5	High	$500,000	NP	Year 1	Public Works
Dam/levee failure	4.8.6	High	$350,000	Grants	6 months	Public Works
Earthquakes	4.9.2	Medium	$0	N/A	3 - 6 months	Zoning
Ground failure	4.10.7	Medium	$250,000	Grants	6 months	Public Works

NP - not provided; N/A - not applicable

Village of Dupo Hazard Mitigation Plan Summary						
Critical facilities	13					
Tax valuation (total)	$72,400,982					
5-year development trend	NP					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2012	2012	2012	
Adoption of 2021 IBC	NP					
Flooding	Yes	Years: 1993, 1995, 2019, 2022				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	Yes	5				
RL/SRL	Yes					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes	Village Engineer				
Substantial improvement/damage provision	Yes					
Ground failure areas	No					
Critical facilities in ground failure areas	N/A					
At risk populations in ground failure areas	N/A					
Levees	Yes					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	100% of population				
Completed hazard mitigation activities	Yes					
Current hazard mitigation activities	Yes					
Incorporation of St. Clair County HMP into city planning	Yes	Capital Improvement Plan				
Emergency capabilities	PD = 10	FD = 15				
Emergency powers	Yes	Ability to declare emergency, order evacuation, curfew				
Hazard ranking complete	Yes					

Mitigation Strategies						
Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP					
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	NP
Tornado	4.3	Medium	To be determined	Future mitigation grant	NP	Public Safety
Winter storms	4.4.3	Medium	NP	Future mitigation grant	NP	Village
Extreme heat/drought	4.5.1	NP	NP	Future mitigation grant	NP	Village
Severe thunderstorms	4.6	NP	NP	Future mitigation grant	NP	Village
Flood	4.7.2	NP	$0	N/A	NP	Village
Dam/levee failure	NP	NP	NP	NP	NP	NP
Earthquakes	NP	NP	NP	NP	NP	NP
Ground failure	NP	NP	NP	NP	NP	NP

NP -not provided; N/A - not applicable

Village of East Carondelet Hazard Mitigation Plan Summary						
Critical facilities	5					
Tax valuation (total)	$2,894,211					
5-year development trend	5% estimated residential and residential-focused commercial growth					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2012	2012	2012	
Adoption of 2021 IBC	2025					
Flooding	Yes	Years: 1993, 1995, 2019, 2022				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	Yes	5				
RL/SRL	Yes					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes	Village Engineer				
Substantial improvement/damage provision	Yes					
Ground failure areas	No					
Critical facilities in ground failure areas	N/A					
At risk populations in ground failure areas	N/A					
Levees	Yes					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	100% of population				
Completed hazard mitigation activities	Yes					
Current hazard mitigation activities	Yes					
Incorporation of St. Clair County HMP into city planning	Yes	Capital Improvement Plan				
Emergency capabilities	PD = 9 PT	FD = 20 PT				
Emergency powers	Yes	Ability to declare emergency, order evacuation, curfew				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.2	High	$0	N/A	Year 1	Village
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	NP
Tornado	4.3.1	High	$350,000	Grant funds	Years 1 - 5	Village
Winter storms	4.4.2	High	$70,000	Municipal revenue	Year 1	Village
Extreme heat/drought	4.5.6	High	$5,000	Neighborhood Watch	NP	Village
Severe thunderstorms	4.6.6	High	$2,000	Municipal revenue	Year 1	Village
Flood	4.7.2	High	$0	N/A	Years 1 - 5	Village
Dam/levee failure	4.8.4	High	$20,000	Municipal revenue	Year 1	Village, Prairie du Pont Fire District
Dam/levee failure	4.8.5	High	$20,000	Municipal revenue	Year 2	Village, Prairie du Pont Fire District
Earthquakes	4.9.6	High	$0	N/A	Years 1 - 5	Village
Ground failure	NP	NP	NP	NP	NP	NP

NP -not provided; N/A - not applicable; PT - part time

City of East St. Louis Hazard Mitigation Plan Summary						
Critical facilities	26					
Tax valuation (total)	NP					
5-year development trend	2% overall					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2021	2021	2021	2021	2021	
Adoption of 2021 IBC	2024					
Flooding	Yes	Years: 1993, 1995, 1996, 2022				
Floodplain development allowed	No					
Critical facilities in flood zone(s)	6					
RL/SRL	Yes					
At risk populations in flood zone(s)	Yes	15% of population				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	No					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	N/A					
Ground failure areas	Yes					
Critical facilities in ground failure areas	0					
At risk populations in ground failure areas	Yes	3% of population				
Levees	Yes	10% of population at risk				
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	No					
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	NP					
Emergency capabilities	PD = 31	FD = 37				
Emergency powers	Yes	Emergency declaration				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP					
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	City
Tornado	4.3	Low	$0	N/A	Years 1 - 5	City, St. Clair County
Winter storms	4.4	High	$0	N/A	Years 1 - 5	City, St. Clair County
Extreme heat/drought	4.5	High	$0	N/A	Years 1 - 5	City, St. Clair County
Severe thunderstorms	4.6	High	$0	N/A	Years 1 - 5	City, St. Clair County
Flood	4.7.2	High	$0	N/A	Years 1 - 7	City
Flood	4.7.4	High	$1,100,000	FEMA HMGP	Years 1 - 5	City, St. Clair County
Dam/levee failure	4.8	High	$0	N/A	Years 1-10	City, St. Clair County
Earthquakes	4.9	High	$0	N/A	Years 1 - 7	City, St. Clair County
Ground failure	NP	NP	NP	NP	NP	NP

NP -not provided; N/A - not applicable

Village of Fairmont City Hazard Mitigation Plan Summary						
Critical facilities	4					
Tax valuation (total)	$30,900,471					
5-year development trend	10% Commercial Retail Development of National City Rte 203 Corridor					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2023					
Adoption of 2021 IBC	2024					
Flooding	Yes	2008, 1994, 1973				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	4					
RL/SRL	No					
At risk populations in flood zone(s)	Yes	100%				
NFIP participation	No					
NFIP minimum floodplain management criteria						
Latest FIRM adopted						
NFIP designee appointed						
Substantial improvement/damage provision						
Ground failure areas	No					
Critical facilities in ground failure areas						
At risk populations in ground failure areas						
Levees	Yes	5				
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	No					
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes					
Emergency capabilities	PD = 22	FD = 12				
Emergency powers	Yes: ability to declare emergency, order evacuation, decline curfew					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness		Medium				
Effective response	4.2.3	Medium	$0	N/A	Years 1 - 5	Village of Fairmont City
Tornado	4.3.2	High	$1,200,000	Future Grants	Years 1 - 2	Village of Fairmont City
Winter storms	4.4.2	Medium/High	$150,000	Future Grants	Years 1 - 2	Village of Fairmont City
Extreme heat/drought	4.5.6	Medium/High	$150,000	Future Grants	Years 1 - 2	Village of Fairmont City
Severe thunderstorms	4.6.6	High	$150,000	Future Grants	Years 1 - 2	Village of Fairmont City
Flood	4.7.2	High	$0	N/A	Years 1 - 2	Village of Fairmont City
Dam/levee failure	4.8.2	High	$0	N/A	Years 1 - 2	Village of Fairmont City
Earthquakes	4.9.4	Medium	$0	N/A	Years 1 - 2	Village of Fairmont City
Ground failure	4.10.3	Low	$0	N/A	Years 5 - 1	Village of Fairmont City

NP -not provided; N/A - not applicable

City of Fairview Heights Hazard Mitigation Plan Summary						
Critical facilities	19					
Tax valuation (total)	No Property Tax					
5-year development trend	Stay the same					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2021	2021	2011 NEC	2021	IL State Plumbing Code	
Adoption of 2021 IBC	2027					
Flooding	No					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	No					
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	Yes					
Ground failure areas	Yes					
Critical facilities in ground failure areas	Yes	6				
At risk populations in ground failure areas	10%					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	100%				
Completed hazard mitigation activities	Hollandia Drainage Improvements	320,000				
Current hazard mitigation activities	Emergency Warning Siren Upgrades					
Incorporation of St. Clair County HMP into city planning	Integrated in City Emergency Operation Plan					
Emergency capabilities	PD = 45	FD = 55				
Emergency powers	Mayoral					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1	High/Medium	$6,000	Future grants	Years 1 - 2	Police Department
Effective response	4.2.3	High	$0	Future grants	Years 1 - 2	EMA
Tornado	4.3	High/Medium/Low	$300,000	Future grants	Years 1 - 5	Public Works
Winter storms	4.4	High/Medium	$250,000		Years 1 - 6	EMA
Extreme heat/drought	4.5	High/Medium/Low	$125,000	Grant Funded	Years 1 - 4	Economic Director, EMA
Severe thunderstorms	4.6	High	$250,000		Years 1 - 5	Public Works
Flood	4.7.2	Medium	$0	Grant Funded	Years 1 - 3	Public Works
Dam/levee failure	4.8	Medium	$75,000	Grant Funded	Years 1 -7	Public Works
Earthquakes	4.9	Medium	$5,000	Grant Funded	Years 1 - 2	EMA
Ground failure	4.1	Medium	$300,000	Grant Funded	Years 1 - 5	Land Use

NP -not provided; N/A - not applicable

Village of Fayetteville Hazard Mitigation Plan Summary						
Critical facilities	4					
Tax valuation (total)	$2,799,615					
5-year development trend	Stay the same					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2012	2012	2012	
Adoption of 2021 IBC						
Flooding	No					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	1	Sewer Plant				
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	2009					
NFIP designee appointed	Yes	Village President				
Substantial improvement/damage provision	NP					
Ground failure areas	No					
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	No					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	100%				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Will adopt by ordinance					
Emergency capabilities	PD = 0	FD = 10				
Emergency powers	Declare Emergency, Order Evacuation					
Hazard ranking complete	No					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness		High	$5,000		Years 1 -5	
Effective response	4.2.3	High	$0	General Municipal Revenue	Years 1 -5	
Tornado	4.3.1				Years 1 -5	
Winter storms	4.4				Years 1 -5	
Extreme heat/drought	4.5				Years 1 -5	
Severe thunderstorms	4.6					
Flood	4.7.2		$0			
Dam/levee failure	4.8					
Earthquakes	4.9				Years 1 - 10	USGS
Ground failure	NP					

NP -not provided; N/A - not applicable

Village of Freeburg Hazard Mitigation Plan Summary						
Critical facilities	12					
Tax valuation (total)	$120,800,293					
5-year development trend	Expected 3% growth					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	IBC2012	IBC2012	NEC2012	NFA2013	Current	
Adoption of 2021 IBC	Village mirrors building requirements					
Flooding	No					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	No					
RL/SRL	No					
At risk populations in flood zone(s)	No	Tentative, checking				
NFIP participation	No					
NFIP minimum floodplain management criteria	N/A					
Latest FIRM adopted	N/A					
NFIP designee appointed	N/A					
Substantial improvement/damage provision	N/A					
Ground failure areas	No					
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	No					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	3%				
Completed hazard mitigation activities	Yes	Additional Tornado Siren				
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Emergency Operations Plan EOP 2023 Revised					
Emergency capabilities	PD = 10	FD = 27				
Emergency powers	Declare Emergency, Declare Curfew					
Hazard ranking complete	Yes					

Mitigation Strategies						
Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$0	Freeburg ESDA	On-Going	Freeburg ESDA
Effective response	4.2.3	High	$0	Municipal revenue	Years 1 - 5	Freeburg ESDA
Tornado	4.3.6	High	$10,000	Freeburg ESDA	Years 2 - 4	Freeburg ESDA
Winter storms	4.4.2	High	Varies	Municipal revenue	On-Going	Freeburg ESDA
Extreme heat/drought	4.5.3	High	Unknown	Municipal revenue	Years 2 - 3	Freeburg ESDA
Severe thunderstorms	4.6.3	High	Unknown	Municipal revenue	On-Going	Freeburg ESDA
Flood	4.7.2		$0			
Dam/levee failure						
Earthquakes	4.9.3 & 4.9.4	High		Municipal revenue		Freeburg ESDA
Ground failure	NP					

NP -not provided; N/A - not applicable

City of Lebanon Hazard Mitigation Plan Summary						
Critical facilities	8					
Tax valuation (total)	$307,312					
5-year development trend	One housing development of 13 lots; two commercial businesses					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2006	2006	2005	2006	2014	
Adoption of 2021 IBC	Code Review Starting May 2024					
Flooding	Yes	1993, 2018				
Floodplain development allowed	No					
Critical facilities in flood zone(s)	Yes	Waste water treatment plant				
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes	Ordinance #1524				
Latest FIRM adopted	Yes					
NFIP designee appointed	No					
Substantial improvement/damage provision						
Ground failure areas	Yes					
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	Unknown					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	15%				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Incorporate into Emergency Operations Plan					
Emergency capabilities	PD = 12	FD = 23				
Emergency powers	Declare emergency, Order evacuations, Declare curfew					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$0		Years 1 - 5	NP
Effective response	4.2.3	High	$0			NP
Tornado	4.3.1	Medium	$100	General fund	Year 1	NP
Winter storms	4.4.1	Medium	$200	General fund	Year 1	NP
Extreme heat/drought	4.5.1	Medium	$200	General fund	Year 1	NP
Severe thunderstorms	4.6.3	Medium	$10,000		Year 3	NP
Flood	4.7.2	High	$0	General fund	Years 3 -5	NP
Dam/levee failure	NP					
Earthquakes	NP					
Ground failure	NP					

NP -not provided; N/A - not applicable

Village of Lenzburg Hazard Mitigation Plan Summary						
Critical facilities	4					
Tax valuation (total)	$1,948,317					
5-year development trend	5% Infrastructure					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
Adoption of 2021 IBC	N/A					
Flooding	No					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	No					
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	No					
NFIP minimum floodplain management criteria	No					
Latest FIRM adopted	No					
NFIP designee appointed	No					
Substantial improvement/damage provision	No					
Ground failure areas	Yes	Unknown				
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	No					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	0%				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	N/A					
Emergency capabilities	PD =	FD = 16				
Emergency powers	N/A					
Hazard ranking complete	No					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$0		Years 1 - 5	NP
Effective response	4.2.3	High	$0			NP
Tornado	4.3.1	Medium	$100	General fund	Year 1	NP
Winter storms	4.4.1	Medium	$200	General fund	Year 1	NP
Extreme heat/drought	4.5.1	Medium	$200	General fund	Year 1	NP
Severe thunderstorms	4.6.3	Medium	$10,000		Year 3	NP
Flood	4.7.2	High	$0	General fund	Years 3 -5	NP
Dam/levee failure	NP					
Earthquakes	NP					
Ground failure	NP					

NP -not provided; N/A - not applicable

Village of Marissa Hazard Mitigation Plan Summary						
Critical facilities	5					
Tax valuation (total)	$20,857,130					
5-year development trend	Stay the same					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2012	2012	2012	
Adoption of 2021 IBC	2024					
Flooding	Yes	2017, 2018, 2019, 2020, 2021, 2022, 2023 flash flooding				
Floodplain development allowed	Yes, currently have no restrictions					
Critical facilities in flood zone(s)	Yes					
RL/SRL	Yes	2017 and every year since then				
At risk populations in flood zone(s)	Yes, up to 35%					
NFIP participation	No	Not sure of the value it would provide to our community				
NFIP minimum floodplain management criteria	N/A					
Latest FIRM adopted	N/A					
NFIP designee appointed	N/A					
Substantial improvement/damage provision	N/A					
Ground failure areas	Yes	Areas of the village have been undermined				
Critical facilities in ground failure areas	Yes					
At risk populations in ground failure areas	As much as 80%					
Levees	No					
High hazard potential dams	NP					
At risk populations vulnerable to tornadoes	Yes, 100%					
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Help with our flooding issue and update our master plan					
Emergency capabilities	PD =	FD =	Police, fire and first responders			
Emergency powers	Able to declare emergency, evacuation order and curfew					
Hazard ranking complete	NP					

Mitigation Strategies						
Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP	NP	NP	NP	NP	NP
Effective response	4.2.3	High	$0	N/A	Year 1 - 5	NP
Tornado	NP	NP	NP	NP	NP	NP
Winter storms	NP	NP	NP	NP	NP	NP
Extreme heat/drought	NP	NP	NP	NP	NP	NP
Severe thunderstorms	NP	NP	NP	NP	NP	NP
Flood	4.7.2	NP	$0	N/A	NP	NP
Dam/levee failure	NP	NP	NP	NP	NP	NP
Earthquakes	NP	NP	NP	NP	NP	NP
Ground failure	NP	NP	NP	NP	NP	NP

N/A - Not applicable; NP - not provided

City of Mascoutah Hazard Mitigation Plan Summary						
Critical facilities	32					
Tax valuation (total)	$218,570,339					
5-year development trend	Housing, an estimate increase of 5%; Commercial, an estimate increase of 3%					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2011	2012	2012	
Adoption of 2021 IBC	To be determined					
Flooding	Yes	1957, plus lesser events every few years				
Floodplain development allowed	No					
Critical facilities in flood zone(s)	Some roads are under water in heavy rains					
RL/SRL	No					
At risk populations in flood zone(s)	An estimated 2 percent					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	No	New maps have not yet been issued for our city				
NFIP designee appointed	City of Mascoutah					
Substantial improvement/damage provision	Provision is in development					
Ground failure areas	No					
Critical facilities in ground failure areas	N/A					
At risk populations in ground failure areas	N/A					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes, estimated 40%					
Completed hazard mitigation activities	Yes					
Current hazard mitigation activities	Yes	An IEPA low interest loan for WWTP				
Incorporation of St. Clair County HMP into city planning	Yes	Into City's emergency operation plan				
Emergency capabilities	PD = 25	FD = 40	EMT 7			
Emergency powers	The City is a Home Rule municipality. The emergency powers rest with the mayor,					
	the policy chief and the city manager					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP	NP	NP	NP	NP	NP
Effective response	4.2.3	High	$0	NP	Year 1-5	NP
Tornado	4.3.2	High	$1.5 million	Future grants	Year 4	City of Mascoutah - FD, PD, EMS, Public Works
Winter storms	4.4.2	High	$2 million	Future grants	Ongoing	City of Mascoutah - Public Works, EMS, PD
Extreme heat/drought	4.5.4	High	$200,000	Future grants	Year 5	City of Mascoutah - Public Works
Severe thunderstorms	4.6.7	High	$200,000 per year	Future grants	Year 4	City of Mascoutah - Public Works, Electrical Dept
Flood	4.7.2	High	$500	Future grants	Year 4	City of Mascoutah - Planning Department, Engineering Department
Dam/levee failure	NP	NP	NP	NP	NP	NP
Earthquakes	4.9.3	High	$2 million	Future grants	Year 5	City of Mascoutah - Engineering Department
Ground failure	4.10.1	High	$500,000	Future grants	Year 5	City of Mascoutah - Engineering Department

NP -not provided; N/A - not applicable

Village of Millstadt Hazard Mitigation Plan Summary						
Critical facilities	13					
Tax valuation (total)	$119,195,522					
5-year development trend	NP					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2012	2012	2011	NP	NP	
Adoption of 2021 IBC	NP					
Flooding	No					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	0					
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	No	Not in floodplain				
NFIP minimum floodplain management criteria	N/A					
Latest FIRM adopted	N/A					
NFIP designee appointed	N/A					
Substantial improvement/damage provision	N/A					
Ground failure areas	Yes					
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	NP					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	1%				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes	Into Village's emergency operation plan				
Emergency capabilities	PD = 8	FD = 32				
Emergency powers	Mayor, Village Board, Police Chief, Fire Chief					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$0	N/A	Year 1 - 3	NP
Effective response	4.2.3	High	$0	N/A	Year 1 - 5	NP
Tornado	4.3.8	Medium	$50,000	Municipal budget	Year 1 - 5	NP
Winter storms	4.4.2	Medium	$5,000	Municipal budget	Annually	NP
Extreme heat/drought	4.5.4	High	$1.5 million	Grants, municipal budget	Year 1 - 3	NP
Severe thunderstorms	4.6.1	Medium	$20,000	Municipal budget/MFT	Year 1 - 3	NP
Flood	4.7.2	NP	$0	N/A	NP	NP
Flood	4.7.10	Medium	$20,000	Municipal budget/MFT	Year 1 - 3	NP
Dam/levee failure	N/A	N/A	N/A	N/A	N/A	N/A
Earthquakes	4.9.1	Low	$0	N/A	Year 1 - 3	NP
Ground failure	4.10.3	Low	$0	N/A	Year 2 - 5	NP

NP -not provided; N/A - not applicable

Village of New Athens Hazard Mitigation Plan Summary						
Critical facilities	4					
Tax valuation (total)	$26,274,179					
5-year development trend	Anticipate stable development with no loss of major employers					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	NP	2018	2018	2021	2018	
Adoption of 2021 IBC	NP					
Flooding	Yes	2019 and 2022				
Floodplain development allowed	No					
Critical facilities in flood zone(s)	3					
RL/SRL	Yes	2018, 2021				
At risk populations in flood zone(s)	Yes	30%				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	Dredge ditches and make sure roadways have appropriate run-off levels					
Ground failure areas	No					
Critical facilities in ground failure areas	N/A					
At risk populations in ground failure areas	N/A					
Levees	Yes	1				
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	30%				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes					
Emergency capabilities	PD = 4 FT, 2 PT	FD = 25				
Emergency powers	Yes	Evacuation, curfew, emergency				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$5,000 Annually	General fund	Ongoing	Village of New Athens
Effective response	4.2.3	High	$0	N/A	Year 1 - 5	NP
Tornado	4.3.2	Medium	$15,000	Future grant awards	Year 3	Village of New Athens
Winter storms	4.4.3	High	$75,000	Future grant awards	Year 3	Village of New Athens
Extreme heat/drought	4.5.6	High	$75,000	Future grant awards	Year 3	Village of New Athens
Severe thunderstorms	4.6.1	High	$40,000 annually	Water and Sewer fees and future grant awards	Ongoing	Village of New Athens
Flood	4.7.2	High	$0	N/A	NP	NP
Dam/levee failure	4.8.5	High	$25,000	Future grant awards	Year 3	Village of New Athens
Earthquakes	4.9.7	Low	$25,000	Future grant awards	Year 3	Village of New Athens
Ground failure	4.10.2	Medium	$50,000	Future grant awards	Year 3	Village of New Athens

NP -not provided; N/A - not applicable

City of O'Fallon Hazard Mitigation Plan Summary						
Critical facilities	24					
Tax valuation (total)	$907,164,742					
5-year development trend	23% increase anticipated					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2018	2018	2017	2018	2018	
Adoption of 2021 IBC	2024 will be adopted in 2027					
Flooding	Yes	Year - 2023				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	No					
RL/SRL	Yes					
At risk populations in flood zone(s)	Yes	1% of population				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes	Floodplain manager				
Substantial improvement/damage provision	Yes					
Ground failure areas	Yes	Unknown number				
Critical facilities in ground failure areas	Yes	2 facilities				
At risk populations in ground failure areas	Yes	10%				
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes					
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes	Emergency Operation Plan				
Emergency capabilities	PD = 50	FD = 51				
Emergency powers	Yes	Emergency powers, curfew, evacuation				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.3	High	$0	County grant	Year 1	Public Safety, St. Clair County
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	All department
Tornado	4.4.2	Medium	$0	General fund	Complete	Public Works, Public Safety
Winter storms	4.5.4	Medium	NP	Existing Water Dept. Revenue	Ongoing	Public Works
Extreme heat/drought	4.6.5	High	NP	Grants	Year 1	Public Safety, St. Clair County
Severe thunderstorms	4.7.9	Medium	NP	Existing revenue	Ongoing	Public Works
Flood	4.7.2	Medium	$0	N/A	Year 2	Public Works
Dam/levee failure	4.8.3	Low	$0	N/A	Year 1	Community Development
Earthquakes	4.9.4	Medium	$0	N/A	Ongoing	Public Safety
Ground failure	4.10.3	Low	$0	N/A	Ongoing	Community Development

NP -not provided; N/A - not applicable

City of Sauget Hazard Mitigation Plan Summary						
Critical facilities	6					
Tax valuation (total)	$14,230,000					
5-year development trend	Anticipated 10% growth of commercial/light industrial (Sauget Business Park)					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2021					
Adoption of 2021 IBC	N/A					
Flooding	Yes	Years: 1993, 1995, 2019				
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	Yes	6 facilities				
RL/SRL	Yes	Years: 1993,1995,2019				
At risk populations in flood zone(s)	Yes	20% over 60				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes	Weis Design Group				
Substantial improvement/damage provision	Yes					
Ground failure areas	No					
Critical facilities in ground failure areas	N/A					
At risk populations in ground failure areas	N/A					
Levees	Yes	20% of population	5 critical facilities			
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	20% of the population				
Completed hazard mitigation activities	Yes					
Current hazard mitigation activities	Yes					
Incorporation of St. Clair County HMP into city planning	Yes	Capital Improvements for the Emergency Operations Plan				
Emergency capabilities	PD = 10	FD = 11				
Emergency powers	Yes	Ability to declare curfew, evacuation				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP	NP	NP	NP	NP	NP
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	NP
Tornado	4.3.7	NP	$10,000	Future grants	Years 1 - 2	Village Administration
Winter storms	4.4.2	NP	$250,000	Future grants	Years 1 - 2	Village Administration
Extreme heat/drought	4.5.1	NP	$350,000	Future grants	Years 1 - 2	Village Administration
Severe thunderstorms	4.6.1	NP	$650,000	Future grants	Years 1 - 3	Village Administration
Flood	4.7.2	High	$0	N/A	Years 1 - 5	Village Administration
Flood	4.7.10	NP	$2,500,000	Future grants	Years 1 - 2	Village Administration
Dam/levee failure	4.8.6	NP	$50,000	Future grants	Years 1 - 2	Village Administration
Earthquakes	4.9.9	NP	$50,000	Future grants	Years 1 - 2	Village Administration
Ground failure	4.10.7	NP	$25,000	Future grants	Year 1	Village Administration

NP -not provided; N/A - not applicable

Village of Shiloh Hazard Mitigation Plan Summary						
Critical facilities	10					
Tax valuation (total)	$364,968,405.00					
5-year development trend	Increasing					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2018 IRC	NP	2018	2018	2018	
Adoption of 2021 IBC	NP					
Flooding	No					
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	0					
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	N/A					
Ground failure areas	Yes					
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	No					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	No					
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes	Emergency Operations Plan				
Emergency capabilities	PD = 25	FD = 0	Volunteer F.F. from O'Fallon			
Emergency powers	Yes	Ability to order evacuations, declare curfew/emergency				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	Medium	$5,000	Future grants	Years 1 - 5	Police
Effective response	4.2.3	High	$5,000	Future grants	Years 1 - 5	Village
Tornado	4.3.8	High	$250,000	Future grants	Years 1 - 5	Police, Public Works, Building and Zoning
Winter storms	4.4.3	Medium	$250,000	Future grants	Years 1 - 5	Public Works, Building and Zoning
Extreme heat/drought	4.5.6	Medium	$100,000	Future grants	Years 1 - 5	Police, Fire
Severe thunderstorms	4.6.6	Medium	$250,000	Future grants	Years 1 - 5	Public Works, Police
Flood	4.7.2	Low	$2,000	Future grants, County	Years 1 - 5	Building and Zoning, Public Works, St. Clair County
Dam/levee failure	4.8.5	Low	$0	N/A	Ongoing	St. Clair County
Earthquakes	4.9.1	Low	$0	N/A	Ongoing	St. Clair County
Ground failure	4.10.0	Medium	$1,000	Future grants, County, Mining Departme nt	Ongoing	St. Clair Count, Mining Dept.

NP -not provided; N/A - not applicable

Village of Smithton Hazard Mitigation Plan Summary						
Critical facilities	5					
Tax valuation (total)	$108,441,464					
5-year development trend	Anticipate 3% growth					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	IBC 2003		2005			
Adoption of 2021 IBC	2024					
Flooding	No					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	Yes	Multiple				
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes					
Substantial improvement/damage provision	Yes					
Ground failure areas	No					
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	No					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	1% of population				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes	Emergency Operations Plan				
Emergency capabilities	PD = 10	FD = 35 (Volunteer)				
Emergency powers	Declare Curfew, Declare Emergency					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	High	$0	Smithton ESDA	On-going	Smithton ESDA Coordinator
Effective response	4.2.3	High	$0	General Mu	Years 1 - 5	Smithton ESDA with County EMA-OHS
Tornado	4.3.6	High	$10,000	Smithton ES	Years 2 - 4	Smithton ESDA
Winter storms	4.4.3	High	Varies	Local Gov't Revenue	On-going	Smithton ESDA
Extreme heat/drought	4.5.3	High	Unknown	General Municipal Revenue	Years 2 - 3	Smithton ESDA, Village emergency response departments, Village
Severe thunderstorms	4.6.1	High	Unknown	General Municipal Revenue/ESDA budget	Year 2 - 3	Smithton ESDA and Public Works
Flood	4.7.2	Low	$0	NP	On-going	Zoning Administrator
Dam/levee failure	NP	NP	NP	NP	NP	NP
Earthquakes	4.9.3 & 4.9.4	High	NP	Municipal Revenue Funding	Response Plan	Smithton ESDA
Ground failure	NP	NP	NP	NP	NP	NP

NP -not provided; N/A - not applicable

Village of St. Libory Hazard Mitigation Plan Summary						
Critical facilities	4					
Tax valuation (total)	NP					
5-year development trend	Stay the same					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	NP	NP	NP	NP	NP	
Adoption of 2021 IBC						
Flooding	No					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	0					
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	No					
NFIP minimum floodplain management criteria	NP					
Latest FIRM adopted	NP					
NFIP designee appointed	NP					
Substantial improvement/damage provision	NP					
Ground failure areas	No					
Critical facilities in ground failure areas	NP					
At risk populations in ground failure areas	NP					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	No					
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Yes	Emergency Operations Plan				
Emergency capabilities	PD =	FD = 24				
Emergency powers	Yes	Emergency powers including curfew				
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	NP	NP	NP	NP	NP	NP
Effective response	4.2.3	High	$0	N/A	Years 1 - 5	NP
Tornado	4.3.8	NP	$25,000	Future grants	Years 1 - 5	Village administration
Winter storms	4.4.3	NP	$25,000	Future grants	Years 1 - 5	Village administration
Extreme heat/drought	NP	NP	NP	NP	NP	NP
Severe thunderstorms	4.6.3	NP	$30,000	Future grants	Years 1 - 5	Village administration
Flood	4.7.2	High	$0	N/A	Years 1 - 5	Village administration
Flood	4.7.4	Moderate to high	$1,500,000	Future grants	Years 1-10	Village administration
Dam/levee failure	NP	NP	NP	NP	NP	NP
Earthquakes	NP	NP	NP	NP	NP	NP
Ground failure	NP	NP	NP	NP	NP	NP

NP -not provided; N/A - not applicable

Village of Swansea Hazard Mitigation Plan Summary						
Critical facilities	9					
Tax valuation (total)	$100,000,000					
5-year development trend	Continue slow population growth, mostly single-family homes.					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
	2105 IBS	2015 IMC	2014 NEC	2006 IFC	IL State Code	
Adoption of 2021 IBC	Village will adopt the 2021 codes in 2024					
Flooding	Yes					
Floodplain development allowed	Yes					
Critical facilities in flood zone(s)	0					
RL/SRL	No					
At risk populations in flood zone(s)	No					
NFIP participation	Yes					
NFIP minimum floodplain management criteria	Yes					
Latest FIRM adopted	Yes					
NFIP designee appointed	Yes	Building & Zoning Department				
Substantial improvement/damage provision	Yes					
Ground failure areas	Yes					
Critical facilities in ground failure areas	No					
At risk populations in ground failure areas	No					
Levees	No					
High hazard potential dams	No					
At risk populations vulnerable to tornadoes	Yes	Manufactured housing parks				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Emergency Operations Plan					
Emergency capabilities	PD = 23	FD = 25				
Emergency powers	Declare emergency, order evacuation, set curfew					
Hazard ranking complete	Yes					

Mitigation Strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department(s)
Public information/awareness	4.1.3	Medium	$500	General Fund	Year 1	NP
Effective response	4.2.3	High	$0	General Municipal Revenue	Years 1 - 5	NP
Tornado	4.3.2	High	$0	St. Clair Cc	Spring 202	Swansea Fire Department
Winter storms	4.4 A3	High	$10,000	Grants	Years 1 - 3	Swansea Fire Department
Extreme heat/drought	4.5 A6	Low	$10,000	Grants	Years 1 - 5	Swansea Fire Department
Severe thunderstorms	NP	High	$1,000	General Fund	Year 1	Building and Zoning Department
Flood	4.7.2	High	$0	General Fund	Ongoing	Building and Zoning Department
Dam/levee failure	4.8 A5	High	$5,000	General Fund	Year 1	Swansea Fire Department
Earthquakes	4.9 A2	High	$1,000	General Fund	Year 1	Building and Zoning Department
Ground failure	4.10 A6	High	$5,000	General Fund	Year 1	Swansea Fire Department

NP -not provided; N/A - not applicable

Village of Washington Park Hazard Mitigation Plan Summary						
Critical facilities	8					
Tax valuation (total)	$14,742,736					
5-year development trend	Multiple developments currently being built and/or anticipated					
Building codes	Building	Mechanical	Electric	Fire	Plumbing	
		2013	2013	2013	2013	
Adoption of 2021 IBC						
Flooding	Yes					
Floodplain development allowed	No					
Critical facilities in flood zone(s)	8					
RLF/SRLF	Yes	1995, 1996				
At risk populations in flood zone(s)	Yes	30%				
NFIP participation	Yes					
NFIP minimum floodplain management criteria	No					
Latest FIRM adopted	Yes					
NFIP designee appointed	No					
Substantial improvement/damage provision						
Ground failure areas	Yes	18				
Critical facilities in ground failure areas	no					
At risk populations in ground failure areas	11%					
Levees	Yes	2				
High hazard potential dams	Yes					
At risk populations vulnerable to tornadoes	Yes	100%				
Completed hazard mitigation activities	No					
Current hazard mitigation activities	No					
Incorporation of St. Clair County HMP into city planning	Emergency Operations, Capital Improvement					
Emergency capabilities	PD = 7	FD = 12				
Emergency powers	Declare Emergency					
Hazard ranking complete	Yes					

Mitigation strategies

Hazard	Strategy	Priority / Benefit	Cost	Funding source	Timeline	Responsible Department
Public information/awareness						
Effective response	4.2.3	High	$0	Municipal	Years 1 - 5	Washington Park
Tornado	4.3	High	$0	Future Gra	Years 1 - 5	Washington Park
Winter storms	4.4	High	$0	Future Grants	Years 1 - 5	Washington Park
Extreme heat/drought	4.5	High	$0	Future Gra	Years 1 - 5	Washington Park
Severe thunderstorms	4.6	High	$0	Future Gra	Years 1 - 5	Washington Park
Flood	4.7.2	High	$0	Future Grants	Years 1 - 5	Washington Park
Dam/levee failure	4.8	High	$0	Future Gra	Years 1 - 5	Washington Park
Earthquakes	4.9	High	$0	Future Gra	Years 1 - 5	Washington Park
Ground failure	NP	NP	NP	NP	NP	NP

NP -not provided; N/A - not applicable

Section 6. Plan Implementation and Maintenance

Section 6.1 Implementation through existing plans

Throughout the planning process, the St. Clair County Planning Team worked to identify existing hazard mitigation policies, develop mitigation goals, and create a comprehensive range of mitigation strategies specific to each jurisdiction which are compatible with existing jurisdiction plans and goals. This work provides a blueprint for reducing the potential loses identified in the Risk Assessment (Section 4). The ultimate goal of this plan is to incorporate the mitigation strategies proposed into ongoing planning efforts within the County. The St. Clair County Emergency Management Agency will be the local champion for the mitigation actions. The St. Clair County Board and the city and village councils will be an integral part of the implementation process. Federal and state assistance will be necessary for a number of the identified actions.

The actions and goals represented in this plan will be integrated into the county's Emergency Operations Plan which involves the St. Clair County Board, EMA, Sheriff, Highway Department, Health Department, Coroner, and Zoning. The hazards described in this plan will be considered during future updates of the EOP, building codes, and zoning.

Continued public involvement is also critical to the successful implementation of the MHMP. Comments from the public on the MHMP will be received by the St. Clair County Emergency Management Agency and forwarded to the Planning Team for discussion. Education efforts for hazard mitigation will be an ongoing effort of St. Clair County. The public will be notified of periodic planning meetings through notices in the local newspaper. Once adopted, a copy of the MHMP will be maintained in each jurisdiction and in the St. Clair County Emergency Management Agency.

Section 6.2 Monitoring, Evaluation, and Updating the MHMP

Throughout the five-year planning cycle, the St. Clair County Emergency Management Agency will reconvene the Planning Team to monitor, evaluate, and update the plan on an annual basis. Additionally, a meeting will be held in 2029 to address the five-year update of this plan. Members of the planning committee are readily available to engage in email correspondence between annual meetings. If the need for a special meeting, due to new developments or the occurrence of a declared disaster in the county, the team will meet to update mitigation strategies. Depending on grant opportunities and fiscal resources, mitigation projects may be implemented independently by individual communities or through local partnerships.

As part of the update process, the Planning Team will review the county goals and objectives to determine their relevance to changing situations in the county and how they integrate with existing developmental, environmental, and other plans. In addition, state and federal policies will be reviewed to ensure they are addressing current and expected conditions. The team will also review the risk assessment portion of the plan to determine if this information should be updated or modified. The plan revision will also reflect changes in local development and its relation to each hazard. The parties responsible for the various implementation actions will report on the status of their projects, and will include which implementation processes worked well, any difficulties encountered, how coordination efforts are proceeding, and which strategies should be revised.

The GIS data used to prepare the plan was obtained from existing county GIS data as well as data collected as part of the planning process. This updated Hazus-MH GIS data has been returned to the county for use and maintenance in the county's system. As newer data becomes available, these updated data will be used for future risk assessments and vulnerability analyses.

Definitions

100-year Floodplain Areas subject to inundation by the 1-percent-annual-chance flood event.

Critical Facility A structure, because of its function, size, service area, or uniqueness, that has the potential to cause serious bodily harm, extensive property damage, or disruption of vital socioeconomic activities if it is destroyed or damaged or if its functionality is impaired. This includes, but are not limited to, water and wastewater treatment facilities, municipal buildings, educations facilities, and non-emergency healthcare facilities.

Community Rating System (CRS) A voluntary program for National Flood Insurance Program (NFIP) participating communities. The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management.

Comprehensive Plan A document, also known as a "general plan," covering the entire geographic area of a community and expressing community goals and objectives. The plan lays out the vision, policies, and strategies for the future of the community, including all the physical elements that will determine the community's future developments.

Disaster Mitigation Act of 2000 (DMA 2000)
The largest legislation to improve the planning process. It was signed into law on October 30, 2000. This new legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur.

Essential Facility A subset of critical facilities that represent a substantial hazard to human life in the event of failure. This includes (but not limited to) hospital and fire, rescue, ambulance, emergency operations centers, and police stations.

Federal Emergency Management Agency
An independent agency created in 1979 to provide a single point of accountability for all federal activities related to disaster mitigation and emergency preparedness, response, and recovery.

Hazard A source of potential danger or adverse condition.

Hazard Mitigation Any sustained action to reduce or eliminate long-term risk to human life and property from hazards.

Hazard Mitigation Grant Program (HMPG)
Authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, HMGP is administered by FEMA and provides grants to states, tribes, and local governments to implement hazard mitigation actions after a major disaster declaration.

Hazus-MH A geographic information system (GIS)-based disaster risk assessment tool.

Multi-Hazard Mitigation Planning
Identify policies and actions that can be implemented over the long term to reduce risk and future losses from various hazardous events.

National Flood Insurance Program
Administered by the Federal Emergency Management Agency, which works closely with nearly 90 private insurance companies to offer flood insurance to property owners and

renters. In order to qualify for flood insurance, a community must join the NFIP and agree to enforce sound floodplain management standards.

Planning Team A group composed of government, private sector, and individuals with a variety of skills and areas of expertise, usually appointed by a city or town manager, or chief elected official. The group finds solutions to community mitigation needs and seeks community acceptance of those solutions.

Risk Priority Index Quantifies risk as the product of hazard probability and magnitude so Planning Team members can prioritize mitigation strategies for high-risk-priority hazards.

Risk Assessment Quantifies the potential loss resulting from a disaster by assessing the vulnerability of buildings, infrastructure, and people.

Strategy A collection of actions to achieve goals and objectives.

Vulnerability Describes how exposed or susceptible to damage an asset is. Vulnerability depends on an asset's construction, contents, and the economic value of its functions.

Acronyms

A
AEGL – Acute Exposure Guideline Levels
ALOHA – Areal Locations of Hazardous Atmospheres
C
CERI – Center for Earthquake Research and Information
CRS – Community Rating System
D
DEM – Digital Elevation Model
DFIRM – Digital Flood Insurance Rate Map
DMA – Disaster Mitigation Act of 2000
E
EAP – Emergency Action Plan
EMA – Emergency Management Agency
EPA – Environmental Protection Agency
F
FEMA – Federal Emergency Management Agency
FIRM – Flood Insurance Rate Map
G
GIS – Geographic Information System
H
Hazus-MH – Hazards USA Multi-Hazard
HMGP – Hazard Mitigation Grant Program
HUC – Hydrologic Unit Code
I
IA – Individual Assistance
IDNR – Illinois Department of Natural Resources
IDOT – Illinois Department of Transportation
IEMA – Illinois Emergency Management Agency
ISO – Insurance Service Office
ISGS – Illinois State Geological Survey
ISWS– Illinois State Water Survey
M
MHMP – Multi-Hazard Mitigation Plan
N
NCDC – National Climatic Data Center
NEHRP – National Earthquake Hazards Reduction Program
NFIP – National Flood Insurance Program
NID – National Inventory of Dams
NOAA – National Oceanic and Atmospheric Administration
NSFHA – Non-Special Flood Hazard Area

P
PA – Public Assistance
PHMSA– Pipeline and Hazardous Materials Safety Administration
PPM – Parts Per Million
R
RPI – Risk Priority Index
S
SPC – Storm Prediction Center
STAPLEE – Social, Technical, Administrative, Political, Legal, Economic, and Environmental
U USGS – United States Geological Survey

Appendices

Appendix A – Municipality Questionnaires

Appendix B – Supporting Documentation

Appendix C – Adopting Resolutions

Appendix D – Historical Hazards

Appendix E – List of Essential Facilities

Appendix F – St. Clair County Flood Maps / Critical Facilities Map

Appendix A – Municipality Questionnaires

EAST-WEST GATEWAY
Council of Governments
Creating Solutions Across Jurisdictional Boundaries

St. Clair Unincorporated County Hazard Mitigation Plan Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your county is eligible to apply for hazard mitigation grants.

Date:4/16/2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Herb Simmons – EMA Director Bryan Whitaker – EMA Asst Director Samantha Roland – LEPC Coordinator Rick Stubblefield – Dir of Economic Development Jennifer Gomric – County Assessor
County	St. Clair
Contact name and email	Bryan Whitaker – bryan.whitaker@co.st-clair.il.us Samantha Roland – Samantha.bierman@co.st-clair.il.us

1. *How many critical facilities are in your county?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	50

2. Please provide your county's property tax valuation/assessment for the most current year.	2022	$4,860,301,344			
3. What are your county's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Stable residential growth with some commercial business growth.			
4. Please provide the year of your county's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code 2012	Mechanical code 2012	Electric code 2012	Fire code 2012
5. Please provide the year your county anticipates adopting newer or current building codes and the code year.	Example, in 2024 County will adopt the 2021 International Building Code (IBC).	To Be Determined			
6. Has your county flooded in the past?	Yes	If yes, what years? 2022, 2019, 2006, 2003, 1993	No		
7. What rivers/creeks border or run through your county?	Please list: Multiple				
8. Do you allow construction/development in your flood zone(s)?	Yes With applicable permits	No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 20			

10. Have structures in your county experienced repetitive losses due to flooding?	Yes	If yes, what years?	No
11. Does your county have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total county population 10%	No
12. Does your county participate in the National Flood Insurance Program (NFIP)?	Yes	No	If no, please describe why not and skip to question #17
13. Has your county adopted NFIP minimum floodplain management criteria via county ordinance?	Yes	No	If no, please describe why not
14. Has your county adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your county appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your county implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	Through annual review of affected properties.		
17. Does your county have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many? Unknown	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your county have at-risk populations in areas with potential ground failure?	If yes, please list percent of total county population 10%		No
20. Does your county sit behind any levees?	Yes	If yes, how many? 3	No, if no, please skip to #23
21. Does your county have at-risk populations behind levees?	Yes	If yes, please list percent of total county population 5%	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many? 10	No
23. Is your county located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your county have at-risk populations behind levees?	Yes	If yes, please list percent of total county population	No
26. Please describe how your county coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your county has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your county have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population 25%	No	
29. Has your county completed any hazard mitigation activities/projects in the last 5 years?	Yes	No	What projects? On going buyout program	Budget? $15 million
30. Is your county currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No
31. Does your county plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No	What projects? Buyout Flood Mitigation BRIC	Approximate cost? $15million $25 million $50 million

32. How will your county incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) We will adopt the MHMP and add it to the county Emergency Operations Plan.		
33. Please list your county's emergency capabilities	Example: 35 firefighters, 26 police officers	Multiple sheriff deputies, public works officials and building inspectors.		
34. Please list your county's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Pass ordinances, declare emergencies, order evacuations, institute curfews.		
35. Does your county have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name	If yes, how much does the system cost annually? $23,000	No
36. Does your county have emergency alert sirens?	Yes	If yes, how many? 122	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: We utilized social media, print media and television media.			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	Buyout program, Belleville Flooding, Stookey Flooding, East Carondelet Flooding, Caseyville Flooding, Harding Ditch survey
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your county and why? (can be more than one)	Flooding, tornados and earthquakes.

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your county eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every county must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total county population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Bryan Whitaker, Samantha Roland	PRIORITY			ACTION		
Title(s): Assistant Director, LEPC Coordinator	H - High			O - Ongoing		
County: St. Clair	M - Medium			C - Complete		
Date: 4/16/2024	L - Low			D - Deferred		
ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	M	L	O	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	M	L	O	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	L	O	C	D
2. Adopt current building codes	H	M	L	O	C	D
3. Integrate Hazard Mitigation Plan into local plans	H	M	L	O	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H	M	L	O	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	M	L	O	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of County:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into County planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into County's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of County:	St. Clair
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of
Action or Project	
Applicable Goal Statement:	To create safe places for residents to evacuate to during Tornado
Action/Project Number:	1
Name of Action or Project:	Tornado Safe Room
Mitigation Category:	Tornado
Action or Project Description:	Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings
Estimated Cost:	$5,000,000
Benefits:	Provides safe area for residents
Plan for Implementation	
Responsible Organization/Department:	St. Clair County EMA
Supporting Organization/Department:	TBD
Action/Project Priority:	1
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of County:	St Clair
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility
Action or Project	
Applicable Goal Statement:	To help at risk populations during cold weather
Action/Project Number:	1
Name of Action or Project:	Warming Shelter
Mitigation Category:	Winter Storm
Action or Project Description:	Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers
Estimated Cost:	$500,000
Benefits:	Provides safe, warm place for those displaced during winter events
Plan for Implementation	
Responsible Organization/Department:	St. Clair County EMA
Supporting Organization/Department:	TBD
Action/Project Priority:	1
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	Local Funds and Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of County:	St Clair
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat
Problem being Mitigated:	Extreme Heat
Action or Project	
Applicable Goal Statement:	Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers
Action/Project Number:	1
Name of Action or Project:	Cooling Centers
Mitigation Category:	Extreme Heat
Action or Project Description:	Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers
Estimated Cost:	$500,000
Benefits:	Provides a safe cool environment for those in need
Plan for Implementation	
Responsible Organization/Department:	St. Clair County EMA
Supporting Organization/Department:	TBD
Action/Project Priority:	1
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	Local Funding, Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of County:	St. Clair
Risk / Vulnerability	
Hazard Addressed:	Severe Storm Flash Flooding
Problem being Mitigated:	Flash Flooding
Action or Project	
Applicable Goal Statement:	Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows
Action/Project Number:	1
Name of Action or Project:	Flash Flooding
Mitigation Category:	Severe Thunderstorm
Action or Project Description:	Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows
Estimated Cost:	$100,000
Benefits:	Reduces risk of flash flooding during severe thunderstorms
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	EMA
Action/Project Priority:	1
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Local Funds, Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of County:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in County ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of County:	St. Clair
Risk / Vulnerability	
Hazard Addressed:	Repetitive Flooding
Problem being Mitigated:	Flooding
Action or Project	
Applicable Goal Statement:	Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts
Action/Project Number:	1
Name of Action or Project:	Repetitive Flooding
Mitigation Category:	Flooding
Action or Project Description:	Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts
Estimated Cost:	$15,000,000
Benefits:	Eliminates properties prone to repetitive flooding
Plan for Implementation	
Responsible Organization/Department:	EMA
Supporting Organization/Department:	N/A
Action/Project Priority:	1
Timeline for Completion:	3 years
Potential/Existing Fund Sources:	Federal Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of County:	St Clair
Risk / Vulnerability	
Hazard Addressed:	Levee Failure
Problem being Mitigated:	Levee Failure
Action or Project	
Applicable Goal Statement:	Encourage annual inspection of dams and levees
Action/Project Number:	1
Name of Action or Project:	Levee Inspections
Mitigation Category:	Levee Failure
Action or Project Description:	Encourage annual inspection of dams and levees
Estimated Cost:	$0
Benefits:	Safe levees throughout the county
Plan for Implementation	
Responsible Organization/Department:	Levee Districts
Supporting Organization/Department:	EMA
Action/Project Priority:	1
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Levee Districts
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of County:	St Clair
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Earthquake
Action or Project	
Applicable Goal Statement:	Use infrastructure retrofit and structural and non-structural retrofit of existing buildings
Action/Project Number:	1
Name of Action or Project:	Retrofit Buildings
Mitigation Category:	Earthquake
Action or Project Description:	Use infrastructure retrofit and structural and non-structural retrofit of existing buildings
Estimated Cost:	To Be Determined
Benefits:	Makes buildings safer in the event of an earthquake
Plan for Implementation	
Responsible Organization/Department:	To Be Determined
Supporting Organization/Department:	N/A
Action/Project Priority:	1
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of County:	St Clair
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	Ground Failure
Action or Project	
Applicable Goal Statement:	Conduct risk assessments for ground failures
Action/Project Number:	1
Name of Action or Project:	Ground Failure
Mitigation Category:	Ground Failure
Action or Project Description:	Conduct risk assessments for ground failures
Estimated Cost:	To Be Determined
Benefits:	Helps prevent construction or lessen impact of mines on construction
Plan for Implementation	
Responsible Organization/Department:	To Be Determined
Supporting Organization/Department:	N/A
Action/Project Priority:	1
Timeline for Completion:	On Going
Potential/Existing Fund Sources:	General Funds / Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

_____Flooding_____ Mitigation Action Worksheet	
Name of County:	St. Clair
Risk / Vulnerability	
Hazard Addressed:	Belleville Flooding
Problem being Mitigated:	Belleville Flooding
Action or Project	
Applicable Goal Statement:	To reduce flooding in downtown Belleville
Action/Project Number:	1
Name of Action or Project:	Belleville Flooding
Mitigation Category:	Flooding
Action or Project Description:	To reduce flooding in downtown Belleville through survey and remediation.
Estimated Cost:	To Be Determined
Benefits:	Reduces flooding of critical infrastructure
Plan for Implementation	
Responsible Organization/Department:	St. Clair County / City of Belleville
Supporting Organization/Department:	EMA
Action/Project Priority:	1
Timeline for Completion:	3 years
Potential/Existing Fund Sources:	Federal Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

_____Flooding_____ Mitigation Action Worksheet	
Name of County:	St. Clair
Risk / Vulnerability	
Hazard Addressed:	East Carondelet Flooding
Problem being Mitigated:	East Carondelet Flooding
Action or Project	
Applicable Goal Statement:	To reduce impacts of flooding in East Carondelet
Action/Project Number:	1
Name of Action or Project:	East Carondelet Flooding
Mitigation Category:	Flooding
Action or Project Description:	To reduce impacts of flooding in East Carondelet
Estimated Cost:	To be Determined
Benefits:	Reduces ongoing Flooding
Plan for Implementation	
Responsible Organization/Department:	St Clair County / Village of East Carondelet
Supporting Organization/Department:	N/A
Action/Project Priority:	1
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Federal Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

_____Flooding_____ Mitigation Action Worksheet	
Name of County:	St Clair County
Risk / Vulnerability	
Hazard Addressed:	Stookey Township Flooding
Problem being Mitigated:	Stookey Township Flooding
Action or Project	
Applicable Goal Statement:	To reduce ongoing flooding in portions of Stookey Township
Action/Project Number:	1
Name of Action or Project:	Stookey Township Flooding
Mitigation Category:	Flooding
Action or Project Description:	To reduce ongoing flooding in portions of Stookey Township
Estimated Cost:	$2,000,000
Benefits:	Reduces ongoing flooding
Plan for Implementation	
Responsible Organization/Department:	St Clair County
Supporting Organization/Department:	Stookey Township
Action/Project Priority:	1
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Federal Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

_____Flooding_____ Mitigation Action Worksheet	
Name of County:	St Clair
Risk / Vulnerability	
Hazard Addressed:	Caseyville Repetitive Flooding
Problem being Mitigated:	Flooding
Action or Project	
Applicable Goal Statement:	To reduced flooding in the Village of Caseyville
Action/Project Number:	1
Name of Action or Project:	Caseyville Flooding
Mitigation Category:	Flooding
Action or Project Description:	To reduce flooding in the Village of Caseyville
Estimated Cost:	To be Determined
Benefits:	Reduces flooding
Plan for Implementation	
Responsible Organization/Department:	Village of Caseyville
Supporting Organization/Department:	St Clair County
Action/Project Priority:	1
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Federal Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

____Flooding_____ Mitigation Action Worksheet	
Name of County:	St Clair County
Risk / Vulnerability	
Hazard Addressed:	Harding Ditch Flooding
Problem being Mitigated:	Flooding
Action or Project	
Applicable Goal Statement:	To reduce flood impacts from the Harding Ditch
Action/Project Number:	1
Name of Action or Project:	Harding Ditch Flooding
Mitigation Category:	Flooding
Action or Project Description:	To reduce flood impacts from the Harding Ditch
Estimated Cost:	To be Determined
Benefits:	Reduces flooding to multiple communities
Plan for Implementation	
Responsible Organization/Department:	St Clair County
Supporting Organization/Department:	To be Determined
Action/Project Priority:	1
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Federal Grants
Local Planning Mechanisms to be Used in Implementation, if any:	MHMP
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: April 12, 2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Jennifer Gain Meyer, MS, LEHP – City Clerk Jamie Maitret, CPA – Finance Director Scott Tyler – Director of Health, Housing and Building Scott Saeger, PE – City Engineer Clifford Cross, AICP – Director of Economic Development, Planning & Zoning
City	City of Belleville, Illinois
Contact name and email	Clifford Cross, AICP ccross@belleville.net

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number – Approximate Numbers 12 Government Buildings, 20 Public/Private Schools, 1 Hospital 3 Railroads (BSDA, NS, FTRL) 560 Lane Miles, 262 Center Lane Miles & 60 Miles of Alleys.

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation Total EAV: $771,634,575 Rate Setting EAV: $509,476,059			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Based upon review of trends, potential development, housing construction and potential growth to the south and east we project a potential 3% overall. An approximate 3% in housing, 3% commercial and 3% retail.			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2006 IBC 2006 IRC	Plumbing code Current Edition Illinois State Plumbing Code	Mechanical code 1988 edition thereof and all subsequent editions thereof	Electric code 2014	Fire code
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year 2024 (This will be required prior to 2025 due to the anticipation of State adopted codes.)			
6. Has your city flooded in the past?	Yes	If yes, what years? 1957 and 2022	No		
7. What rivers/creeks border or run through your city?	Please list: Richland Creek, Loop Creek and Schoenberger Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes	No	Explanation if needed: Only upon demonstrated hardship and a variance in accordance with Section 157.04 of the code.		

9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways		Number: Based upon review of Critical Facility locations we have not identified any facility within a documented flood zone.
10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city pop Based upon census an anticipated 10% population	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not

15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)
16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	There has been no identified implementation plan.		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many? Much of the City is over mines. Approximately 22,000 parcels in the City with an anticipated 25% over mines.	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No None identified via documentation.
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population Based upon census an anticipated 10%		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28

24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?	
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No	
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	Not Applicable			
27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	Not Applicable			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population 10% consistent with flooding	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No No specific hazard mitigation projects have been identified

31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No	What projects? Upon completion of the Comprehensive Plan the City intends to pursue hazard mitigation funds based upon identified needs.	Approximate cost? The cost would be contingent upon identified needs and funding opportunities. Budget match availabilities would further identify funding request. The City intends to complete a Capital Improvement Plan, upon completion of the Comprehensive Plan, to determine future fiscal year funding request.

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) The City plans to pursue the adoption of a new 20 year Comprehensive Plan in 2024. The Comprehensive plan will have a Chapter addressing these needs leading to the development of an implementation plan.
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	74 Police Officers 63 Firefighters
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Ordinance 8436-2020

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name Code Red	If yes, how much does the system cost annually?	No
36. Does your city have emergency alert sirens?	Yes	If yes, how many? 9	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: The City is evaluating the implementation of a Citywide tracking software that will provide a Citizen portal for updates associated with emergency measures, permitting processes, code updates, etc.			
38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	The primary goal would be to incorporate intergovernmental coordination that better assists the communities in mitigation activities throughout the region. All of the below should be identified within the section addressing intergovernmental coordination.			
For flooding	X			
For winter storms	X			
For heat waves/drought	X			
For tornadoes	X			
For earthquakes	X			
For ground failure	X			
For dam/levee failure	X			
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Flooding: Based upon the inability to predict an immediate event. Ground Failure: Inability to predict specific property failure based upon existing data.			

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here -

https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Clifford Cros, AICP	PRIORITY			ACTION		
Title(s): Director of Economic Development, Planning & Zonings	H - High			O - Ongoing		
City: Belleville, Illinois	M - Medium			C - Complete		
Date: 04/12/2024	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	**H**	M	L	**O**	C	D
2. Participate and support emergency training for citizen volunteers	**H**	M	L	**O**	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	**H**	M	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	**H**	M	L	**O**	C	D
2. Adopt current building codes	H	**M**	L	O	C	**D**
3. Integrate Hazard Mitigation Plan into local plans	**H**	M	L	O	C	**D**
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	**M**	L	**O**	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	**L**	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	**L**	O	C	**D**
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	**H**	M	L	**O**	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	**O**	C	D
7. Conduct risk assessments for tornado events	H	M	**L**	O	C	**D**
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	M	**L**	O	C	**D**
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	**M**	L	**O**	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Public Information and Awareness for Mitigating Any Natural Disasters
Problem being Mitigated:	Public Awareness
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.1.3
Name of Action or Project:	City Hazard Mitigation Webpage
Mitigation Category:	Public Information and Awareness for Mitigating Any Natural Disasters
Action or Project Description:	Create a webpage to educate the public on potential natural disasters and provide links to applicable agencies and mitigation strategies.
Estimated Cost:	$5,000
Benefits:	A centralized webpage that can educate the public while providing direct links to associated agencies and informative materials.
Plan for Implementation	
Responsible Organization/Department:	City of Belleville – Multiple Departments but administered through the Public Relations office.
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	6 months to initiate and ongoing updates
Potential/Existing Fund Sources:	General Revenue Funds
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Create and improve early warning systems
Action or Project	
Applicable Goal Statement:	Goal # 6
Action/Project Number:	4.2.6
Name of Action or Project:	Create and improve early warning systems for tornado events
Mitigation Category:	Tornado
Action or Project Description:	Install updated sirens and improve communication systems
Estimated Cost:	$100,000
Benefits:	Improve early warning for residents to seek shelter
Plan for Implementation	
Responsible Organization/Department:	St. Clair County Emergency Management Agency
Supporting Organization/Department:	City of Belleville
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	Grant Funding Sources
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Winter Storms
Problem being Mitigated:	Ensure all emergency equipment if operating
Action or Project	
Applicable Goal Statement:	Goal# 3
Action/Project Number:	4.4.2
Name of Action or Project:	Ensure all-weather capabilities for emergency equipment
Mitigation Category:	Winter Storms
Action or Project Description:	Obtain and maintain all emergency equipment
Estimated Cost:	$50,000
Benefits:	Properly operating emergency equipment
Plan for Implementation	
Responsible Organization/Department:	City of Belleville
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	1 year and ongoing
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat / Drought
Problem being Mitigated:	Enforce Burn Ordinances and water reuse
Action or Project	
Applicable Goal Statement:	Goal # 3
Action/Project Number:	4.5.3
Name of Action or Project:	Enforce burn ordinances and audit water loss and incentivize water reuse
Mitigation Category:	Extreme Heat / Drought
Action or Project Description:	Enforce Burn Ordinances and educate public on water reuse
Estimated Cost:	$0
Benefits:	Better safety for public, reduced water costs and water conservation
Plan for Implementation	
Responsible Organization/Department:	City of Belleville
Supporting Organization/Department:	Public Relations / Website Development
Action/Project Priority:	Low
Timeline for Completion:	1 year and ongoing
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorms
Problem being Mitigated:	Create and Improve Early Warning Systems
Action or Project	
Applicable Goal Statement:	Goal # 5
Action/Project Number:	4.6.5
Name of Action or Project:	Create and improve early warning systems for severe thunderstorm events
Mitigation Category:	Severe Thunderstorms
Action or Project Description:	Install updated sirens and improve communication systems
Estimated Cost:	$100,000
Benefits:	Improve early warning for resident to respond to extreme weather conditions
Plan for Implementation	
Responsible Organization/Department:	St. Clair County Emergency Management Agency
Supporting Organization/Department:	City of Belleville Fire Department
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	Grant Funding Services
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	City of Belleville
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	6 Months
Potential/Existing Fund Sources:	$1,000
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Flood
Problem being Mitigated:	Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures
Action or Project	
Applicable Goal Statement:	Goal # 8
Action/Project Number:	4.7.8
Name of Action or Project:	Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures
Mitigation Category:	Flood
Action or Project Description:	Update City GIS and Mapping System
Estimated Cost:	$0
Benefits:	Updated mapping system creating an inventory of floodplain and flood prone areas
Plan for Implementation	
Responsible Organization/Department:	City of Belleville
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	6 months
Potential/Existing Fund Sources:	General Revenue Funds
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Dam and Levee Failure
Problem being Mitigated:	Develop and implement dam/levee failure emergency plan
Action or Project	
Applicable Goal Statement:	Goal # 4
Action/Project Number:	4.8.4
Name of Action or Project:	Develop and implement dam/levee failure emergency action plans
Mitigation Category:	Dam / Levee Failure
Action or Project Description:	Evaluate risk and identify potential events and develop plans and operations to address the disaster
Estimated Cost:	$0
Benefits:	Better understanding of potential disasters and development of plans and procedures to address the disaster
Plan for Implementation	
Responsible Organization/Department:	City of Belleville
Supporting Organization/Department:	
Action/Project Priority:	Low
Timeline for Completion:	1-3 years
Potential/Existing Fund Sources:	General Revenue Funds
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Earthquakes
Problem being Mitigated:	Outdated Building Codes
Action or Project	
Applicable Goal Statement:	Goal # 2
Action/Project Number:	4.9.2
Name of Action or Project:	Review and update building codes
Mitigation Category:	Earthquakes
Action or Project Description:	Rewrite and adopt most recent building codes
Estimated Cost:	$1000
Benefits:	Updated building codes that address potential earthquake and seismic risk
Plan for Implementation	
Responsible Organization/Department:	City of Belleville
Supporting Organization/Department:	
Action/Project Priority:	Low
Timeline for Completion:	1-2 years
Potential/Existing Fund Sources:	General Revenue Funds
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	City of Belleville
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	Identify High Risk Ground Failures during the permitting process
Action or Project	
Applicable Goal Statement:	Goal # 1
Action/Project Number:	4.10.1
Name of Action or Project:	Evaluate and mitigate potential ground failure sites during the permitting process
Mitigation Category:	Ground Failure
Action or Project Description:	Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock
Estimated Cost:	$0
Benefits:	Protection of and potential elimination of future ground failure reducing property loss
Plan for Implementation	
Responsible Organization/Department:	City of Belleville
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	General Revenue Funds
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4/11/24

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Vera Banks President of the Board
City	Village of Brooklyn, Illinois
Contact name and email	Vera Banks vgbanks@brooklynil.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 9

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation 1,810,955			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Residential and commercial buildings			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code Adopted St. Clair Co. codes	Plumbing code	Mechanical code	Electric code	Fire code
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year 2024			
6. Has your city flooded in the past?	Yes	If yes, what years? 2019, 2020, 2021, 2022 & 2023	No		
7. What rivers/creeks border or run through your city?	Please list: Mississippi River				
8. Do you allow construction/development in your flood zone(s)?	Yes	No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 9			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years? 2019, 2020, 2021, 2022 & 2023	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population 100%	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No	If no, please describe why not and skip to question #17 Too expensive or unavailable
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many? 1	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population 100%	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many? 5	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population 100%	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No	What projects? New Buildings	Approximate cost? 6,000,000

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency operations plan Capital improvement plan		
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Police department 12 Fire department 17		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Declare emergency, order evacuations and declare curfew		
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name Warning sirens Police and fire dept. bull horn	If yes, how much does the system cost annually? 1,000	No
36. Does your city have emergency alert sirens?	Yes	If yes, how many? 2	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Social media, bill inserts, word of mouth			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Vera Banks	PRIORITY			ACTION		
Title(s): President of the Board	H - High			O - Ongoing		
City: Village of Brooklyn, Illinois	M - Medium			C - Complete		
Date:	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	M	L	O	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	M	L	O	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	L	O	C	D
2. Adopt current building codes	H	M	L	O	C	D
3. Integrate Hazard Mitigation Plan into local plans	H	M	L	O	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H	M	L	O	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	M	L	O	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Improving early warning systems
Action/Project Number:	4.3.6
Name of Action or Project:	Public safety
Mitigation Category:	Tornado
Action or Project Description:	Improving warning systems for tornado
Estimated Cost:	$100,000.00
Benefits:	Providing early warnings for the safety of our residents
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	3 – 5 years
Potential/Existing Fund Sources:	Future grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Create and support neighborhood initiatives for at risk populations.
Action/Project Number:	4.1.1
Name of Action or Project:	Public safety
Mitigation Category:	Winter Storm
Action or Project Description:	Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers
Estimated Cost:	$500,000.00
Benefits:	Establish relief centers and encourage the high risk population to use the centers
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	3 – 5 years
Potential/Existing Fund Sources:	Future grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat/Drought
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Create relief centers for at risk population
Action/Project Number:	4.5.1
Name of Action or Project:	Public safety
Mitigation Category:	Extreme Heat/Drought
Action or Project Description:	Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers
Estimated Cost:	$500,000.00
Benefits:	Establish relief center for at risk population
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	2 -4 years
Potential/Existing Fund Sources:	Future grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorms
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Creating and improving early warning systems
Action/Project Number:	4.6.5
Name of Action or Project:	Public safety
Mitigation Category:	Severe Thunderstorm
Action or Project Description:	Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response
Estimated Cost:	$100,00.00
Benefits:	Providing early warning systems for the safety of our residents
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	2 – 3 years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Flood
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Develop ordinances to require best management practices storm water infrastructure design
Action/Project Number:	4.7.12
Name of Action or Project:	Public safety
Mitigation Category:	Flood
Action or Project Description:	Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions
Estimated Cost:	$500,000.00
Benefits:	Reduce flood damage
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	2 -8 years
Potential/Existing Fund Sources:	Future grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Levee Failure
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Creating and improving early warning systems
Action/Project Number:	4.8.5
Name of Action or Project:	Public safety
Mitigation Category:	Levee Failure
Action or Project Description:	Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response
Estimated Cost:	$100,00.00
Benefits:	Improve early warning systems to provide raped communication and response
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	1 -2 years
Potential/Existing Fund Sources:	Grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Create and improve warning systems
Action/Project Number:	4.9.7
Name of Action or Project:	Earthquake
Mitigation Category:	Public safety
Action or Project Description:	Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
Estimated Cost:	$100,00.00
Benefits:	Providing early warning systems for the safety of our residents
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	1 – 3 years
Potential/Existing Fund Sources:	Future grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Brooklyn, Illinois
Risk / Vulnerability	
Hazard Addressed:	Ground failure
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Reviewing new construction permit applications
Action/Project Number:	4.10.1
Name of Action or Project:	Public safety
Mitigation Category:	Ground failure
Action or Project Description:	. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock
Estimated Cost:	$0
Benefits:	Eliminate construction in areas with undermined land
Plan for Implementation	
Responsible Organization/Department:	Village of Brooklyn, Illinois
Supporting Organization/Department:	Public Works
Action/Project Priority:	High
Timeline for Completion:	1 – 2 years
Potential/Existing Fund Sources:	Future grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:4/11/24

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	James W. Nold – Senior Project Manager, Hurst-Rosche, Inc Curtis McCall, Sr. – Mayor DeMario Helm – Deputy Mayor Francella Jackson – Chief of Staff LaMar D. Gentry – Economic Development Director Bob Darnell – Director of Code Enforcement
City	Cahokia Heights, IL
Contact name and email	jnold@hurst-rosche.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 20

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2022	Valuation: $351,306, 708			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Anticipate 5% growth in new housing, new commercial development, due to proximity to regional airport, potential new school, and hospital			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2021	Plumbing code 2021	Mechanical code 2021	Electric code 2021	Fire code 2021
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year In 2024, Cahokia Heights will adopted the 2021 International Building Code (IBC).			
6. Has your city flooded in the past?	Yes	If yes, what years? Every year. Most recent FEMA disaster declaration was July 2022			
7. What rivers/creeks border or run through your city?	Please list: Harding Ditch Canal No. 1 Shoenberger Creek Goose Lake Ditch Blue Water Ditch Prairie du Pont Creek Dead Creek Steiger Ditch WPA Ditch Edgemont Ditch North Ditch				
8. Do you allow construction/development in your flood zone(s)?	Yes		Explanation if needed: Most of the city is within the 100 year flood plain		

9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number:20	
10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years? Every year	
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	The City is located in a historically disadvantaged community, and an area of persistent poverty. It has been described in the past as "one of the poorest communities in the nation" in major media outlets. It is also home to residents who are predominantly Black or African American. The 2020 census lists the percentages of these residents at between 65% and 97%, depending on the census tract. Below is a map of historically disadvantaged areas according the to USDOT. The census tracts included in this area are 5023, 5025, 5026.02, 5026.03, and 5029.	

12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes		If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes: YES	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes: YES	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes: YES	No	Please list designee or agency (title and/or department, do not list person by name)
16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	Individuals must apply for a building permit and follow the strict guidelines per our flood management ordinance. The city requires individuals to submit a *'substantial improvement/substantial damage'* form for review prior to any work begins.		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	No		No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No

19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many? The entire riverfront levee system, the levees associated with the Harding Ditch, Canal No. 1, Blue Water Ditch, and Prairie du Pont Creek	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	100%	No
22. Are there any critical facilities behind the levees?	Yes	All of them. 20	
23. Is your city located downstream/below any high hazard potential dam?*	No	If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	We are not aware of any dams in our city. If one if found, we will work closely with the Illinois Dept. of Natural Resources.		
27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	We are not aware of any dams in our city. If one if found, we will work closely with downstream jurisdictions.		

28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	100%		
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes		What projects? IEPA Wastewater Grant City/County IGD Sewer repairs Ditch cleanout and drainage improvements	Budget? $10 MM $300k annually unknown
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No: NO
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes		What projects? 4676 FEMA Grant for new storm sewers, culverts, and ditch regrading	Approximate cost? $3.015MM
32. How will your city incorporate the St. Clair County Hazard Mitigation Plan into your existing plans?	.	Please list which plans (must include at least one plan) Emergency Operations Plan		

33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	We have 55 firefighters and 22 police officers		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Mayor Curtis McCall Sr.		
35. Does your city have an emergency notification system (e.g. Code Red)?	No	If yes, please provide name	If yes, how much does the system cost annually?	No
36. Does your city have emergency alert sirens?	Yes	If yes, how many? 6	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Web page Robocall Email Door hangers Signage Bill inserts and Text Message Blasting			
38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	None			
For flooding	Cahokia Heights and East St. Louis Flood Risk Analysis by USACE July 2023; Prairie du Pont and Judy's Branch Watershed Study by Heartlands Conservancy, December 2023			
For winter storms				

For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Flooding from surface water from rain events due to poor drainage infrastructure and existing topography

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Curtis McCall Sr	PRIORITY			ACTION		
Title(s): Mayor	H - High			O - Ongoing		
City: Cahokia Heights	M - Medium			C - Complete		
Date:	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	M	L	O	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	M	L	O	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	L	O	C	D
2. Adopt current building codes	H	M	L	O	C	D
3. Integrate Hazard Mitigation Plan into local plans	H	M	L	O	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H	M	L	O	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	M	L	O	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	**H**	**M**	**L**	**O**	**C**	**D**
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	**H**	**M**	**L**	**O**	**C**	**D**
2. Improve structural integrity of dams, using incentives where feasible	**H**	**M**	**L**	**O**	**C**	**D**
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	**H**	**M**	**L**	**O**	**C**	**D**
4. Develop and implement dam/levee failure emergency action plans	**H**	**M**	**L**	**O**	**C**	**D**
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**M**	**L**	**O**	**C**	**D**
6. Conduct risk assessments for dam / levee failures	**H**	**M**	**L**	**O**	**C**	**D**
4.9 - Earthquakes						
1. Improve early warning systems	**H**	**M**	**L**	**O**	**C**	**D**
2. Review and update building codes	**H**	**M**	**L**	**O**	**C**	**D**
3. Maintain integrated communications systems for rapid response	**H**	**M**	**L**	**O**	**C**	**D**
4. Promote student, individual, and household preparation	**H**	**M**	**L**	**O**	**C**	**D**
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	**H**	**M**	**L**	**O**	**C**	**D**
6. Adopt Seismic Construction Ordinance	**H**	**M**	**L**	**O**	**C**	**D**
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**M**	**L**	**O**	**C**	**D**
8. Integrate communications systems to provide rapid communication and response	**H**	**M**	**L**	**O**	**C**	**D**
9. Conduct risk assessments for earthquakes	**H**	**M**	**L**	**O**	**C**	**D**
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**	**M**	**L**	**O**	**C**	**D**
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	**H**	**M**	**L**	**O**	**C**	**D**
2. Map and assess vulnerable areas and stabilize when feasible	**H**	**M**	**L**	**O**	**C**	**D**
3. Maintain a list of buildings constructed over underground mines	**H**	**M**	**L**	**O**	**C**	**D**
4. Develop specially engineered resilient pipelines in areas subject to ground failures	**H**	**M**	**L**	**O**	**C**	**D**
5. Develop / improve mining regulations	**H**	**M**	**L**	**O**	**C**	**D**
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**M**	**L**	**O**	**C**	**D**
7. Conduct risk assessments for ground failures	**H**	**M**	**L**	**O**	**C**	**D**
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**	**M**	**L**	**O**	**C**	**D**

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of public information and awareness
Action or Project	
Applicable Goal Statement:	#1
Action/Project Number:	4.1
Name of Action or Project:	Public Information and Awareness Campaign
Mitigation Category:	Creating effective response to any natural disaster
Action or Project Description:	Increase communication with residents and Integrate St. Clair Multi-Jurisdiction Plan into City's plans
Estimated Cost:	$0
Benefits:	Public will be more informed
Plan for Implementation	
Responsible Organization/Department:	Administration
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Local funding
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	Administration
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	Federal, state and local
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Lack of coordinated response to a tornado
Action or Project	
Applicable Goal Statement:	#1
Action/Project Number:	4.3
Name of Action or Project:	Coordinated Response Team
Mitigation Category:	Creating effective response to any disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans
Estimated Cost:	Unknown
Benefits:	A well-coordinated plan will be developed
Plan for Implementation	
Responsible Organization/Department:	Code enforcement, street, park and environmental
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Fed, state and local
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	Winter storms
Problem being Mitigated:	Preparation for a winter storm
Action or Project	
Applicable Goal Statement:	#1 and #2
Action/Project Number:	4.4
Name of Action or Project:	Winter storm preparedness plan
Mitigation Category:	Creating effective response to any disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans
Estimated Cost:	Unknown
Benefits:	Reduce accidents, allow for quick emergency response, and save lives
Plan for Implementation	
Responsible Organization/Department:	Street and park department
Supporting Organization/Department:	Creating effective response to winter storms
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Fed, state and local
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat
Problem being Mitigated:	Lack of cooling facilities
Action or Project	
Applicable Goal Statement:	#1
Action/Project Number:	4.5
Name of Action or Project:	Cooling Facilities
Mitigation Category:	Integrate Hazard Mitigation Plan into local plans
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans
Estimated Cost:	Unknown
Benefits:	Save lives in extreme heat
Plan for Implementation	
Responsible Organization/Department:	Administration
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Local, State, and American Red Cross
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorms
Problem being Mitigated:	Lack of preparedness
Action or Project	
Applicable Goal Statement:	#2 and #2
Action/Project Number:	4.6
Name of Action or Project:	Severe Thunderstorm Action Plan
Mitigation Category:	Create effective response to severe thunderstorms
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans
Estimated Cost:	Unknown
Benefits:	Preserve property and save lives
Plan for Implementation	
Responsible Organization/Department:	All city departments
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Fed, state and local
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Code Enforcement, Street Department, and Water and Sewer
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	Federal, state, and local
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	#2 and #3
Action/Project Number:	4.7, 2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	Unknown
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Code Enforcement, Street Department, and Water and Sewer
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Fed, state, and local
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	City of Cahokia Heights
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4.12.24

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Mayor G.W. Scott Sr. Public Works Superintendent Brian Rader Treasurer Tamara Ammann Zoning Administrator Phil Little Village Attorney Doug Stewart
City	Village of Caseyville, Illinois
Contact name and email	Doug Stewart – Doug@Stewartlg.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number: 18 4 Schools; 2 Railroads (E/W); 2 Interstates (I-64; I-255); 2 State Highways (IL – 157, 159); 2 Nursing Homes; 1 65+ Independent Living Community; 1 Drug/Alcohol Treatment Center; 3 bridges; $250m Tyson Manufacturing Facility

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation $74,299,594			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) 2024 Valuation Growth Expected: Increase 10-15%; 42 new homes constructed ($10.5m-$19.32m) (2024); Completion of $250m expansion of Tyson Plant (2024); Construction of New Memory Care Facility (2025); Construction of New Mixed Use/Industrial complex (2025).			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2012	Plumbing code 2012	Mechanical code 2012	Electric code 2011	Fire code 2012
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Anticipate adopting latest building codes by 2025.			
6. Has your city flooded in the past?	Yes	If yes, what years? 1993; 1995; 2008; 2015; 2018; 2022, 2023	No		
7. What rivers/creeks border or run through your city?	Please list: Canteen Creek (North); Little Canteen Creek (a.ka. Hardin Ditch)				
8. Do you allow construction/development in your flood zone(s)?	Yes Construction allowed only if project is completed up to the appropriate 100/yr or 500/yr guidelines.	No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 12			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years? 1993; 1995; 2018; 2022; 2023	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population 30%	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes XXXXXXXXXX	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes XXXXXXXX	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes XXXXXXX	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes XXXXXXXX	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	Owners & Occupants receive notice to meet "substantial improvement/substantial damage provisions upon village becoming aware of triggering event (move in/out, utility account change, occupancy permit, building permit, etc.). Also, evaluation completed with each new building permit application. Village maintains working list of abandoned/severely damaged structures.		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes xxxxxxxxxx	If yes, how many? 2-3 mine shafts; 3 areas of potential ground failure	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes XXXXXXXXX	If yes, how many? 5	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population 40%		No
20. Does your city sit behind any levees?	Yes 2	If yes, how many? 2	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes XXXXXXXXXX	If yes, please list percent of total city population 25%	No
22. Are there any critical facilities behind the levees?	Yes XXXXXX	If yes, how many? 6	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 XXXXXXXXXX
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No

26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	N/A			
27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	N/A			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes XXXXXXXX	If yes, please list percent of total population 10%	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes XXXXXX	No	What projects? Multiple Levee Repairs; Updated Siren System; Updated Notification System	Budget? $700,000
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No NO
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes XXXXXXX	No	What projects? Levee Reconstruction	Approximate cost? $15m-18m

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Updating capital improvement plan to include mitigation efforts. Amending Emergency Operation Plans to include disaster mitigation. Adoption of Master Development Plan consistent with Mitigation Plan.		
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	18- Firefighters 18-police officers Outsourced dispatch (County ETSB) and EMS services.		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Previously adopted Emergency Management Plan Ability to declare emergency ability to order curfew/evacuation/etc. Village-level emergency management agency with authority to coordinate with county/state/federal emergency agencies		
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes XXXXXX	If yes, please provide name Use Code Red System; Also use water account notification system; use social media	If yes, how much does the system cost annually? $5,000	No
36. Does your city have emergency alert sirens?	Yes XXXX	If yes, how many? 3	No	

37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Village Webpage; Code Red; Utility Account (water bills; email; texts) notifications; social media (facebook)
38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	Redesign and redevelopment of levee systems
For winter storms	Increased notification systems through updated communication streams (code red; social media) and updated siren system
For heat waves/drought	Community center turned into a cooling center
For tornadoes	Increased notification systems through updated communication streams (code red; social media) and updated siren system
For earthquakes	Increased notification systems through updated communication streams (code red; social media) and updated siren system
For ground failure	Increased notification systems through updated communication streams (code red; social media) and updated siren system
For dam/levee failure	Increased notification systems through updated communication streams (code red; social media) and updated siren system
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Flooding

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Mayor G.W. Scott Sr., Superintendent Brian Rader, Administrator Phil Little, Village Attorney Doug Stewart	PRIORITY	ACTION
Title(s):	H - High	O - Ongoing
City: Village of Caseyville	M - Medium	C - Complete
Date: April 10, 2024	L - Low	D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	**M**	L	**O**	C	D
2. Participate and support emergency training for citizen volunteers	H	**M**	L	**O**	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	**M**	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	**H**	M	L	**O**	C	D
2. Adopt current building codes	H	**M**	L	O	C	**D**
3. Integrate Hazard Mitigation Plan into local plans	**H**	M	L	**O**	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	**H**	M	L	**O**	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	**M**	L	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	**M**	L	**O**	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	**M**	L	O	**C**	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	O	**C**	D
7. Conduct risk assessments for tornado events	H	**M**	L	O	**C**	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	**H**	M	L	**O**	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	**M**	L	O	**C**	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Public information and awareness
Problem being Mitigated:	Awareness & Education
Action or Project	
Applicable Goal Statement:	Increasing awareness and educating public on responses
Action/Project Number:	4.1.3
Name of Action or Project:	Awareness Mitigation
Mitigation Category:	Public Information and Education
Action or Project Description:	Develop and implement marketing and outreach efforts to educate residents on notification systems; hold events with volunteers contacting elderly and high risk population to educate them on efforts and help sign up for add'l notification system
Estimated Cost:	$30,000
Benefits:	Increased awareness of public to natural disaster will lessen risk for loss of life and injury.
Plan for Implementation	
Responsible Organization/Department:	Administrative Department
Supporting Organization/Department:	Fire and Police Departments
Action/Project Priority:	Achieve 50% of residents signed up for code red or social media pages
Timeline for Completion:	3-6months
Potential/Existing Fund Sources:	Unknown
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Risk Assessment
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	Complete risk assessment for tornado event
Action/Project Number:	4.3.7
Name of Action or Project:	Village Risk Assessment
Mitigation Category:	Preparation
Action or Project Description:	Conduct risk assessment of village vulnerabilities. Inspect critical infrastructure for weaknesses
Estimated Cost:	$50,000
Benefits:	Focus preparedness efforts; identify high risk areas; identify special emergency equipment needed in event of catastrophic storm; plan rescue efforts
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	Fire/Police
Action/Project Priority:	Medium
Timeline for Completion:	3-6 months
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Preparation
Problem being Mitigated:	Acquire necessary equipment
Action or Project	
Applicable Goal Statement:	Acquisition of necessary equipment for major storm event
Action/Project Number:	4.4.3
Name of Action or Project:	Winter Storm Prep
Mitigation Category:	Preparation
Action or Project Description:	Acquire updated equipment necessary to clear roadways; Acquire necessary equipment to prepare water system for hard freezes due to hard freezes lasting longer
Estimated Cost:	$500,000
Benefits:	Speed up recovery efforts; minimize impact to water system by significant freeze event
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Preparation
Problem being Mitigated:	Water Loss
Action or Project	
Applicable Goal Statement:	Repair, Retrofit and maintain water supply system to minimize water loss
Action/Project Number:	4.5.4
Name of Action or Project:	Retrofit water system
Mitigation Category:	Preparation
Action or Project Description:	Retrofit current water system to minimize water loss during drought.
Estimated Cost:	$1,000,000
Benefits:	Decrease impact to dated water system during major drought; decrease costs incurred from lost water
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	3-5 years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Preparation
Problem being Mitigated:	Storm water drainage
Action or Project	
Applicable Goal Statement:	Clean out storm drainage systems to clear debris and blockages
Action/Project Number:	4.6.1
Name of Action or Project:	Storm Drain Cleanout
Mitigation Category:	Preparation
Action or Project Description:	Clean out storm drain and drainage systems to increase flow rates and decrease risk associated with blockages
Estimated Cost:	$200,000
Benefits:	Increases drainage; decreases risk of blockage during major event
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	3 months
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Preparation
Problem being Mitigated:	Removal of Public Structures from flood zones
Action or Project	
Applicable Goal Statement:	Relocation of Public Works Garage from Floodway
Action/Project Number:	4.7.5
Name of Action or Project:	Relocation of Public Works Garage
Mitigation Category:	Prep
Action or Project Description:	Public Works Garage and all Equipment located in high risk area. Will need to acquire new location and construct or retrofit existing building for use as public works garage
Estimated Cost:	$500,000
Benefits:	Decreases risk to village equipment and staff that will be used during an emergency event as all equipment located in floodway
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Conduct risk assessment for levee failures
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	Conduct risk Assessment for levee failures
Action/Project Number:	4.8.6
Name of Action or Project:	Levee Risk Assessment
Mitigation Category:	Preparation
Action or Project Description:	Assess current levee system for compliance with appropriate standards; create action item list; identify vulnarabilities
Estimated Cost:	$350,000
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	6 months
Potential/Existing Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	Preparation
Action or Project	
Applicable Goal Statement:	Review and Adopt latest building codes
Action/Project Number:	4.9.2
Name of Action or Project:	Building Code Update
Mitigation Category:	Prepare
Action or Project Description:	Review and update appropriate building codes to better withstand earthquakes
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Zoning
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	3-6 months
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Ordinance adoption
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Caseyville
Risk / Vulnerability	
Hazard Addressed:	Risk Assessment
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	Complete risk assessment for ground failures
Action/Project Number:	4.10.7
Name of Action or Project:	Ground Failure Risk Assessment
Mitigation Category:	Preparation
Action or Project Description:	Complete Risk assessment for ground failure, with special focus on mines located along the bluff.
Estimated Cost:	$250,000
Benefits:	Assess risk to local residents; assess risk to 157 and I-64 for blockages or failures associate with ground failure
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	6 months
Potential/Existing Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:4/12/24

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Dawn Keys – Village Trustee
City	
Contact name and email	

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 13

2. Please provide your city's property tax valuation/assessment for the most current year.	Year	Valuation 72,400,982			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.)			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code	Mechanical code	Electric code	Fire code
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year			
6. Has your city flooded in the past?	Yes	If yes, what years?	No		
7. What rivers/creeks border or run through your city?	Please list:				
8. Do you allow construction/development in your flood zone(s)?	Yes	No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number:			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan)		
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers			
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.			
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name	If yes, how much does the system cost annually?	No
36. Does your city have emergency alert sirens?	Yes	If yes, how many?	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list:			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Dawn Keys	PRIORITY			ACTION		
Title(s):Trustee	H - High			O - Ongoing		
City:Dupo	M - Medium			C - Complete		
Date:4/12/24	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	[redacted]	M	L	[redacted]	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	M	L	O	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	L	O	C	D
2. Adopt current building codes	H	M	L	O	C	D
3. Integrate Hazard Mitigation Plan into local plans	[redacted]	M	L	[redacted]	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	[redacted]	M	L	[redacted]	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	[redacted]	M	L	O	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	M	L	O	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	[redacted]	M	L	[redacted]	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	[redacted]	M	L	[redacted]	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	[redacted]	M	L	[redacted]	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	[redacted]	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	[redacted]	M	L	[redacted]	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	■	M	L	■	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	■	M	L	■	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	■	M	L	■	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Storm drains/culverts
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	Ongoing 1
Name of Action or Project:	Storm drain flooding
Mitigation Category:	1
Action or Project Description:	To be determined
Estimated Cost:	To be determined
Benefits:	Lower the risk of flooding/storm drain backup for residents and businesses
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	St.Clair County EMA
Action/Project Priority:	Top property
Timeline for Completion:	Undetermined
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Future mitigation grant thru St.Clair County
Progress Report	
Action Status:	On going
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Tornado safety
Action or Project	
Applicable Goal Statement:	To improve safety awareness
Action/Project Number:	2
Name of Action or Project:	Tornado Safety
Mitigation Category:	Priority
Action or Project Description:	To be determined
Estimated Cost:	To be determined
Benefits:	Safety cautions for citizens
Plan for Implementation	
Responsible Organization/Department:	Public safety for the Village of Dupo
Supporting Organization/Department:	St.Clair County EMS
Action/Project Priority:	2
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future Mitigation Grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	Snow/Ice Storms
Action or Project	
Applicable Goal Statement:	Better back up generator,equipment to keep snow and ice removed.
Action/Project Number:	3
Name of Action or Project:	Winter storm
Mitigation Category:	3
Action or Project Description:	To be determined
Estimated Cost:	To be determined
Benefits:	Safe road and prevent ice build up.
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	ST.Clair County EMS
Action/Project Priority:	Moderate
Timeline for Completion:	Unknown
Potential/Existing Fund Sources:	Future Miidigation grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	VILLAGE OF Dupo
Risk / Vulnerability	
Hazard Addressed:	Heat/Draught
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	Prepare for elderly assistance / care for water breaks
Action/Project Number:	4
Name of Action or Project:	Heat
Mitigation Category:	4
Action or Project Description:	To be determined
Estimated Cost:	To be determined
Benefits:	To prevent water breaks from drought/ heat
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	ST.CLAIR COUNTY EMS
Action/Project Priority:	4
Timeline for Completion:	Unknown
Potential/Existing Fund Sources:	Future Midigation Grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	VILLAGE OF DUPO
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorm
Problem being Mitigated:	5
Action or Project	
Applicable Goal Statement:	Future benefits for the community
Action/Project Number:	5
Name of Action or Project:	Thunderstorm
Mitigation Category:	
Action or Project Description:	Priority
Estimated Cost:	To be determined
Benefits:	Community wide benefit
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	ST.CLAIR COUNTY EMS
Action/Project Priority:	Priority
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future Mitigation Grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	ST.Clair County EMS
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future Mitigation Grant
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	To be determined
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	To be determined
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	ST.CLAIR COUNTY EMS
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Future Mitigation Grant
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	To be determined
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	St.Clair County EMS
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future mitigation grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	To be determined
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	St.Clair County EMS
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future Mitigation grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	To be determined
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	St.Clair County EMS
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Future Mitigation Grant
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	To be determined
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	St.Clair County EMS
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future Mitigation grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	To be determined
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future Mitigation Grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	To be determined
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	Future Mitigation Grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	To be determined
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	ST.CLAIR COUNTY EMS
Action/Project Priority:	
Timeline for Completion:	To be determined
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Future Mitigation Grant
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	Village of Dupo
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	To be determined
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Village of Dupo
Supporting Organization/Department:	St.Clair County EMS
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	Future Mitigation Grant
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: Aoril 5,

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Jon A. Kremer, PE; Village Engineer
City	Village of East Carondelet
Contact name and email	Jon A. Kremer jkremer@gocos.net

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 5 Village Hall Village Community Center Fire Department (Prairie duPont) housed in EC Post Office Village roadways

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2022	Valuation $ 2,894,211			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Expectation of 5% residential growth and residential focused commercial			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code 2012	Mechanical code 2012	Electric code 2012	Fire code 2012
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	2021 international Building Code (IBC).			
6. Has your city flooded in the past?	**Yes**	If yes, what years? Minor flooding 1993, 1995, 2019 and 2022	No		
7. What rivers/creeks border or run through your city?	Please list: Village is separated by a levee from the Mississippi River on the west Fish Lake tributaries through the Village, draining north to south				
8. Do you allow construction/development in your flood zone(s)?	Yes The majority of the Village is located in a zone of minor flooding that does not preclude development	No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number:5 Village roadways Village Hall Village Community Center Fire Department Post Office			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No We have no information that any structure was flooded
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No The Village does not experience flash flooding
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes The Village is participating in NFIP	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	**Yes**	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	**Yes**	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	**Yes** Village Engineer	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	The majority of the flood related damage in the Village occurs to the street pavements and drainways. Pavements with oil mat surfacing are being replaced with pavements featuring aggregate subbase, geotextile fabric and hot-mix asphalt pavement. Drainways are re-graded to remove accumulated soil settlement and debris that restrict open channel flow.		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	**No,** if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	**Yes** Mississippi River	If yes, how many?	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	**Yes** The entire Village is behind (east of) the levee	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	**Yes**	If yes, how many? All of them	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	**No,** if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	**Yes**	If yes, please list percent of total population: **100%**	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	**Yes**	No	What projects? Pavement replacements to 12th Street, 10th Street and 14th Street	Budget? Approximately $80,000 per street
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects Pavement replacements to 12th Street, 10th Street and 14th Street have been funded by St. Clair County CDBG			No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	**Yes**	No	What projects? Comprehensive Storm Water Management Program	Approximate cost? $ 500,000

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Capital Improvement Plan for street and storm drainage improvements for Illinois Avenue, East Wisconsin Avenue, Missouri Avenue, Railroad Drive (S 8th Street) The Community Center is classified for emergency operations. An operation plan will be developed. The stormwater master plan will address improvements to collection of stormwater and conveyance to the pump stations, upgrading of the pump stations and repairs to the pump houses that pump the water over the levee.		
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Part time Fire Fighters: 20 Part Time Police Officers: 9 Stormwater Pump Operators: 2		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	The Village has the ability to declare an emergency, order evacuation, to established curfews and to control travel on Village streets during localized flooding events.		
35. Does your city have an emergency notification system (e.g. Code Red)?	**Yes**	If yes, please provide name Code Red	If yes, how much does the system cost annually? Free through County	No
36. Does your city have emergency alert sirens?	**Yes**	If yes, how many? **One**	No	

37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Non-Emergency = Facebook, web page and Code Red
38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	The most frequent natural disaster causing the most significant impact is the minor flooding of the streets and the effect of long term (more than two days) of water and saturated ground conditions that weaken the pavement base and sub-base. Rain runoff from the farmed areas north of the Village drain through the Village between 9th and 15th Street. Water ponds and water borne silt settles in the Village ditches thereby creating hydraulic capacity reductions.

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Jon A. Kremer	PRIORITY			ACTION		
Title(s): Village Engineer	H - High			O - Ongoing		
City: Village of East Carondelet	M - Medium			C - Complete		
Date: April 5, 2024	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	**H**	M	L	**O**	C	D
2. Participate and support emergency training for citizen volunteers	**H**	M	L	**O**	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	**H**	M	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	**H**	M	L	**O**	C	D
2. Adopt current building codes	**H**	M	L	**O**	C	D
3. Integrate Hazard Mitigation Plan into local plans	**H**	M	L	**O**	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	**H**	M	L	**O**	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	**H**	M	L	**O**	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	**H**	M	L	**O**	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	**H**	M	L	O	**C**	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	**O**	C	D
7. Conduct risk assessments for tornado events	**H**	M	L	**O**	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	**H**	M	L	**O**	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	**H**	M	L	**O**	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	VILLAGE OF EAST CARONDELET
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of awareness
Risk / Vulnerability	
Applicable Goal Statement:	1, 3
Action/Project Number:	4.1-A 1-3
Name of Action or Project:	Training and information
Mitigation Category:	Education and training
Action or Project Description:	Provide emergency training for citizen volunteers, educate staff about training and use of alternate media
Estimated Cost:	$0
Benefits:	Informed and prepared public
Plan for Implementation	
Responsible Organization/Department:	VILLAGE OF EAST CARONDELET
Supporting Organization/Department:	VILLAGE OF EAST CARONDELET
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	General Municipal Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Loss of life and Property Damage
Action or Project	
Applicable Goal Statement:	Goals 1,2 & 3
Action/Project Number:	4.3.1, 4.5.1; and 4.9.5
Name of Action or Project:	Construct a tornado resistance safe building
Mitigation Category:	Create safe building
Action or Project Description:	Construction safe building for tornado, extreme heat and earthquake events
Estimated Cost:	$ 350,000
Benefits:	Provide a safe place for residents during a tornados, extreme heat and earthquake events
Plan for Implementation	
Responsible Organization/Department:	VILLAGE OF EAST CARONDELET
Supporting Organization/Department:	Prairie du Pont Fire District
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Grant funds
Local Planning Mechanisms to be Used in Implementation, if any:	VILLAGE OF EAST CARONDELET
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Winter storm and power outage
Problem being Mitigated:	Loss of life or personal property
Action or Project	
Applicable Goal Statement:	1, 3
Action/Project Number:	4.4.2
Name of Action or Project:	Provide warming center with automatic electric generator
Mitigation Category:	Warming center
Action or Project Description:	Convert community center to a warming station, provide cots and movable curtain walls.
Estimated Cost:	$70,000
Benefits:	Provision of fully equipped warming center
Plan for Implementation	
Responsible Organization/Department:	VILLAGE OF EAST CARONDELET
Supporting Organization/Department:	VILLAGE OF EAST CARONDELET, NEIGHBORHOOD WATCH
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	Municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Village of East Carondelet
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat
Problem being Mitigated:	Overheating of elderly, and at risk population
Action or Project	
Applicable Goal Statement:	1,3
Action/Project Number:	4.5
Name of Action or Project:	Create cooling center in the Community Center building to provide cooling and drinking water/food to sustain people
Mitigation Category:	Provide cooling
Action or Project Description:	Provide cooling area in the center with cots/beds; curtains, shower, hydration and food in a temperature controlled environment
Estimated Cost:	$ 5,000 for non-perishable items
Benefits:	Secure cooling station
Plan for Implementation	
Responsible Organization/Department:	VILLAGE OF EAST CARONDELET
Supporting Organization/Department:	VILLAGE OF EAST CARONDELET, Neighborhood Watch
Action/Project Priority:	High
Timeline for Completion:	TBD
Potential/Existing Fund Sources:	Neighborhood Watch
Local Planning Mechanisms to be Used in Implementation, if any:	Village Board of Trustees to establish resolution of support
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Severe thunderstorms can cause loss of life, injuries and severe damage to property
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	1,3
Action/Project Number:	4.6. A - 6
Name of Action or Project:	Acquire necessary equipment, pumps, generators, chainsaws, axes and hoses
Mitigation Category:	Removal of dangerous buildings and downed trees after the thunderstorm
Action or Project Description:	Removal of debris and damage
Estimated Cost:	$ 2,000
Benefits:	Remove hazardous conditions returning structures to safe condition
Plan for Implementation	
Responsible Organization/Department:	VILLAGE OF EAST CARONDELET
Supporting Organization/Department:	VILLAGE OF EAST CARONDELET
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	Municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Village Board of Trustees to establish resolution of support
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Village of East Carondelet
Supporting Organization/Department:	Village of East Carondelet
Action/Project Priority:	High
Timeline for Completion:	Immediate
Potential/Existing Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Collapse of Mississippi River levee, sudden inundation
Problem being Mitigated:	Lack of an evacuation plan
Action or Project	
Applicable Goal Statement:	1 and 3
Action/Project Number:	4.8 A-4 and 5
Name of Action or Project:	Develop and evacuation plan and warning system
Mitigation Category:	Dissemination of information to public
Action or Project Description:	Alarms and notifications
Estimated Cost:	$ 20,000
Benefits:	Protecting lives by implementing an evacuation plan and method of mass information announcement
Plan for Implementation	
Responsible Organization/Department:	Village of East Carondelet
Supporting Organization/Department:	Praire du Pont Fire District and Levee District
Action/Project Priority:	High
Timeline for Completion:	Immediate
Potential/Existing Fund Sources:	Municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Code Red, police and fire loud speaker announcements, siren
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Severe and widespread damage to structures
Action or Project	
Applicable Goal Statement:	1, 2 and 3
Action/Project Number:	4.9; A-2,6, 8 and 9
Name of Action or Project:	Adopt seismic ordinance
Mitigation Category:	Provide warning to residents, provide seismic safe house
Action or Project Description:	Provide early warning and announce safe house ocation Provide safe house
Estimated Cost:	See Tornado Risk $ 350,000
Benefits:	Protection of life
Plan for Implementation	
Responsible Organization/Department:	Village of East Carondelet
Supporting Organization/Department:	Village of East Carondelet, Prairie du Pont Fire District
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Grant funds
Local Planning Mechanisms to be Used in Implementation, if any:	Adopt seismic building code ordinance. Code Red, police and fire loud speakers, siren
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	Ground failure is a result of Karst topography, miming subsidence or sinkholes. The Village is **not** located in such an area.
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	VILLAGE OF EAST CARONDELET
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4-7-2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Charles Powell- Mayor Robert Betts- City Manager Jason Blackmon- ESDA Matt Missey- City Engineer
City	East Saint Louis, IL
Contact name and email	Robert Betts: rbetts@cesl.us

1. *How many critical facilities are in your city?* Critical facilities = schools, hospitals, government buildings, railroads, highways — Number - 26

2. Please provide your city's property tax valuation/assessment for the most current year.	Year	Valuation				
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) JJK Campus Housing Development Pop Miles Aquatic Center				
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code	Mechanical code	Electric code	Fire code	
		2021	2021	2021	2021	
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year 2024				
6. Has your city flooded in the past?	(Yes)	If yes, what years? 1993,1995,1996, 2022	No			
7. What rivers/creeks border or run through your city?	Please list: Harding Ditch, WPA Ditch, Mississippi river, Canal Schoenberger Creek					
8. Do you allow construction/development in your flood zone(s)?	Yes	(No)	Explanation if needed:			
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 6				

Final Settlement Sheet
ST. CLAIR County
TFE01 - EAST ST LOUIS TIF #1

12/13/2023 9:34

Current Year Taxes Due

	Original Amount Due	$4,160,663.92
+	Supplements	$6,471.02
-	Cancellations	$25,258.30
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$4,141,876.64**
+	Prior Year Real EstateTax	$6,095.46
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$4,147,972.10**

Current Year Taxes Paid

+	Real Estate	$3,940,946.22
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	$6,095.46
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$3,947,041.68**
+	Hold Back	$0.00
+	County Trustee	$200,267.74
+	Forfeited Tax	$662.68
	Total	**$4,147,972.10**

Interest Distribution

County Interest	$14,683.94
Township Interest	$0.00
Total Interest	$14,683.94

Distribution Summary

Tax Distribution Date	Amount
07/07/2023	$133,490.13
07/21/2023	$485,069.29
08/11/2023	$477,452.19
08/25/2023	$494,155.01
09/15/2023	$512,377.95
09/29/2023	$471,494.50
10/20/2023	$474,146.30
12/15/2023	$898,856.31
Totals: 8 Distributions	**$3,947,041.68**

Interest Distribution Date	Amount
12/15/2023	$14,683.94
Totals: 1 Distributions	**$14,683.94**
Grand Totals: 9 Distributions	**$3,961,725.62**

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
003 - BONDS AND INTEREST	$3,947,041.68	$3,048,185.37	$898,856.31	$0.00	$14,683.94	$0.00
Totals	**$3,947,041.68**	**$3,048,185.37**	**$898,856.31**	**$0.00**	**$14,683.94**	**$0.00**

(C)2023 DEVNET Incorporated

Final Settlement Sheet

ST. CLAIR County

TFE02 - EAST ST LOUIS TIF #2

12/13/2023 9:34

Current Year Taxes Due

	Original Amount Due	$0.00
+	Supplements	$0.00
-	Cancellations	$0.00
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$0.00**
+	Prior Year Real EstateTax	$0.00
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$0.00**

Current Year Taxes Paid

+	Real Estate	$0.00
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	$0.00
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$0.00**
+	Hold Back	$0.00
+	County Trustee	$0.00
+	Forfeited Tax	$0.00
	Total	**$0.00**

Interest Distribution

County Interest	$0.00
Township Interest	$0.00
Total Interest	$0.00

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
003 - BONDS AND INTEREST	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Totals	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

(C)2023 DEVNET Incorporated

Final Settlement Sheet
ST. CLAIR County
TFE3A - E ST LOUIS TIF 3-A

Current Year Taxes Due

	Original Amount Due	$1,954,467.80
+	Supplements	$8,563.10
-	Cancellations	$57,013.51
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$1,906,017.39**
+	Prior Year Real EstateTax	($21,805.12)
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$1,884,212.27**

Current Year Taxes Paid

+	Real Estate	$1,610,219.91
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	($21,805.12)
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$1,588,414.79**
+	Hold Back	$0.00
+	County Trustee	$295,752.52
+	Forfeited Tax	$44.96
	Total	**$1,884,212.27**

Interest Distribution

County Interest	$5,909.28
Township Interest	$0.00
Total Interest	$5,909.28

Distribution Summary

Tax Distribution Date	Amount
07/07/2023	$157,797.87
07/21/2023	$147,674.65
08/11/2023	$154,114.30
08/25/2023	$150,114.41
09/15/2023	$156,703.75
09/29/2023	$147,642.32
10/20/2023	$176,315.80
12/15/2023	$498,051.69
Totals: 8 Distributions	**$1,588,414.79**

Interest Distribution Date	Amount
12/15/2023	$5,909.28
Totals: 1 Distributions	**$5,909.28**
Grand Totals: 9 Distributions	**$1,594,324.07**

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
003 - BONDS AND INTEREST	$1,588,414.79	$1,090,363.10	$498,051.69	$0.00	$5,909.28	$0.00
Totals	**$1,588,414.79**	**$1,090,363.10**	**$498,051.69**	**$0.00**	**$5,909.28**	**$0.00**

Miscellaneous Adjustment Detail

Year	Source	Account Type	Amount	Adjustment Description
2022	RE - Real Estate	Payment In Lieu of Tax	$0.00	SCC HOUSING AUTHORITY by TBA
2022	RE - Real Estate	Payment In Lieu of Tax	$0.00	EAST ST LOUIS PILOT by TBA
Totals 2 entries			**$0.00**	

(C)2023 DEVNET Incorporated

Final Settlement Sheet

ST. CLAIR County

TFE3B - E ST LOUIS TIF 3-B

Current Year Taxes Due

	Original Amount Due	$5,611.78
+	Supplements	$0.00
-	Cancellations	$0.00
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$5,611.78**
+	Prior Year Real EstateTax	$0.00
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$5,611.78**

Current Year Taxes Paid

+	Real Estate	$5,611.78
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	$0.00
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$5,611.78**
+	Hold Back	$0.00
+	County Trustee	$0.00
+	Forfeited Tax	$0.00
	Total	**$5,611.78**

Interest Distribution

County Interest	$20.88
Township Interest	$0.00
Total Interest	$20.88

Distribution Summary

Tax Distribution Date	Amount
07/07/2023	$1,044.01
07/21/2023	$635.90
08/11/2023	$534.15
08/25/2023	$455.81
09/15/2023	$853.15
09/29/2023	$710.18
10/20/2023	$647.93
12/15/2023	$730.65
Totals: 8 Distributions	**$5,611.78**

Interest Distribution Date	Amount
12/15/2023	$20.88
Totals: 1 Distributions	**$20.88**
Grand Totals: 9 Distributions	**$5,632.66**

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
003 - BONDS AND INTEREST	$5,611.78	$4,881.13	$730.65	$0.00	$20.88	$0.00
Totals	**$5,611.78**	**$4,881.13**	**$730.65**	**$0.00**	**$20.88**	**$0.00**

(C)2023 DEVNET Incorporated

Final Settlement Sheet
ST. CLAIR County
TFE3C - E ST LOUIS TIF 3-C

12/13/2023 9:34

Current Year Taxes Due

	Original Amount Due	$115,367.08
+	Supplements	$0.00
-	Cancellations	$4,458.76
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$110,908.32**
+	Prior Year Real EstateTax	$0.00
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$110,908.32**

Current Year Taxes Paid

+	Real Estate	$110,808.72
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	$0.00
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$110,808.72**
+	Hold Back	$0.00
+	County Trustee	$99.60
+	Forfeited Tax	$0.00
	Total	**$110,908.32**

Interest Distribution

County Interest	$412.23
Township Interest	$0.00
Total Interest	$412.23

Distribution Summary

Tax Distribution Date	Amount
07/07/2023	$12,068.65
07/21/2023	$11,651.41
08/11/2023	$11,627.76
08/25/2023	$11,439.74
09/15/2023	$10,741.62
09/29/2023	$12,031.68
10/20/2023	$12,475.52
12/15/2023	$28,772.34
Totals: 8 Distributions	**$110,808.72**

Interest Distribution Date	Amount
12/15/2023	$412.23
Totals: 1 Distributions	**$412.23**
Grand Totals: 9 Distributions	**$111,220.95**

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
003 - BONDS AND INTEREST	$110,808.72	$82,036.38	$28,772.34	$0.00	$412.23	$0.00
Totals	**$110,808.72**	**$82,036.38**	**$28,772.34**	**$0.00**	**$412.23**	**$0.00**

(C)2023 DEVNET Incorporated

Final Settlement Sheet
ST. CLAIR County
TFE3D - E ST LOUIS TIF 3-D

12/13/2023 9:34

Current Year Taxes Due

	Original Amount Due	$0.00
+	Supplements	$0.00
-	Cancellations	$0.00
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$0.00**
+	Prior Year Real EstateTax	$0.00
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$0.00**

Current Year Taxes Paid

+	Real Estate	$0.00
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	$0.00
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$0.00**
+	Hold Back	$0.00
+	County Trustee	$0.00
+	Forfeited Tax	$0.00
	Total	**$0.00**

Interest Distribution

County Interest	$0.00
Township Interest	$0.00
Total Interest	$0.00

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
001 - CORPORATE	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Totals	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

(C)2023 DEVNET Incorporated

Final Settlement Sheet
ST. CLAIR County
TFE3E - E ST LOUIS TIF 3-E

Current Year Taxes Due

	Original Amount Due	$0.00
+	Supplements	$0.00
-	Cancellations	$0.00
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$0.00**
+	Prior Year Real EstateTax	$0.00
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$0.00**

Current Year Taxes Paid

+	Real Estate	$0.00
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	$0.00
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$0.00**
+	Hold Back	$0.00
+	County Trustee	$0.00
+	Forfeited Tax	$0.00
	Total	**$0.00**

Interest Distribution

County Interest	$0.00
Township Interest	$0.00
Total Interest	$0.00

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
003 - BONDS AND INTEREST	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Totals	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

(C)2023 DEVNET Incorporated

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years? 1993, 1995, 1996, 2022	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population 15%	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not City Council Approval
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	N/A		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	(Yes)	If yes, how many? 30	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	(No)
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population 3%		No
20. Does your city sit behind any levees?	(Yes)	If yes, how many? 2	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	(Yes)	If yes, please list percent of total city population 10%	No
22. Are there any critical facilities behind the levees?	(Yes)	If yes, how many? 21	No
23. Is your city located downstream/below any high hazard potential dam?*	(Yes)	If yes, how many? 19	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	(Yes)	No	If yes, how many? 21
25. Does your city have at-risk populations behind levees?	(Yes)	If yes, please list percent of total city population 10%	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	N/A		

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	N/A			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population	(No)	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	(No)	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects		(No)	
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	(Yes)	No	What projects?	Approximate cost?
			Move residents out of floodplain	$1.1 million

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) N/A
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Police-31 Fire-37 ESDA-1 Total: 69
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Mayor- declares emergency plan. City Council

35. Does your city have an emergency notification system (e.g. Code Red)?	(Yes)	If yes, please provide name Code Red	If yes, how much does the system cost annually?	No
36. Does your city have emergency alert sirens?	(Yes)	If yes, how many? 6		No
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook, Robocall, X, Webpage			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	Terrorist Activity Hazmat Activity
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	1. Flooding 2. Earthquake- New Madrid Fault

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Charles Powell III Robert Betts	PRIORITY	ACTION
Title(s):Mayor City Manager	H - High	O - Ongoing
City: East Saint Louis	M - Medium	C - Complete
Date: 4-7-2024	L - Low	D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	(H)	M	L	O	(C)	D
2. Participate and support emergency training for citizen volunteers	H	M	(L)	O	C	(D)
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	(H)	M	L	(O)	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	(H)	M	L	(O)	C	D
2. Adopt current building codes	H	(M)	L	(O)	C	D
3. Integrate Hazard Mitigation Plan into local plans	(H)	M	L	(O)	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	(L)	O	(C)	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	(H)	M	L	(O)	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	(L)	O	C	(D)
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	(L)	O	C	(D)
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	(L)	O	C	(D)
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	(H)	M	(L)	(O)	C	D
7. Conduct risk assessments for tornado events	H	(M)	L	O	(C)	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	(M)	L	(O)	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	(H)	M	L	(O)	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Louis
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Protection and Safety During Tornado
Action or Project	
Applicable Goal Statement:	Goal #2, #4, and #6
Action/Project Number:	4.3
Name of Action or Project:	Integrate Tornado Mitigation Plan into Local Plan
Mitigation Category:	Create Effect Plan to Respond to Tornado
Action or Project Description:	Community to be prepared to respond to groups that would be at high risk
Estimated Cost:	$0
Benefits:	Reduce loss of lives and property at a minimum.
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Louis
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	Low
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Tornado Ordinance
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	Develop plan for unhoused, elderly, and at risk populations during a winter storm
Action or Project	
Applicable Goal Statement:	Goal #1, #2, and #3
Action/Project Number:	4.4
Name of Action or Project:	Integrate winter storm plan into local plan
Mitigation Category:	Create effective response to winter storm
Action or Project Description:	Implement winter storm plan into the city ordinance
Estimated Cost:	$0
Benefits:	Reduce unhoused and elderly to keep risk at a minimum.
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Louis
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	High
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	Future grants/ General Fund Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Winter Storm Ordinance
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat/Drought
Problem being Mitigated:	Develop plan for unhoused, elderly, and at risk populations during a heat wave.
Action or Project	
Applicable Goal Statement:	Goal #1, #3, and #6
Action/Project Number:	4.5
Name of Action or Project:	Integrate Extreme Heat/Drought Plan into Local Plan
Mitigation Category:	Create Response to Extreme Heat/Drought
Action or Project Description:	Implement extreme heat plan into city's ordinance
Estimated Cost:	$0
Benefits:	Reduce heat related fatalities, injuries, and volume of calls to 1st responders.
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Louis
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	High
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	General Revenue/Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Extreme Heat Ordinance
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorms
Problem being Mitigated:	Reduce flooding, severe damage to property and accidents.
Action or Project	
Applicable Goal Statement:	Goal #1,#3, and #5
Action/Project Number:	4.6
Name of Action or Project:	Integrate severe thunder storm plan into local plan
Mitigation Category:	Create effective response to severe thunderstorm
Action or Project Description:	Implement severe thunderstorm plan into city's ordinance
Estimated Cost:	$0
Benefits:	Reduce loss of lives, injuries, and severe damage to property.
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Loius
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	High
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	General Revenue/Future Grant
Local Planning Mechanisms to be Used in Implementation, if any:	Severe Thunderstorm Ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Louis
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	High
Timeline for Completion:	1-7 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	Dam/Levee failure
Problem being Mitigated:	Develop a plan for dam/levee failure
Action or Project	
Applicable Goal Statement:	Goal #3,#4, and #5
Action/Project Number:	4.8
Name of Action or Project:	Integrate dam/levee failure mitigation plan
Mitigation Category:	Reducing the loss of lives and property
Action or Project Description:	Creating plan that goes into city's ordinance
Estimated Cost:	$0
Benefits:	Reduce loss of property and lives
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Louis
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	High
Timeline for Completion:	1-10 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Dam/Levee Ordinance
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	East Saint Louis
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Develop plan for widespread damage for earthquake
Action or Project	
Applicable Goal Statement:	Goal #7, #4, and #9
Action/Project Number:	4.9
Name of Action or Project:	Integrate earthquake plan into city's plan
Mitigation Category:	Create effective plan to respond to an earthquake
Action or Project Description:	Implement earthquake plan into city's ordinance
Estimated Cost:	$0
Benefits:	Community will be better prepared and have better recovery from an earthquake.
Plan for Implementation	
Responsible Organization/Department:	City of East Saint Louis
Supporting Organization/Department:	Saint Clair County
Action/Project Priority:	High
Timeline for Completion:	1-7 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Earthquake Ordinance
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4/11/2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	**Village Mayor Michael Suarez** **Fire Chief Robert Allen**
City	**Village of Fairmont City**
Contact name and email	**Michael Suarez** **msuarez@fairmontcityil.com**

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number **4** **Government, Rail Road, Highway and Water Treatment**

2. Please provide your city's property tax valuation/assessment for the most current year.	Year **2023**	Valuation **30,900,471.00**				
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) **10% Commercial; Retail Development of National City Route 203 corridor**				
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code **2023**	Plumbing code	Mechanical code	Electric code	Fire code	
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year **2024**				
6. Has your city flooded in the past?	Yes	If yes, what years? **2008, 1994, 1973**	No			
7. What rivers/creeks border or run through your city?	Please list: **Cahokia canal, Schoenbayer Creek, Mississippi River, Hardley Ditch**					
8. Do you allow construction/development in your flood zone(s)?	Yes **X**	No	Explanation if needed:			
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: **4**				

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No X
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population **100%**	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No X	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No X	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No X	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No X	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20 X
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No X
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No X
20. Does your city sit behind any levees?	Yes X	If yes, how many? 5	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes X	If yes, please list percent of total city population 100%	No
22. Are there any critical facilities behind the levees?	Yes X	If yes, how many? 4	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 X
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many? X
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No X
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	X		

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	X			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population	No X	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No X	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects		No X	
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No X	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) **We would incorporate all of St. Clair County Hazard Mitigation Plan**
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	**34**
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	**Code Red power** **Siren Capability** **Ability to declare emergency** **Ability to order evacuation** **Ability to decline curfew**

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes **X**	If yes, please provide name **Code Red**	If yes, how much does the system cost annually?	No
36. Does your city have emergency alert sirens?	Yes **X**	If yes, how many?	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: **Facebook, website, newsletter, electronic message board, bill inserts**			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	**n/a**
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	**Tornado** **Older homes, The Village is located in tornado alley, more frequent of a tornado than any other severe weather**

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The inventory of dams for St. Clair County can be found here -

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

St. Clair County Hazard Mitigation Plan Action Ranking Sheet

Name(s): Fire Chief Robert Allen ; Mayor Michael Suttles	PRIORITY	ACTION
Title(s): Fire Chief Mayor	H - High	O - Ongoing
City: Village of Fairmont City	M - Medium	C - Complete
Date: 4/11/2024	L - Low	D - Deferred
ACTIONS	**Circle One (L, M, H)**	**Circle One (O, C, D)**
4.1 - Public Information & Awareness for Any Natural Disasters		
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H (M) L	(O) C D
2. Participate and support emergency training for citizen volunteers	H (M) L	(O) C D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H (M) L	(O) C D
4.2 - Creating Effective Response to Any Natural Disaster		
1. Conduct risk assessments for all natural disasters	H (M) L	(O) C D
2. Adopt current building codes	H (M) L	(O) C D
3. Integrate Hazard Mitigation Plan into local plans	H (M) L	(O) C D
4.3 - Tornado		
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	(H) M L	(O) C D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	(H) M L	(O) C D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	(H) M L	(O) C D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	(H) M L	(O) C D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	(H) M L	(O) C D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	(H) M L	(O) C D
7. Conduct risk assessments for tornado events	(H) M L	(O) C D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	(H) M L	(O) C D
4.4 - Winter Storms		
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H (M) L	(O) C D
2. Ensure all-weather capabilities for emergency equipment	(H) M L	(O) C D

3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial Improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D

4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	**Village of Fairmont City**
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	**Village of Fairmont City**
Supporting Organization/Department:	**St. Clair County EMA / State Park Fire Dept.**
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	**St. Clair County Hazard Mitigation Plan**
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Fairmont City
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Power Outage, Debris clean up, Infrastructure damage
Action or Project	
Applicable Goal Statement:	Goal # 4
Action/Project Number:	4.3.2
Name of Action or Project:	Tornado
Mitigation Category:	Tornado
Action or Project Description:	Integrate Hazard Plan into local plans
Estimated Cost:	$1.2 Million
Benefits:	Public Safety
Plan for Implementation	
Responsible Organization/Department:	Village of Fairmont City
Supporting Organization/Department:	St. Clair County EMA, State Park Fire Dept
Action/Project Priority:	High priority / Ongoing
Timeline for Completion:	1-2 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County Hazard Mitigation Plan
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Fairmont City
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	Power Outage, down trees, down power lines
Action or Project	
Applicable Goal Statement:	Goal # 1&2
Action/Project Number:	4.4:2
Name of Action or Project:	Winter Storm
Mitigation Category:	Winter Storm
Action or Project Description:	Integrate Hazard plan into local plan
Estimated Cost:	$150,000.00
Benefits:	Public Safety
Plan for Implementation	
Responsible Organization/Department:	Village of Fairmont City
Supporting Organization/Department:	St. Clair County EMA / State Park Fire Dept.
Action/Project Priority:	High Priority / On Going
Timeline for Completion:	1-2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County Hazard Mitigation Plan
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Fairmont City
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat / Drought
Problem being Mitigated:	Power outage, cooling, water availability
Action or Project	
Applicable Goal Statement:	Goal # 2
Action/Project Number:	4.5.6
Name of Action or Project:	Extreme heat / drought
Mitigation Category:	Extreme heat / drought
Action or Project Description:	Integrate hazard plan into local plan
Estimated Cost:	$150,000.00
Benefits:	Public Safety
Plan for Implementation	
Responsible Organization/Department:	Village of Fairmont City
Supporting Organization/Department:	St. Clair County EMA / State Park Fire Dept.
Action/Project Priority:	High Priority / On Going
Timeline for Completion:	3-6 Months
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County Hazard Mitigation Plan
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Fairmont City
Risk / Vulnerability	
Hazard Addressed:	Severe Storms
Problem being Mitigated:	Power Outage / Down power lines / debris
Action or Project	
Applicable Goal Statement:	Goal # 1 & 2
Action/Project Number:	4.6.6
Name of Action or Project:	Severe Storms
Mitigation Category:	Severe Storms
Action or Project Description:	Integrate Hazard Plan into Local plan
Estimated Cost:	$150,000.00
Benefits:	Public Safety
Plan for Implementation	
Responsible Organization/Department:	Village of Fairmont City
Supporting Organization/Department:	St. Clair County EMA / State Park Fire Dept.
Action/Project Priority:	High Priority / On Going
Timeline for Completion:	3-6 months
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County Malard Mitigation Plan
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	**Village of Fairmont City**
Risk / Vulnerability	
Hazard Addressed:	**Flooding**
Problem being Mitigated:	**Development in floodplain**
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	**Village of Fairmont City**
Supporting Organization/Department:	**St. Clair County EMA / State Park Fire Dept.**
Action/Project Priority:	**High Priority / On Going**
Timeline for Completion:	**1-2 years**
Potential/Existing Fund Sources:	**Future Grants**
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	**Village of Fairmont City**
Risk / Vulnerability	
Hazard Addressed:	**Dam / Levee Failure**
Problem being Mitigated:	**Development in dam / levee failure**
Action or Project	
Applicable Goal Statement:	**Goals # 2 & 3**
Action/Project Number:	**4.8.2**
Name of Action or Project:	**Dam / levee structure**
Mitigation Category:	**Risk of failure in dams & levees**
Action or Project Description:	**Integrate hazard plan into local plan**
Estimated Cost:	**$0**
Benefits:	**Public Safety, reduce losses**
Plan for Implementation	
Responsible Organization/Department:	**Village of Fairmont City**
Supporting Organization/Department:	**St. Clair County EMA / State Park Fire Dept**
Action/Project Priority:	**High Priority / On Going**
Timeline for Completion:	**1-2 years**
Potential/Existing Fund Sources:	**Future Grants**
Local Planning Mechanisms to be Used in Implementation, if any:	**St. Clair County Hazard mitigation plan**
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Fairmont City
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Damage from Earthquake
Action or Project	
Applicable Goal Statement:	Goals # 2&3
Action/Project Number:	4.9.4
Name of Action or Project:	Earthquake
Mitigation Category:	Earthquake Damage
Action or Project Description:	Integrate Hazard Plan into local Plan
Estimated Cost:	$0
Benefits:	Public Safety / Structural damage
Plan for Implementation	
Responsible Organization/Department:	Village of Fairmont City
Supporting Organization/Department:	St. Clair County EMA / State Park Fire Dept.
Action/Project Priority:	Medium / On Going
Timeline for Completion:	1-2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County Hazard Mitigation Plan
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Fairmont City
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	Damage from Earthquake
Action or Project	
Applicable Goal Statement:	Goals# 2&3
Action/Project Number:	4.10.3
Name of Action or Project:	Ground Failure
Mitigation Category:	Ground Failure Damage
Action or Project Description:	Integrate Hazard Plan into local plan
Estimated Cost:	$0
Benefits:	Public Safety / Infrastructure
Plan for Implementation	
Responsible Organization/Department:	Village of Fairmont City
Supporting Organization/Department:	St. Clair County EMA / State Park Fire Dept
Action/Project Priority:	Low / on Going
Timeline for Completion:	5-10 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County Hazard Mitigation Plan
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

618-489-2155

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: **April 1, 2024**

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	C.J. Beyersdorfer, Director EMA Fairview Heights John Harty, Deputy Director EMA Fairview Heights
City	Fairview Heights IL
Contact name and email	C.J. Beyersdorfer Beyersdorfer#fairviewpd.org 618-489-2155 618-444-5759

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number **Schools 5** **Interstate 1** **Government- 11** **Railroad – 1** **State Hwy - 1**

2. Please provide your city's property tax valuation/assessment for the most current year.	Year	Valuation **Our city does not have property tax.**			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) **Stay the same.**			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code **2021**	Plumbing code **Illinois State Plumbing Code**	Mechanical code **2021**	Electric code **2011 NEC**	Fire code **2021**
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year 2027			
6. Has your city flooded in the past?	Yes	If yes, what years?	No **X**		
7. What rivers/creeks border or run through your city?	Please list: Ogles Creek Schoenberger Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes	No **X**	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: **0**			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No **X**
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No **X**
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes **X**	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes **X**	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes **X**	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes **X**	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	After a flooding event the City follows the St. Clair County Assessor's property valuation along with FEMA software to make a determination in a cumulative process.		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes **X**	If yes, how many? Not known	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes **X**	If yes, how many? **6**	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population **10%**		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23 **X**
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 **X**
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population **100%**	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No	What projects? **Hollandia Drainage Improvements**	Budget? **$320,000**
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects **Emergency warning siren upgrade**			No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes **X**	No	What projects? In collaboration with St. Clair County EMA for the BRIC grant	Approximate cost? 1.5 MILLION

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) **Our city works closely with St. Clair County. Their plan is integrated in our city Emergency Operation Plan**
33. Please list your city's emergency capabilities	Example: 35 firefighters, 55 police officers	Police Officers 45 Fireman – 55 Public Works – 21 Parks Department – 12 EMS - 0
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Mayoral

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes **X**	If yes, please provide name **Code Red**	If yes, how much does the system cost annually? **$15,000**	No
36. Does your city have emergency alert sirens?	Yes **X**	If yes, how many? **5**	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: **Our city uses a variety of social media accounts to provide information. Facebook, X, Instagram. In addition, we have contact email lists for a variety of key groups in the city who can push information to their followers. Examples are Banks and Houses of Worship in town**			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	**Winter Storms** **Severe Weather/Tornados**

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

	Name(s): C.J. Beyersdorfer John Harty	PRIORITY	ACTION
Title(s): Director EMA Fairview Heights Deputy Director EMA Fairview Heights	H - High		O - Ongoing
City: Fairview Heights	M - Medium		C - Complete
Date: April 4, 2024	L - Low		D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)		M		O		
2. Participate and support emergency training for citizen volunteers		M		O		
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H			O		
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters		M		O		
2. Adopt current building codes		M		O		
3. Integrate Hazard Mitigation Plan into local plans	H			O		
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings			L	O		
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H			O		
3. Retrofit one- and two-family residences and infrastructure and essential buildings		M		O		
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H			O		

5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections		**M**				
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**					
7. Conduct risk assessments for tornado events	**H**					
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	**H**					**D**
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers		**M**				**D**
2. Ensure all-weather capabilities for emergency equipment	**H**			**O**		
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**			**O**		
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers		**M**				**D**
2. Increase tree planting and enhance shade availability to mitigate heat impacts			**L**			
3. Enforce burn ordinances and audit water loss and incentivize water reuse		**M**				
4. Repair, retrofit, and maintain water supply systems to minimize water loss			**L**			**D**
5. Provide soil and water conservation practices education for farmers			**L**			
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**			**O**		
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	**H**			**O**		
2. Review and update building codes to reduce building damage	**H**			**O**		

3. Improve early warning systems and maintain integrated communications systems for rapid response	**H**			**O**		
4. Promote student, individual, and household preparation	**H**			**O**		
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**			**O**		
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**			**O**		
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration		**M**		**O**		
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans		**M**		**O**		
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls		**M**		**O**		
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts		**M**		**O**		
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage			**L**	**O**		
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency		**M**		**O**		
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions		**M**		**O**		
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	**H**			**O**		
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance			**L**			
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	**H**			**O**		
11. Install and maintain pumping stations in levee systems			**L**			
12. Develop ordinances to require best management practices stormwater	**H**			**O**		

infrastructure design and construction, with long term maintenance provisions						
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response			L			
14. Conduct risk assessments for floods			L			
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property			L			
16. Promote use of green infrastructure techniques to property owners		M		O		
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees		M				D
2. Improve structural integrity of dams, using incentives where feasible		M				D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees		M		O		
4. Develop and implement dam/levee failure emergency action plans		M		O		
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.		M		O		
6. Conduct risk assessments for dam / levee failures		M		O		
4.9 - Earthquakes						
1. Improve early warning systems		M		O		
2. Review and update building codes		M		O		
3. Maintain integrated communications systems for rapid response		M		O		
4. Promote student, individual, and household preparation		M		O		
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings		M		O		
6. Adopt Seismic Construction Ordinance		M		O		
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.		M		O		
8. Integrate communications systems to provide rapid communication and response		M		O		
9. Conduct risk assessments for earthquakes		M		O		
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property		M		O		

4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock		**M**		**O**		
2. Map and assess vulnerable areas and stabilize when feasible		**M**		**O**		
3. Maintain a list of buildings constructed over underground mines		**M**		**O**		
4. Develop specially engineered resilient pipelines in areas subject to ground failures		**M**		**O**		
5. Develop / improve mining regulations		**M**		**O**		
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.		**M**		**O**		
7. Conduct risk assessments for ground failures		**M**		**O**		
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property		**M**		**O**		

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	ALL HAZZARDS
Problem being Mitigated:	CONTINUE TO IMPROVE OUR SOCIAL MEDIA FOOT PRINT TO EDUCATE THE PUBLIC SO THEY CAN BE PREPARED FOR ANY INCIDENT
Action or Project	
Applicable Goal Statement:	TO MAXIMIZE OUR AVENUES OF NOTIFICATION AS TO REACH THE MOST AMOUNT OF PEOPLE IN OUR COMMUNITY GOAL 4
Action/Project Number:	4.1
Name of Action or Project:	GET THE WORD OUT
Mitigation Category:	Create of multifaceted notification system
Action or Project Description:	Continue to increase our cadre of PIO's and our social media presence. We are working with vendors to improve our ability to reach our residents
Estimated Cost:	$6000
Benefits:	We will be able to reach our residents through different avenues and more frequently
Plan for Implementation	
Responsible Organization/Department:	Police Chief
Supporting Organization/Department:	FH EMA
Action/Project Priority:	Medium to high
Timeline for Completion:	1-2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Research and meetings with vendors
Progress Report	
Action Status:	In progress

Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Update City plan with county hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	F H. EMA
Supporting Organization/Department:	N/A
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Continue to work with St. Clair County and IEMA to update city EOP
Progress Report	
Action Status:	In progress
Report of Progress:	In progress

Tornado Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	TORNADO
Problem being Mitigated:	INCREASED RELATIONSHIPS WITH COMMUNITY, UTILITY COMPANIES, AND SOLIDIFYING INFRASTRUCTURE.
Action or Project	
Applicable Goal Statement:	TORNADAIC ACTIVITY IS UNPREDICABLE. PREPERATION FOR RESPONSE AND RECOVERY ARE THE MOST IMPORTANT PART OF MITIGATING A TORNADO. INCREASED COMMUNITY RELATIONSHIPS, RELATIONSHIPS WITH UTILITY COMPANIES, AND EDUCATION ALONG WITH PROTECTING INFRASTRUCTURE WILL ASSIST OUR CITY IF A TONRADO OCCURS. GOAL 4
Action/Project Number:	4.3
Name of Action or Project:	BIG BAD WIND
Mitigation Category:	CONTINUE TO DEVELOP RELATIONSHIPS AND MAKE IMPROVEMENTS TO INFRASTRUCTURE
Action or Project Description:	WE CONTINUE TO WORK WITH OUR UTILITY PARTNERS TO SECURE INFRASTRUCTURE. OUR BUILDING CODES ARE UPDATED REGULARLY. OUR CITY BUILDINGS NEED IMPROVEMENTS FOR GENERATOR SUPPORT AND UPDATED ELECTRICAL
Estimated Cost:	$300000
Benefits:	IMPROVEMENTS TO UTILITIES WILL REDUCE THE FREQUECNY OF LOSS OF POWER AND BUILD RECILLIANCY IN OUR COMMUNITY.
Plan for Implementation	
Responsible Organization/Department:	FH PUBLIC WORKS
Supporting Organization/Department:	MAYOR, CITY COUNCI, FH EMA
Action/Project Priority:	HIGH
Timeline for Completion:	1-5 YEARS
Potential/Existing Fund Sources:	FUTURE GRANTS
Local Planning Mechanisms to be Used in Implementation, if any:	MEETINGS AND MAPPING OF EXISTING INFRUCTURE THAT WOULD BE AFFECTED BY TORNADO AND DETERMINE BEST COARSE OF ACTION TO SOLIDIFY
Progress Report	

Action Status:	IN PROGRESS
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	WINTER STORMS
Problem being Mitigated:	LACK OF ACCESSIBILITY OF RESIDENTS AND VISITORS. PREPARE FOR POWER OUTAGES AND PROGRAMS THAT ASSIST RESIDENTS IN TIMES OF WEATHER
Action or Project	
Applicable Goal Statement:	WINTERS STORMS ARE ONE OF THE MOST PREVILLANT HAZARDS OUR COMMUNITY FACES. WE ARE A RETAIL HUB FOR DOWNSTATE ILLINOIS WHICH TRIPLES OUR POPULATION ON A DAILY BASIS. OUR EQUIIPMENT IS BECOING OUTDATED TO MITIGATE WINTER STORMS. ADDITIONALLY, A LARGE TRANSIENT POPULATION HAS SETTLED IN OUR COMMUNITY AND WE DO NOT HAVE THE RESOURCES TO PROVIDE SERVICES OR SHELTER TO THEM.
Action/Project Number:	4-4
Name of Action or Project:	BABY ITS COLD OUTSIDE
Mitigation Category:	UPDATE EQUIPMENT AND CREATE WARMING CENTERS
Action or Project Description:	WE NEED TO REPLACE SNOW PLOW EQUIPMENT FOR OUR CITY TRUCKS. WE NEED TO FIND AN APPLICABLE LOCATION FOR A SUSTAINABLE WARMING CENTER ALONG WITH FUNDING TO OPERATE THE FACILITY
Estimated Cost:	250000
Benefits:	WE WILL INCREASE OUR CITY'S CAPABILITIES TO MITIGATE WINTER STORMS AND ESTABLISH A NEEDED PLACE FOR TRANSIENT POPULATIONS TO GO DURING AN EVENT
Plan for Implementation	
Responsible Organization/Department:	FH EMA
Supporting Organization/Department:	PUBLIC WORKS, MAYOR AND CITY COUNCIL
Action/Project Priority:	MEDIUM
Timeline for Completion:	1-6 YEARS
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	OBTAIN ESTIMATES FOR EQUIPMENT. IDENTIFY PARTNERS FOR A WARMING CENTER FACILITY ALONG WITH OPERATIONAL COSTS
Progress Report	
Action Status:	IN PROGRESS
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	HEAT/DROUGHT
Problem being Mitigated:	SUMMER WEATHER CAN CREATE MANY ISSUES. IN OUR CITY WE HAVE A SMALL LOW-INCOME POPULATION BUT HAVE A HIGHER SENIOR POPULATION WHO ARE ON A FIXED INCOME IN OLDER HOMES THAT NEED REPAIR. WE NEED TO IDENTIFY RESIDENTS WHO WOULD FIT IN THIS CATAGORY
Action or Project	
Applicable Goal Statement:	TO WORK WITH UTLILITY COMPANIES AND ESTABLISH LOWER BILLING COSTS FOR SENIORS OR FIXED INCOME RESIDENTS. ADDITIONALLY, TO IMPROVE OUR "SENIOR FRIENDS" PROGRAM WHERE THE POLICE DEPARTMENT PERIODICALLY CHECKS ON SENIOR RESIDENTS.
Action/Project Number:	4.5
Name of Action or Project:	ITS HOT OUTSIDE
Mitigation Category:	IMPROVE SENIOR SUBSIDITIES AND IMPROVE ON SENIOR PROGRAMS
Action or Project Description:	WHILE WORKING WITH UTILITY COMPANIES, WE NEED TO ESTABLISH LOWER POWER RATES SO SENIOR RESIDENTS CAN AFFORD THEIR UTILITIES AND STAY COOL DURING SUMMER MONTHS. OUR SENIOR FRIENDS PROGRAM IS A NEW PROGRAM THAT IS UNFUNDED AND UNMANNED. THE PROGRAM WOULD IMPROVE WITH MORE RESOURCES ADDED TO IT.
Estimated Cost:	125000
Benefits:	RESIDENTS WOULD RECEIVE FUNDING OR REDUCTIONS IN UTILITY BILLS WHICH WOULD ALLOW THEM TO BE SAFE IN THEIR HOMES. OUR SENIOR FRIENDS PROGAM COUND REACH MORE PEOPLE AND WE WOULD BE ABLE TO IDENTIFY TISSUES EARLY.
Plan for Implementation	
Responsible Organization/Department:	FH ECONOMIC DIRECTOR EMA DIRECTOR
Supporting Organization/Department:	MAYOR, DEPUTY CHIEF OF POLICE
Action/Project Priority:	MEDIUM
Timeline for Completion:	1-4 YEARS
Potential/Existing Fund Sources:	GRANT FUNDED
Local Planning Mechanisms to be Used in Implementation, if any:	IDENTIFY RESIDENTS IN NEED AND WORK WITH UTILITY COMPANIES. ESTABLISH A MORE COMPREHENSIVE PLAN OF ACTION FOR SENIRO FRIENDS PROGRAM
Progress Report	

Action Status:	ON GOING
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	SEVERE WEATHER
Problem being Mitigated:	PROBLEMS ASSOCIATED ARE POWER OUTAGES AND FLOODING
Action or Project	
Applicable Goal Statement:	SEVERE WEATHER IS UNPREDICTABLE. INCREASE PUBLIC WARNING AND EDCUCATION OF RESIDENTS TO PREPARE FOR WEATHER IS KEY. IN ADDITION, CONTINUED IMPROVEMENTS TO UTILITIES WILL BE IMPORTANT
Action/Project Number:	4.6
Name of Action or Project:	BRING ON THE RAIN
Mitigation Category:	INFRASTRURE IMPROVEMENTS AND EARLY WARNING NOTIFICAITONS
Action or Project Description:	THE CITY NEEDS TO IMPROVE OUR INSPECTION OF STORM DRAINS. A PURCHASE OF A VACCUM TRUCK TO CLEAR STORM SEWERS AND THE DEVELOPMENT OF A MAINTENACE PROGRAM WOULD BE BENEFICIAL. OUR CODE RED SYSTEM CAN BE BETTER UTILIZED TO NOTIFY PEOPLE AND EDUCATE THEM ON THE SYSTEMS OPTIONS. OUR CITY ALSO NEEDS TO ESTABLISH BETTER MOU'S WITH THE COUNTY AND STATE TO COVER CITY EMPLOYEES MAINTAINING STATE AND COUNTY ROADS.
Estimated Cost:	250000
Benefits:	WITH THE PURCHASE OF NEW EQUIPMENT, WE WILL HAVE BETTER DRAINAGE WHICH REDUCES FLASH FLOODING.
Plan for Implementation	
Responsible Organization/Department:	FH PUBLIC WORKS
Supporting Organization/Department:	FH EMA
Action/Project Priority:	MEDIUM
Timeline for Completion:	1-5 YEARS
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	IDENTIFY COSTS OF VACCUM TRUCK, CREATE AND IMPLEMENT MOU'S, AND IMPROVE ON OUR EDUCATION OF RESIDENTS OF CODE RED.
Progress Report	
Action Status:	ON GOING

Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	IDENTIFY AREAS OF POSSIBLE FLASH FLOODING ALONG WITH RETENTION AREAS AND CULVERTS THAT COLLECT WATER FROM OTHER COMMUNITIES AND DISTRIBUTE THEM OUT OF OUR CITY. Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	FH PUBLIC WORKS
Supporting Organization/Department:	FH EMA
Action/Project Priority:	IDENTIFICATION OF FLOOD PLAIN AREAS AND THE COSTS TO MITIGATE THEM
Timeline for Completion:	1-3 YEARS
Potential/Existing Fund Sources:	GRANT FUNDED
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	ON GOING
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTG
Risk / Vulnerability	
Hazard Addressed:	DAM FAILURE
Problem being Mitigated:	WE HAVE 3 DAMS IN OUR CITY LIMITS WHICH ARE UNDER PRIVATE CONTROL AND WERE ESTABLISHED MANY YEARS AGO. THE CITY NEEDS TO IDENTIFY AND INSPECT THE QUALITY OF DAMS TO INCLUDE PROJECTED LOSS IF THERE IS A FAILURE
Action or Project	
Applicable Goal Statement:	ESTBALISH A PROGRAM TO INSPECT AND ORDIANCE FOR MAINTENANCE OF DAMS IN OUR COMMUNITY 4.8
Action/Project Number:	4.8
Name of Action or Project:	HOLD'M BACK
Mitigation Category:	INSPECT AND IMPROVE INFRASTRUCTURE
Action or Project Description:	UPDATE ORDIANCE TO PLAN FOR CARE AND MAINTENANCE OF DAMS IN THE CITY ALONG WITH PROVIDING FOR ROUTINE INSPECTIONS.
Estimated Cost:	75000
Benefits:	IDENTIFICATION OF POSSIBLE THREATS AND IDENTIFICATION OF POSSIBLE AREAS OF LOSS IF A FAILURE WOULD OCCUR
Plan for Implementation	
Responsible Organization/Department:	FH PUBLIC WORKS
Supporting Organization/Department:	FH EMA
Action/Project Priority:	MED
Timeline for Completion:	1-7 YEARS
Potential/Existing Fund Sources:	GRANT FUNDED
Local Planning Mechanisms to be Used in Implementation, if any:	ORDINANCE
Progress Report	
Action Status:	ON GOING
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	EARTHQUAKE
Problem being Mitigated:	SOLIDIFY INFRASTRUCTURE
Action or Project	
Applicable Goal Statement:	SOUTHERN ILLINOIS IS IN THE NEW MADRID FAULT, SO EARTHQUAKES ARE A REAL POSSIBLILITY. MAINTENANCE TO INFRASTRUCTURE AND CONTINUED EDUCATION IS ON THE FOREFRONT TO BE ADDRESSED 4.9
Action/Project Number:	4.9
Name of Action or Project:	SHAKE, SHAKE, SHAKE IT OUT
Mitigation Category:	IMPROVE NOTIFICATIONS AND EDUCATION
Action or Project Description:	EARTHQUAKES ARE DIFFICULT TO PLAN FOR. EDUCATION OF RESIDENTS IS KEY SO THEY ARE PREPARED. INCREASED COMMUNITY ENGAGEMENT WILL ASSSIST IN A RESPONSE AND PREPERATION
Estimated Cost:	5000
Benefits:	OUR COMMUNITY WILL BE BETTER PREPARED
Plan for Implementation	
Responsible Organization/Department:	FH EMA
Supporting Organization/Department:	FH PUBLIC WORKS
Action/Project Priority:	BETTER COMMUNITY ENGAGEMENT
Timeline for Completion:	1-2 YEARS
Potential/Existing Fund Sources:	GRANT FUNDED
Local Planning Mechanisms to be Used in Implementation, if any:	COMMUNITY MEETINGS AND EVENTS WITH INFORMATIONAL MATERIAL AND ENCOURAGE PREPERATION.
Progress Report	
Action Status:	ON GOING
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	CITY OF FAIRVIEW HEIGHTS
Risk / Vulnerability	
Hazard Addressed:	GROUND FAILURE
Problem being Mitigated:	OUR AREA
Action or Project	
Applicable Goal Statement:	OUR AREA IS INCLUDED IN A VAST AREA OF UNDERGROUND MINES. WE CURRENTLY HAVE A SECTION OF TOWN THAT IS AFFECTED WHERE HOMES HAVE BEEN HEAVILY DAMAGED AND ARE STARING TO DETERIORATE.
Action/Project Number:	4.10
Name of Action or Project:	IMPROVE ORDIANCE TO IMPROVE FUTUE CONSTRUCTIONS WHILE UPDATING MAPPING OF AFFECTED AREAS.
Mitigation Category:	MITIGATION OF AFFECTED AREAS
Action or Project Description:	THE CITY NEEDS TO WORK WITH AFFECTED AREAS WHILE CONTINUING TO IDENTIFY STRUCTURES THAT ARE ALREADY DAMAGED. DEMOLISHION OF CURRENT DAMAGED HOUSES NEED TO OCCUR
Estimated Cost:	300000
Benefits:	IMPROVE THE QUALITY OF OUR NEIGHBORHOODS AND OUR CITY
Plan for Implementation	
Responsible Organization/Department:	FH LAND USE
Supporting Organization/Department:	FH PUBLIC WORKS
Action/Project Priority:	MEDIUM
Timeline for Completion:	1-5 YEARS
Potential/Existing Fund Sources:	GRANT FUNDED
Local Planning Mechanisms to be Used in Implementation, if any:	COMMUNITY MEETINGS AND COLLABORATION WITH INSURANCE COMPANIES ALONG WITH MINING COMPANIES
Progress Report	
Action Status:	IN PROGRESS
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:4/10/2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Village of Fayetteville
City	Fayetteville
Contact name and email	Village President Brian Funk fayettev@htc.net

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 4
2. *Please provide your city's property tax valuation/assessment for the most current year.*	Year	Valuation 2,799,615

3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Stay the Same			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2012	Plumbing code 2012	Mechanical code 2012	Electric code 2012	Fire code 2012
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year			
6. Has your city flooded in the past?	Yes	If yes, what years?	No No		
7. What rivers/creeks border or run through your city?	Please list: Kaskaskia River				
8. Do you allow construction/development in your flood zone(s)?	Yes	No No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 1 Sewer Plant			
10. Have structures in your city experienced repetitive losses due to flooding?		If yes, what years?	No		

11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes		If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes		
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes 2009		
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes		Village President
16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			

17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?			No, if no, please skip to #20 No
18. Are there any critical facilities in ground failure areas?			No
19. Does your city have at-risk populations in areas with potential ground failure?			No
20. Does your city sit behind any levees?		If yes, how many?	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?			No
22. Are there any critical facilities behind the levees?			No
23. Is your city located downstream/below any high hazard potential dam?*		If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?		No	If yes, how many?
25. Does your city have at-risk populations behind levees?			No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	N/A		
27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	No		

28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population 100%		
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?		No	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?				No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?		No	What projects?	Approximate cost?
32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) We will adopt by ordinance		

33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Firefighters 10 Police 0 Village employees 2
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Ability to Declare Emergency, Order Evacuation, and Ability to declare evacuation

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name Code Red		
36. Does your city have emergency alert sirens?	Yes	If yes, how many? 1		
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Word of Mouth Next Door App Facebook Code Red			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	Low Priority
For winter storms	Low Priority
For heat waves/drought	Medium Priority

For tornadoes	High Priority On Going
For earthquakes	High Priority On Going
For ground failure	Low
For dam/levee failure	N/A
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Tornadoes No one ever knows when or where they may happen

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s):Brian Funk	PRIORITY			ACTION		
Title(s):Village President	H - High			O - Ongoing		
City:Village of Fayetteville	M - Medium			C - Complete		
Date:4/10/2024	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	M	L	O	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	M	L	O	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	L	O	C	D
2. Adopt current building codes	H	M	L	O	C	D
3. Integrate Hazard Mitigation Plan into local plans	H	M	L	O	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H	M	L	O	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	M	L	O	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D

15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	Natural Diaster
Problem being Mitigated:	Tornadoes
Action or Project	
Applicable Goal Statement:	How to prevent tornadoes, Tornadoe Prepardness
Action/Project Number:	Best action when a tornadoe Warning is issued
Name of Action or Project:	Preperations
Mitigation Category:	On going
Action or Project Description:	
Estimated Cost:	$5000.00
Benefits:	Saving Lives
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1- 5 years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	Natural Diaster
Problem being Mitigated:	Distruction Left in the Wake of the event
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	4.3.1
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	Lives Saved
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	Snow and Ice
Action or Project	
Applicable Goal Statement:	Cleaning of Streets for Snow
Action/Project Number:	4.4
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Fayettevile
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	4.5
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	Saving Lives
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	Severe Storms
Problem being Mitigated:	Possible lighting Strikes
Action or Project	
Applicable Goal Statement:	Prepare everyone for storms
Action/Project Number:	4.6
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	N/A
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	4.8
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	4.9
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	USGS
Supporting Organization/Department:	USGS
Action/Project Priority:	
Timeline for Completion:	1-10 Years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Fayetteville
Risk / Vulnerability	
Hazard Addressed:	N/A
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments
Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:4 / 09 /2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Eugene Kramer – Coordinator, Freeburg ESDA Matt Trout - Village of Freeburg Administrator Tim Pruett – Village Engineer
City Freeburg	
Contact name and email	Eugene Kramer gkramer@freeburg.com

1. *How many critical facilities are in your city?*	Critical facilities = schools 3, hospitals,0 government buildings,=1 railroads, highways	Number =12

2. Please provide your city's property tax valuation/assessment for the most current year.	Yea 2023r	Valuation $120,800,293.00			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Expected growth of 3%			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code IBC2012	Plumbing code Current	Mechanical code IMC2012	Electric code NEC2011	Fire code NFA2013
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year Village mirrors building requirements			
6. Has your city flooded in the past?	Yes	If yes, what years?	No=x		
7. What rivers/creeks border or run through your city?	Please list: Silver Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes	No= X	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number:=0			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No = X
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No= X Tentative checking
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes =X	If yes, how many? Many-unknown this was a mining area .	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No = X X
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No = X X
20. Does your city sit behind any levees?	Yes	If yes, how many?	No=x, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No X
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 X = NO
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No X	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No X
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	NO LOCAL DAMS affect the Village.		

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	No high hazard potential dam.			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes = X	If yes, please list percent of total population 3.1 %	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes X	No	What projects? Additional Tornado outdoor warning siren at S.A.V.E site.	Budget? $10,000.00
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No X
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No X	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency Operations Plan EOP 2023 Revised		
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Fire Fighters = 27 Police Officers = 10 ESDA workers – 8 Public Works = 13		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Ability to declare a curfew Ability to declare an emergency.		
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes X	If yes, please provide name Blackboard	If yes, how much does the system cost annually? $ 4,132.00	No
36. Does your city have emergency alert sirens?	Yes X	If yes, how many? (6)	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Fiacebook Emails Village WEB page			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	Weather alert radios for households, similar to smoke detection abilities. Maintain STARCOM communication equipment for direct NWS communications.
For earthquakes	Verification of alerts from USGS & CUSEC-rapid communications.
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Tornadoes as an EF-3 struck the community on May 15, 1968 causing deaths and building / electrical line damage in 1973.damage to the community by an EF-2 tornado.

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Eugene Kramer	PRIORITY			ACTION		
Title(s): ESDA Coordinator	H - High			O - Ongoing		
City: Freeburg	M - Medium			C - Complete		
Date: 04/09/2024	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	(H)	M	L	(O)	C	D
2. Participate and support emergency training for citizen volunteers	(H)	M	L	(O)	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	(H)	M	L	(O)	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	(H)	M	L	(O)	C	D
2. Adopt current building codes	(H)	M	L	(O)	C	D
3. Integrate Hazard Mitigation Plan into local plans	(H)	M	L	(O)	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H	(M)	L	(O)	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	(M)	L	O	C	(D)
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	(M)	L	(O)	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	(H)	M	L	O	©	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	(H)	M	L	(O)	C	D
7. Conduct risk assessments for tornado events	(H)	M	L	(O)	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	(H)	M	L	(O)	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	(H)	M	L	(O)	C	D
2. Ensure all-weather capabilities for emergency equipment	(H)	M	L	(O)	C	D

3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	**(H)**	**M**	**L**	**O**	**C**	**(D)**
2. Increase tree planting and enhance shade availability to mitigate heat impacts	**H**	**M**	**L**	**O**	**C**	**(D)**
3. Enforce burn ordinances and audit water loss and incentivize water reuse	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4. Repair, retrofit, and maintain water supply systems to minimize water loss	**(H)**	**M**	**L**	**(O)**	**C**	**D**
5. Provide soil and water conservation practices education for farmers	**H**	**(M)**	**L**	**O**	**C**	**(D)**
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	**(H)**	**M**	**L**	**(O)**	**C**	**D**
2. Review and update building codes to reduce building damage	**(H)**	**M**	**L**	**(O)**	**C**	**D**
3. Improve early warning systems and maintain integrated communications systems for rapid response	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4. Promote student, individual, and household preparation	**(H)**	**M**	**L**	**(O)**	**C**	**D**
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**(H)**	**M**	**L**	**(O)**	**C**	**D**
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.7 – Flood This section does NOT apply to our area.						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	**H**	**M**	**L**	**O**	**C**	**D**
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	**H**	**M**	**L**	**O**	**C**	**D**
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	**H**	**M**	**L**	**O**	**C**	**D**
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	**H**	**M**	**L**	**O**	**C**	**D**
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	**H**	**M**	**L**	**O**	**C**	**D**
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	**H**	**M**	**L**	**O**	**C**	**D**
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	**H**	**M**	**L**	**O**	**C**	**D**
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	**H**	**M**	**L**	**O**	**C**	**D**
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	**H**	**M**	**L**	**O**	**C**	**D**
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	**H**	**M**	**L**	**O**	**C**	**D**
11. Install and maintain pumping stations in levee systems	**H**	**M**	**L**	**O**	**C**	**D**
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	**H**	**M**	**L**	**O**	**C**	**D**
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	**H**	**M**	**L**	**O**	**C**	**D**
14. Conduct risk assessments for floods	**H**	**M**	**L**	**O**	**C**	**D**
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**	**M**	**L**	**O**	**C**	**D**
16. Promote use of green infrastructure techniques to property owners	**H**	**M**	**L**	**O**	**C**	**D**

4.8 - Dam and Levee Failure This section does NOT apply to our area.						
1. Encourage annual inspection of dams and levees	**H**	**M**	**L**	**O**	**C**	**D**
2. Improve structural integrity of dams, using incentives where feasible	**H**	**M**	**L**	**O**	**C**	**D**
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	**H**	**M**	**L**	**O**	**C**	**D**
4. Develop and implement dam/levee failure emergency action plans	**H**	**M**	**L**	**O**	**C**	**D**
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**M**	**L**	**O**	**C**	**D**
6. Conduct risk assessments for dam / levee failures	**H**	**M**	**L**	**O**	**C**	**D**
4.9 - Earthquakes						
1. Improve early warning systems NOTE: unaware of any pre-notification systems for earthquakes	**(H)**	**M**	**L**	**O**	**C**	**(D)**
2. Review and update building codes	**(H)**	**M**	**L**	**O**	**C**	**(D)**
3. Maintain integrated communications systems for rapid response	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4. Promote student, individual, and household preparation	**(H)**	**M**	**L**	**(O)**	**C**	**D**
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	**(H)**	**M**	**L**	**O**	**C**	**(D)**
6. Adopt Seismic Construction Ordinance	**H**	**(M)**	**L**	**O**	**C**	**(D)**
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**(H)**	**M**	**L**	**(O)**	**C**	**D**
8. Integrate communications systems to provide rapid communication and response	**(H)**	**M**	**L**	**(O)**	**C**	**D**
9. Conduct risk assessments for earthquakes	**(H)**	**M**	**L**	**(O)**	**C**	**D**
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	**H**	**(M)**	**L**	**(O)**	**C**	**D**
2. Map and assess vulnerable areas and stabilize when feasible	**H**	**(M)**	**L**	**O**	**C**	**(D)**
3. Maintain a list of buildings constructed over underground mines	**H**	**(M)**	**L**	**O**	**C**	**(D)**
4. Develop specially engineered resilient pipelines in areas subject to ground failures	**H**	**(M)**	**(L)**	**O**	**C**	**(D)**
5. Develop / improve mining regulations	**H**	**M**	**(L)**	**O**	**C**	**(D)**
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**(M)**	**L**	**O**	**C**	**(D)**
7. Conduct risk assessments for ground failures	**H**	**M**	**(L)**	**O**	**C**	**(D)**
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Freeburg
Risk / Vulnerability	
Hazard Addressed:	ALL HAZARDS
Problem being Mitigated:	INCREASE PUBLIC INFORMATION/EDUCATION ALL HAZARDS SPOECIFIC TO OUR AREA
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.1.3
Name of Action or Project:	Educate the public, local government staff, and elected officials.
Mitigation Category:	Public awareness & involvement to inform and prepare the pubic for all hazards.
Action or Project Description:	Educate the public, local government staff and elected officials about relevant hazards and train in and use alternate media.
Estimated Cost:	$0.00
Benefits:	Potential to save lives and property.
Plan for Implementation	
Responsible Organization/Department:	Freeburg Emergency Services & Disaster Agency (ESDA)
Supporting Organization/Department:	Public Works, Freeburg Police, Freeburg Fire Departments
Action/Project Priority:	High priority
Timeline for Completion:	On-Going to reflect any improvements in data .
Potential/Existing Fund Sources:	Freeburg ESDA
Local Planning Mechanisms to be Used in Implementation, if any:	Freeburg ESDA Department
Progress Report	
Action Status:	On-GOING
Report of Progress:	ON GOING

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	Freeburg ESDA with County EMA-OHS
Supporting Organization/Department:	Freeburg Public works, Freeburg Police,, Freeburg Fire Departments.
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Freeburg ESDA
Progress Report	
Action Status:	On-Going
Report of Progress:	2-5 years

Tornado Mitigation Action Worksheet	
Name of City:	Freeburg
Risk / Vulnerability	
Hazard Addressed:	TORNADO
Problem being Mitigated:	INCREASE HAZARD PLANS INTO VILLAGE PLANNING EFFORTS.
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.3.6
Name of Action or Project:	Prepare for receipt & dissemination to the general public of a threating tornado.
Mitigation Category:	Effective response to a tornado warning alert.
Action or Project Description:	Create and improve early warning systems for tornado for tornado alerts including outdoor warning sirens, targeted responses using such notification systems such as reverse 9-1-1, code red,everbridge,Blackboard, etc., and target communications
Estimated Cost:	$10,000.00
Benefits:	Alerting the general public for their protection responses and that of our local emergency response departments.
Plan for Implementation	
Responsible Organization/Department:	Freeburg ESDA
Supporting Organization/Department:	Freeburg Police, Public Works, and Fire Departments
Action/Project Priority:	HIGH
Timeline for Completion:	2-4 years and always ON-GOING as systems (equipment) updates.
Potential/Existing Fund Sources:	Freeburg ESDA budget
Local Planning Mechanisms to be Used in Implementation, if any:	Freeburg ESDA
Progress Report	
Action Status:	On-Going
Report of Progress:	TBA within 2024

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Freeburg
Risk / Vulnerability	
Hazard Addressed:	Snow Storms
Problem being Mitigated:	Need integration with County EMA-OHS with Freeburg ESDA EOP
Action or Project	
Applicable Goal Statement:	Goal # 3
Action/Project Number:	4.4.3
Name of Action or Project:	Acquire necessary equipment including generators, and pumps, to secure lives and property.
Mitigation Category:	PREPARE FOR WINTER STORMS
Action or Project Description:	Respond to needs of life threatening conditions resulting from power outages and roadway blockage due to snowfall.
Estimated Cost:	Varies – unknown to size of the winter storm.
Benefits:	Increase access to/for the citizens to access medical and emergency department responses.
Plan for Implementation	
Responsible Organization/Department:	Freeburg ESDA
Supporting Organization/Department:	Freeburg Public Works, Freeburg Police and Freeburg Fire departments.
Action/Project Priority:	High
Timeline for Completion:	This is an ON GOING operation.
Potential/Existing Fund Sources:	Local Government Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Freeburg ESDA
Progress Report	
Action Status:	On-going
Report of Progress:	2-5 years

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	VILLAGE OF FREEBURG
Risk / Vulnerability	
Hazard Addressed:	All Hazards
Problem being Mitigated:	To integrate hazard mitigation plans into Village/County planning efforts.
Action or Project	
Applicable Goal Statement:	GOAL #3
Action/Project Number:	4.5.3
Name of Action or Project:	Mitigate hazards associated with extreme heat/drought.
Mitigation Category:	Extreme Heat / Drought
Action or Project Description:	Enforce burn ordinates and audit water loss and incentivize water reuse.
Estimated Cost:	Unknown
Benefits:	Effective increase in water availability for residence and cooling shelters.
Plan for Implementation	
Responsible Organization/Department:	Freeburg ESDA and all Village emergency response departments & Village
Supporting Organization/Department:	Zoning Department.
Action/Project Priority:	High
Timeline for Completion:	2-3 years
Potential/Existing Fund Sources:	General Municipal Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Zoning Board
Progress Report	
Action Status:	2-3 years
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	VILLAGE OF FREEBURG
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorm Hazards
Problem being Mitigated:	Integrate local EOP with County EMA-OHS EOP
Action or Project	
Applicable Goal Statement:	# 3
Action/Project Number:	4.6.3
Name of Action or Project:	Prepare for Severe Thunderstorm hazards, that include damaging winds, hail, and extreme rainfall.
Mitigation Category:	Severe Thunderstorms
Action or Project Description:	Create and improve early warning systems and maintain integrated communication systems for rapid response to this hazard.
Estimated Cost:	unknown
Benefits:	Protect life and property.
Plan for Implementation	
Responsible Organization/Department:	Freeburg ESDA
Supporting Organization/Department:	Freeburg Police, Public Works and Freeburg Fire Departments.
Action/Project Priority:	High
Timeline for Completion:	On-going
Potential/Existing Fund Sources:	General municipal revenue/ESDA budget
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	2-3 years
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Freeburg
Risk / Vulnerability	
Hazard Addressed:	Flooding (EXTREMELY LOW RISK OF FLOODING)
Problem being Mitigated:	Development in floodplain DOES NOT APPLY TO VILLAGE OF FREEBURG
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	VILLAGE OF FREEBURG
Risk / Vulnerability	
Hazard Addressed:	DOES NOT APPLY TO OUR VILLAGE LOCATION
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	VILLAGE OF FREEBURG
Risk / Vulnerability	
Hazard Addressed:	NONE-DOES NOT APPLY TO OUR VILLAGE
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	VILLAGE OF FREEBURG
Risk / Vulnerability	
Hazard Addressed:	EARTHQUAKE
Problem being Mitigated:	REDUCE LOSS OF LIFE/SERIOUS INJURY TO PERSONS.
Action or Project	
Applicable Goal Statement:	#3
Action/Project Number:	4.9.3 & 4.9.4
Name of Action or Project:	Earthquake Mitigation per local EOP
Mitigation Category:	Earthquake related hazards.
Action or Project Description:	Maintain integrated communication systems for rapid responses and promote student/individual, and household preparation.
Estimated Cost:	
Benefits:	Preparedness by individuals increases safety to life and property
Plan for Implementation	
Responsible Organization/Department:	Freeburg ESDA
Supporting Organization/Department:	Freeburg Police, Freeburg Fire and Public Works Departments.
Action/Project Priority:	High
Timeline for Completion:	Response plan in Freeburg ESDA EOP
Potential/Existing Fund Sources:	Municipal venue funding
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	On-going
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: **4/11/2024**

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Luanne Holper, City Clerk Cody Terry, Superintendent of Streets/ Alleys and Cemetery Penny Zimmerman, Superintendent of Water/Sewer Cheri Wright, Mayor Michele Davis, Accountant
City	City of Lebanon
Contact name and email	clerk@lebanonil.org

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number: **2 School Buildings** **4 Government Buildings** **2 Highways**

2. Please provide your city's property tax valuation/assessment for the most current year.	Year **2022**	Valuation	**307,312.18**			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	**We have one housing development consisting of 13 Lot. We expect two commercial businesses to be built.**				
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code	Mechanical code	Electric code	Fire code	
	2006	**2014**	**2006**	**2005**	**2006**	
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	**We will be reviewing our codes starting in May 2024 with our new Building Inspector/ Code Enforcement Official.**				
6. Has your city flooded in the past?	Yes	If yes, what years? **1993** **2018**				
7. What rivers/creeks border or run through your city?	Please list: **Little Silver Creek**					
8. Do you allow construction/development in your flood zone(s)?	No	Explanation if needed:				
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: **Our waste water treatment plant is close to the flood plain and has parts of the property which may be contained .**				

10. Have structures in your city experienced repetitive losses due to flooding?		If yes, what years?	**No**
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	**NO**
12. Does your city participate in the National Flood Insurance Program (NFIP)?	**Yes**		If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	**Yes** **Ordinance #1524**	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	**Yes**	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	**No**	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	**Yes**	If yes, how many? **Do not know**	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	**Not that I am aware of.**
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		**UNKNOWN**
20. Does your city sit behind any levees?	Yes	If yes, how many?	**No, if no, please skip to #23**
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	**No, if no, please skip to #28**
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.

28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?

Yes

If yes, please list percent of total population

No

15%

29. Has your city completed any hazard mitigation activities/projects in the last 5 years?

Yes **No**

What projects?

Budget?

30. Is your city currently receiving funds for hazard mitigation planning or projects?

Yes, please list what plans or projects

No

31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?

Yes **Not aware of any**

What projects?

Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) **We will incorporate the St Clair County Plan into our Emergency Operations Plan and will look at other ways during capital improvements.**
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Volunteer firefighters 23 approximately Police Officers 12
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Ability to : Declare emergency Order evacuations Declare curfew

35. Does your city have an emergency notification system (e.g. Code Red)?	**Yes**	If yes, please provide name **CODE RED**	If yes, how much does the system cost annually? **4,687.20**	No
36. Does your city have emergency alert sirens?	**Yes**	If yes, how many? **1**	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: **FACEBOOK** **NOTIFICATION ON WATER/SEWER BILLS** **PLACE ON WEBSITE PAGE.**			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.

For flooding

For winter storms

For heat waves/drought

For tornadoes

For earthquakes

For ground failure

For dam/levee failure

39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)

Tornados and Snow/ice storms would be the two disasters that would most likely impact our city. We have had a tornado in the past that damaged many structures including the high school. We have also been completely closed off to all communities because of bad winter weather making highways 4 and 50 unable to travel.

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of doms and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

St. Clair County Hazard Mitigation Plan Action Ranking Sheet

Name(s): Luanne Holper	PRIORITY	ACTION
Title(s): City Clerk	H - High	O - Ongoing
City: City of Lebanon	M - Medium	C - Complete
Date: 4/11/2024	L - Low	D - Deferred
ACTIONS	**Circle One (L, M, H)**	**Circle One (O, C, D)**
4.1 - Public Information & Awareness for Any Natural Disasters		
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H (M) L	(O) C D
2. Participate and support emergency training for citizen volunteers	H M (L)	O C (D)
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H (M) L	(O) C D
4.2 - Creating Effective Response to Any Natural Disaster		
1. Conduct risk assessments for all natural disasters	(H) M L	(O) C D
2. Adopt current building codes	H (M) L	(O) C D
3. Integrate Hazard Mitigation Plan into local plans	H (M) L	(O) C D
4.3 - Tornado		
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H M (L)	(O) C D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	(H) M L	(O) C D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H M (L)	O C (D)
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	(H) M L	(O) C D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	(H) M L	O (C) D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	(H) M L	O (C) D
7. Conduct risk assessments for tornado events	(H) M L	(O) C D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	(H) M L	(O) C D
4.4 - Winter Storms		
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H (M) L	(O) C D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	City of Lebanon
Risk / Vulnerability	
Hazard Addressed:	All Hazards
Problem being Mitigated:	Lack of hazard mitigation plans
Action or Project	
Applicable Goal Statement:	Goal # 1
Action/Project Number:	4.1.3
Name of Action or Project:	Prepare public to any natural disaster mitigation
Mitigation Category:	Educate public, government staff and elected official by circulating information and presenting training methods
Action or Project Description:	Publish notices to the citizens about the training on how to address hazards In our community.
Estimated Cost:	0
Benefits:	More prepared citizens to meet natural disasters in a knowledgeable way.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	City of Lebanon
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	City of Lebanon
Risk / Vulnerability	
Hazard Addressed:	Tornadoes
Problem being Mitigated:	Lack of tornado mitigation in City Plan
Action or Project	
Applicable Goal Statement:	Goal #1
Action/Project Number:	4.3.1
Name of Action or Project:	Integrate Tornado Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to a tornado disaster
Action or Project Description:	Find new shelters that would provide a safer place to survive a tornado For vulnerable people.
Estimated Cost:	100.
Benefits:	Provide citizens with homes constructed either poorly or which no sturdy structure exists with a shelter.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	M
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	General fund
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	City of Lebanon
Risk / Vulnerability	
Hazard Addressed:	Sever weather event
Problem being Mitigated:	Lack of Sever Weather Mitigation in City plan
Action or Project	
Applicable Goal Statement:	Goal # 1
Action/Project Number:	4.4.1
Name of Action or Project:	Integrate Sever Weather Storm mitigation into the City Plan
Mitigation Category:	Prepare for winter storms with extreme temperatures, wind and ice
Action or Project Description:	Establish relief warming centers within the community to combat power outages to fans and air conditioners
Estimated Cost:	200.
Benefits:	Provide a heated place to have citizens go to for relief until power can be restored.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	M
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	City of Lebanon
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat /Drought
Problem being Mitigated:	Excessive Heat temperatures in homes
Action or Project	
Applicable Goal Statement:	Goal # 1
Action/Project Number:	4.5.1
Name of Action or Project:	Integrate excessive heat Mitigation Plan into local plans
Mitigation Category:	Creating a response to extreme heat and drought in the City Plan
Action or Project Description:	Establish cooling centers within the community for those citizens that do not have air conditioning for relief from the heat and provide water.
Estimated Cost:	200.
Benefits:	Less dehydration and heat stroke.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	M
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	City of Lebanon
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorms
Problem being Mitigated:	Advance warning and shelter
Action or Project	
Applicable Goal Statement:	Goal #
Action/Project Number:	4.6.3
Name of Action or Project:	Integrate Severe Warning Plan into local plans
Mitigation Category:	Develop a more advance warning system in our City Plan
Action or Project Description:	Create more early warning systems, such as sirens and use Code Red more.
Estimated Cost:	10,000.
Benefits:	Citizens can have advance warning to get under cover.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	M
Timeline for Completion:	3Years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of Lebanon
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	H
Timeline for Completion:	3-5 Years
Potential/Existing Fund Sources:	General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4-11-2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s) JOHN HOFFMAN
fire chief

City LENZBURG IL 62255

Contact name and email firechief55@hotmail.com

1. *How many critical facilities are in your city?* Critical facilities = schools, hospitals, government buildings, railroads, highways — Number 4

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation 1,948,317.00
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) 5% INFRASTRUCTURE

4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code	Mechanical code	Electric code	Fire code
	NA				

5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year NA
6. Has your city flooded in the past?	Yes	If yes, what years? (No)
7. What rivers/creeks border or run through your city?	Please list: NONE	

8. Do you allow construction/development in your flood zone(s)?	Yes	No	Explanation if needed:
		NA	
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways		Number:
		NA	

10. Have structures in your city experienced repetitive losses due to flooding? NO	Yes	If yes, what years?	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding? NO	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No
12. Does your city participate in the National Flood Insurance Program (NFIP)? NO	Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance? NO	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)? NO	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP? NO	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	NA		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	(Yes)	If yes, how many? UNKNOWN	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	(No)
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		(No)
20. Does your city sit behind any levees?	Yes	If yes, how many?	(No), if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	(No)
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	(No), if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	(Yes)	If yes, please list percent of total population .01%	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	(No)	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects		(No)	
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	(No)	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans? NA	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan)			
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Fire Fighters 16			
34. Please list your city's emergency powers NA	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.				
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name	If yes, how much does the system cost annually?	(No)	
36. Does your city have emergency alert sirens?	Yes	If yes, how many?	(No)		
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Voice Shout out				

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.
For flooding
For winter storms
For heat waves/drought
For tornadoes
For earthquakes
For ground failure
For dam/levee failure

39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one) HIGH WINDS

TORNADOES.

GROUND FAILURE

***High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here -** https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us **or** samantha.bierman@co.st-clair.il.us**.**

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: April 10, 2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Laura McMahon, Mayor Chad Easton, Village Admin Donna Stewart, Village Collector
City	Marissa
Contact name and email	Donna Stewart- marissaclerk@egyptian.net

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 2 schools City Hall/PD 1 RR 1 highway

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2024	Valuation $20,857,130			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Stay the same			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	No sure, the county handles our building permits				
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year			
6. Has your city flooded in the past?	Yes	Every year for the past 7 years we have experienced flash floods			
7. What rivers/creeks border or run through your city?	Please list: Mud Creek, and unnamed creeks				
8. Do you allow construction/development in your flood zone(s)?	Yes		Explanation if needed: currently we have no restrictions		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, government buildings, railroads, bridges, and highways	Number: 5			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	2017 and every year since then.	
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	Up to 35% of our population is elderly
12. Does your city participate in the National Flood Insurance Program (NFIP)?		No	Not sure of the value it would provide to our community
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?			
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?			
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?			

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	Areas of the village have been undermined
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	Sewer plant
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		As much as 80%
20. Does your city sit behind any levees?	no	If yes, how many?	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?			
22. Are there any critical facilities behind the levees?			
23. Is your city located downstream/below any high hazard potential dam?*			
24. Are there any critical facilities below the high hazard potential dam(s)?			
25. Does your city have at-risk populations behind levees?			
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes		100%	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?		No		
30. Is your city currently receiving funds for hazard mitigation planning or projects?				No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes		What projects? Flooding	Approximate cost? $2,500,000

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Help with our flooding issue and updating our master plan.		
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Police Fire First Responders		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Able to declare Emergency, Evacuation, Curfew		
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	Code Red	$0 Provided by the County	
36. Does your city have emergency alert sirens?	Yes	If yes, how many?	6	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook, Website, Water Bill, Code Red			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	Please help with flash flooding
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s):Chad Easton	PRIORITY			ACTION		
Title(s): Village Admin.	H - High			O - Ongoing		
City: Marissa, IL	M - Medium			C - Complete		
Date: 04/11/2024	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	M	L	O	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	M	L	O	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	L	O	C	D
2. Adopt current building codes	H	M	L	O	C	D
3. Integrate Hazard Mitigation Plan into local plans	H	M	L	O	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H	M	L	O	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	M	L	O	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: April 10, 2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Jesse Calton, Public Works Director Jeremy Gottschammer, EMS Supervisor Sal Elkott, City Engineer Cody Hawkins, City Manager
City	Mascoutah
Contact name and email	Cody Hawkins chawkins@mascoutah.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number Parks=1, Water pump house= 1, City Hall=1 Public Works facilities=2 Waste Water Treatment Plant=1 Post Office=1, Airport=1, Water Tower=2 Firehouse=1, Township Bld=1, Civic Center=1 Senior Center=1, Library=1, Railroads=1 Lift stations=9, Electric substations= 3 Highways=4

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation $218,570,339 for			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Housing, an estimate increase of 5% Commercial, an estimate increase of 3%			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2012	Plumbing code 2012	Mechanical code 2012	Electric code 2011	Fire code 2012
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year To be determined			
6. Has your city flooded in the past?	Yes Yes	If yes, what years? 1957, plus lesser events every few years	No		
7. What rivers/creeks border or run through your city?	Please list: Silver Creek, Hog Creek, and Pig Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes	No No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: Some roads are under water in heavy rains			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population An estimated 2 percent	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No No, new maps have not yet been issued for our city	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes The City of Mascoutah	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	Provision is in development		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20 No
~~*18. Are there any critical facilities in ground failure areas?*~~	Yes	If yes, how many?	No
~~*19. Does your city have at-risk populations in areas with potential ground failure?*~~	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23 No
~~*21. Does your city have at-risk populations behind levees?*~~	Yes	If yes, please list percent of total city population	No
~~*22. Are there any critical facilities behind the levees?*~~	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 No
~~*24. Are there any critical facilities below the high hazard potential dam(s)?*~~	Yes	No	If yes, how many?
~~*25. Does your city have at-risk populations behind levees?*~~	Yes	If yes, please list percent of total city population	No
~~*26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.*~~			

~~*27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.*~~				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes Yes	If yes, please list percent of total population Estimated 40%	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes Yes	No	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects Yes, an IEPA low interest loan for WWTP			No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes Yes	No	What projects? Sewer interceptor	Approximate cost? In process, estimated as several million dollars

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Yes, into the City's emergency operation plan		
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	40 Fire fighters 7 EMT 25 Police officers		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	The city is a Home Rule municipality. The emergency powers rest with the mayor, police chief, and the city manager		
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes Yes	If yes, please provide name Code Red	If yes, how much does the system cost annually? Jesse	No
36. Does your city have emergency alert sirens?	Yes Yes	If yes, how many? Four	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook, email subscriptions, local newspaper, cord Red, digital marquees			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	The city follows the adopted emergency plan
For winter storms	The city follows the adopted emergency plan
For heat waves/drought	The city follows the adopted emergency plan
For tornadoes	The city follows the adopted emergency plan
For earthquakes	The city follows the adopted emergency plan
For ground failure	The city follows the adopted emergency plan
For dam/levee failure	The city follows the adopted emergency plan
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Tornados, earthquakes, and winter storms. Winter storms item is included because the city operates its own power distribution system

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s):	PRIORITY		ACTION
	Names: Cody Hawkins, Jesse Carlton, Jeremy Gottschammer, Sal Elkott Title(s): City Manager, Public Works Director, EMS Supervisor, City Engineer	H - High	O - Ongoing
	City: Mascoutah	M - Medium	C - Complete
	Date: April 11, 2024	L - Low	D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	(H)	M	L	(O)	C	D
2. Participate and support emergency training for citizen volunteers	H	(M)	L	(O)	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	(M)	L	(O)	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	(M)	L	(O)	C	D
2. Adopt current building codes	H	(M)	L	(O)	C	D
3. Integrate Hazard Mitigation Plan into local plans	(H)	M	L	(O)	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	(M)	L	(O)	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	(H)	M	L	(O)	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	(L)	O	C	(D)
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	(M)	L	(O)	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	(H)	M	L	(O)	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	(H)	M	L	(O)	C	D
7. Conduct risk assessments for tornado events	H	(M)	L	(O)	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	(H)	M	L	(O)	C	D
4.4 - Winter Storms						

1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D

13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	City of Mascoutah
Risk / Vulnerability	
Hazard Addressed:	Tornados
Problem being Mitigated:	Safety and Property Damage
Action or Project	
Applicable Goal Statement:	Promote Community Safety
Action/Project Number:	4.3.2
Name of Action or Project:	To develop early warning system
Mitigation Category:	Early warning system
Action or Project Description:	To develop early warning system to allow public to shelter safely
Estimated Cost:	$1.5 Million
Benefits:	Enhance community safety
Plan for Implementation	
Responsible Organization/Department:	City of Mascoutah
Supporting Organization/Department:	FD, PD, EMS, Public Works
Action/Project Priority:	Develop early warning system
Timeline for Completion:	4 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	City of Mascoutah
Risk / Vulnerability	
Hazard Addressed:	Power loss prevention, water main bursting, and Promotion of safety
Problem being Mitigated:	Safety
Action or Project	
Applicable Goal Statement:	Goal #2
Action/Project Number:	4.4.2
Name of Action or Project:	Power Loss Prevention, water main repair/replacement, and Safety Promotion
Mitigation Category:	Safety, water supply, and power supply
Action or Project Description:	Tree trimming away from power lines, warming centers, spreading deicing agents on roads
Estimated Cost:	$2.0 million
Benefits:	Reducing economic loss and improving safety
Plan for Implementation	
Responsible Organization/Department:	City of Mascoutah
Supporting Organization/Department:	Public Works, EMS, PD
Action/Project Priority:	Monitor weather alerts
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	The City of Mascoutah
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat
Problem being Mitigated:	Power distribution problems, and safety challenge
Action or Project	
Applicable Goal Statement:	Goal #4
Action/Project Number:	4.5.4
Name of Action or Project:	Stock adequate electrical spare parts such as transformers, and conductors
Mitigation Category:	Monitor weather forecasts
Action or Project Description:	Ensure adequate spare parts for power system
Estimated Cost:	$200k
Benefits:	Power system reliability and resident safety enhancement
Plan for Implementation	
Responsible Organization/Department:	City of Mascoutah
Supporting Organization/Department:	Public Works
Action/Project Priority:	Replacement of vulnerable electrical distribution appurtenances
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	City of Mascoutah
Risk / Vulnerability	
Hazard Addressed:	Severe thunderstorms
Problem being Mitigated:	Power distribution, and safety
Action or Project	
Applicable Goal Statement:	Goal #6
Action/Project Number:	4.6.7
Name of Action or Project:	Power Reliability improvements
Mitigation Category:	Monitor weather forecasts and early warning system
Action or Project Description:	Enhance availability of electrical department workers during these events with additional personnel
Estimated Cost:	$200k per year
Benefits:	Mitigation of economic losses
Plan for Implementation	
Responsible Organization/Department:	City of Mascoutah
Supporting Organization/Department:	Public Works, namely electrical department
Action/Project Priority:	Monitor weather forecasts and early warning system
Timeline for Completion:	4
Potential/Existing Fund Sources:	Future grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of Mascoutah
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in the flood plain
Action or Project	
Applicable Goal Statement:	Goal #2
Action/Project Number:	4.7.2
Name of Action or Project:	Maintain participating in the NFIP
Mitigation Category:	Participate in NFIP
Action or Project Description:	Enforce floodplain management ordinances, regulation in SFHAs and implement substantial improvement/substantial damage provision in City ordinance.
Estimated Cost:	$500k
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	City of Mascoutah
Supporting Organization/Department:	Planning Department and Engr Department
Action/Project Priority:	Enforce floodplain management ordinances,
Timeline for Completion:	4 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	City of Mascoutah
Risk / Vulnerability	
Hazard Addressed:	Dam/Levee Failure
Problem being Mitigated:	Flooding and property damage due to dam/levee failure
Action or Project	
Applicable Goal Statement:	N/A the City is not susceptible to Dam/levee problems
Action/Project Number:	N/A the City is not susceptible to Dam/levee problems
Name of Action or Project:	N/A the City is not susceptible to Dam/levee problems
Mitigation Category:	N/A the City is not susceptible to Dam/levee problems
Action or Project Description:	N/A the City is not susceptible to Dam/levee problems
Estimated Cost:	N/A the City is not susceptible to Dam/levee problems
Benefits:	N/A the City is not susceptible to Dam/levee problems
Plan for Implementation	
Responsible Organization/Department:	The City of Mascoutah
Supporting Organization/Department:	N/A the City is not susceptible to Dam/levee problems
Action/Project Priority:	N/A the City is not susceptible to Dam/levee problems
Timeline for Completion:	N/A the City is not susceptible to Dam/levee problems
Potential/Existing Fund Sources:	N/A the City is not susceptible to Dam/levee problems
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	City of Mascoutah
Risk / Vulnerability	
Hazard Addressed:	Earthquakes
Problem being Mitigated:	Property and Infrastructure damage due to earthquakes
Action or Project	
Applicable Goal Statement:	Goal 3 and 6
Action/Project Number:	4.9.3
Name of Action or Project:	Maintain integrated communications system for rapid response
Mitigation Category:	Earthquake proofing of infrastructure
Action or Project Description:	Develop a map of vulnerable sites and a plan of how to fortify them.
Estimated Cost:	$2.0 Million
Benefits:	Future Grants
Plan for Implementation	
Responsible Organization/Department:	City of Mascoutah
Supporting Organization/Department:	Engineering Department
Action/Project Priority:	Develop a map of vulnerable sites and a plan of how to fortify them.
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	Subsidence due to Karst features
Action or Project	
Applicable Goal Statement:	Goals 1 & 2
Action/Project Number:	4.10.1
Name of Action or Project:	Ground Failure Mitigation
Mitigation Category:	Ground Failure Mitigation
Action or Project Description:	Review construction permit applications, map and assess vulnerable areas
Estimated Cost:	$500k
Benefits:	Prevent economic damage
Plan for Implementation	
Responsible Organization/Department:	City of Mascoutah
Supporting Organization/Department:	Engineering Department
Action/Project Priority:	Review construction permit applications, map and assess vulnerable areas
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4/12/24

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)

City

Contact name and email

1. *How many critical facilities are in your city?* Critical facilities = schools, hospitals, government buildings, railroads, highways — Number: 13

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation Attached				
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.)				
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2012	Plumbing code	Mechanical code 2012	Electric code 2011	Fire code	
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year				
6. Has your city flooded in the past?	Yes	If yes, what years?	(No)			
7. What rivers/creeks border or run through your city?	Please list: Creek					
8. Do you allow construction/development in your flood zone(s)?	Yes	(No)		Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 0				

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	(No)
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	(No)
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	(No) NOT IN Flood plain	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	(Yes)	If yes, how many?	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	(No)
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	(No), if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	(No) if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. *If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.*

28. *Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?* (Yes) / No — If yes, please list percent of total population: 1%

29. *Has your city completed any hazard mitigation activities/projects in the last 5 years?* Yes / (No) — What projects? — Budget?

30. *Is your city currently receiving funds for hazard mitigation planning or projects?* Yes, please list what plans or projects / (No)

31. *Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?* Yes / (No) — What projects? — Approximate cost?

32. *How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?*

Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.

Please list which plans (must include at least one plan)

Emergency Operations Plan

33. *Please list your city's emergency capabilities*

Example: 35 firefighters, 26 police officers

32 Firefighters
8 Police

34. *Please list your city's emergency powers*

Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.

Mayor
Village Board
Police Chief
Fire Chief

35. *Does your city have an emergency notification system (e.g. Code Red)?*

(Yes) No

If yes, please provide name

Code Red

If yes, how much does the system cost annually?

Paid by St. Clair Count

36. *Does your city have emergency alert sirens?*

(Yes) No

If yes, how many?

37. *What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)*

Please list:

Facebook, village webpage, bill inserts

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.

For flooding

For winter storms

For heat waves/drought

For tornadoes

For earthquakes

For ground failure

For dam/levee foilure

39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)

• Tornadoes
Winter storms

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastraphic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

St. Clair County Hazard Mitigation Plan Action Ranking Sheet

Name(s):	PRIORITY	ACTION
Title(s):	H - High	O - Ongoing
City:	M - Medium	C - Complete
Date:	L - Low	D - Deferred
ACTIONS	Circle One (L, M, H)	Circle One (O, C, D)
4.1 - Public Information & Awareness for Any Natural Disasters		
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H (M) L (O) C D	
2. Participate and support emergency training for citizen volunteers	H (M) L (O) C D	
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H (M) L (O) C D	
4.2 - Creating Effective Response to Any Natural Disaster		
1. Conduct risk assessments for all natural disasters	H M (L) (O) C D	
2. Adopt current building codes	H (M) L O C D	
3. Integrate Hazard Mitigation Plan into local plans	H M (L) O C D	
4.3 - Tornado		
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H M (L) O C (D)	
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	(H) M L O (C) D	
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H M (L) (O) C D	
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H M L O C D	
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H M L O C D	
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	H (M) L O (C) D	
7. Conduct risk assessments for tornado events	H M (L) (O) C D	
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H (M) L (O) C D	
4.4 - Winter Storms		
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	(H) M L O (C) D	

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Public Information Awareness
Problem being Mitigated:	lack of Public knowledge
Action or Project	
Applicable Goal Statement:	3
Action/Project Number:	4.1.3
Name of Action or Project:	Maintaince
Mitigation Category:	Creating effective response
Action or Project Description:	Keep updating web page, facebook etc.
Estimated Cost:	$0
Benefits:	Keep public informed
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-3yrs
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	#8
Action/Project Number:	4.3.8
Name of Action or Project:	
Mitigation Category:	aquiring nec equipment
Action or Project Description:	To be able to provide alternate power to village buildings
Estimated Cost:	650,000
Benefits:	Able to keep local govt. functioning
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	Med
Timeline for Completion:	1-5 yrs
Potential/Existing Fund Sources:	Mun. budget
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	#2
Action/Project Number:	4.4.2
Name of Action or Project:	Maintaince
Mitigation Category:	Creating effective Response
Action or Project Description:	making sure all equipment is maintained and in working order
Estimated Cost:	$5000
Benefits:	Allows quick response to assist public
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	Annually
Potential/Existing Fund Sources:	Budget
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	# 4
Action/Project Number:	4.5.4
Name of Action or Project:	Water System Upgrade
Mitigation Category:	Creating effective response
Action or Project Description:	Replace/upgrade water infrastructure
Estimated Cost:	1.5m
Benefits:	provide better water supply to residence
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-3yrs
Potential/Existing Fund Sources:	grants/budget
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorm
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	#1
Action/Project Number:	4.6.1
Name of Action or Project:	Storm system upgrade
Mitigation Category:	Creating effective response
Action or Project Description:	Cleaning/replacing storm drains
Estimated Cost:	$20,600
Benefits:	reduce potential for flash flooding
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	1-3 yrs
Potential/Existing Fund Sources:	budget/MFT
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Flood
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	#10
Action/Project Number:	4.7.10
Name of Action or Project:	Storm system upgrade
Mitigation Category:	Creating effective response
Action or Project Description:	Clean/replace storm drain
Estimated Cost:	$20,000
Benefits:	reduce potential flash flooding
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	1-3 yrs
Potential/Existing Fund Sources:	budget/MFT
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

N/A

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	#1 #2
Action/Project Number:	4.9.1
Name of Action or Project:	Improve early warning systems
Mitigation Category:	Creating effective response
Action or Project Description:	update/encourage public participation
Estimated Cost:	$0
Benefits:	Informs public faster
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	Low
Timeline for Completion:	1-3 yrs
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Millstadt
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	#3
Action/Project Number:	4.10.3
Name of Action or Project:	Maintain a list of buildings constructed over mines
Mitigation Category:	Creating effective response
Action or Project Description:	maintaining/updating list and maps of building on mines
Estimated Cost:	$0
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	Low
Timeline for Completion:	2-5 yrs
Potential/Existing Fund Sources:	NA
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Joe Behnken, Mayor Arlene Geppert, Co-Coordinator ESDA Devn Browm Co-Coordinator ESDA Chris Remick, Superintendent of Public Works Tim Buehler, Chief of Police Stan Ruhmann, Fire Chief, New Athens Fire District
City	New Athens, IL
Contact name and email	Joe Behnken mayor@newathensil.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 4

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation $27,274,179			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.). Anticipate stable development with no loss of major employers.			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code 2018`	Mechanical code 2018	Electric code 2018	Fire code 2021
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year Will continue to adopt the County code revisions as they occur in the future.			
6. Has your city flooded in the past?	Yes	If yes, what years?	2019 and 2022		
7. What rivers/creeks border or run through your city?	Please list: Kaskaskia River				
8. Do you allow construction/development in your flood zone(s)?	Yes	**No**	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 3			

10. Have structures in your city experienced repetitive losses due to flooding?	**Yes**	If yes, what years? 1940's and 1960's before the levee was constructed in early 1960's, since then, 2018 and 2021	
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If **yes**, please list percent of total city population 30%	
12. Does your city participate in the National Flood Insurance Program (NFIP)?	**Yes**		
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	**Yes**		If no, please describe why not Clueless as to what the NFIP acronym represents.
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	**Yes**	No	If no, please describe why not, Not a priority for the village that has a levy and a population of 1,945
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	**Yes**	No we have not appointed agency, have no idea what NFIP represents	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	Dredge ditches and make sure roadways have appropriate run-off levels		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?		If yes, how many?	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?		If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many? 1	
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	30%
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	6
23. Is your city located downstream/below any high hazard potential dam?*	NO	If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	NO	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	NO	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	Superintendent of Public Works and EMS director would coordinate with any local dam owners and IDNR		

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	Not applicable			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	**Yes**	If yes, please list percent of total population	30%	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?		**No**	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?				**No**
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?		**No**	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Will adopt by Ordinance
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	25 Firefighters, 4 full time and 2 part time policeman
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Order evacuation! Declare Emergency Declare Curfew

35. Does your city have an emergency notification system (e.g. Code Red)?	**Yes**	If yes, please provide name Code Red	If yes, how much does the system cost annually? $2,000
36. Does your city have emergency alert sirens?	**Yes**	If yes, how many? 1	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook, Website, bill inserts and occasionally will use Code Red for non-emergencies.		

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	none
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Tornado or strong straight line winds because of our midwestern United States location

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Joe Behnken	PRIORITY			ACTION		
Title(s): Mayor	H - High			O - Ongoing		
City: Village of New Athens, IL	M - Medium			C - Complete		
Date:04/04/24	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	**H**	M	L	**O**	C	D
2. Participate and support emergency training for citizen volunteers	**H**	M	L	**O**	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	**H**	M	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	**M**	L	O	C	**D**
2. Adopt current building codes	**H**	M	L	**O**	C	D
3. Integrate Hazard Mitigation Plan into local plans	**H**	M	L	**O**	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	**H**	M	L	**O**	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	H	**M**	L	O	C	**D**
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	**L**	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	**L**	O	C	**D**
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	**M**	L	**O**	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	**O**	C	D
7. Conduct risk assessments for tornado events	H	**M**	L	O	C	**D**
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	**H**	M	L	**O**	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	**M**	L	**O**	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of New Athens
Risk / Vulnerability	
Hazard Addressed:	All Natural Disasters
Problem being Mitigated:	Poorly informed and prepared public
Action or Project	
Applicable Goal Statement:	Public awareness and involvement
Action/Project Number:	1
Name of Action or Project:	Public awareness and involvement
Mitigation Category:	Public Information and Awareness
Action or Project Description:	Using newsletters, websites, Facebook sharing, local government and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
Estimated Cost:	$5.000 annually
Benefits:	Create a well informed and prepared public
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	New Athens Community Unit School District, New Athens Fire District,
Action/Project Priority:	Using newsletters, websites, Facebook sharing, local government and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	General Fund surplus and future grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Tornados can strike quickly and unexpectedly
Action or Project	
Applicable Goal Statement:	Tornado Preparation to enhance community safety
Action/Project Number:	1.
Name of Action or Project:	Tornado Preparation
Mitigation Category:	Tornado
Action or Project Description:	Develop and maintain early warning systems to target public and specific, vulnerable communities.
Estimated Cost:	$15,000
Benefits:	Enhance community safety
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	New Athens Fire District
Action/Project Priority:	Develop and maintain early warning systems to target public and specific, vulnerable communities
Timeline for Completion:	Three years
Potential/Existing Fund Sources:	Future grant awards
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of New Athens
Risk / Vulnerability	
Hazard Addressed:	Winter Storm Mitigation
Problem being Mitigated:	Extreme weather accompanied by power outage
Action or Project	
Applicable Goal Statement:	Acquire necessary equipment, including generators and pumps to secure lives and property.
Action/Project Number:	1
Name of Action or Project:	Winter Storm Mitigation
Mitigation Category:	Winter Storms
Action or Project Description:	Acquire necessary equipment, including generators and pumps to secure lives and property.
Estimated Cost:	$75.000
Benefits:	Secure lives and porperty
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	Public Utilities (Ameren, Illinois)
Action/Project Priority:	Acquire necessary equipment, including generators and pumps to secure lives and property
Timeline for Completion:	Three years
Potential/Existing Fund Sources:	Future grant awards
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of New Athens
Risk / Vulnerability	
Hazard Addressed:	Extreme heat/drought
Problem being Mitigated:	Extreme weather accompanied by power outages
Action or Project	
Applicable Goal Statement:	Acquire necessary equipment, including generators and pumps to secure lives and property
Action/Project Number:	1
Name of Action or Project:	Extreme heat/drought
Mitigation Category:	Extreme heat/drought
Action or Project Description:	Acquire necessary equipment, including generators and pumps to secure lives and property
Estimated Cost:	$75,000
Benefits:	Secure lives and property
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	Public Utilities (Ameren, IL)
Action/Project Priority:	Acquire necessary equipment, including generators and pumps to secure lives and property
Timeline for Completion:	Three Years
Potential/Existing Fund Sources:	Future Grant Awards
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of New Athens
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorm
Problem being Mitigated:	Severe thunderstorms can cause loss of life, injuries, and severe damage to property.
Action or Project	
Applicable Goal Statement:	Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
Action/Project Number:	1
Name of Action or Project:	Inspection and Maintenance of storm drains and drainage systems
Mitigation Category:	Severe Thunderstorm
Action or Project Description:	Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows
Estimated Cost:	$40,000 annually
Benefits:	Prevention of loss of life, injuries, and severe damage to property.
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	
Action/Project Priority:	Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Water and Sewer Fess and future grant awards
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of New Athens
Risk / Vulnerability	
Hazard Addressed:	Dam/Levee Failure
Problem being Mitigated:	Failure of Dams and Levees can be catastrophic, causing loss of life and property
Action or Project	
Applicable Goal Statement:	Create and improve early warning systems
Action/Project Number:	1
Name of Action or Project:	Create and improve early warning systems
Mitigation Category:	Dam/Levee Failure
Action or Project Description:	Create and improve early waring system including sirens, and targeted response such as Reverse 911. Code Red and other.
Estimated Cost:	$25,000
Benefits:	Preventing loss of life and property
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	St. Clair County
Action/Project Priority:	Create and improve early warning system including sirens, and targeted response such as Reverse 911. Code Red and other
Timeline for Completion:	Three years
Potential/Existing Fund Sources:	Future grant award proceeds.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of New Athens
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Earthquakes have high potential for severe, widespread damage.
Action or Project	
Applicable Goal Statement:	Create and improve early warning systems
Action/Project Number:	1
Name of Action or Project:	Create and improve early warning systems
Mitigation Category:	Earthquakes
Action or Project Description:	Create and improve early warning systems for earthquakes including sirens, and targeted response such as reverse 911, Code Red and other.
Estimated Cost:	$25,000
Benefits:	Prevent severe widespread damage
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	St. Clair County
Action/Project Priority:	Create and improve early warning systems for earthquakes including sirens, and targeted response such as reverse 911, Code Red and other.
Timeline for Completion:	Three years
Potential/Existing Fund Sources:	Future grant awards
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of New Athens
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	Ground failure has the potential to cause property damage, injuries and potential loss of life.
Action or Project	
Applicable Goal Statement:	Map and access vulnerable areas and stabilize when feasible
Action/Project Number:	1
Name of Action or Project:	Ground Failure
Mitigation Category:	Ground Failure
Action or Project Description:	Map and access vulnerable areas and stabilize when feasible
Estimated Cost:	$50,000
Benefits:	Prevent property damage, injuries and potential loss of life.
Plan for Implementation	
Responsible Organization/Department:	Village of New Athens
Supporting Organization/Department:	US Department of Agriculture
Action/Project Priority:	Map and access vulnerable areas and stabilize when feasible
Timeline for Completion:	Three Years
Potential/Existing Fund Sources:	Future grant awards
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4/11/2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Chad Truran—Building Official, Floodplain Manager Justin Randall--Community Development Director Jeff Taylor – Public Works Director Grant Litteken – Asst. City Administrator Brad White – Fire Chief Kirk Brueggeman – Police Chief/Director of Public Safety
City	City of O'Fallon
Contact name and email	Grant Litteken - glitteken@ofallon.org

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number: 14 schools, 1 hospital, 4 fire stations, 1 public safety facility (police, EMS, 911 Dispatch), 1 City Hall, 3 Public Works Facilities (Streets, Water, Sewer Plant).
2. *Please provide your city's property tax valuation/assessment for the most current year.*	Year	Valuation: $907,164,742

3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) EAV increased 23% over the past five years				
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code *2018 IBC*	Plumbing code- *Illinois Plumbing Code*	Mechanical code *2018 IMC*	Electric code *2017 NEC*	Fire code *2018 IFC*	
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year—*We will adopt the 2024 ICC Codes in 2027*				
6. Has your city flooded in the past?	Yes-*X*	If yes, what years? *2023*	No			
7. What rivers/creeks border or run through your city?	Please list: *Ogles, Engle, Rock Springs, and Richland Creek*					
8. Do you allow construction/development in your flood zone(s)?	Yes-*X*	No	Explanation if needed: *All development must comply with our floodplain development ordinance.*			
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 0				
10. Have structures in your city experienced repetitive losses due to flooding?	Yes-*X (We are only aware of one structure. However, it was never reported to us in the past and therefore no records were kept.)*	If yes, what years? *2023*	No			

11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population – x – 1%	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes-*X*	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes-*X*	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes-*X*	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes-*X* *Chad Truran, Building Official, Floodplain Manager*	No	Please list designee or agency (title and/or department, do not list person by name)-
16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	*After a flood, the building and inspections division assesses structures in known floodplain areas. If damage is found, notice is sent to the owner for permit requirements. SI/SD estimation begins utilizing SDE V3.0.0 or other equivalent means. Require permits to be pulled for work. We have only had one home that we have had to use this process, in 2023.*		

17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes--*X*	If yes, how many? *We have underground mines throughout various locations in our City.*	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes – X – O'Fallon Fire House #4 & Fire House #2 St. Elizabeth's Hospital – mine mitigation done	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population – Yes – 10%		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23-*X*
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes – X	If yes, how many? 1 – Fairwood Lake Dam	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No-X	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No - X
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	N/A		

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	There are no other jurisdictions downstream.			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes-*X*	If yes, please list percent of total population	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No X	What projects? We conduct disaster preparedness exercises.	Budget? NA
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No X
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes X	No	What projects? NA	Approximate cost? NA

32. How will your city incorporate the St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency Operations Plan
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	50 Police Officers, 51 Firefighters, 27 essential Public Works Employees
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Declarations of emergency powers for the Mayor. Approved by City Council. Emergency Operations Plan includes curfew and evacuation powers.

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes X	If yes, please provide name CodeRed	If yes, how much does the system cost annually?	No
36. Does your city have emergency alert sirens?	Yes X	If yes, how many? 9 – Maintained by St. Clair County	No	

37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook, Instagram, LinkedIn, Nextdoor, Ring Public Safety, webpage, Press Releases, TikTok (Although we've not posted much to it yet), water bill inserts, reverse dialing.
38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	Training and exercise for Public Safety and City staff
For flooding	X
For winter storms	X
For heat waves/drought	X
For tornadoes	X
For earthquakes	X
For ground failure	X
For dam/levee failure	X
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	*Tornadoes—Region is always at risk* *Earthquakes—New Madrid fault line.*

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): O'Fallon, Illinois / Grant Litteken	PRIORITY	ACTION
Title(s): Asst. City Administrator	H - High	O - Ongoing
City: O'Fallon IL	M - Medium	C - Complete
Date: 4/12/24	L - Low	D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	(H)	M	L	(O)	C	D
2. Participate and support emergency training for citizen volunteers	(H)	M	L	(O)	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	(H)	M	L	(O)	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	(H)	M	L	(O)	C	D
2. Adopt current building codes	(H)	M	L	O	(C)	D
3. Integrate Hazard Mitigation Plan into local plans	(H)	M	L	O	(C)	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	(H)	M	L	(O)	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	(H)	M	L	(O)	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	(M)	L	(O)	C	D
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	(H)	M	L	O	(C)	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	(H)	M	L	O	(C)	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	(H)	M	L	(O)	C	D
7. Conduct risk assessments for tornado events	(H)	M	L	(O)	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	(H)	M	L	(O)	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	(H)	M	L	O	(C)	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.
Problem being Mitigated:	Casualty mitigation from a tornado
Action or Project	
Applicable Goal Statement:	Goal #1
Action/Project Number:	4.3
Name of Action or Project:	Storm Siren
Mitigation Category:	4.3
Action or Project Description:	Develop and maintain early warning systems to target public and specific, vulnerable communities
Estimated Cost:	No Cost / Cost absorbed by St Clair County Grant
Benefits:	Early warnings for our residents
Plan for Implementation	
Responsible Organization/Department:	St Clair County / Public Safety
Supporting Organization/Department:	O'Fallon
Action/Project Priority:	High
Timeline for Completion:	1 Year
Potential/Existing Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	In Progress
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	O'Fallon
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	All Departments
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.
Problem being Mitigated:	Winter Storms
Action or Project	
Applicable Goal Statement:	Goal #2
Action/Project Number:	4.4.2
Name of Action or Project:	Winter Storm Preparedness
Mitigation Category:	Winter Storms
Action or Project Description:	Ensure all-weather capabilities for emergency equipment
Estimated Cost:	No additional Costs / Fleet is outfitted for severe Weather
Benefits:	Decreased response times to affected areas
Plan for Implementation	
Responsible Organization/Department:	Public Works / Public Safety
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	Done
Potential/Existing Fund Sources:	General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Complete
Report of Progress:	Complete

Winter Storm Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls.
Problem being Mitigated:	Water loss
Action or Project	
Applicable Goal Statement:	Goal #1
Action/Project Number:	4.5.4
Name of Action or Project:	Water supply in Drought
Mitigation Category:	Extreme Drought
Action or Project Description:	Repair, retrofit, and maintain water supply systems to minimize water loss
Estimated Cost:	Unavailable
Benefits:	Ensure water supply is available for normal use.
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Existing revenue for Water Department / State and Federal Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Ongoing
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Severe thunderstorms can cause loss of life, injuries, and severe damage to property.
Problem being Mitigated:	Severe Thunderstorms
Action or Project	
Applicable Goal Statement:	Goal #1
Action/Project Number:	4.6.5
Name of Action or Project:	Storm Sirens
Mitigation Category:	4.6.5
Action or Project Description:	Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
Estimated Cost:	Unknown
Benefits:	Early Warning for Residents and visitors
Plan for Implementation	
Responsible Organization/Department:	St Clair County / Public Saftey
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	2 Months
Potential/Existing Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	In Progress
Report of Progress:	Ongoing

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.
Problem being Mitigated:	Flash Flooding
Action or Project	
Applicable Goal Statement:	Goal #2
Action/Project Number:	4.7.9
Name of Action or Project:	Flood Prevention
Mitigation Category:	4.7.9
Action or Project Description:	Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance
Estimated Cost:	Unknown
Benefits:	Decrease flooding ensure proper drainage
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Existing Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Ongoing
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	Ongoing
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Dam and Levee Failure
Problem being Mitigated:	Failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.
Action or Project	
Applicable Goal Statement:	Goal #2
Action/Project Number:	4.8.3
Name of Action or Project:	Dam Education
Mitigation Category:	4.8.3
Action or Project Description:	Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees
Estimated Cost:	0
Benefits:	Reduced chance of dam and levee breaks
Plan for Implementation	
Responsible Organization/Department:	Community Development
Supporting Organization/Department:	
Medium	Low
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Not Started
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Earthquakes
Problem being Mitigated:	Although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.
Action or Project	
Applicable Goal Statement:	Goal #1
Action/Project Number:	4.9.4
Name of Action or Project:	Earthquake Preparedness
Mitigation Category:	4.9.4
Action or Project Description:	Promote student, individual, and household preparation
Estimated Cost:	0
Benefits:	Education will decrease residents dependence on city services in the event of an earthquake.
Plan for Implementation	
Responsible Organization/Department:	Public Safety
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Ongoing
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	City of O'Fallon
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	Subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property
Action or Project	
Applicable Goal Statement:	Goal #1
Action/Project Number:	4.10.3
Name of Action or Project:	Ground Failure Building data
Mitigation Category:	4.10.3
Action or Project Description:	Maintain a list of buildings constructed over underground mines
Estimated Cost:	0
Benefits:	Advanced knowledge of where issues may occur
Plan for Implementation	
Responsible Organization/Department:	Community Development
Supporting Organization/Department:	
Action/Project Priority:	Low
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Existing Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Ongoing
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Date:
April 11, 2024

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Thomas P Weis, P.E., Michael J. Shillito, P.E. at Weis Desig
City	Village of Sauget, IL
Contact name and email	Tom Weis ,tpw@weisdesigngroup.com Michael Shillito, mshi

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number
Sauget Village Hall(Police and Fire), Alton & Southern & Mo Pacific Railroad, Terminal Railroad Association, IL Rte. 3, Hwy. 255, American Bottoms Wastewater Treatment Plant		6

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation $14,230,000			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail. anticipated 10% growth of commercial/light industrial (Sauget Business Park)	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Residential growth unlikely, but commercial/light industrial development in Business Park expected.			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year) 2021	Building code IBC 2021	Plumbing code	Mechanical code	Electric code	Fire code
5. Please provide the year your city anticipates adopting newer or current building codes and the code year. N/A	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year			
6. Has your city flooded in the past? Yes, the rains of 1993,1995 and 2019 caused flooding behind the levee	Yes	If yes, what years? 1993,1995,2019	No		
7. What rivers/creeks border or run through your city? Goose Lake Ditch & Dead Creek	Please list: Back up canals for the Mississippi River				
8. Do you allow construction/development in your flood zone(s)? Yes, developers must provide no rise certificate and detention for greater than 1 acre unless part of a regional system or network of ditches	Yes	No	Explanation if needed: Developers expected to build above BFE's, mitigate floodplain grading, and provide detention.		
9. How many critical facilities are in your flood zone(s)? 6	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 6			

10. Have structures in your city experienced repetitive losses due to flooding? Yes, sewer system 1993,1995,2019	Yes yes	If yes, what years?	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding? Yes, 20% over 60	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No
12. Does your city participate in the National Flood Insurance Program (NFIP)? Yes	Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance? Yes	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)? Yes	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP? Yes, Weis Design Group	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	The Village reviews/approves plans to ensure improvements are above the BFE, and observes construction to confirm compliance with Village requirements.		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20 No
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees? Yes	Yes yes	If yes, how many? 1	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees? Yes,20%	Yes yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees? Yes	Yes yes	If yes, how many? 5	No
23. Is your city located downstream/below any high hazard potential dam?* No	Yes	If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees? Yes,20%	Yes yes	If yes, please list percent of total city population 20%	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	The Village coordinates with MESD for levee related issues		

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	N/A			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes? Yes	Yes	If yes, please list percent of total population 20%	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years? Yes, every year the Village does a sewer lining project in strategic areas and ongoing pump repairs at lift stations on a regular basis	Yes yes	No	What projects? Sewer lining	Budget? $250,000/yr for sewers and $100,000/year for pump systems
30. Is your city currently receiving funds for hazard mitigation planning or projects? Yes, the Village has applied and receives funds to help with the above referenced projects with IGD St Clair County	Yes, please list what plans or projects Ongoing sewer lining and ongoing pump station repair			No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects? Yes, to continue to repair and improve our sewer system and pump system	Yes Yes	No	What projects? Monsanto Ave sewer repairs	Approximate cost? $2,000,000

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans? Capital Improvements for the Emergency Operations Plan	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency operations plan
33. Please list your city's emergency capabilities 10 police officers and 1 support staff and 11 firefighters	Example: 35 firefighters, 26 police officers	
34. Please list your city's emergency powers ability to declare emergency,ability to order evacuation and ability to declare curfew	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	

35. Does your city have an emergency notification system (e.g. Code Red)? No, utilize St Clair County	Yes	If yes, please provide name	If yes, how much does the system cost annually?
	No No		
36. Does your city have emergency alert sirens? No, utilize St Clair County	Yes	If yes, how many?	No No

37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook and door to door notification

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	Attention to levee closure plans
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	A levee breach anywhere along East St Louis or Village of Sauget boundaries

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Thomas P Weis,P.E.	PRIORITY	ACTION
Title(s): Village Engineer	H - High	O - Ongoing
City: Village of Sauget, IL	M - Medium	C - Complete
Date: 4-11-24	L - Low	D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	M	**L**	**O**	C	D
2. Participate and support emergency training for citizen volunteers	H	M	**L**	**O**	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	**M**	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	**H**	M	L	**O**	C	D
2. Adopt current building codes	H	**M**	L	O	**C**	D
3. Integrate Hazard Mitigation Plan into local plans	**H**	M	L	**O**	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	**H**	M	L	**O**	C	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	**L**	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	**H**	M	L	**O**	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	**H**	M	L	**O**	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	**O**	C	D
7. Conduct risk assessments for tornado events	**H**	M	L	**O**	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	**H**	M	L	**O**	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	**M**	L	**O**	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Industry property damage
Action or Project	
Applicable Goal Statement:	Community safety
Action/Project Number:	4.3.7
Name of Action or Project:	Tornado preparedness
Mitigation Category:	Tornado
Action or Project Description:	Tornado preparedness meetings
Estimated Cost:	$10,000
Benefits:	public safety
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	Tornado preparedness meetings
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Future grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Snow/Ice storm
Problem being Mitigated:	improper equipment
Action or Project	
Applicable Goal Statement:	preparedness of equipment
Action/Project Number:	4.4.2
Name of Action or Project:	storm prepardness
Mitigation Category:	Snow
Action or Project Description:	Assess and purchase proper equipment
Estimated Cost:	$250,000
Benefits:	public safety
Plan for Implementation	
Responsible Organization/Department:	public works
Supporting Organization/Department:	Village Administration
Action/Project Priority:	Assess and purchase proper equipment
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat
Problem being Mitigated:	relief center
Action or Project	
Applicable Goal Statement:	provide relief area
Action/Project Number:	4.5.1
Name of Action or Project:	heat relief
Mitigation Category:	Heat
Action or Project Description:	provide a relief center with emergency generator for AC
Estimated Cost:	$350,000
Benefits:	public health
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	Assess the proper building upgrades needed
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Building Assessment needed
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Sewer Flooding
Problem being Mitigated:	Sewer Cleaning and repair
Action or Project	
Applicable Goal Statement:	Acquire sewer cleaning /inspection equipment
Action/Project Number:	4.6.1
Name of Action or Project:	Sewer cleaning
Mitigation Category:	Thunderstorms
Action or Project Description:	Provide equipment to properly clean sewers
Estimated Cost:	$650,000
Benefits:	public safety
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	Provide training and equipment
Timeline for Completion:	3 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Sewers in Disrepair
Action or Project	
Applicable Goal Statement:	Repair sewers in vulnerable areas
Action/Project Number:	4.7.10
Name of Action or Project:	Sewer Repairs
Mitigation Category:	Flooding
Action or Project Description:	Sewer Repairs
Estimated Cost:	$2,500,000
Benefits:	Public Safety,commerce, and quality of life
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	sewer repairs ,high priority needed
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Planning documents and estimates have been prepared
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Levee Failure
Problem being Mitigated:	Risk Assesment
Action or Project	
Applicable Goal Statement:	Provide risk assessment in case of levee failure
Action/Project Number:	4.8.6
Name of Action or Project:	Levee Failure Assessment
Mitigation Category:	Levee
Action or Project Description:	Evacuation and condition analysis
Estimated Cost:	$50,000
Benefits:	Plan for evacuation
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	Review Assessment of condition and evacuation plan
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Work with Mesd and their existing condition report
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Building Risk Assessment
Action or Project	
Applicable Goal Statement:	Risk Assesment
Action/Project Number:	4.9.9
Name of Action or Project:	Public Building risk assessment
Mitigation Category:	Earthquakes
Action or Project Description:	Evaluation and condition analysis
Estimated Cost:	$50,000
Benefits:	Public safety of critical buildings
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	Review Assessment of condition/evaluation plan
Timeline for Completion:	2 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Sauget,IL
Risk / Vulnerability	
Hazard Addressed:	Ground Failures
Problem being Mitigated:	Assessment
Action or Project	
Applicable Goal Statement:	Conduct risk assessments for ground failures
Action/Project Number:	4.10.7
Name of Action or Project:	Risk Assessment
Mitigation Category:	Ground failures
Action or Project Description:	Conduct risk assessments for ground failures
Estimated Cost:	$25,000
Benefits:	Avoid future failures
Plan for Implementation	
Responsible Organization/Department:	Sauget
Supporting Organization/Department:	Village Administration
Action/Project Priority:	Enforce soil testing for new projects
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	During Construction plan review enforce soil testing of new developments
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:4/11/2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Brenda Kern Village Clerk Sean Schneider Director of Building and Zoning Chris Etling Director of Public Works Rich Wittenauer Chief of Police Tracy Kennet Chief Financial Officer
City	The Village of Shiloh
Contact name and email	Sean Schneider Building and Zoning Director Sschneider@ShilohIL.org

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number = 10. Including- Village Hall, Community Center, Klucker Hall, Public Works Building, Police Department, Fire Department, Hospital, 3 Schools.

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation $364,968,405.			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	**1.) Shiloh Springs Est. Land Value $1.5 Mill Parcel #09-06.0-309-003/004/005** **2.) 2309 Frank Scott Parkway Eas. Parcel #09050105001/Paired with 2001 Frank Scott Parkway Eas. Parcel #04310400018** **3.) Hwy 158 Development** **4.) 3416 Lebanon Ave. Parcel #**09070300048			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2018 IRC	Plumbing code 2018 IPC	Mechanical code	Electric code 2017 NEC	Fire code 2018 IFC
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.		Unknown, In the next few years, as directed.			
6. Has your city flooded in the past?	No	If yes, what years?			
7. What rivers/creeks border or run through your city?	Richland Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes,	No	There are no flood zones, so if something catastrophic happened is the only way it could have been allowed.		
9. How many critical facilities are in your flood zone(s)?			Number: 0		

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	N/A, No Flooding issues		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many? 2	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	N/A		

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.	N/A			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) -Emergency Operations
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	25 Police Officers 0 Fire Fighters from Shiloh *Volunteers F.F. from O'Fallon
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name	If yes, how much does the system cost annually?	No
36. Does your city have emergency alert sirens?	Yes	If yes, how many?	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook, Email subscriptions, Web page			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	No new or additional strategies on The Village of Shiloh's behalf.
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Tornado

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Brenda Kern Village Clerk Sean Schneider Director of Building and Zoning Chris Etling Director of Public Works Rich Wittenauer Chief of Police	**PRIORITY**	**ACTION**
Title(s): Village Clerk, Director of Building and Zoning, Director of Public Works, Chief of Police	**H - High**	**O - Ongoing**
City: Village of Shiloh	**M - Medium**	**C - Complete**
Date: 4-11-2024	**L - Low**	**D - Deferred**

ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	**H**	M	L	**O**	C	D
2. Participate and support emergency training for citizen volunteers	H	**M**	L	**O**	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	**M**	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	**L**	**O**	C	D
2. Adopt current building codes	**H**	M	L	**O**	C	D
3. Integrate Hazard Mitigation Plan into local plans	**H**	M	L	**O**	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	**L**	O	C	**D**
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	**L**	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	**M**	L	**O**	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	**H**	M	L	**O**	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	O	**C**	D
7. Conduct risk assessments for tornado events	H	M	**L**	**O**	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	**M**	L	**O**	C	D
4.4 - Winter Storms						

1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D

13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	**H**	**M**	**L**	**O**	**C**	**D**
14. Conduct risk assessments for floods	**H**	**M**	**L**	**O**	**C**	**D**
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**	**M**	**L**	**O**	**C**	**D**
16. Promote use of green infrastructure techniques to property owners	**H**	**M**	**L**	**O**	**C**	**D**
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	**H**	**M**	**L**	**O**	**C**	**D**
2. Improve structural integrity of dams, using incentives where feasible	**H**	**M**	**L**	**O**	**C**	**D**
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	**H**	**M**	**L**	**O**	**C**	**D**
4. Develop and implement dam/levee failure emergency action plans	**H**	**M**	**L**	**O**	**C**	**D**
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**M**	**L**	**O**	**C**	**D**
6. Conduct risk assessments for dam / levee failures	**H**	**M**	**L**	**O**	**C**	**D**
4.9 - Earthquakes						
1. Improve early warning systems	**H**	**M**	**L**	**O**	**C**	**D**
2. Review and update building codes	**H**	**M**	**L**	**O**	**C**	**D**
3. Maintain integrated communications systems for rapid response	**H**	**M**	**L**	**O**	**C**	**D**
4. Promote student, individual, and household preparation	**H**	**M**	**L**	**O**	**C**	**D**
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	**H**	**M**	**L**	**O**	**C**	**D**
6. Adopt Seismic Construction Ordinance	**H**	**M**	**L**	**O**	**C**	**D**
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**M**	**L**	**O**	**C**	**D**
8. Integrate communications systems to provide rapid communication and response	**H**	**M**	**L**	**O**	**C**	**D**
9. Conduct risk assessments for earthquakes	**H**	**M**	**L**	**O**	**C**	**D**
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**	**M**	**L**	**O**	**C**	**D**
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	**H**	**M**	**L**	**O**	**C**	**D**
2. Map and assess vulnerable areas and stabilize when feasible	**H**	**M**	**L**	**O**	**C**	**D**
3. Maintain a list of buildings constructed over underground mines	**H**	**M**	**L**	**O**	**C**	**D**
4. Develop specially engineered resilient pipelines in areas subject to ground failures	**H**	**M**	**L**	**O**	**C**	**D**
5. Develop / improve mining regulations	**H**	**M**	**L**	**O**	**C**	**D**
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**H**	**M**	**L**	**O**	**C**	**D**
7. Conduct risk assessments for ground failures	**H**	**M**	**L**	**O**	**C**	**D**
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**	**M**	**L**	**O**	**C**	**D**

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Public Info & Awareness for Natural Disasters
Problem being Mitigated:	Safety of the Public
Action or Project	
Applicable Goal Statement:	Info &Awareness for Public Safety
Action/Project Number:	4.1.3
Name of Action or Project:	Preparation of Public Info & Awareness
Mitigation Category:	Public Info & Awareness for Natural Disaster
Action or Project Description:	Social Media, Media Contacts, Early Warning System
Estimated Cost:	$5000
Benefits:	To protect and provide services for the Public.
Plan for Implementation	
Responsible Organization/Department:	Village of Shiloh
Supporting Organization/Department:	Village Staff, P.D.
Action/Project Priority:	On-going/Medium
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Village of Shiloh
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation training info needed for Village for planning efforts
Action or Project	
Applicable Goal Statement:	3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below): Adopt Current Building Codes. Integrate Hazard Mitigation into local plans
Estimated Cost:	$5000
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	Village of Shiloh
Supporting Organization/Department:	Village Staff/ Deferred to St. Clair County
Action/Project Priority:	On-going/High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Village of Shiloh
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Tornado Mitigation
Problem being Mitigated:	Property Damage & Public Safety
Action or Project	
Applicable Goal Statement:	1,2,3
Action/Project Number:	4.3.1, 4.3.2, 4.3.4, 4.3.5, 4.3.8
Name of Action or Project:	Preparation for Tornados
Mitigation Category:	Effective Response to Tornado
Action or Project Description:	Pumps, Generators, Storm Clean-up Equipment
Estimated Cost:	$250,000
Benefits:	Enhancing Day to Day Operations of the Village
Plan for Implementation	
Responsible Organization/Department:	Village of Shiloh
Supporting Organization/Department:	Police Dept./Public Works/Building and Zoning
Action/Project Priority:	On-going/High
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Village of Shiloh, implementing code of 12'x10' shed anchors as well as Anchoring Mobile Homes. Influencing sheds smaller than 10x12 to anchor but not mandating
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Winter Storm
Problem being Mitigated:	Property Damage/ Safety of Public
Action or Project	
Applicable Goal Statement:	1,2,3
Action/Project Number:	4.4.1, 4.4.2,4.4.3
Name of Action or Project:	Preparation for Winter Storms
Mitigation Category:	Effective Response to Winter Storm
Action or Project Description:	Pumps/Generators/Snow Plows/Salt/Truck usage/Labor/Storm Clean-up Equipment/Equipment Maintenance
Estimated Cost:	$250,000
Benefits:	Enhancing driving conditions for public safety
Plan for Implementation	
Responsible Organization/Department:	Village of Shiloh
Supporting Organization/Department:	Public Works, Building and Zoning
Action/Project Priority:	On-going/Medium
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Village of Shiloh, Ordinances i.e. Enforcing no parking on roadway, No dumpsters/Pods on roadway
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat/Drought
Problem being Mitigated:	Safety of the Public
Action or Project	
Applicable Goal Statement:	1,2,3
Action/Project Number:	4.5.1, 4.5.2, 4.5.3, 4.5.6
Name of Action or Project:	Preparation for Extreme Heat/Drought
Mitigation Category:	Effective Response for Extreme Heat/Drought
Action or Project Description:	Ensure Shelters are open, use social media, media contacts, security staff for shelter
Estimated Cost:	$100,000
Benefits:	Protecting and Providing Services for the Public
Plan for Implementation	
Responsible Organization/Department:	Village of Shiloh
Supporting Organization/Department:	Village Staff, P.D., F.D.
Action/Project Priority:	Ongoing/Medium
Timeline for Completion:	1-5 Years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Village of Shiloh
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Thunderstorm
Problem being Mitigated:	Safety of Public/Property Damage
Action or Project	
Applicable Goal Statement:	1,2,3
Action/Project Number:	4.6.1, 4.6.2, 4.6.3, 4.6.6
Name of Action or Project:	Preparation for Severe Thunderstorm
Mitigation Category:	Effective Response to Thunderstorm
Action or Project Description:	Preparation, Maintenance, Repair, Pumps, generators, storm clean-up equipment
Estimated Cost:	$250,000
Benefits:	Protecting and Providing Services for the public
Plan for Implementation	
Responsible Organization/Department:	Village of Shiloh
Supporting Organization/Department:	Public Works, P.D.
Action/Project Priority:	Ongoing/Medium
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Village of Shiloh, Drainage ordinances
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2,
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	1
Action/Project Number:	4.7.1, 4.7.2, 4.7.3
Name of Action or Project:	participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$2,000
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	St. Clair County, Village of Shiloh
Supporting Organization/Department:	St. Clair County, Shiloh Building and Zoning, Public Works
Action/Project Priority:	Deferred/Low
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Future Grants, St. Clair County
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Dam Failure
Problem being Mitigated:	Developments in Dam flood plain
Action or Project	
Applicable Goal Statement:	2,3
Action/Project Number:	4.8.5
Name of Action or Project:	Early Detection and Warning of Dam/Levee break
Mitigation Category:	Effective Response to Levee/Dam Break
Action or Project Description:	Using Sirens to Alert the Public, Social Media, Media Contacts
Estimated Cost:	$0
Benefits:	Safety of the general public, Land, And Buildings
Plan for Implementation	
Responsible Organization/Department:	St. Clair County
Supporting Organization/Department:	St. Clair County
Action/Project Priority:	Deferred/Low
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Although there is a low probability in a given year, there is potential for widespread damage from a large earthquake.
Problem being Mitigated:	Announcing to the public
Action or Project	
Applicable Goal Statement:	1
Action/Project Number:	4.9.1, 4.9.2, 4.9.7
Name of Action or Project:	Earthquake Safety
Mitigation Category:	Effective disaster response
Action or Project Description:	Reach out to St. Clair County, Use our own resources
Estimated Cost:	$0
Benefits:	Safety and well-being of the public as well as land and buildings and bridges.
Plan for Implementation	
Responsible Organization/Department:	St. Clair County
Supporting Organization/Department:	St. Clair County
Action/Project Priority:	Deferred/Low
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	St. Clair County/ Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	St. Clair County Resources
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Shiloh
Risk / Vulnerability	
Hazard Addressed:	Ground Failure
Problem being Mitigated:	Ground collapse and repair
Action or Project	
Applicable Goal Statement:	1
Action/Project Number:	4.10.1
Name of Action or Project:	Review construction Permit applications, reduce allowing building in these areas
Mitigation Category:	Research and Development.
Action or Project Description:	Early detection, researching properties before allowing for building permit.
Estimated Cost:	$1000
Benefits:	Public Saftey, Financial burden of Buildings/homes/roads/bridges
Plan for Implementation	
Responsible Organization/Department:	St. Clair County and Mining Dept.
Supporting Organization/Department:	St. Clair County
Action/Project Priority:	Ongoing/Medium
Timeline for Completion:	On-going
Potential/Existing Fund Sources:	Future Grants/ St. Clair County/ Mining Dept.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 4/12/2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Kari Speir, Village Administrator Jason Neff, Police Chief Dean Klein, Public Works Supervisor
City	Village of Smithton
Contact name and email	Kari Speir kspeir@smithton-village.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 2 Schools 2 Government Buildings IL Route 159
2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2023	Valuation $108,441,464

3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Anticipate 3% growth			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code IBC 2003	Plumbing code Illinois Plumbing Code	Mechanical code	Electric code NEC 2005	Fire code
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year In 2024 the Village will adopt codes followed by St. Clair County (2012 editions)			
6. Has your city flooded in the past?	Yes	If yes, what years?	No=X		
7. What rivers/creeks border or run through your city?	Please list: Douglas Creek West Fork Richland Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes	No=X	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 0			
10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No=X		

11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No=X
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes=X	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes=X	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes=X	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes=X	No	Please list designee or agency (title and/or department, do not list person by name)
16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	The Village follows rules and guidelines adopted by FEMA.		

17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20=X
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23=X
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28=N
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			
27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.			

28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes =X	If yes, please list percent of total population 1%	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No=X	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No=X
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No=X	What projects?	Approximate cost?
32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Smithton Emergency Operations Plan		

33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	35 Volunteer Firefighters 10 Police Officers 5 Public Works		
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Ability to declare a curfew. Ability to declare an emergency. Ability to issue any other such orders in the interest of public safety and welfare.		
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes-X	If yes, please provide name CodeRed	If yes, how much does the system cost annually? $2,750.00	No
36. Does your city have emergency alert sirens?	Yes=X	If yes, how many? 4	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Facebook Water/Sewer Bills Emails Village Website			
38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.				
For flooding				
For winter storms				
For heat waves/drought				

For tornadoes	Weather alert radios for households similar to smoke detection abilities.
For earthquakes	Verification of alerts from USGS & CUSEC-rapid communications.
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Tornado, Severe Thunderstorms, Winter Storm, Heat Wave/Drought, Earthquake

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Kari Speir	**PRIORITY**			**ACTION**		
Title(s): Village Administrator	**H - High**			**O - Ongoing**		
City: Village of Smithton	**M - Medium**			**C - Complete**		
Date: 4/12/2024	**L - Low**			**D - Deferred**		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	**(H)**	**M**	**L**	**(O)**	**C**	**D**
2. Participate and support emergency training for citizen volunteers	**(H)**	**M**	**L**	**(O)**	**C**	**D**
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	**(H)**	**M**	**L**	**(O)**	**C**	**D**
2. Adopt current building codes	**(H)**	**M**	**L**	**(O)**	**C**	**D**
3. Integrate Hazard Mitigation Plan into local plans	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.3 – Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	**H**	**(M)**	**L**	**O**	**C**	**(D)**
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	**(M)**	**L**	**(O)**	**C**	**D**
3. Retrofit one- and two-family residences and infrastructure and essential buildings	**H**	**(M)**	**L**	**O**	**C**	**(D)**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	**H**	**(M)**	**L**	**(O)**	**C**	**D**
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	**(H)**	**M**	**L**	**O**	**(C)**	**D**
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**(H)**	**M**	**L**	**(O)**	**C**	**D**
7. Conduct risk assessments for tornado events	**(H)**	**M**	**L**	**(O)**	**C**	**D**
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	**(H)**	**M**	**L**	**(O)**	**C**	**D**
2. Ensure all-weather capabilities for emergency equipment	**(H)**	**M**	**L**	**(O)**	**C**	**D**

3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	**(H)**	**M**	**L**	**O**	**C**	**(D)**
2. Increase tree planting and enhance shade availability to mitigate heat impacts	**H**	**M**	**(L)**	**O**	**C**	**(D)**
3. Enforce burn ordinances and audit water loss and incentivize water reuse	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4. Repair, retrofit, and maintain water supply systems to minimize water loss	**(H)**	**M**	**L**	**(O)**	**C**	**D**
5. Provide soil and water conservation practices education for farmers	**H**	**(M)**	**L**	**O**	**C**	**(D)**
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	**(H)**	**M**	**L**	**(O)**	**C**	**D**
2. Review and update building codes to reduce building damage	**(H)**	**M**	**L**	**(O)**	**C**	**D**
3. Improve early warning systems and maintain integrated communications systems for rapid response	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4. Promote student, individual, and household preparation	**(H)**	**M**	**L**	**(O)**	**C**	**D**
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	**(H)**	**M**	**L**	**(O)**	**C**	**D**
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**(H)**	**M**	**L**	**(O)**	**C**	**D**
4.7 – Flood – This section does NOT apply to our area.						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	**H**	**M**	**L**	**O**	**C**	**D**
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	**H**	**M**	**L**	**O**	**C**	**D**
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	**H**	**M**	**L**	**O**	**C**	**D**
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	**H**	**M**	**L**	**O**	**C**	**D**
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	**H**	**M**	**L**	**O**	**C**	**D**
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	**H**	**M**	**L**	**O**	**C**	**D**
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	**H**	**M**	**L**	**O**	**C**	**D**
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	**H**	**M**	**L**	**O**	**C**	**D**
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	**H**	**M**	**L**	**O**	**C**	**D**
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	**H**	**M**	**L**	**O**	**C**	**D**
11. Install and maintain pumping stations in levee systems	**H**	**M**	**L**	**O**	**C**	**D**
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	**H**	**M**	**L**	**O**	**C**	**D**
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	**H**	**M**	**L**	**O**	**C**	**D**
14. Conduct risk assessments for floods	**H**	**M**	**L**	**O**	**C**	**D**
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	**H**	**M**	**L**	**O**	**C**	**D**
16. Promote use of green infrastructure techniques to property owners	**H**	**M**	**L**	**O**	**C**	**D**

4.8 - Dam and Levee Failure – This section does NOT apply to our area.						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	(H)	M	L	(O)	C	D
2. Review and update building codes	H	(M)	L	O	C	(D)
3. Maintain integrated communications systems for rapid response	(H)	M	L	(O)	C	D
4. Promote student, individual, and household preparation	(H)	M	L	(O)	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	(M)	L	O	C	(D)
6. Adopt Seismic Construction Ordinance	H	M	(L)	O	C	(D)
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	(H)	M	L	(O)	C	D
8. Integrate communications systems to provide rapid communication and response	(H)	M	L	(O)	C	D
9. Conduct risk assessments for earthquakes	(H)	M	L	(O)	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	(H)	M	L	(O)	C	D
4.10 - Ground Failure – This section does NOT apply to our area.						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	All Hazards
Problem being Mitigated:	Increase public information/education on all hazards specific to our area
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.1.3
Name of Action or Project:	Educate the public, local government staff, and elected officials.
Mitigation Category:	Public awareness and involvement to inform and prepare the public for all hazards.
Action or Project Description:	Educate the public, local government staff and elected officials about relevant hazards and train in and use alternate media.
Estimated Cost:	$0.00
Benefits:	Potential to save lives and property.
Plan for Implementation	
Responsible Organization/Department:	Smithton ESDA Coordinator
Supporting Organization/Department:	Smithton Police, Smithton and Hecker Fire Departments, Public Works
Action/Project Priority:	High priority
Timeline for Completion:	On-going to reflect any improvements in data.
Potential/Existing Fund Sources:	Smithton ESDA
Local Planning Mechanisms to be Used in Implementation, if any:	Smithton ESDA Department
Progress Report	
Action Status:	On-going
Report of Progress:	On-going

Effective Response Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into Village's plans (listed below): Emergency Operations Plan
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	Smithton ESDA with County EMA-OHS
Supporting Organization/Department:	Smithton Police, Smithton and Hecker Fire Departments, Public Works
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Smithton ESDA
Progress Report	
Action Status:	On-going
Report of Progress:	2-5 years

Tornado Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Increase hazard plans into Village planning efforts.
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.3.6
Name of Action or Project:	Prepare for receipt and dissemination to the general public of a threatening tornado.
Mitigation Category:	Effective response to a tornado warning alert.
Action or Project Description:	Create and improve early warning systems for tornado alerts including outdoor warning sirens, targeted responses using such notification systems such as Code Red and target communications.
Estimated Cost:	$10,000.00
Benefits:	Alerting the general public for their protection responses and that of our local emergency response departments.
Plan for Implementation	
Responsible Organization/Department:	Smithton ESDA
Supporting Organization/Department:	Smithton Police, Smithton and Hecker Fire Departments, Public Works
Action/Project Priority:	High
Timeline for Completion:	2-4 years and always on-going as systems (equipment) updates.
Potential/Existing Fund Sources:	Smithton ESDA
Local Planning Mechanisms to be Used in Implementation, if any:	Smithton ESDA
Progress Report	
Action Status:	On-going
Report of Progress:	1 year

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	Winter Storms
Problem being Mitigated:	Need integration with County EMA-OHS with Smithton ESDA EOP
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.4.3
Name of Action or Project:	Acquire necessary equipment including generators, and pumps, to secure lives and property.
Mitigation Category:	Prepare for winter storms.
Action or Project Description:	Respond to needs of life-threatening conditions resulting from power outages and roadway blockage due to snow or ice.
Estimated Cost:	Varies – unknown due to size of the winter storm.
Benefits:	Increase access to/for the citizens to access medical and emergency department responses.
Plan for Implementation	
Responsible Organization/Department:	Smithton ESDA
Supporting Organization/Department:	Smithton Police, Smithton and Hecker Fire Departments, Public Works
Action/Project Priority:	High
Timeline for Completion:	This is an on-going operation.
Potential/Existing Fund Sources:	Local Government Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Smithton ESDA
Progress Report	
Action Status:	On-going
Report of Progress:	2-5 years

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	Extreme Heat / Drought
Problem being Mitigated:	To integrate hazard mitigation plans into Village/County planning efforts.
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.5.3
Name of Action or Project:	Mitigate hazards associated with extreme heat/drought
Mitigation Category:	Extreme Heat / Drought
Action or Project Description:	Enforce burn ordinances, audit water loss, and incentivize water reuse.
Estimated Cost:	Unknown
Benefits:	Effective increase in water availability for residence and cooling shelters.
Plan for Implementation	
Responsible Organization/Department:	Smithton ESDA, Village emergency response departments, Village
Supporting Organization/Department:	Zoning Administrator
Action/Project Priority:	High
Timeline for Completion:	2-3 years
Potential/Existing Fund Sources:	General Municipal Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Zoning Board
Progress Report	
Action Status:	On-going
Report of Progress:	2-3 years

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorm Hazards
Problem being Mitigated:	Integrate local EOP with County EMA-OHS EOP
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.6.1
Name of Action or Project:	Prepare for Severe Thunderstorm hazards that include damaging winds, hail and extreme rainfall.
Mitigation Category:	Severe Thunderstorms
Action or Project Description:	Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
Estimated Cost:	Unknown
Benefits:	Protect life and property.
Plan for Implementation	
Responsible Organization/Department:	Smithton ESDA & Public Works
Supporting Organization/Department:	Smithton Police, Smithton and Hecker Fire Departments, Public Works
Action/Project Priority:	High
Timeline for Completion:	On-going
Potential/Existing Fund Sources:	General Municipal Revenue / ESDA budget
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	On-going
Report of Progress:	2-3 years

Flood Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	Flooding (EXTREME LOW RISK OF FLOODING)
Problem being Mitigated:	Development in floodplain – DOES NOT APPLY TO VILLAGE OF SMITHTON
Action or Project	
Applicable Goal Statement:	Goals #2 & #3
Action/Project Number:	4.7.2
Name of Action or Project:	Maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in Village ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Zoning Administrator
Supporting Organization/Department:	Smithton Public Works
Action/Project Priority:	Low
Timeline for Completion:	On-going
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	DOES NOT APPLY TO OUR VILLAGE LOCATION
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	DOES NOT APPLY TO OUR VILLAGE
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	Reduce loss of life / serious injury to persons.
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.9.3 & 4.9.4
Name of Action or Project:	Earthquake mitigation per local EOP
Mitigation Category:	Earthquake related hazards.
Action or Project Description:	Maintain integrated communication systems for rapid responses and promote student, individual, and household preparation.
Estimated Cost:	
Benefits:	Preparedness by individuals increases safety to life and property.
Plan for Implementation	
Responsible Organization/Department:	Smithton ESDA
Supporting Organization/Department:	Smithton Police, Smithton and Hecker Fire Departments, Public Works
Action/Project Priority:	High
Timeline for Completion:	Response plan in Smithton EOP
Potential/Existing Fund Sources:	Municipal revenue funding
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	On-going
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Smithton
Risk / Vulnerability	
Hazard Addressed:	DOES NOT APPLY TO OUR VILLAGE
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:4/11/24

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Robert Stroder – Mayor
City	Village of St LIbory, Il
Contact name and email	Robert Stroder Mayor@stlibory.us

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 4
2. Please provide your city's property tax valuation/assessment for the most current year.	Year	Valuation

3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Stay the same			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code	Mechanical code	Electric code	Fire code
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year			
6. Has your city flooded in the past?	Yes	If yes, what years?	No X		
7. What rivers/creeks border or run through your city?	Please list: Little Mud Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes	No: X	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 0			
10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No: X		

11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No: X
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No: X There is no flood plan.	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)
16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			

17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20 X
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23 X
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 X
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			
27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.			

28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population	No X

29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No X	What projects?	Budget?

30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects	No: X

31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No X	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency operations plan.

33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	24 Firefighter personnel
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	The Mayor or the Fire Chief have the powers to declare and emergency when needed. They also have the power to declare a curfew if needed.

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name	If yes, how much does the system cost annually?	No: X
36. Does your city have emergency alert sirens?	Yes	If yes, how many?	No: X	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Bill inserts and facebook.			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	

For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Severe weather, and High winds.

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): Robert Stroder	PRIORITY	ACTION
Title(s): Mayor	H - High	O - Ongoing
City: Village of St Libory	M - Medium	C - Complete
Date: 4/11/24	L - Low	D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	**H**	M	L	**O**	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	**D**
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	**M**	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	**M**	L	**O**	C	D
2. Adopt current building codes	H	M	L	O	**C**	D
3. Integrate Hazard Mitigation Plan into local plans	H	**M**	L	**O**	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	**C**	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	**C**	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	**C**	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	**O**	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	**C**	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	**M**	L	**O**	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	**M**	L	**O**	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D

15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of St LIbory
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Power outage from tornados
Action or Project	
Applicable Goal Statement:	To ensure community can continue running.
Action/Project Number:	4.3.8
Name of Action or Project:	Preparation for tornado
Mitigation Category:	
Action or Project Description:	Install generator.
Estimated Cost:	25000.00
Benefits:	Public safety
Plan for Implementation	
Responsible Organization/Department:	Village of St Libory
Supporting Organization/Department:	Village administration
Action/Project Priority:	Allow village to continue day to day in a power outage
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of St Libory
Risk / Vulnerability	
Hazard Addressed:	Winter storm warning
Problem being Mitigated:	Power outage from winter storm
Action or Project	
Applicable Goal Statement:	To ensure public safety
Action/Project Number:	4.4.3
Name of Action or Project:	Preparation for winter storm
Mitigation Category:	Winter Storm
Action or Project Description:	Install Generator
Estimated Cost:	25000
Benefits:	To ensure the village could operate as normal if power outage due to winter storm.
Plan for Implementation	
Responsible Organization/Department:	Village of St Libory
Supporting Organization/Department:	Administration of the Village
Action/Project Priority:	To ensure the village could operate as normal if power outage due to winter storm.
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of St Libory
Risk / Vulnerability	
Hazard Addressed:	Severe weather warning
Problem being Mitigated:	Have early warning for public safety
Action or Project	
Applicable Goal Statement:	Have early warning for public safety
Action/Project Number:	4.6.3
Name of Action or Project:	Preparation for severe weather
Mitigation Category:	Thunderstorms
Action or Project Description:	Improve on early warning systems
Estimated Cost:	30000
Benefits:	To ensure public safety, and they know a head of time.
Plan for Implementation	
Responsible Organization/Department:	Village of St Libory
Supporting Organization/Department:	Administration of Village
Action/Project Priority:	High to Moderate
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of St Libory
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Controlling flood water
Action or Project	
Applicable Goal Statement:	To control the excess flood water
Action/Project Number:	4.7.4
Name of Action or Project:	Retention pond
Mitigation Category:	Flooding
Action or Project Description:	Buy excess property to build retaining pond to control the amount of water that flows through our creek.
Estimated Cost:	150000.00
Benefits:	To be able to control the water that flows through the creek in our town.
Plan for Implementation	
Responsible Organization/Department:	Village of St Libory
Supporting Organization/Department:	Administration of Village
Action/Project Priority:	Moderate to High
Timeline for Completion:	10 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date:4/11/24

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Dean Zurliene – Mayor Taffy Bequette - Clerk
City	Village of Summerfield
Contact name and email	T Bequette Tbequette63@gmail.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 4
2. *Please provide your city's property tax valuation/assessment for the most current year.*	Year 2022	Valuation 4,359,469

3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Stay the same			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2012	Plumbing code 2012	Mechanical code 2012	Electric code 2012	Fire code 2012
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year Unknown			
6. Has your city flooded in the past?	Yes	If yes, what years?	No X		
7. What rivers/creeks border or run through your city?	Please list:				
8. Do you allow construction/development in your flood zone(s)?	Yes	No: X	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 0			
10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No: X		

11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No: X
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes	No: X There is no flood plan.	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	No	Please list designee or agency (title and/or department, do not list person by name)
16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.			

17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes	If yes, how many?	No, if no, please skip to #20 X
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23 X
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 X
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			
27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.			

28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes	If yes, please list percent of total population	No X

29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No X	What projects?	Budget?

30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects	No: X

31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No X	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency operations plan.

33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers			
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	The Mayor has the powers to declare and emergency when needed. They also have the power to declare a curfew if needed.		
35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name	If yes, how much does the system cost annually?	No: X
36. Does your city have emergency alert sirens?	Yes	If yes, how many?	No: X	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list:			
38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.				
For flooding				
For winter storms				
For heat waves/drought				

For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Severe weather, and High winds.

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): D Zurliene & T Bequette	PRIORITY			ACTION		
Title(s): Mayor & Clerk	H - High			O - Ongoing		
City: Village of Summerfiled	M - Medium			C - Complete		
Date: 4/11/24	L - Low			D - Deferred		
ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	**H**	M	L	**O**	C	D
2. Participate and support emergency training for citizen volunteers	H	M	L	O	C	**D**
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	H	**M**	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	**M**	L	**O**	C	D
2. Adopt current building codes	H	M	L	O	**C**	D
3. Integrate Hazard Mitigation Plan into local plans	H	**M**	L	**O**	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	L	O	**C**	D
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	L	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	L	O	**C**	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	L	O	**C**	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	**O**	C	D
7. Conduct risk assessments for tornado events	H	M	L	O	**C**	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	**M**	L	**O**	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	**M**	L	**O**	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D

15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Summerfield
Risk / Vulnerability	
Hazard Addressed:	Tornado
Problem being Mitigated:	Power outage from tornados
Action or Project	
Applicable Goal Statement:	To ensure community can continue running.
Action/Project Number:	4.3.8
Name of Action or Project:	Preparation for tornado
Mitigation Category:	
Action or Project Description:	Install generator.
Estimated Cost:	25000.00
Benefits:	Public safety
Plan for Implementation	
Responsible Organization/Department:	Village of Summerfield
Supporting Organization/Department:	Village administration
Action/Project Priority:	Allow village to continue day to day in a power outage
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Summerfield
Risk / Vulnerability	
Hazard Addressed:	Winter storm warning
Problem being Mitigated:	Power outage from winter storm
Action or Project	
Applicable Goal Statement:	To ensure public safety
Action/Project Number:	4.4.3
Name of Action or Project:	Preparation for winter storm
Mitigation Category:	Winter Storm
Action or Project Description:	Install Generator
Estimated Cost:	25000
Benefits:	To ensure the village could operate as normal if power outage due to winter storm.
Plan for Implementation	
Responsible Organization/Department:	Village of Summerfield
Supporting Organization/Department:	Administration of the Village
Action/Project Priority:	To ensure the village could operate as normal if power outage due to winter storm.
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Summerfield
Risk / Vulnerability	
Hazard Addressed:	Severe weather warning
Problem being Mitigated:	Have early warning for public safety
Action or Project	
Applicable Goal Statement:	Have early warning for public safety
Action/Project Number:	4.6.3
Name of Action or Project:	Preparation for severe weather
Mitigation Category:	Thunderstorms
Action or Project Description:	Improve on early warning systems
Estimated Cost:	30000
Benefits:	To ensure public safety, and they know a head of time.
Plan for Implementation	
Responsible Organization/Department:	Village of Summerfield
Supporting Organization/Department:	Administration of Village
Action/Project Priority:	High to Moderate
Timeline for Completion:	5 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Village of Summerfield
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Controlling flood water
Action or Project	
Applicable Goal Statement:	To control the excess flood water
Action/Project Number:	4.7.4
Name of Action or Project:	Retention pond
Mitigation Category:	Flooding
Action or Project Description:	Buy excess property to build retaining pond to control the amount of water that flows through our creek.
Estimated Cost:	150000.00
Benefits:	To be able to control the water that flows through the creek in our town.
Plan for Implementation	
Responsible Organization/Department:	Village of Summerfield
Supporting Organization/Department:	Administration of Village
Action/Project Priority:	Moderate to High
Timeline for Completion:	10 years
Potential/Existing Fund Sources:	Future Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: April 11, 2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Ben Schloesser, Village Administrator Chris Tell, Fire Chief Matt Blomberg, Police Chief
City	Swansea
Contact name and email	bschloesser@swanseail.org

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 9

2. Please provide your city's property tax valuation/assessment for the most current year.	Year 2024	Valuation 100,000,000			
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Continue slow population growth, mostly single-family homes.			
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code 2015 IBC	Plumbing code IL State Code	Mechanical code 2015 IMC	Electric code 2014 NEC	Fire code 2006 IFC
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year The Village will adopt the 2021 codes in 2024			
6. Has your city flooded in the past?	Yes YES	If yes, what years? 2022	No		
7. What rivers/creeks border or run through your city?	Please list: Richland Creek				
8. Do you allow construction/development in your flood zone(s)?	Yes Yes, restricted per flood damage prevention code	No	Explanation if needed:		
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 0			

10. Have structures in your city experienced repetitive losses due to flooding?	Yes	If yes, what years?	No No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.	If yes, please list percent of total city population	No No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	Yes Yes	No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes Yes	No	If no, please describe why not
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	Yes Yes	No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes Yes, Building & Zoning Department	No	Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	Floodplain administrator performs assessment after flooding event to determine if substantial damage criterion has been met.		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	Yes Yes	If yes, how many? Unknown	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	No Not known to be
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population		No No
20. Does your city sit behind any levees?	Yes	If yes, how many?	No, if no, please skip to #23 No
21. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
22. Are there any critical facilities behind the levees?	Yes	If yes, how many?	No
23. Is your city located downstream/below any high hazard potential dam?*	Yes	If yes, how many?	No, if no, please skip to #28 14
24. Are there any critical facilities below the high hazard potential dam(s)?	Yes	No	If yes, how many?
25. Does your city have at-risk populations behind levees?	Yes	If yes, please list percent of total city population	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.			

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions.				
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	Yes Yes, manufactured housing parks	If yes, please list percent of total population	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	No No	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			No No
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	Yes	No No	What projects?	Approximate cost?

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency Operations Plan
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	23 Police Officers 25 firefighters
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Declare emergency, order evacuation, set curfew

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes Yes	If yes, please provide name Hyperreach	If yes, how much does the system cost annually? $5,000	No
36. Does your city have emergency alert sirens?	Yes Yes	If yes, how many? 4	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Police and Fire Department Facebook pages, newsletter (Swansea Report)		

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Tornadoes

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population. Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Name(s): **Ben Schloesser, Chris Tell, & Matt Blomberg**	PRIORITY	ACTION
Title(s): **Village Administrator, Fire Chief, & Police Chief**	H - High	O - Ongoing
City: **Village of Swansea, Illinois**	M - Medium	C - Complete
Date: **April 11, 2024**	L - Low	D - Deferred

ACTIONS	Circle One (L, M, H)			Circle One (O, C, D)		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	H	M	**L**	O	C	**D**
2. Participate and support emergency training for citizen volunteers	**H**	M	L	**O**	C	D
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	**H**	M	L	**O**	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	H	M	**L**	O	C	**D**
2. Adopt current building codes	**H**	M	L	**O**	C	D
3. Integrate Hazard Mitigation Plan into local plans	H	M	**L**	O	C	**D**
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	**M**	L	O	C	**D**
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	**H**	M	L	**O**	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	**L**	O	C	**D**
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	**H**	M	L	**O**	C	D
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	**H**	M	L	**O**	C	D
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	**H**	M	L	O	**C**	D
7. Conduct risk assessments for tornado events	H	M	**L**	O	**C**	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	H	**M**	L	**O**	C	D
4.4 - Winter Storms						

1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D

13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	*a poorly informed public and a poorly prepared public*
Action or Project	
Applicable Goal Statement:	Goal #2
Action/Project Number:	4.1.3
Name of Action or Project:	Public Education
Mitigation Category:	Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness
Action or Project Description:	Provide to the public emergency preparedness guidance through print and social media.
Estimated Cost:	$500
Benefits:	An informed public is a prepared public.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	1 year
Potential/Existing Fund Sources:	General funding
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	Tornadoes
Problem being Mitigated:	Early warning & Notification
Action or Project	
Applicable Goal Statement:	Goal A 1 2
Action/Project Number:	4.3.2
Name of Action or Project:	Installation of early warning sirens
Mitigation Category:	
Action or Project Description:	Replacement of early warning sirens with improved ones
Estimated Cost:	
Benefits:	Early notification to the public of dangerous weather
Plan for Implementation	
Responsible Organization/Department:	Swansea Fire Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	Spring 2024
Potential/Existing Fund Sources:	St. Clair County Emergency Management Agency
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Completed
Report of Progress:	Completed and online

Winter Storm Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	*Loss of power to critical facilities*
Problem being Mitigated:	Loss of vital public services
Action or Project	
Applicable Goal Statement:	4.4 A 3
Action/Project Number:	4.4 A 3
Name of Action or Project:	Backup power sources
Mitigation Category:	Resilience
Action or Project Description:	Acquire necessary equipment, including generators, and pumps, to secure lives and property
Estimated Cost:	$10,000
Benefits:	Resilience of keeping public services functioning in case of a loss of power.
Plan for Implementation	
Responsible Organization/Department:	Swansea Fire Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-3 years
Potential/Existing Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Deferred
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	power outages those without air-conditioning needing care
Problem being Mitigated:	Lack of backup power
Action or Project	
Applicable Goal Statement:	Goal 4.5 A. 6
Action/Project Number:	4.5 A 6
Name of Action or Project:	Backup power sources
Mitigation Category:	Resilience
Action or Project Description:	Acquire necessary equipment, including generators, and pumps, to secure lives and property
Estimated Cost:	$10,000
Benefits:	Resilience of keeping public services functioning in case of a loss of power
Plan for Implementation	
Responsible Organization/Department:	Swansea Fire Department
Supporting Organization/Department:	
Action/Project Priority:	Low
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	Damage to structures
Problem being Mitigated:	Injury and property loss
Action or Project	
Applicable Goal Statement:	Review and update building codes to reduce building
Action/Project Number:	
Name of Action or Project:	Adoption of 2021 International Building & Fire Codes
Mitigation Category:	Preparation
Action or Project Description:	The Board of Trustees will pass an ordinance adopting the 2021 International Building & Fire Codes
Estimated Cost:	$1,000
Benefits:	Buildings more resilient to the threat of severe weather
Plan for Implementation	
Responsible Organization/Department:	Building & Zoning Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	Summer 2024
Potential/Existing Fund Sources:	General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Pending before the Trustees
Report of Progress:	Ordinance(s) to be prepared and reviewed by Village Attorney

Flood Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Building & Zoning Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential/Existing Fund Sources:	General fund
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	*loss of life and property*
Problem being Mitigated:	Lack of early warning system
Action or Project	
Applicable Goal Statement:	4.8 A 5
Action/Project Number:	4.8 A 5
Name of Action or Project:	Hyperreach
Mitigation Category:	Public notification
Action or Project Description:	Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red
Estimated Cost:	$5,000 annually
Benefits:	Ability to notify the public of danger
Plan for Implementation	
Responsible Organization/Department:	Swansea Fire Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	2023
Potential/Existing Fund Sources:	General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Completed
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	severe, widespread damage
Problem being Mitigated:	Resiliance
Action or Project	
Applicable Goal Statement:	4.9 A 2
Action/Project Number:	4.9 A 2
Name of Action or Project:	Building Code Update
Mitigation Category:	Resilience
Action or Project Description:	The Board of Trustees will pass an ordinance adopting the 2021 International Building & Fire Codes
Estimated Cost:	$1,000
Benefits:	Buildings more resilient to the threat of severe weather
Plan for Implementation	
Responsible Organization/Department:	Building & Zoning Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	Summer 2024
Potential/Existing Fund Sources:	General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Ongoing
Report of Progress:	

Ground Failure Mitigation Action Worksheet	
Name of City:	Village of Swansea, Illinois
Risk / Vulnerability	
Hazard Addressed:	*sinkhole formation and collapse, and underground subsidence*
Problem being Mitigated:	*property damage, injuries, and potential loss of life*
Action or Project	
Applicable Goal Statement:	4.10 A 6
Action/Project Number:	4.10 A 6
Name of Action or Project:	Hyperreach
Mitigation Category:	Notification
Action or Project Description:	Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red
Estimated Cost:	$5,000 annually
Benefits:	Ability to notify the public of danger
Plan for Implementation	
Responsible Organization/Department:	Swansea Fire Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	Summer 2023
Potential/Existing Fund Sources:	General fund
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Completed
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

_____ Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Type text here
Haz
text Type text here
EAST-WEST GATEWAY
Council of Governments
Creating Solutions Across Jurisdictional Boundaries

St. Clair County Hazard Mitigation Plan City Questionnaire

Thank you for filling out the information below. Not only does your contribution help St. Clair County develop and maintain the St. Clair County Hazard Mitigation Plan, but it is also a critical step in ensuring your city is eligible to apply for hazard mitigation grants.

Date: 04/18/2024

Please fill out the questions below as completely as possible and list everyone who contributed information.

Name(s) & Title(s)	Leonard Moore-Mayor Courtney Hoffman II-Village Consultant
City	Washington Park , IL
Contact name and email	Courtney Hoffman II admin@hoffmanfeingold.com

1. *How many critical facilities are in your city?*	Critical facilities = schools, hospitals, government buildings, railroads, highways	Number 8

Tax Computation Report
ST. CLAIR County

Taxing District VCWP - VILLAGE OF WASH PARK

Equalization Factor 1.0

Property Type	Total EAV	Rate Setting EAV
Farm	72,763	25,344
Residential	6,725,083	3,983,519
Commercial	3,660,361	1,047,859
Industrial	2,199,535	444,611
Mineral	0	0
State Railroad	2,007,080	2,007,080
Local Railroad	77,914	56,862
County Total	**14,742,736**	**7,565,275**
Total + Overlap	**14,742,736**	**7,565,275**

Other Values	
EZ Value Abated	0
EZ Tax Abated	$0.00
New Property	0
TIF Increment	7,177,461

Road and Bridge Transfer

Road District	Fund	Amount Extended
TTCAR - CANTEEN ROAD	999	$5,454.56
Total		**$5,454.56**

Fund/Name	Levy Request	Maximum Rate	Calc'ed Rate	Actual Rate	Certified Rate	Total Extension	Total Extension After TIF & EZ	Total Extension w/Overlaps	Percent
001 CORPORATE	130,700	0.0000	1.727631	1.7277	1.7277	$254,710.25	$130,705.26	$130,705.26	27.3025
005 I.M.R.F	40,000	0.0000	0.528732	0.5288	0.5288	$77,959.59	$40,005.17	$40,005.17	8.3565
012 FIRE PROTECTION	12,000	0.0000	0.158620	0.1587	0.1587	$23,396.72	$12,006.09	$12,006.09	2.5079
013 FIREMEN PENSION	43,000	0.0000	0.568387	0.5684	0.5684	$83,797.71	$43,001.02	$43,001.02	8.9823
015 POLICE PENSION	90,000	0.0000	1.189646	1.1897	1.1897	$175,394.33	$90,004.08	$90,004.08	18.8006
027 AUDIT	10,000	0.0000	0.132183	0.1322	0.1322	$19,489.90	$10,001.29	$10,001.29	2.0891
035 LIABILITY INSURANCE	68,000	0.0000	0.898844	0.8989	0.8989	$132,522.45	$68,004.26	$68,004.26	14.2051
062 WORKMAN'S COMP	85,000	0.0000	1.123555	1.1236	1.1236	$165,649.38	$85,003.43	$85,003.43	17.7560
999 CITY SHARE ROAD AND BRI	0	0.0000	0.000000	0.0000	0.0000	$0.00	$0.00	$0.00	0.0000
Totals	**478,700**		**6.327598**	**6.3280**	**6.3280**	**$932,920.33**	**$478,730.60**	**$478,730.60**	**100.0000**

Copyright (C) 1997-2024 DEVNET Incorporatec

Final Settlement Sheet
ST. CLAIR County
TFWP - WASHINGTN PRK TIF #1

12/13/2023 9:34

Current Year Taxes Due

	Original Amount Due	$1,081,912.14
+	Supplements	$0.00
-	Cancellations	$13,540.80
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$1,068,371.34**
+	Prior Year Real EstateTax	($9,735.08)
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$1,058,636.26**

Current Year Taxes Paid

+	Real Estate	$952,706.19
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	($9,735.08)
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$942,971.11**
+	Hold Back	$0.00
+	County Trustee	$115,665.15
+	Forfeited Tax	$0.00
	Total	**$1,058,636.26**

Interest Distribution

County Interest	$3,508.08
Township Interest	$0.00
Total Interest	$3,508.08

Distribution Summary

Tax Distribution Date	Amount
07/07/2023	$51,243.16
07/21/2023	$75,049.64
08/11/2023	$145,394.47
08/25/2023	$125,694.95
09/15/2023	$75,399.69
09/29/2023	$113,548.33
10/20/2023	$119,667.01
12/15/2023	$236,973.86
Totals: 8 Distributions	**$942,971.11**

Interest Distribution Date	Amount
12/15/2023	$3,508.08
Totals: 1 Distributions	**$3,508.08**
Grand Totals: 9 Distributions	**$946,479.19**

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
003 - BONDS AND INTEREST	$942,971.11	$705,997.25	$236,973.86	$0.00	$3,508.08	$0.00
Totals	**$942,971.11**	**$705,997.25**	**$236,973.86**	**$0.00**	**$3,508.08**	**$0.00**

Miscellaneous Adjustment Detail

Year	Source	Account Type	Amount	Adjustment Description
2022	RE - Real Estate	Payment In Lieu of Tax	$0.00	SCC HOUSING AUTHORITY by TBA
Totals	**1 entries**		**$0.00**	

(C)2023 DEVNET Incorporated

Final Settlement Sheet
ST. CLAIR County
TFWP2 - WASHINGTON PARK TIF 2

Type text here

Current Year Taxes Due

	Original Amount Due	$190,040.08
+	Supplements	$147.26
-	Cancellations	$6,885.76
-	Abatements/Refunds	$0.00
+	Mobile Home	$0.00
+/-	Road & Bridge Transfer	$0.00
+	Misc. Adjustments	$0.00
	Adjusted Amount Due	**$183,301.58**
+	Prior Year Real EstateTax	$200.86
+	Prior Year Mobile Home Tax	$0.00
+	Prior Year Misc. Adjustments	$0.00
	Total Amount Due	**$183,502.44**

Current Year Taxes Paid

+	Real Estate	$109,850.85
+	Railroad	$0.00
+	Mobile Home	$0.00
+	Misc. Adjustments	$0.00
+	Prior Year Real Estate	$200.86
+	Prior Year Mobile Home	$0.00
+	Prior Year Misc. Adjustments	$0.00
-	Abatements/Refunds	$0.00
	Total Collected	**$110,051.71**
+	Hold Back	$0.00
+	County Trustee	$72,276.15
+	Forfeited Tax	$1,174.58
	Total	**$183,502.44**

Interest Distribution

County Interest	$409.42
Township Interest	$0.00
Total Interest	$409.42

Distribution Summary

Tax Distribution Date	Amount
07/07/2023	$4,000.47
07/21/2023	$11,647.07
08/11/2023	$12,547.48
08/25/2023	$11,893.79
09/15/2023	$8,092.48
09/29/2023	$8,198.10
10/20/2023	$9,241.41
12/15/2023	$44,430.91
Totals: 8 Distributions	**$110,051.71**

Interest Distribution Date	Amount
12/15/2023	$409.42
Totals: 1 Distributions	**$409.42**
Grand Totals: 9 Distributions	**$110,461.13**

Fund Summary

Fund	Amount Collected	Previously Distributed	Current Distribution	Amount Available	Interest	PY Over Distrib
001 - CORPORATE	$110,051.71	$65,620.80	$44,430.91	$0.00	$409.42	$0.00
Totals	**$110,051.71**	**$65,620.80**	**$44,430.91**	**$0.00**	**$409.42**	**$0.00**

Miscellaneous Adjustment Detail

Year	Source	Account Type	Amount	Adjustment Description
2022	RE - Real Estate	Payment In Lieu of Tax	$0.00	SCC HOUSING AUTHORITY by TBA
2022	RE - Real Estate	Back Tax Collected	$0.00	August 2023 Assignment by TBA
Totals 2 entries			**$0.00**	

(C)2023 DEVNET Incorporated

2. Please provide your city's property tax valuation/assessment for the most current year.	Year	Valuation see attached				
3. What are your city's expected development trends over the next 5 years? Please list expected development, housing, commercial, retail.	Example: anticipate 5% growth, stay the same, or decrease by 3%, etc.	Why? (Example, new housing development, loss of major employer, etc.) Senior Housing Development Wood Waste to Energy Plant EV Charging Station New Housing New Public Safety Facility				
4. Please provide the year of your city's adopted building codes (if not all same year, please list each code with year)	Building code	Plumbing code 2013	Mechanical code 2013	Electric code 2013	Fire code 2013	
5. Please provide the year your city anticipates adopting newer or current building codes and the code year.	Example, in 2024 City will adopt the 2021 International Building Code (IBC).	Year 2025				
6. Has your city flooded in the past?	Yes (circled)	If yes, what years? 1995, 1996	No			
7. What rivers/creeks border or run through your city?	Please list: Harding Ditch Spring Lake Rose Lake Schoenberger					
8. Do you allow construction/development in your flood zone(s)?	Yes	No (circled)	Explanation if needed:			
9. How many critical facilities are in your flood zone(s)?	Critical facilities = Schools, hospitals, government buildings, railroads, bridges, and highways	Number: 8				

10. Have structures in your city experienced repetitive losses due to flooding?	(Yes)	Type tee	If yes, what years? 1995,1996	No
11. Does your city have at-risk populations in flood zones or areas prone to flash flooding?	At risk populations = people without access to transportation, those who speak English as a second language or not at all, those living in poverty, people over 60 years, and persons of color.		If yes, please list percent of total city population 30%	No
12. Does your city participate in the National Flood Insurance Program (NFIP)?	(Yes)		No	If no, please describe why not and skip to question #17
13. Has your city adopted NFIP minimum floodplain management criteria via city ordinance?	Yes	(No)		If no, please describe why not Village Board
14. Has your city adopted the latest effective Flood Insurance Rate Map (FIRM)?	(Yes)		No	If no, please describe why not
15. Has your city appointed a designee or agency to implement the addressed commitments and requirements of NFIP?	Yes	(No)		Please list designee or agency (title and/or department, do not list person by name)

16. Please describe how your city implements the 'substantial improvement/substantial damage' provisions of your floodplain management regulations after a flooding event.	N/A		
17. Does your city have any sinkholes, underground mines, or areas of potential ground failure?	(Yes)	If yes, how many? 18	No, if no, please skip to #20
18. Are there any critical facilities in ground failure areas?	Yes	If yes, how many?	(No)
19. Does your city have at-risk populations in areas with potential ground failure?	If yes, please list percent of total city population 11%		No
20. Does your city sit behind any levees?	(Yes)	If yes, how many? 2	No, if no, please skip to #23
21. Does your city have at-risk populations behind levees?	(Yes)	If yes, please list percent of total city population 100	No
22. Are there any critical facilities behind the levees?	(Yes)	If yes, how many? 8	No
23. Is your city located downstream/below any high hazard potential dam?*	(Yes)	If yes, how many? 19	No, if no, please skip to #28
24. Are there any critical facilities below the high hazard potential dam(s)?	(Yes)	No	If yes, how many? 8
25. Does your city have at-risk populations behind levees?	(Yes)	If yes, please list percent of total city population 100	No
26. Please describe how your city coordinates with local dam owners and the Illinois Dept. of Natural Resources, Dam Safety Section.	N/A		Type text here

27. If your city has a high hazard potential dam, please describe your coordination efforts with downstream jurisdictions. Washin	N/A			
28. Does your city have at-risk populations living in housing that may be vulnerable to tornadoes?	(Yes)	If yes, please list percent of total population: 100	No	
29. Has your city completed any hazard mitigation activities/projects in the last 5 years?	Yes	(No)	What projects?	Budget?
30. Is your city currently receiving funds for hazard mitigation planning or projects?	Yes, please list what plans or projects			(No)
31. Does your city plan to apply for hazard mitigation grant funds in the next 5 years, and if so, for what kind of projects?	(Yes)	No	What projects? Demolition Structural retrofitting Infrastructure retrofit	Approximate cost? $4.7 Million

32. How will your city incorporate the St. St. Clair County Hazard Mitigation Plan into your existing plans?	Example: Emergency Operations Plan, Capital Improvement Plan, Master Plan, etc.	Please list which plans (must include at least one plan) Emergency Operation, Capital Improvement
33. Please list your city's emergency capabilities	Example: 35 firefighters, 26 police officers	Police - 7 Firefighters - 12 Total 19
34. Please list your city's emergency powers	Example: ability to declare emergency, ability to order evacuation, ability to declare curfew, etc.	Village President declares emergency Board of Trustees

35. Does your city have an emergency notification system (e.g. Code Red)?	Yes	If yes, please provide name	If yes, how much does the system cost annually?	(No)
36. Does your city have emergency alert sirens?	(Yes)	If yes, how many? 5	No	
37. What methods or mechanisms do you have available to communicate with your citizens for non-emergencies? (e.g., X, Facebook, bill inserts, email subscription, web page, etc.)	Please list: Robo Calls, Webpages and Facebook			

38. Please list any mitigation strategies or additions to the St. Clair County Hazard Mitigation Plan not included in the Plan Goals and Mitigation Actions section that you would like considered for adoption in plan amendments or future plans.	Hazmat Terrorist
For flooding	
For winter storms	
For heat waves/drought	
For tornadoes	
For earthquakes	
For ground failure	
For dam/levee failure	
39. What is the natural disaster most likely to most significantly impact your city and why? (can be more than one)	Earthquake Flooding Tornadoes

*High hazard potential dams are those dams that should there be a failure, there is risk to human life. The Inventory of dams for St. Clair County can be found here - https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:St.%20Clair,%20Illinois&viewType=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

Thank you for providing the above information! It is a key part in making your city eligible for hazard mitigation grant funding.

If you have any questions, please email bryan.whitaker@co.st-clair.il.us or samantha.bierman@co.st-clair.il.us.

Plan Goals and Mitigation Actions

The goals for the St. Clair County Multi-Hazard Mitigation Plan are as follows:

1. Prepare communities in advance of a natural disaster to prevent loss of life, minimize injury, and illness;
2. Preserve and maintain property, including public and private infrastructure, businesses, and individual homes, and improve community vitality; and
3. Encourage regional, county, and local planning and development that reduces future risk from natural disaster and is consistent with the hazard mitigation plan.

Every city must choose at least one mitigation strategy per natural hazard:

- Tornadoes
- Earthquakes
- Extreme Heat / Drought
- Winter Storms
- Severe Thunderstorm
- Ground Failure
- Flooding
- Dam / Levee Failure

St. Clair County Plan goals are based on grant fundable measures. If yes, please list percent of total city population Although not all mitigation strategies listed below are fundable, most listed below meet those criteria.

4.1 Public Information and Awareness for Mitigating Any Natural Disasters

Problem addressed: Two problems are relevant to any type of natural disaster mitigation: a poorly informed public and a poorly prepared public.

A. Public awareness and involvement. Using newsletters, websites, and other means of communication, local governments and school districts can effectively educate and inform the public and encourage advance preparation to mitigate the impact of natural disasters.
   1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs).
   2. Participate and support emergency training for citizen volunteers.
   3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media.

4.2. Creating Effective Response to Any Natural Disaster

Problem addressed: Citizens expect immediate and effective response to any disaster, no matter how unexpected, or how severe. Local governments face challenges in meeting this expectation and must make it a priority.

A. Public actions to prepare for natural disasters. County and local governments and school districts should take certain steps in advance of a variety of natural disasters.
   1. Conduct risk assessments for all natural disasters.
   2. Adopt current building codes.
   3. Integrate Hazard Mitigation Plan into local plans.

4.3 Mitigation Needed to Prepare for Tornadoes

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

A. Tornado preparation. Local governments should cooperate to enhance community safety.
   1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
   2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
   3. Retrofit one- and two-family residences and infrastructure and essential buildings.
   4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
   5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.

6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

4.4 Mitigation Needed to Prepare for Winter Storms

Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Ensure all-weather capabilities for emergency equipment.
   3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.5 Mitigation Needed to Prepare for Extreme Heat / Drought

Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls. Drought can severely impact agricultural producers.

A. Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.
   1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
   2. Increase tree planting and enhance shade availability to mitigate heat impacts.
   3. Enforce burn ordinances and audit water loss and incentivize water reuse.
   4. Repair, retrofit, and maintain water supply systems to minimize water loss.
   5. Provide soil and water conservation practices education for farmers.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.6 Mitigation Needed to Prepare for Severe Thunderstorms

Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.

A. Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.
   1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
   2. Review and update building codes to reduce building damage.
   3. Improve early warning systems and maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.7 Mitigation Needed to Prepare for Floods

Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.

A. Reduce risk of flood damage. Communities should take special action to reduce flood damage.
   1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
   2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
   3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
   4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
   5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
   6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
   7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
   8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
   9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
   10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
   11. Install and maintain pumping stations in levee systems.
   12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
   13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
   14. Conduct risk assessments for floods.
   15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
   16. Promote use of green infrastructure techniques to property owners.

4.8 Mitigation Needed to Address Risk of Failure in Dams and Levees

Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.

A. Reduce risk of dam or levee failure.
   1. Encourage annual inspection of dams and levees.
   2. Improve structural integrity of dams, using incentives where feasible.
   3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
   4. Develop and implement dam/levee failure emergency action plans.
   5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   6. Conduct risk assessments for dam / levee failures.

4.9 Mitigation Needed to Prepare for Earthquakes

Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.

A. Prepare for earthquakes.
   1. Improve early warning systems.
   2. Review and update building codes.
   3. Maintain integrated communications systems for rapid response.
   4. Promote student, individual, and household preparation.
   5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.

6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

4.10 Mitigation Needed to Prepare for Ground Failure

Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.

A. Prepare for ground failures.
   1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
   2. Map and assess vulnerable areas and stabilize when feasible.
   3. Maintain a list of buildings constructed over underground mines.
   4. Develop specially engineered resilient pipelines in areas subject to ground failures.
   5. Develop / improve mining regulations.
   6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
   7. Conduct risk assessments for ground failures.
   8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

St. Clair County Hazard Mitigation Plan Action Ranking Sheet

Name(s):	LEONARD MOORE e COURTNEY HOFFMAN	**PRIORITY**	**ACTION**
Title(s):	MAYOR VILLAGE CONSULTANT	**H - High**	**O - Ongoing**
City:	WASHINGTON PARK	**M - Medium**	**C - Complete**
Date:	04/18/2024	**L - Low**	**D - Deferred**

ACTIONS	**Circle One (L, M, H)**			**Circle One (O, C, D)**		
4.1 - Public Information & Awareness for Any Natural Disasters						
1. Continue to expand and strengthen Community Organizations Active in Disaster (COADs)	(H)	M	L	(O)	C	D
2. Participate and support emergency training for citizen volunteers	H	M	(L)	O	C	(D)
3. Educate the public, local government staff, and elected officials about relevant hazards and train in and use alternative media	(H)	M	L	(O)	C	D
4.2 - Creating Effective Response to Any Natural Disaster						
1. Conduct risk assessments for all natural disasters	(H)	M	L	(O)	C	D
2. Adopt current building codes	(H)	M	L	(O)	C	D
3. Integrate Hazard Mitigation Plan into local plans	(H)	M	L	(O)	C	D
4.3 - Tornado						
1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings	H	M	(L)	O	C	(D)
2. Develop and maintain early warning systems to target public and specific, vulnerable communities	(H)	M	L	(O)	C	D
3. Retrofit one- and two-family residences and infrastructure and essential buildings	H	M	(L)	O	C	(D)
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments	H	M	(L)	O	C	(D)
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections	H	M	(L)	O	C	(D)
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response	(H)	M	L	(O)	C	D
7. Conduct risk assessments for tornado events	(H)	M	L	(O)	C	D
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property	(H)	M	L	(O)	C	D
4.4 - Winter Storms						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	(H)	M	L	(O)	C	D

2. Ensure all-weather capabilities for emergency equipment	H	M	L	O	C	D
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.5 - Extreme Heat / Drought						
1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers	H	M	L	O	C	D
2. Increase tree planting and enhance shade availability to mitigate heat impacts	H	M	L	O	C	D
3. Enforce burn ordinances and audit water loss and incentivize water reuse	H	M	L	O	C	D
4. Repair, retrofit, and maintain water supply systems to minimize water loss	H	M	L	O	C	D
5. Provide soil and water conservation practices education for farmers	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.6 - Severe Thunderstorms						
1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows	H	M	L	O	C	D
2. Review and update building codes to reduce building damage	H	M	L	O	C	D
3. Improve early warning systems and maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.7 - Flood						
1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration	H	M	L	O	C	D
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans	H	M	L	O	C	D
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls	H	M	L	O	C	D
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts	H	M	L	O	C	D
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage	H	M	L	O	C	D
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency	H	M	L	O	C	D
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions	H	M	L	O	C	D
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures	H	M	L	O	C	D
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance	H	M	L	O	C	D
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains	H	M	L	O	C	D
11. Install and maintain pumping stations in levee systems	H	M	L	O	C	D
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions	H	M	L	O	C	D
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
14. Conduct risk assessments for floods	H	M	L	O	C	D
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

16. Promote use of green infrastructure techniques to property owners	H	M	L	O	C	D
4.8 - Dam and Levee Failure						
1. Encourage annual inspection of dams and levees	H	M	L	O	C	D
2. Improve structural integrity of dams, using incentives where feasible	H	M	L	O	C	D
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact list for levees	H	M	L	O	C	D
4. Develop and implement dam/levee failure emergency action plans	H	M	L	O	C	D
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
6. Conduct risk assessments for dam / levee failures	H	M	L	O	C	D
4.9 - Earthquakes						
1. Improve early warning systems	H	M	L	O	C	D
2. Review and update building codes	H	M	L	O	C	D
3. Maintain integrated communications systems for rapid response	H	M	L	O	C	D
4. Promote student, individual, and household preparation	H	M	L	O	C	D
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings	H	M	L	O	C	D
6. Adopt Seismic Construction Ordinance	H	M	L	O	C	D
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
8. Integrate communications systems to provide rapid communication and response	H	M	L	O	C	D
9. Conduct risk assessments for earthquakes	H	M	L	O	C	D
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D
4.10 - Ground Failure						
1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock	H	M	L	O	C	D
2. Map and assess vulnerable areas and stabilize when feasible	H	M	L	O	C	D
3. Maintain a list of buildings constructed over underground mines	H	M	L	O	C	D
4. Develop specially engineered resilient pipelines in areas subject to ground failures	H	M	L	O	C	D
5. Develop / improve mining regulations	H	M	L	O	C	D
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.	H	M	L	O	C	D
7. Conduct risk assessments for ground failures	H	M	L	O	C	D
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property	H	M	L	O	C	D

Mitigation Strategy Worksheets

Submit at least one for each hazard (1 – 10)

Public Information & Awareness Mitigation Action Worksheet	
Name of Jurisdiction:	WASHINGTON PARK
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Effective Response Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	All hazards
Problem being Mitigated:	Lack of hazard mitigation plans into City planning efforts
Action or Project	
Applicable Goal Statement:	Goal #3
Action/Project Number:	4.2.3
Name of Action or Project:	Integrate Hazard Mitigation Plan into local plans
Mitigation Category:	Creating Effective Response to Any Natural Disaster
Action or Project Description:	Integrate St. Clair Multi-Jurisdiction Plan into City's plans (listed below):
Estimated Cost:	$0
Benefits:	New developments will have greater natural disaster resiliency.
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential/Existing Fund Sources:	General municipal revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Tornado Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	TORNADO
Problem being Mitigated:	PROTECTION AND SAFETY
Action or Project	
Applicable Goal Statement:	2,4 & 6
Action/Project Number:	4.3
Name of Action or Project:	INTERGRATE TORNADO MITIGATION PLAN
Mitigation Category:	CREATE PLAN TO RESPOND
Action or Project Description:	Community to be prepared to respond to groups that would be at risk
Estimated Cost:	0
Benefits:	reduce loss of lives and property
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	high
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	FUTURE GRANTS
Local Planning Mechanisms to be Used in Implementation, if any:	ORDINANCE
Progress Report	
Action Status:	
Report of Progress:	

Winter Storm Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	WINTER STORM
Problem being Mitigated:	To develop plan for unhoused, elderly, & at risk popuation
Action or Project	
Applicable Goal Statement:	1,2 & 3
Action/Project Number:	4.4
Name of Action or Project:	Intergrate winter storm plan into local plan
Mitigation Category:	create response to winter storm
Action or Project Description:	implement winter storm plan into village ordinance
Estimated Cost:	0
Benefits:	reduce loss of lives and property
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	high
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	FUTURE GRANTS
Local Planning Mechanisms to be Used in Implementation, if any:	WINTER STORM ORDINANCE
Progress Report	
Action Status:	
Report of Progress:	

Extreme Heat / Drought Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	EXTREME HEAT/DROUGHT
Problem being Mitigated:	To develop plan for unhoused, elderly, & at risk popuation
Action or Project	
Applicable Goal Statement:	1,3&6
Action/Project Number:	4.5
Name of Action or Project:	Intergrate Extreme Heat/Drought plan into local plan
Mitigation Category:	Create response to Extreme Heat/Drought
Action or Project Description:	implement Extreme Heat/Drought plan into village ordinance
Estimated Cost:	0
Benefits:	Reduce heat related fatalities, injuries and calls to 1st responders
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	HIGH
Timeline for Completion:	1-5
Potential/Existing Fund Sources:	FUTURE GRANTS and GENERAL REVENUE
Local Planning Mechanisms to be Used in Implementation, if any:	EXTREME HEAT ORDINANCE
Progress Report	
Action Status:	
Report of Progress:	

Severe Thunderstorm Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	Severe Thunderstorms
Problem being Mitigated:	reduce flooding, severe damage to property and accidents
Action or Project	
Applicable Goal Statement:	1,3 & 5
Action/Project Number:	4.6
Name of Action or Project:	intergrate severe thunder storm plan into local plan
Mitigation Category:	create effective response to severe thunderstorm
Action or Project Description:	implement severe thunderstorm plan into village ordinance
Estimated Cost:	0
Benefits:	reduce loss of lives and property
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	high
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	Future Grants and General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Sever Thunderstorm Ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	Flooding
Problem being Mitigated:	Development in floodplain
Action or Project	
Applicable Goal Statement:	Goals #2 & 3
Action/Project Number:	4.7.2
Name of Action or Project:	Join or maintain participating status in National Flood Insurance Program (NFIP)
Mitigation Category:	NFIP Participation
Action or Project Description:	Enforce floodplain management ordinances, regulation of construction in SFHAs and implement substantial improvement/substantial damage provision in City ordinance
Estimated Cost:	$0
Benefits:	Reduce SFHA development in floodplain and reduce repetitive losses
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	high
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	FUTURE GRANTS
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinance
Progress Report	
Action Status:	
Report of Progress:	

Flood Mitigation Action Worksheet	
Name of City:	
Risk / Vulnerability	
Hazard Addressed:	
Problem being Mitigated:	
Action or Project	
Applicable Goal Statement:	
Action/Project Number:	
Name of Action or Project:	
Mitigation Category:	
Action or Project Description:	
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Supporting Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential/Existing Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	
Report of Progress:	

Dam / Levee Failure Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	Dam and Levee Failure
Problem being Mitigated:	Develop a plan for dam and levee failure
Action or Project	
Applicable Goal Statement:	3,4, & 5
Action/Project Number:	4.8
Name of Action or Project:	intergrate dam/levee failure mitigation plan
Mitigation Category:	reducing the loss of lives and property
Action or Project Description:	implement dam & levee plan into village ordinance
Estimated Cost:	0
Benefits:	reduce loss of lives and property
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	HIGH
Timeline for Completion:	1-10
Potential/Existing Fund Sources:	FUTURE GRANTS
Local Planning Mechanisms to be Used in Implementation, if any:	Dam and Levee ordinance
Progress Report	
Action Status:	
Report of Progress:	

Earthquake Mitigation Action Worksheet	
Name of City:	Washington Park
Risk / Vulnerability	
Hazard Addressed:	Earthquake
Problem being Mitigated:	To develop a plan for widesprad damage form earthquake
Action or Project	
Applicable Goal Statement:	4,7 & 9
Action/Project Number:	4.9
Name of Action or Project:	Intergrate earthquake plan into local plan
Mitigation Category:	create effective plan to respond to an earthquake
Action or Project Description:	implement earthquak eplan into village ordinance
Estimated Cost:	0
Benefits:	Community will be better prepared nad have a better recovery from an earthquake
Plan for Implementation	
Responsible Organization/Department:	Washington Park
Supporting Organization/Department:	ST CLAIR COUNTY
Action/Project Priority:	HIGH
Timeline for Completion:	1-5 years
Potential/Existing Fund Sources:	FUTURE GRANTS
Local Planning Mechanisms to be Used in Implementation, if any:	Earthquake Ordinance
Progress Report	
Action Status:	
Report of Progress:	

Appendix B – Supporting Documentation

Bryan Whitaker

From: Bryan Whitaker
Sent: Tuesday, April 2, 2024 9:03 AM
To: All County Users Distribution List
Subject: Multi-Hazard Mitigation Plan

St. Clair County EMA is completing the update to our County Multi-Hazard Mitigation Plan. A portion of this plan is dedicated to public feedback on your experiences with weather hazards within the county. Please take a few moments to complete the below survey to help us further understand the risks in the county. Please consider forwarding this email to anyone you know in St. Clair County and/or posting on your Department/Agencies social media accounts.

https://www.surveymonkey.com/r/9BQJ873

Thank you,

Bryan Whitaker
Assistant Director
St. Clair County ETSB / CENCOM 9-1-1 / Emergency Management Agency
101 South 1st St. Suite B
Belleville, Illinois 62220
Phone: 618-825-2683
Fax: 618-277-7668
bryan.whitaker@co.st-clair.il.us

"A message not acknowledged is a message not received"
-MABAS Red Center

Bryan Whitaker

From: Bryan Whitaker
Sent: Friday, March 29, 2024 3:54 PM
To: Bryan Whitaker
Cc: Samantha Bierman; Herbert Simmons
Subject: St. Clair County Multi-Hazard Mitigation Plan Update
Attachments: St Clair_Regional Haz Mit Plan City Questionnaire.docx

Importance: High

St. Clair County is completing the update to our current Multi-Hazard Mitigation Plan. In order for your community to remain eligible for State and Federal Hazard Mitigation Grant Funds, you **MUST** complete and return the attached questionnaire NO LATER THAN Friday April 12, 2024. Should you have any questions or need assistance in completing the document, please contact Samantha Roland at 618-825-2169 or myself at 618-825-2683. Currently ALL communities in St Clair County are part of the existing Multi-Hazard Mitigation Plan and your participation is necessary to maintain your eligibility.

Thank you,

Bryan Whitaker
Assistant Director
St. Clair County ETSB / CENCOM 9-1-1 / Emergency Management Agency
101 South 1st St. Suite B
Belleville, Illinois 62220
Phone: 618-825-2683
Fax: 618-277-7668
bryan.whitaker@co.st-clair.il.us

"A message not acknowledged is a message not received"
-MABAS Red Center

Bryan Whitaker

From: Bryan Whitaker
Sent: Monday, April 8, 2024 9:49 AM
To: Bryan Whitaker
Cc: Samantha Bierman; Herbert Simmons
Subject: RE: St. Clair County Multi-Hazard Mitigation Plan Update - REPLY REQUESTED

Importance: High

Please accept this reminder that completed Questionnaires are due NO LATER THAN Friday April 12, 2024 for your community to be included in the updated St Clair County Multi Hazard Mitigation Plan. Returning this document is MANDATORY for your agency to remain eligible for State and Federal Hazard Mitigation Grant Funds. Should you have questions or need help completing the document please contact Samantha Roland at 618-825-2169 or myself at 618-825-2683 and we will assist.

Thank you,

Bryan Whitaker
Assistant Director
St. Clair County ETSB / CENCOM 9-1-1 / Emergency Management Agency
101 South 1st St. Suite B
Belleville, Illinois 62220
Phone: 618-825-2683
Fax: 618-277-7668
bryan.whitaker@co.st-clair.il.us

"A message not acknowledged is a message not received"
-MABAS Red Center

From: Bryan Whitaker
Sent: Friday, March 29, 2024 3:54 PM
To: Bryan Whitaker <bryan.whitaker@co.st-clair.il.us>
Cc: Samantha Bierman <samantha.bierman@co.st-clair.il.us>; Herbert Simmons <herbert.simmons@co.st-clair.il.us>
Subject: St. Clair County Multi-Hazard Mitigation Plan Update
Importance: High

St. Clair County is completing the update to our current Multi-Hazard Mitigation Plan. In order for your community to remain eligible for State and Federal Hazard Mitigation Grant Funds, you **MUST** complete and return the attached questionnaire NO LATER THAN Friday April 12, 2024. Should you have any questions or need assistance in completing the document, please contact Samantha Roland at 618-825-2169 or myself at 618-825-2683. Currently ALL communities in St Clair County are part of the existing Multi-Hazard Mitigation Plan and your participation is necessary to maintain your eligibility.

Thank you,

Bryan Whitaker

Assistant Director
St. Clair County ETSB / CENCOM 9-1-1 / Emergency Management Agency
101 South 1st St. Suite B
Belleville, Illinois 62220
Phone: 618-825-2683
Fax: 618-277-7668
bryan.whitaker@co.st-clair.il.us

"A message not acknowledged is a message not received"
-MABAS Red Center

April 17, 2024'

St. Clair County EMA Hazard Mitigation
Plan Public Meeting

Name:	Email:	Cell Phone:	Organization:
Jeremy Gottschammer	jgottschammer@Mascoutah.com	618-978-9362	City of Mascoutah
Shawn Sullivan	Shawn.f.sullivan@usace.army.mil	314-303-4778	USACE
Doug Stewart	doug@Stewartlg.com	217-313-1318	Caseyville
Jenn. Le Vitel	jvitel@outlook.com	314-421-4220	EGW
Jamie Murphy	JMurphy@CESI.US	618-540-2167	CESI
Angie Kampmeyer	angiepaddy@gmail.com	618-444-1347	Ki-LoopCreek Flood
Maryclare Lewandowski	maryclare@eastwestgateway.org	314-683-3819	East-West Gateway
Carol Lawrence	carol.lawrence@eastwestgateway.org		East West Gateway Council of Govts
JASON BLACKMON	j.blackmon@cesi.us	618-779-8471	East St. Louis City
Edward York	Edward_York@Duckworth.senate.gov	(312) 560-2971	sen. Duckworth
Kevin Brooks	Kevin.brooks@mail.house.gov	618-840-0389	Rep Nikki Budzinski
Bryan Whitaker	bryan.whitaker@co.st-clair.il.us	~~618-825-5909~~ 618-825-2683	St. Clair Co EMA
Herb Simmons	herbert.simmons@co.stclair.il.us	618-825-2161	St Clair Co EMA

April 17, 2024'

St. Clair County EMA Hazard Mitigation
Plan Public Meeting

Name:	Email:	Cell Phone:	Organization:
Jared Runyan	Jared.Runyan@illinois.gov	217-720-8709	IEMA - OHS
~~MAT MISSEY~~ Jim Nold	~~MATTHEW missey@tcivil.~~ jnold@hurst-rosche.com	~~618-558-4158~~ 618-612-5064	THOMPSON CIVIL Hurst Rosche, Inc.
John Harty	harty@cofh.org	618-791-4011	FAIRVIEW HEIGHTS
Phillip J. Little	PLITTLE@CASEYVILLE.ORG	618-573-0426	VILLAGE OF CASEYVILLE
Debra Moore	debra.moore@co.st-clair.il.us	618 825-2201	SCC
Francella Jacksan	fjacksan@cahokiaheights	618 781 7985	Cahokia Heights
LaMar D. Gentry	Lgentry@CahokiaFirst.com	(618)593-2337	Cahokia Heights
Kara Rosenkranz	kara.rosenkranz@co.st-clair.il.	618-210-8860	St Clair Health Dept
Kevin Harris	Tamcris819@gmail.com	618-593-9966	NPRT E. St. Louis Branch
Makaka Hill	mhill@equitylegalservices.org		Equity Legal Services
Derrick Burns	dburns@cesl.us	618-417-6879	ESL FD
Jenna Klucker	tklu@co.stclair.il.us	618 825-2164	St. Clair County 911
Samantha Roland	samantha.bierman@co.st-clair.il.us	618-825-2169	SCC EMA

Bryan Whitaker

From: Bryan Whitaker
Sent: Thursday, April 11, 2024 3:20 PM
To: Bryan Whitaker
Cc: Herbert Simmons; Samantha Bierman
Subject: St. Clair County Multi-Hazard Mitigation Plan Public Meeting

St. Clair County EMA will be holding a public meeting on Wednesday April 17, 2024 at 2pm at the Emergency Operations Center 110 W Washinton St. Belleville, IL 62220. The purpose of this meeting will be to discuss the submittals from the municipalities and the final draft of our update to the Multi-Hazard Mitigation Plan which will be submitted to FEMA at the end of this month.

Thank you,

Bryan Whitaker

Assistant Director
St. Clair County ETSB / CENCOM 9-1-1 / Emergency Management Agency
101 South 1st St. Suite B
Belleville, Illinois 62220
Phone: 618-825-2683
Fax: 618-277-7668
bryan.whitaker@co.st-clair.il.us

"A message not acknowledged is a message not received"
-MABAS Red Center

St. Clair County Multi-Hazard Mitigation Plan

Public Meeting

Wednesday April 17, 2024

Meeting Agenda

- Meet Your Planning Team
- County Hazards Identified
- Mitigation Strategies
- Communities Involved
- Questions

Planning Team

- Jennifer Vuitel
  - East-West Gateway Council of Governments
    - Environment and Community Planning Manager
- Mary Grace Lewandowski
  - East-West Gateway Council of Governments
    - Director of Community Planning
- Samantha Roland
  - St. Clair County Emergency Management Agency
    - Local Emergency Planning Committee Chairperson
- Bryan Whitaker
  - St. Clair County Emergency Management Agency
    - Assistant Director

St. Clair County Hazards

- Tornado
- Winter Storm
- Extreme Heat / Drought
- Severe Thunderstorm
- Flood
- Dam / Levee Failure
- Earthquake
- Ground Failure

Tornado Mitigation Strategies

Hazard addressed: Tornados can strike quickly and unexpectedly; communities must be prepared in advance with emergency shelters both to provide protection to vulnerable populations and other groups that might be at greater risk in a tornado event.

1. Build safe rooms for schools, community centers, mobile home communities, critical municipal and infrastructure operations and require construction of safe rooms within new public buildings.
2. Develop and maintain early warning systems to target public and specific, vulnerable communities.
3. Retrofit one- and two-family residences and infrastructure and essential buildings.
4. Adopt current building codes and adopt ordinances to exceed minimum construction standards for high winds and develop ordinance to require underground utility lines in new developments.
5. Require anchoring of manufactured homes and exterior attachments and incorporate local inspections.
6. Create and improve early warning systems for tornado events including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc. and integrate communications systems to provide rapid communication and response.
7. Conduct risk assessments for tornado events.
8. Acquire necessary equipment, including generators, tree trimming equipment, and pumps, to secure lives and property.

Winter Storm Mitigation Strategies

- *Hazard addressed: severe winter storm events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services ability to respond effectively.*

A. Prepare for severe winter weather. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations are not moved to emergency shelters. Emergency equipment must have all-weather response capabilities.

1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
2. Ensure all-weather capabilities for emergency equipment.
3. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Extreme Heat / Drought Mitigation Strategies

- *Hazard addressed: extreme heat events tend to hit low-income communities, the unhoused, and the elderly harder than the general population, while impacting emergency services' ability to respond effectively by creating a large volume of calls.* Drought can severely impact agricultural producers.
- Prepare for extreme heat events. The most serious problems arise when extreme weather is accompanied by power outages and unhoused populations and those without air-conditioning are not moved to relief centers.

1. Create and support neighborhood initiatives for at risk populations, including, but not limited to elderly, unhoused, and those unable to afford their utility bills and establish relief centers and encourage the public and pets to use the centers.
2. Increase tree planting and enhance shade availability to mitigate heat impacts.
3. Enforce burn ordinances and audit water loss and incentivize water reuse.
4. Repair, retrofit, and maintain water supply systems to minimize water loss.
5. Provide soil and water conservation practices education for farmers.
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Severe Thunderstorm Mitigation Strategies

- *Hazard addressed: severe thunderstorms can cause loss of life, injuries, and severe damage to property.*
- Prepare for severe thunderstorms, including damaging high winds, hail, and extreme rainfall events with localized flash flooding.

1. Regularly inspect and maintain storm drains and storm drainage systems to remove debris and blockages impeding stormwater flows.
2. Review and update building codes to reduce building damage.
3. Improve early warning systems and maintain integrated communications systems for rapid response.
4. Promote student, individual, and household preparation.
5. Create and/or improve early warning systems for severe thunderstorms, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
6. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Flood Mitigation Strategies

- *Hazard addressed: Riverine and flash flooding cause significant property damage and have the potential to cause injuries and loss of life.*
- Reduce risk of flood damage. Communities should take special action to reduce flood damage.

1. Protect stream buffers from development and create setback requirements along streams and encourage and/or engage in wetland restoration.
2. Join or maintain participating status in National Flood Insurance Program (NFIP) and adopt Floodplain Management Plans.
3. Reduce or eliminate development in floodplain and use green Infrastructure best management practices to manage stormwater where it falls.
4. Buy out repetitive loss properties, retrofit or reconstruct infrastructure, and utilize structure elevation to reduce flooding impacts.
5. Removal of public structures from flood zones, use dry flood proofing for historic buildings, and dry flood proofing non-residential structures to reduce flood damage.
6. Use localized and non-localized flood risk reduction and soil stabilization for increased flood resiliency.
7. Use post-disaster code enforcement and implement NFIP Substantial improvement/substantial damage provisions.
8. Update floodplain and flash flood-prone area mapping and maintain list of flood prone structures.
9. Install backflow valves and sump pumps in critical facilities and perform storm drainage system maintenance.
10. Replace inadequate or non-performing culverts and maintain, replace, or improve other stormwater infrastructure, including storm drains.
11. Install and maintain pumping stations in levee systems.
12. Develop ordinances to require best management practices stormwater infrastructure design and construction, with long term maintenance provisions.
13. Create and improve early warning systems for floods, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc., and integrate communications systems to provide rapid communication and response.
14. Conduct risk assessments for floods.
15. Acquire necessary equipment, including generators, and pumps, to secure lives and property.
16. Promote use of green infrastructure techniques to property owners.

Dam / Levee Failure Mitigation Strategies

- *Hazard addressed: failure of dams and levees can be catastrophic, since those downstream, or protected behind, may be suddenly inundated, causing loss of life and property.*
- Reduce risk of dam or levee failure.

1. Encourage annual inspection of dams and levees.
2. Improve structural integrity of dams, using incentives where feasible.
3. Educate dam and levee owners about responsibilities and liabilities and develop and maintain emergency contact lists for levees.
4. Develop and implement dam/levee failure emergency action plans.
5. Create and improve early warning systems for dam / levee failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
6. Conduct risk assessments for dam / levee failures.

Earthquake Mitigation Strategies

- *Hazard addressed: although there is a low probability in any given year, there is very high potential for severe, widespread damage from a large earthquake.*
- Prepare for earthquakes.

1. Improve early warning systems.
2. Review and update building codes.
3. Maintain integrated communications systems for rapid response.
4. Promote student, individual, and household preparation.
5. Use infrastructure retrofit and structural and non-structural retrofit of existing buildings.
6. Adopt Seismic Construction Ordinance.
7. Create and improve early warning systems for earthquakes, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
8. Integrate communications systems to provide rapid communication and response.
9. Conduct risk assessments for earthquakes.
10. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Ground Failure Mitigation Strategies

- *Hazard addressed: subsidence related to Karst features, sinkhole formation and collapse, and underground mining and subsidence all have the potential to cause property damage, injuries, and potential loss of life.*
- Prepare for ground failures.

1. Review new construction permit applications and reduce or eliminate construction in areas with undermined land or above highly soluble bedrock.
2. Map and assess vulnerable areas and stabilize when feasible.
3. Maintain a list of buildings constructed over underground mines.
4. Develop specially engineered resilient pipelines in areas subject to ground failures.
5. Develop / improve mining regulations.
6. Create and improve early warning systems for ground failures, including sirens, and targeted response such as Reverse 911, Code Red, Everbridge, Nixle, etc.
7. Conduct risk assessments for ground failures.
8. Acquire necessary equipment, including generators, and pumps, to secure lives and property.

Communities Involved

- St. Clair County
- Belleville
- Brooklyn
- Cahokia Heights
- Caseyville
- Dupo
- East Carondelet
- East St Louis
- Fairmont City
- Fairview Heights
- Fayetteville
- Freeburg
- Lebanon
- Lenzburg
- Marissa
- Mascoutah
- Millstadt
- New Athens
- O'Fallon
- St. Libory
- Sauget
- Shiloh
- Smithton
- Swansea

Questions
?
?
Answers
?

Bryan Whitaker

From: Samantha Bierman
Sent: Wednesday, April 3, 2024 8:36 AM
To: Abe Cook; Adam Vrabec; Adrian Pyle; Angie - Marka ; Bob Dritschel (bdritschel@reagentchemical.com); Bryan Whitaker; Carl Tebbe; Charley Mills; crainey@eshd.org; CJ Beyersdorfer; Cody Billhartz; Cody Crites; Craig Peters; D Dennison (ddennison@wm.com); D Tippey; Dana Yanchunas (danayanchunas@kindermorgan.com); Danny Heitert (dannyh@stellarmfg.com); Darren James; Dave Fellows; David Kee; David Leigh (dleigh@brenntag.com); Derek Edman; Dirk Aspringer; Don Dressel; Don Johnson (don.johnson@schwans.com); Doug Downey; Doug Watson; Drew Zajicek; Dwayne Turner; Ed Scott ; Edward Cannon; Elizabeth Klepzig; Eric Bornemann (Eric.Bornemann@HQ.DHS.GOV); Eric Capps (belleville@homecityice.com); Erin Dietrich (tieriiadministrator@arcadis-us.com); Heather Faragher (kaya@americanbottoms.com); Herbert Simmons; Inspector Generals Office; James Kenyon; Jami Gruenloh; Jami Gruenloh; Jason Keller; Jeff Lott (Jlott@ameren.com); Jeff Zimmerman (greenmountmotomart@fkgoil.com); Jeffery Revisky; Jim Schulhardt (james.schuhardt@ipaper.com); Jim Stout; Jody Cody (jcody@kienstraconcrete.com); Joe Hogg (admin@ctwastewater.org); Joe Nasseri (ecs@kc.rr.com); Joe Sosa; Joel Beer; John Costrino; John D'Albora; John Hedeman; John Hellebusch; John Schewe ; Jon Douglas (jdouglas@lincinc.org); Jon Simpson; julie.nguyen@solvay.com; Kara W. Rosenkranz; Katelyn Smith; Kayla Seiffert; Kelly Wegmann; Ken Kempen (kenjr@htc.net); Kendall Couch; Kevin Turner; Kevin Turner; Lance Wilcox; Larry Kraft; Larry Stammer; Laurie Craig; Lee French; Lisa Meyer; Lyla Porter; Maria Leone; Mark Kern; Mark Belanger; Mark Kohrmann (dawn@podolskyoil.com); Mark Reppond (mark.reppond@safety-kleen.com); Martha Corwin; Matt Fridley; Matt Hartnett; Michelle Cozadd; Mike C; Mike Gilbert; Mike Lueker; Mike Parker; Mike Renfro (mrenfro@safety-kleen.com); MSgt Nicole Schlamann; Myla C. Blandford; Nathan C Branding (nbranding@terminalrailroad.com); Norm Etling; Paula Nixon (pnixon@ameren.com); Peter Vigeant; Phillip Pugh; Ralph Wottowa; Reginald McLinn; Richard Blackburn; Richard Perkins (samsclubt2@endeavourehs.com); Rita Bradhsaw-Jackson; Robbie Horst; Robert Glass (Robert.A.Gass@lowes.com); Roger Bowler (ruthls29@aol.com); rsauget@saugetproperties.com; Russ Bunton (rbunton@psgc-llc.com); Ryan Giacoletto (Ryan.giacoletto@vertexchem.com); Sandra Thompson; Sarah Russell; Scott Paterson; Scott Wesemann; Steve Hardin (joey.cupp@pilottravelcenters.com); Steven Buckley; Steven Jarrett (Steven.jarrett@faa.gov); Tameka Brown - LINC; Terry Hall; Tim McFall; Tish Kettler (tskettler2@msn.com); Tony Falconio; Tony Mars; Tracy Middleton; Wendi Boulware; William Booster (wb449d@att.com); William Harrell (William.harrell@hq.dhs.gov); Yeric Yarrington; Zachary Heintzelman
Subject: County Multi-Hazard Mitigation Plan

St. Clair County EMA is completing the update to our County Multi-Hazard Mitigation Plan. A portion of this plan is dedicated to public feedback on your experiences with weather hazards within the county. Please take a few moments to complete the below survey to help us further understand the risks in the county. Please consider forwarding this email to anyone you know in St. Clair County and/or posting on your Department/Agencies social media accounts.

https://www.surveymonkey.com/r/9BQJ873

Thank you,

Samantha Bierman Roland
System Specialist
LEPC Chairman

St. Clair County Emergency Management Agency

9-1-1 ETSB

101 South 1st Street
Belleville, IL 62220

Office: (618) 825-2169
Cell: (618) 978-5280
Fax: (618) 277-7668

Bryan Whitaker

From: Samantha Bierman
Sent: Wednesday, April 3, 2024 8:36 AM
To: Abe Cook; Adam Vrabec; Adrian Pyle; Angie - Marka ; Bob Dritschel (bdritschel@reagentchemical.com); Bryan Whitaker; Carl Tebbe; Charley Mills; crainey@eshd.org; CJ Beyersdorfer; Cody Billhartz; Cody Crites; Craig Peters; D Dennison (ddennison@wm.com); D Tippey; Dana Yanchunas (danayanchunas@kindermorgan.com); Danny Heitert (dannyh@stellarmfg.com); Darren James; Dave Fellows; David Kee; David Leigh (dleigh@brenntag.com); Derek Edman; Dirk Aspringer; Don Dressel; Don Johnson (don.johnson@schwans.com); Doug Downey; Doug Watson; Drew Zajicek; Dwayne Turner; Ed Scott ; Edward Cannon; Elizabeth Klepzig; Eric Bornemann (Eric.Bornemann@HQ.DHS.GOV); Eric Capps (belleville@homecityice.com); Erin Dietrich (tieriiadministrator@arcadis-us.com); Heather Faragher (kaya@americanbottoms.com); Herbert Simmons; Inspector Generals Office; James Kenyon; Jami Gruenloh; Jami Gruenloh; Jason Keller; Jeff Lott (Jlott@ameren.com); Jeff Zimmerman (greenmountmotomart@fkgoil.com); Jeffery Revisky; Jim Schulhardt (james.schuhardt@ipaper.com); Jim Stout; Jody Cody (jcody@kienstraconcrete.com); Joe Hogg (admin@ctwastewater.org); Joe Nasseri (ecs@kc.rr.com); Joe Sosa; Joel Beer; John Costrino; John D'Albora; John Hedeman; John Hellebusch; John Schewe ; Jon Douglas (jdouglas@lincinc.org); Jon Simpson; julie.nguyen@solvay.com; Kara W. Rosenkranz; Katelyn Smith; Kayla Seiffert; Kelly Wegmann; Ken Kempen (kenjr@htc.net); Kendall Couch; Kevin Turner; Kevin Turner; Lance Wilcox; Larry Kraft; Larry Stammer; Laurie Craig; Lee French; Lisa Meyer; Lyla Porter; Maria Leone; Mark Kern; Mark Belanger; Mark Kohrmann (dawn@podolskyoil.com); Mark Reppond (mark.reppond@safety-kleen.com); Martha Corwin; Matt Fridley; Matt Hartnett; Michelle Cozadd; Mike C; Mike Gilbert; Mike Lueker; Mike Parker; Mike Renfro (mrenfro@safety-kleen.com); MSgt Nicole Schlamann; Myla C. Blandford; Nathan C Branding (nbranding@terminalrailroad.com); Norm Etling; Paula Nixon (pnixon@ameren.com); Peter Vigeant; Phillip Pugh; Ralph Wottowa; Reginald McLinn; Richard Blackburn; Richard Perkins (samsclubt2@endeavourehs.com); Rita Bradhsaw-Jackson; Robbie Horst; Robert Glass (Robert.A.Gass@lowes.com); Roger Bowler (ruthls29@aol.com); rsauget@saugetproperties.com; Russ Bunton (rbunton@psgc-llc.com); Ryan Giacoletto (Ryan.giacoletto@vertexchem.com); Sandra Thompson; Sarah Russell; Scott Paterson; Scott Wesemann; Steve Hardin (joey.cupp@pilottravelcenters.com); Steven Buckley; Steven Jarrett (Steven.jarrett@faa.gov); Tameka Brown - LINC; Terry Hall; Tim McFall; Tish Kettler (tskettler2@msn.com); Tony Falconio; Tony Mars; Tracy Middleton; Wendi Boulware; William Booster (wb449d@att.com); William Harrell (William.harrell@hq.dhs.gov); Yeric Yarrington; Zachary Heintzelman
Subject: County Multi-Hazard Mitigation Plan

St. Clair County EMA is completing the update to our County Multi-Hazard Mitigation Plan. A portion of this plan is dedicated to public feedback on your experiences with weather hazards within the county. Please take a few moments to complete the below survey to help us further understand the risks in the county. Please consider forwarding this email to anyone you know in St. Clair County and/or posting on your Department/Agencies social media accounts.

https://www.surveymonkey.com/r/9BQJ873

Thank you,

Samantha Bierman Roland
System Specialist
LEPC Chairman

St. Clair County Emergency Management Agency

9-1-1 ETSB

101 South 1st Street
Belleville, IL 62220

Office: (618) 825-2169
Cell: (618) 978-5280
Fax: (618) 277-7668

Bryan Whitaker

From: Christina Anderson
Sent: Wednesday, April 3, 2024 9:14 AM
To: arice@urbanleague-stl.org; alexjmchugh@gmail.com; areeter@roe3.org; ThemforThem@gmail.com; cnax@celesshelpinghands.com; bstewart@cbhc1.org; cesommer@chestnut.org; charrison@urbanleague-stl.org; cmoellenhoff@chestnut.org; bobbyandme70@gmail.com; christine.green748@gmail.com; Christina Anderson; cwilliams@thejosephcenter.org; Cynthia Layman; chendricks@lincolnlegal.org; danielle.chambers@swic.edu; darlene.jones@vpcswi.org; dlittle; Decima Brown; dbonner@cdbgops.org; elise.fieldsdixon@illinoiscenterforautism.org; emily.schwaegel@gmail.com; foluke@housingactionil.org; fredspannaus@gmail.com; inspiredincorporated5@gmail.com; Gizelle Kirkwood; jamilm.student@outlook.com; jrbrownlee@chestnut.org; Jeffrey.isbell@mhplan.com; jburris@brightpoint.org; jdeberry@sccroe50.org; johnk@stakenet.com; jpoplstein@lincolnlegal.org; justin.storie@stl.unitedway.org; community@tocofamily.org; kclemons@cbhc1.org; kmhill@chestnut.org; kchatman@urbanleague-stl.org; kzimmer@hoyleton.org; gmontague@catholicurbanprograms.org; larrym@sccha.org; latonya.waller@caritasfamily.org; Trunice777@gmail.com; sparklimits@gmail.com; Joshway_Sarah@yahoo.com; loxenham@lincinc.org; latkins@sccroe50.org; margo.madison-adams@stl.unitedway.org; cathedralsvdpmaria@gmail.com; mbowman@thejosephcenter.org; Mark Eichenlaub; mcompton@lincolnlegal.org; mcollado@sihf.org; beaconmike@beaconministry1.org; mbjohnson@chestnut.org; mallen@eslha.org; ora.mcnair@vpcswi.org; pgraham@lincolnlegal.org; pat.hogrebe@gmail.com; Quinetta.Grant@illinois.gov; rlinzy@cbhc1.org; rebecca.sudduth@va.gov; reneehuggins60@gmail.com; Richard Stubblefield; Samantha.NolanJones@usc.salvationarmy.org; snorthern@thejosephcenter.org; Samantha Bierman; swilliams@cuinc.org; spowers@chestnut.org; sasmith@urbanleague-stl.org; Slautz@Childrenshomeandaid.org; stephanieb@sccha.org; sjstratmann@chestnut.org; Susan Rehrig; Tamara Vaughn-Walker; tmccabe@doorwayshousing.org; teresa.williams@caritasfamily.org; tesnyder@chestnut.org; tmuhammad@catholicurbanprograms.org; ybrockman@urbanleague-stl.org
Subject: FW: Multi-Hazard Mitigation Plan

FYI

From: Bryan Whitaker <bryan.whitaker@co.st-clair.il.us>
Sent: Tuesday, April 2, 2024 9:03 AM
To: All County Users Distribution List <AllCountyUsers2@co.st-clair.il.us>
Subject: Multi-Hazard Mitigation Plan

St. Clair County EMA is completing the update to our County Multi-Hazard Mitigation Plan. A portion of this plan is dedicated to public feedback on your experiences with weather hazards within the county. Please take a few moments to complete the below survey to help us further understand the risks in the county. Please consider forwarding this email to anyone you know in St. Clair County and/or posting on your Department/Agencies social media accounts.

https://www.surveymonkey.com/r/9BQJ873

Thank you,

Bryan Whitaker
Assistant Director
St. Clair County ETSB / CENCOM 9-1-1 / Emergency Management Agency
101 South 1st St. Suite B
Belleville, Illinois 62220
Phone: 618-825-2683
Fax: 618-277-7668
bryan.whitaker@co.st-clair.il.us

"A message not acknowledged is a message not received"
-MABAS Red Center

Bryan Whitaker

From: Perry, Brad D <Brad.Perry@hshs.org>
Sent: Wednesday, April 3, 2024 10:44 AM
To: Bradley White; Elliott, Dawn; Jeff Wild; Jeremy Gottschammer; Claxton, Timothy C; Kirk Brueggeman; rwittenauer@shilohil.org; justin.turnbough; Charles R. Kelley
Cc: Samantha Bierman
Subject: St. Clair County Hazard Mitigation Plan Public Survey

Hello,

Please assist our Health Department partners by sharing / completing the survey below.....

Thanks,

Brad Perry
Manager: Emergency Preparedness, EMS, and Security
HSHS St. Elizabeth's Hospital
One St. Elizabeth's Hospital Blvd.
O'Fallon, IL 62269
Phone: 618-234-2120 ext 15527
brad.perry@hshs.org
www.steliz.org

St. Clair County Hazard Mitigation Plan Public Survey

Citizen input for natural disaster planning in St. Clair County, IL

The St. Clair Hazard Mitigation Plan* is currently being updated by St. Clair County and East-West Gateway Council of Governments in coordination with a partnership of local governments. Since 2004, federal law has required local hazard mitigation plans be prepared and adopted in order for local cities to be eligible for hazard mitigation grant funding through the Federal Emergency Management Agency.

This survey is designed to get your input about the impact of natural disasters on you and your community and find out what type of mitigation actions you believe are most important. The survey is short and should take five to 10 minutes to complete. The information you provide will help identify risks and preferred methods to reduce the impact of natural disasters in your communities.

If you are interested in learning more about the St. Clair Hazard Mitigation Plan, please visit https://www.co.st-clair.il.us. Thank you for your participation!

https://www.surveymonkey.com/r/9BQJ873

LEGAL DISCLAIMER: This message and all attachments may be confidential or protected by privilege. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or use of the information contained in or attached to this message is strictly prohibited. Please notify the sender of the delivery error by replying to this message, and then delete it from your system. Thank you.

Caution: This is an external email. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department.

St. Clair County Emergency Management Agency

...

To

M

ıl stages of the update of the

St. Clair County Emergency Management Agency

Page · Public Service

co.st-clair.il.us

+1 618-825-2682

47K Followers

Advertise Manage

St. Clair County Emergency Management Agency
Published by Bryan Whitaker · April 11 at 3:22 PM ·

St. Clair County EMA will host a public meeting on Wednesday April 17, 2024 at 2pm to discuss the update of our County Multi-Hazard Mitigation Plan. The meeting will be held at the County Emergency Operations Center located at 110 W Washington St. Belleville, IL.

See insights and ads

Boost post

19

1 comment 12 shares

Like Comment Share

Jayna Lennon
Will this event be streamed?

6d Like Reply Send message Hide

Comment as St. Clair County Emergency Management Agency

St. Clair County Emergency Management Agency
Published by Bryan Whitaker · April 2 at 9:00 AM ·

St. Clair County Emergency Management is completing the update of our Counties Multi Hazard Mitigation Plan. A portion of this plan requests public feedback on your experience with weather hazards in the county. Please take a few moments to complete the below survey.

https://www.surveymonkey.com/r/9BQJ873

S.COM
s.com

See insights and ads

Boost post

7

2 shares

Like Comment Share

Comment as St. Clair County Emergency Management Agency

St. Clair County Health Department, Belleville, Illinois
April 2 at 9:54 AM ·

St. Clair EMA needs your feedback!
Please take a few moments to complete this survey.
https://www.surveymonkey.com/r/9BQJ873

St. Clair County Emergency Management Agency
April 2 at 9:00 AM ·

St. Clair County Emergency Management is completing the update of our Counties Multi Hazard Mitigation Plan. A portion of this plan requests public feedback on... See more

S.COM
s.com

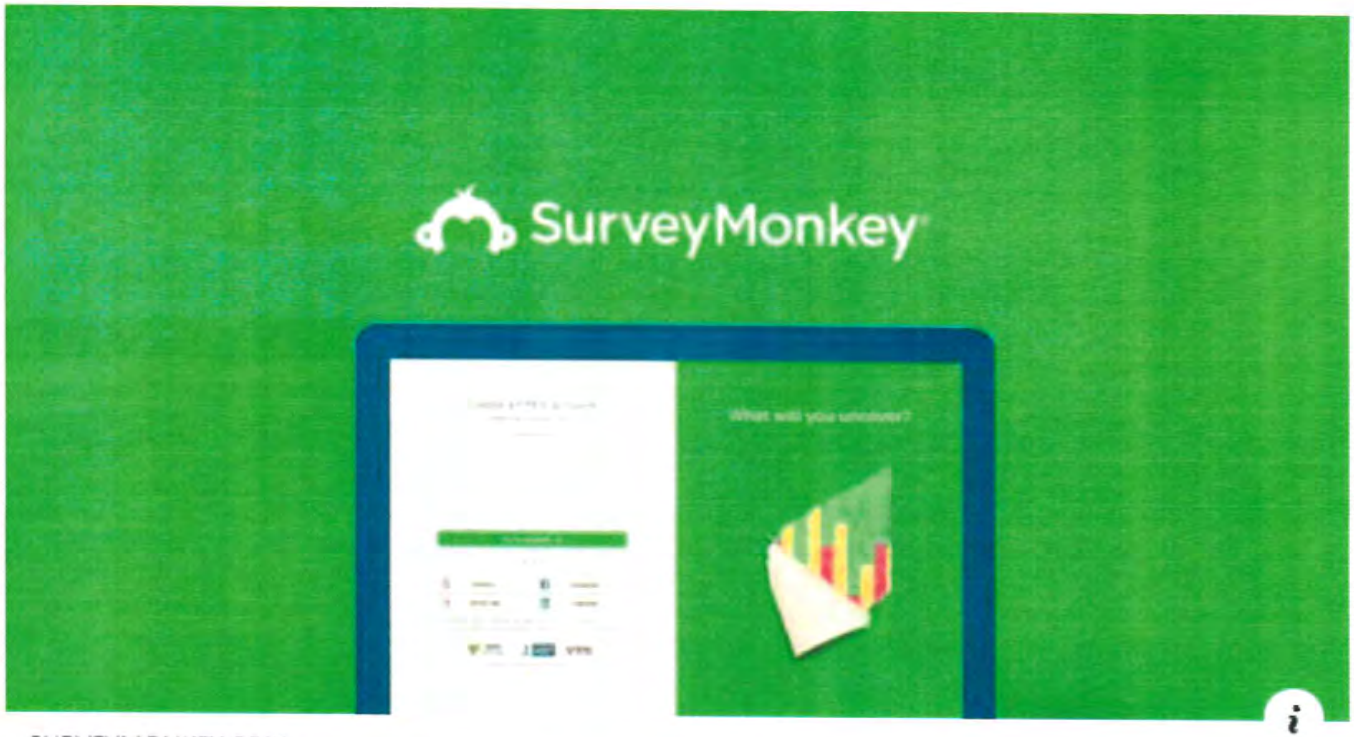
You and Sue Springer Gruberman

Like Comment Share

Comment as Bryan Whitaker

Cahokia Volunteer Fire Department - Official
April 3 at 9:29 AM ·

St. Clair County Emergency Management Agency is in the process of updating the County Multi Hazard Mitigation Plan. Please take a moment to complete the below survey. This will allow for public input on what you experience as weather related hazards within our county. Thank you for taking the time to help in this important matter.



SURVEYMONKEY.COM

St. Clair County Hazard Mitigation Plan Public Survey

Take this survey powered by surveymonkey.com. Create your own surveys for free.

You and 1 other

1 share

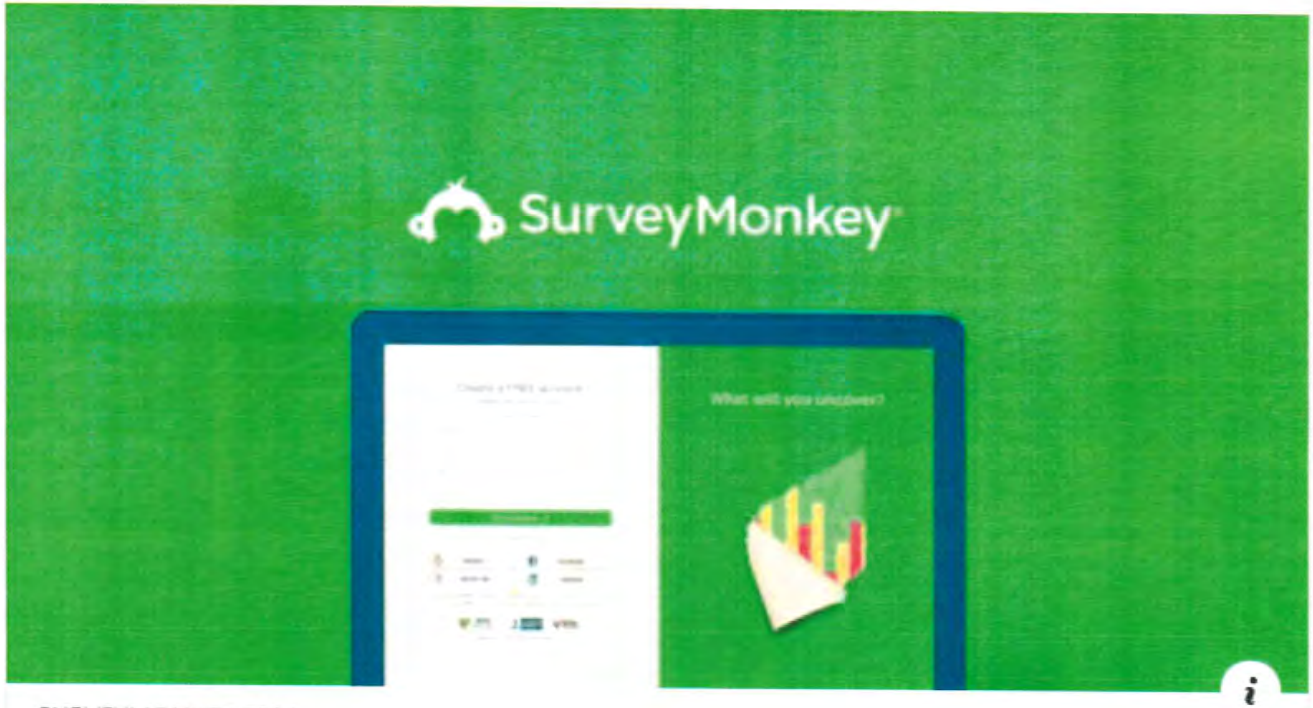
Like Comment Share

Dupo Fire & EMS
April 3 at 9:12 PM ·

St. Clair County Emergency Management is in the process of updating the County Multi Hazard Mitigation Plan. Please take a moment to complete the below survey.

Prairie Du Pont Fire & Rescue
April 3 at 8:59 PM ·

St. Clair County Emergency Management is in the process of updating the County Multi Hazard Mitigation Plan. Please take a moment to complete the below survey.... See more



SURVEYMONKEY.COM

St. Clair County Hazard Mitigation Plan Public Survey

Take this survey powered by surveymonkey.com. Create your own surveys for free.

You and 1 other

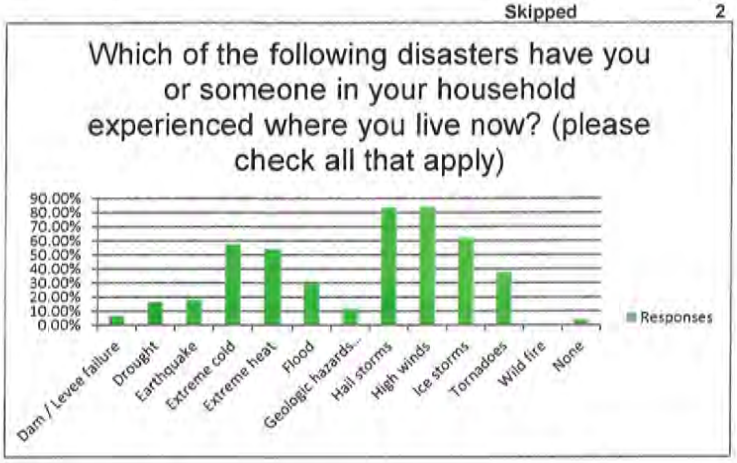
1 share

Like Comment Share

St. Clair County Hazard Mitigation Plan Public Survey

Which of the following disasters have you or someone in your household experienced where you live now? (please check all that apply)

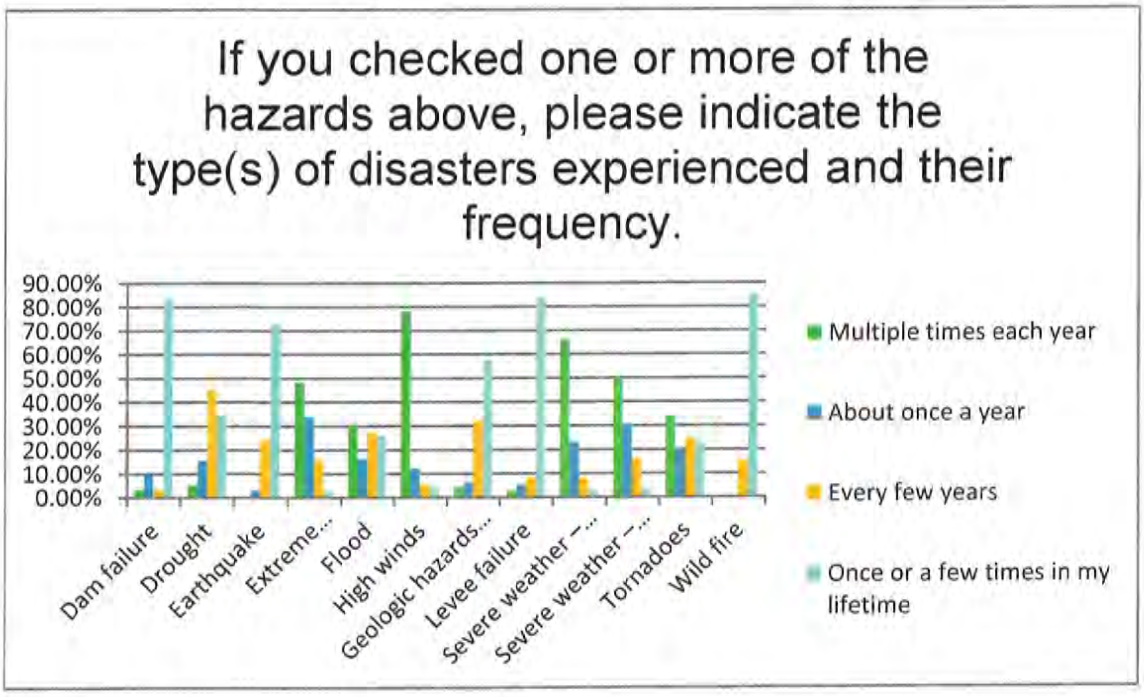
Answer Choices	Responses	
Dam / Levee failure	6.28%	15
Drought	16.32%	39
Earthquake	17.57%	42
Extreme cold	56.90%	136
Extreme heat	53.97%	129
Flood	30.13%	72
Geologic hazards (landslide, subsidence, sinkholes)	11.72%	28
Hail storms	83.26%	199
High winds	83.68%	200
Ice storms	61.92%	148
Tornadoes	37.66%	90
Wild fire	0.00%	0
None	4.18%	10
Other (please specify)		6
	Answered	**239**
	Skipped	**2**



St. Clair County Hazard Mitigation Plan Public Survey

If you checked one or more of the hazards above, please indicate the type(s) of disast

	Multiple times each year		About on
Dam failure	3.33%	1	10.00%
Drought	5.17%	3	15.52%
Earthquake	0.00%	0	2.86%
Extreme temperatures (hot and/or cold)	48.13%	77	33.75%
Flood	30.43%	28	16.30%
High winds	78.16%	161	12.14%
Geologic hazards (landslide, subsidence, sinkholes)	4.26%	2	6.38%
Levee failure	2.70%	1	5.41%
Severe weather – summer	66.07%	111	23.21%
Severe weather – winter	50.00%	88	30.68%
Tornadoes	33.61%	40	19.33%
Wild fire	0.00%	0	0.00%



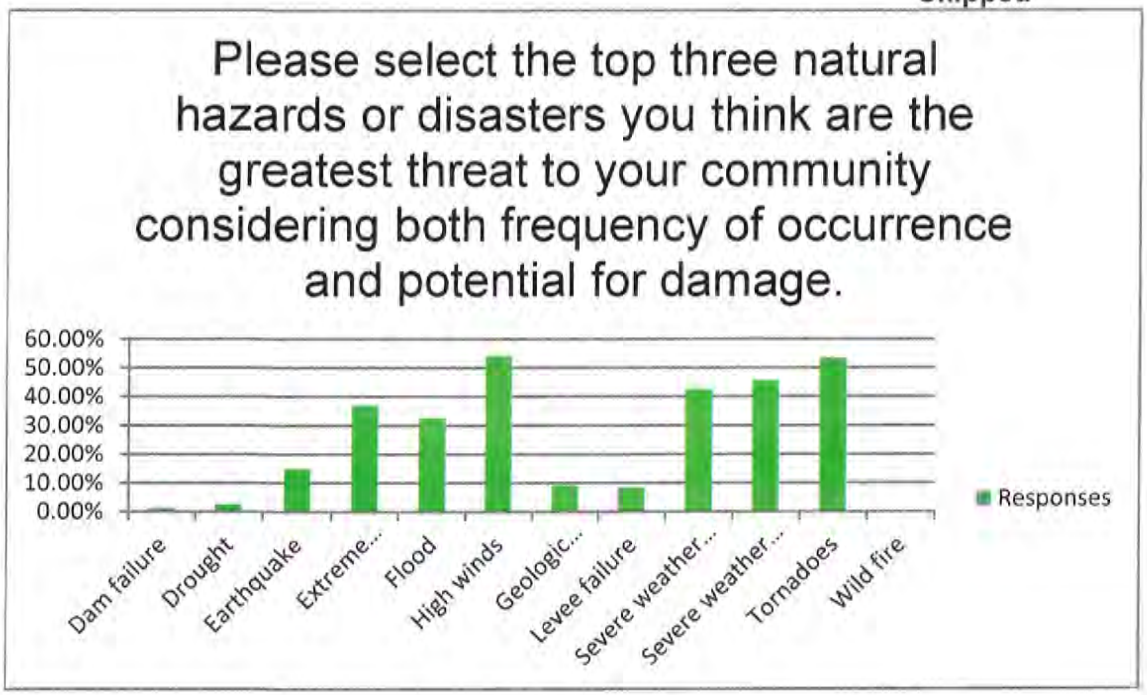
ers experienced and their frequency.

ce a year		Every few years		Once or a few times in my lifetime		Total
3	3.33%	1	83.33%	25		30
9	44.83%	26	34.48%	20		58
2	24.29%	17	72.86%	51		70
54	15.63%	25	2.50%	4		160
15	27.17%	25	26.09%	24		92
25	5.34%	11	4.37%	9		206
3	31.91%	15	57.45%	27		47
2	8.11%	3	83.78%	31		37
39	7.74%	13	2.98%	5		168
54	15.91%	28	3.41%	6		176
23	24.37%	29	22.69%	27		119
0	15.00%	3	85.00%	17		20
			Answered			**231**
			Skipped			**10**

St. Clair County Hazard Mitigation Plan Public Survey

Please select the top three natural hazards or disasters you think are the greatest t

Answer Choices	Responses	
Dam failure	1.25%	3
Drought	2.50%	6
Earthquake	15.00%	36
Extreme temperatures (hot and/or cold)	37.08%	89
Flood	32.50%	78
High winds	54.17%	130
Geologic hazards (landslide, subsidence, sinkholes)	9.17%	22
Levee failure	8.33%	20
Severe weather – summer	42.50%	102
Severe weather – winter	45.42%	109
Tornadoes	53.33%	128
Wild fire	0.00%	0
Is there another natural hazard not listed above that you think is a threat to your to\		20
	Answered	**240**
	Skipped	**1**



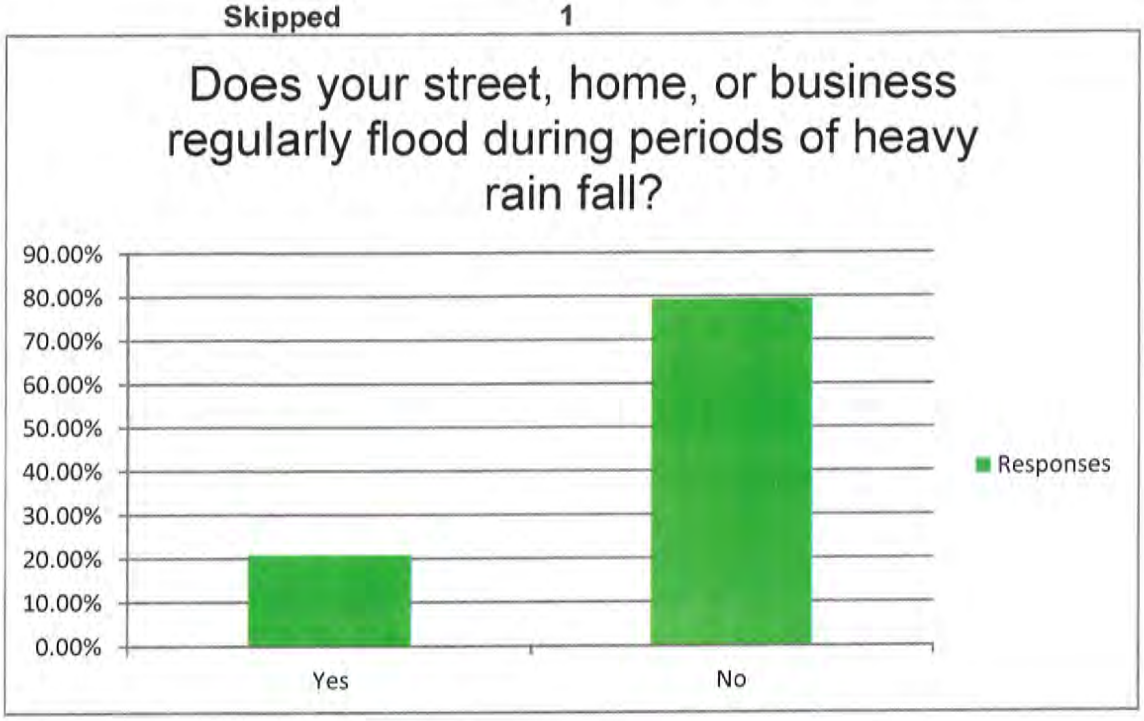
hreat to your community considering both frequency of occurrence and potential

for damage.

St. Clair County Hazard Mitigation Plan Public Survey

Does your street, home, or business regularly flood during periods of heavy rain fa

Answer Choices	Responses	
Yes	20.83%	50
No	79.17%	190
Answered		**240**
Skipped		**1**

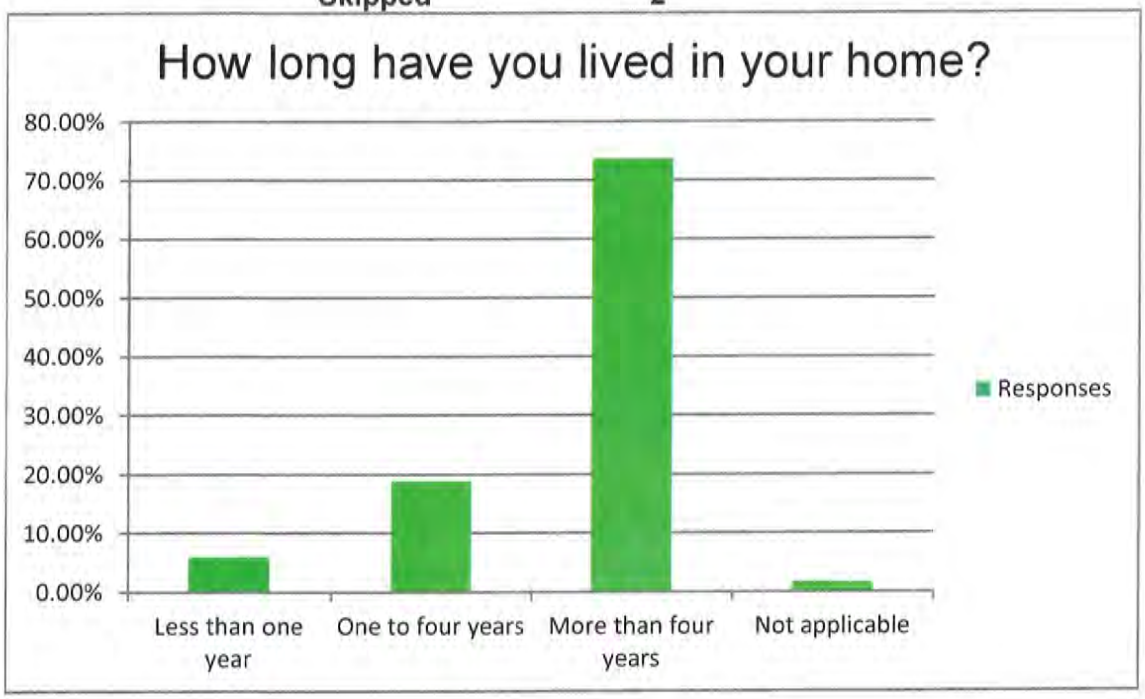


ıll?

St. Clair County Hazard Mitigation Plan Public Survey

How long have you lived in your home?

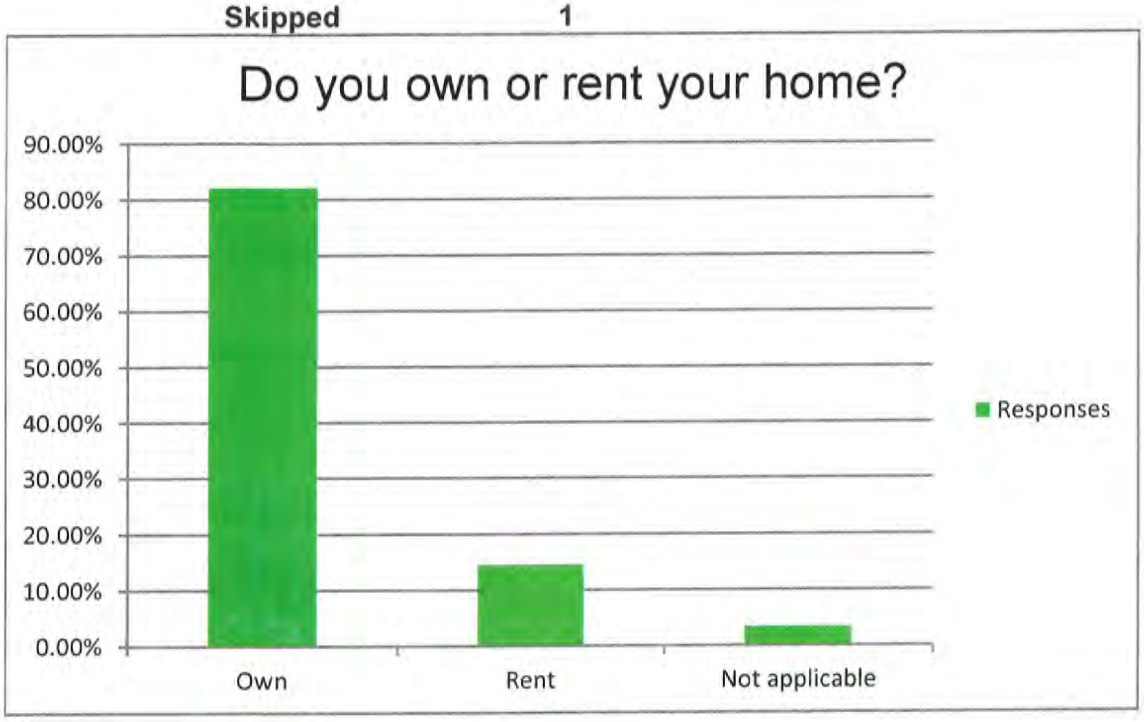
Answer Choices	Responses	
Less than one year	5.86%	14
One to four years	18.83%	45
More than four years	73.64%	176
Not applicable	1.67%	4
	Answered	**239**
	Skipped	**2**



St. Clair County Hazard Mitigation Plan Public Survey

Do you own or rent your home?

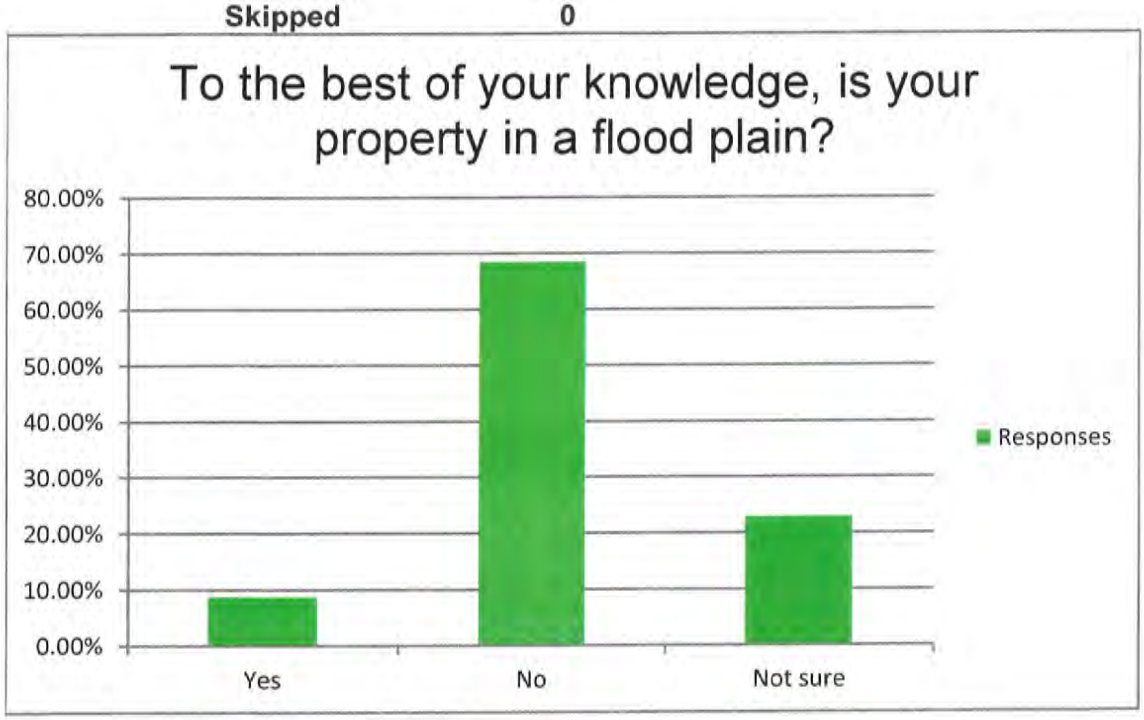
Answer Choices	Responses	
Own	82.08%	197
Rent	14.58%	35
Not applicable	3.33%	8
Answered		**240**
Skipped		**1**



St. Clair County Hazard Mitigation Plan Public Survey

To the best of your knowledge, is your property in a flood plain?

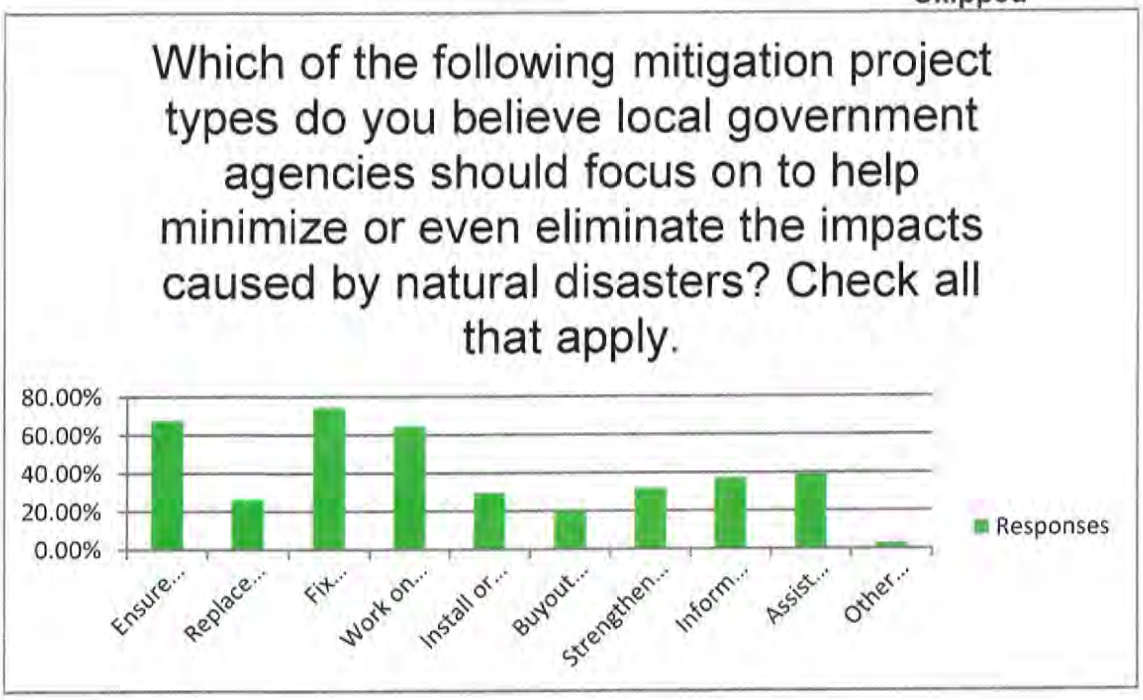
Answer Choices	Responses	
Yes	8.71%	21
No	68.46%	165
Not sure	22.82%	55
Answered		**241**
Skipped		**0**



St. Clair County Hazard Mitigation Plan Public Survey

Which of the following mitigation project types do you believe local government ag

Answer Choices	Responses	
Ensure essential facilities such as police, fire, emergency medical se	67.50%	162
Replace inadequate or vulnerable low water crossings	25.83%	62
Fix infrastructure, such as improving drainage systems	74.17%	178
Work on protecting utilities (electricity, communications, water/waste	64.58%	155
Install or improve protective structures, such as floodwalls or levees	29.58%	71
Buyout flood prone properties and maintain as open space	19.58%	47
Strengthen codes, ordinances, and plan to require building standards	31.67%	76
Inform property owners of ways they can reduce damage to their pro	37.08%	89
Assist vulnerable property owners with securing funding to reduce da	38.75%	93
Other (please specify)	2.92%	7
	Answered	**240**
	Skipped	**1**



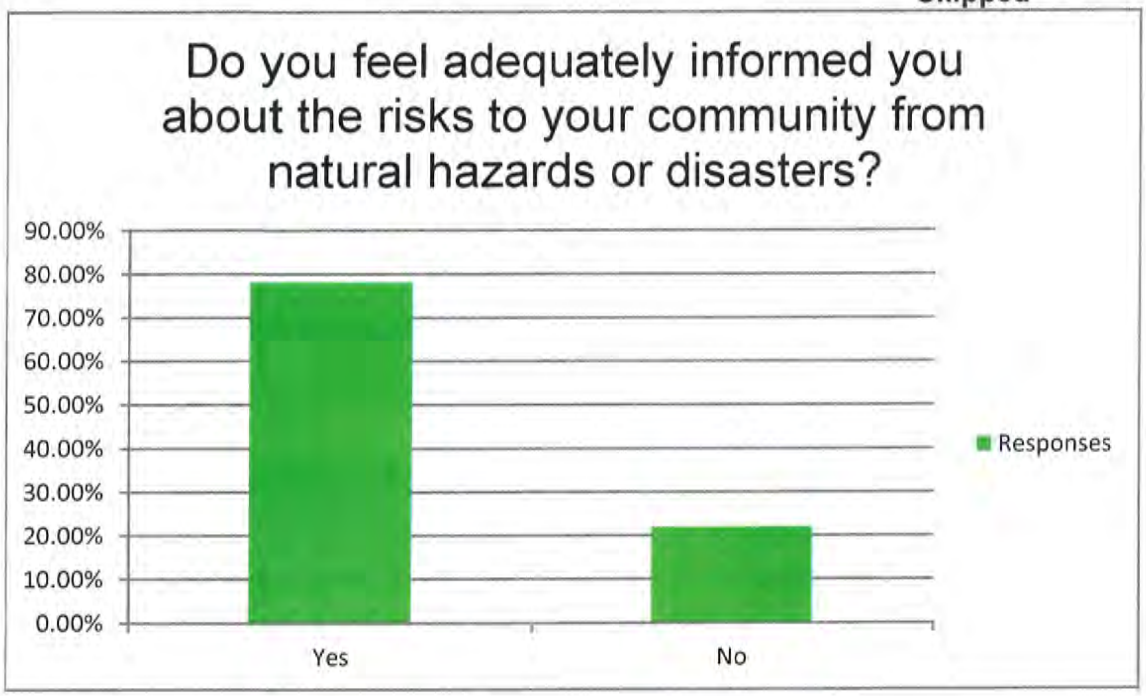
encies should focus on to help minimize or even eliminate the impacts caused by

natural disasters? Check all that apply.

St. Clair County Hazard Mitigation Plan Public Survey

Do you feel adequately informed you about the risks to your community from natur

Answer Choices	Responses	
Yes	78.06%	185
No	21.94%	52
If no, please specify how local governments could provide better information on nat		30
	Answered	**237**
	Skipped	**4**



al hazards or disasters?

St. Clair County Hazard Mitigation Plan Public Survey

Do you have any other comments or concerns about the best way to go about trying

Answered	**54**
Skipped	**187**

to prevent damage and loss of life during a natural disaster?

St. Clair County Hazard Mitigation Plan Public Survey

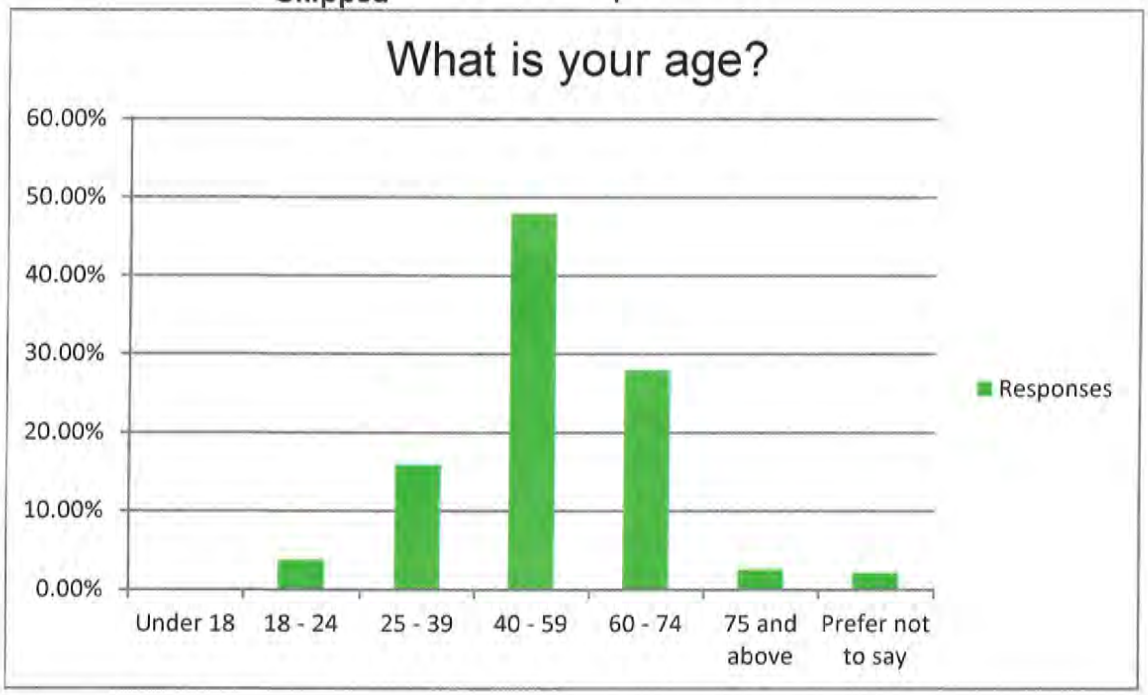
Please tell us a little about yourself. What is your home zip code?

Answered	**241**
Skipped	**0**

St. Clair County Hazard Mitigation Plan Public Survey

What is your age?

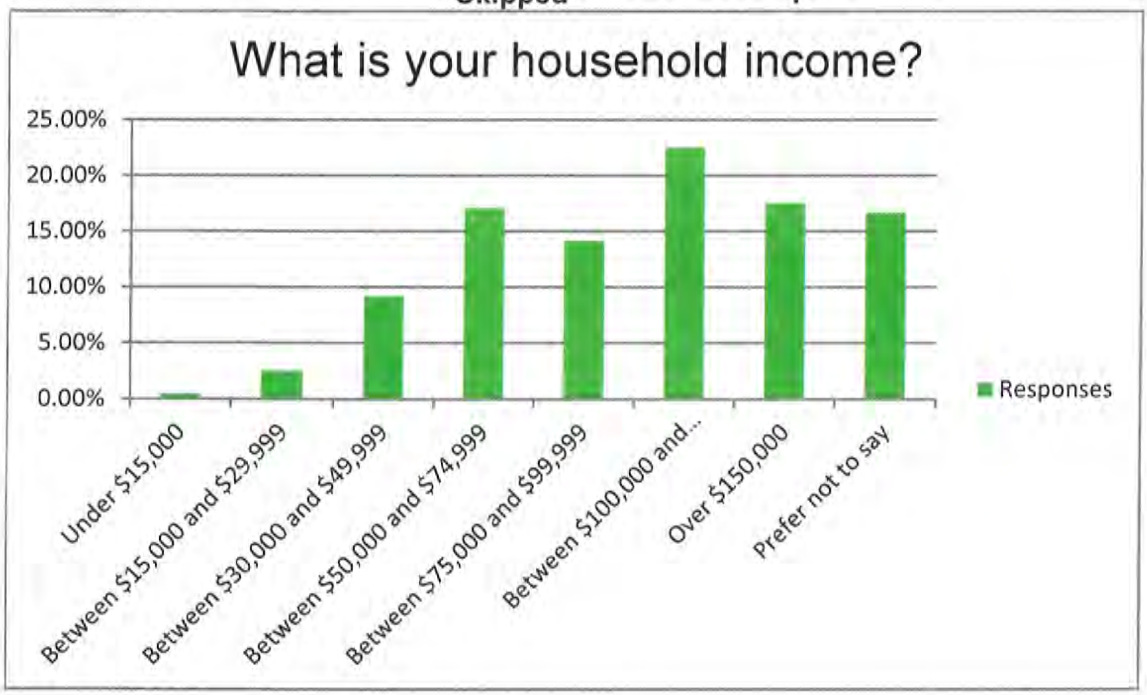
Answer Choices	Responses	
Under 18	0.00%	0
18 - 24	3.75%	9
25 - 39	15.83%	38
40 - 59	47.92%	115
60 - 74	27.92%	67
75 and above	2.50%	6
Prefer not to say	2.08%	5
	Answered	**240**
	Skipped	**1**



St. Clair County Hazard Mitigation Plan Public Survey

What is your household income?

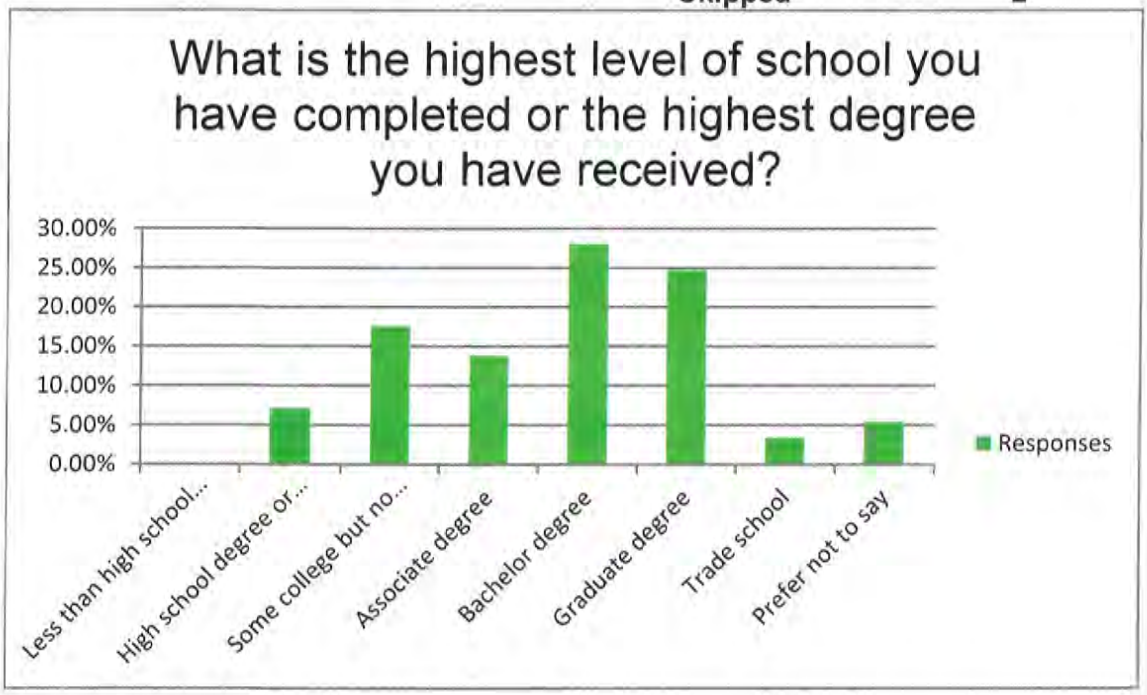
Answer Choices	Responses	
Under $15,000	0.42%	1
Between $15,000 and $29,999	2.50%	6
Between $30,000 and $49,999	9.17%	22
Between $50,000 and $74,999	17.08%	41
Between $75,000 and $99,999	14.17%	34
Between $100,000 and $150,000	22.50%	54
Over $150,000	17.50%	42
Prefer not to say	16.67%	40
	Answered	**240**
	Skipped	**1**



St. Clair County Hazard Mitigation Plan Public Survey

What is the highest level of school you have completed or the highest degree you ha

Answer Choices	Responses	
Less than high school degree	0.00%	0
High school degree or equivalent (e.g., GED)	7.11%	17
Some college but no degree	17.57%	42
Associate degree	13.81%	33
Bachelor degree	28.03%	67
Graduate degree	24.69%	59
Trade school	3.35%	8
Prefer not to say	5.44%	13
	Answered	**239**
	Skipped	**2**

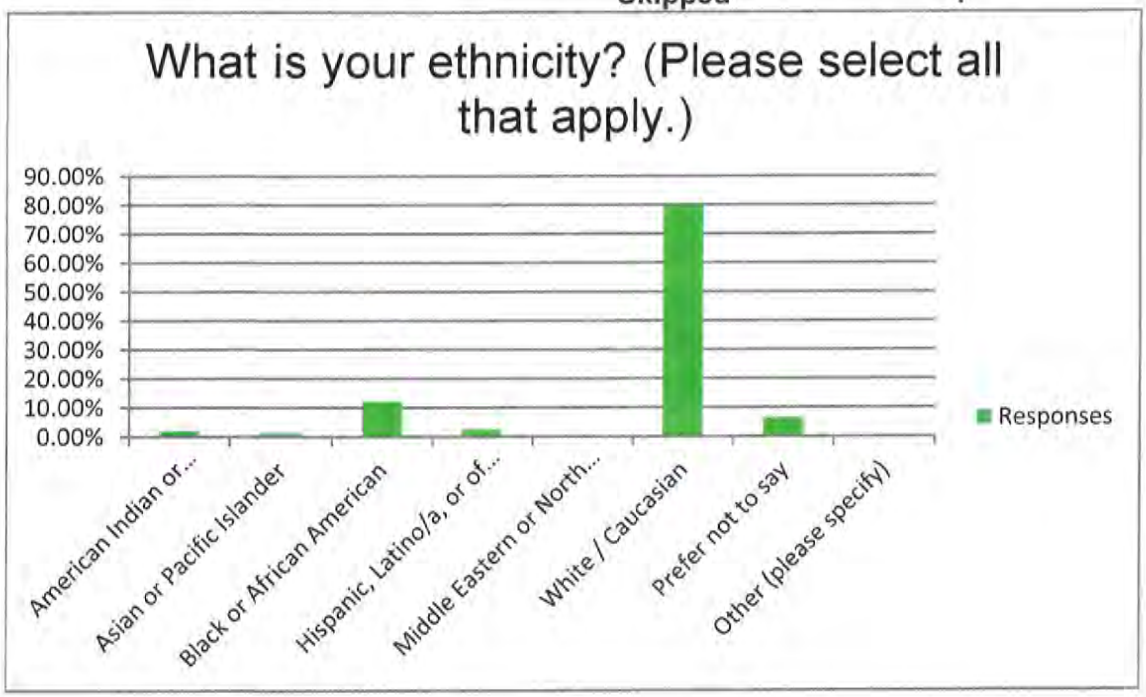


ve received?

St. Clair County Hazard Mitigation Plan Public Survey

What is your ethnicity? (Please select all that apply.)

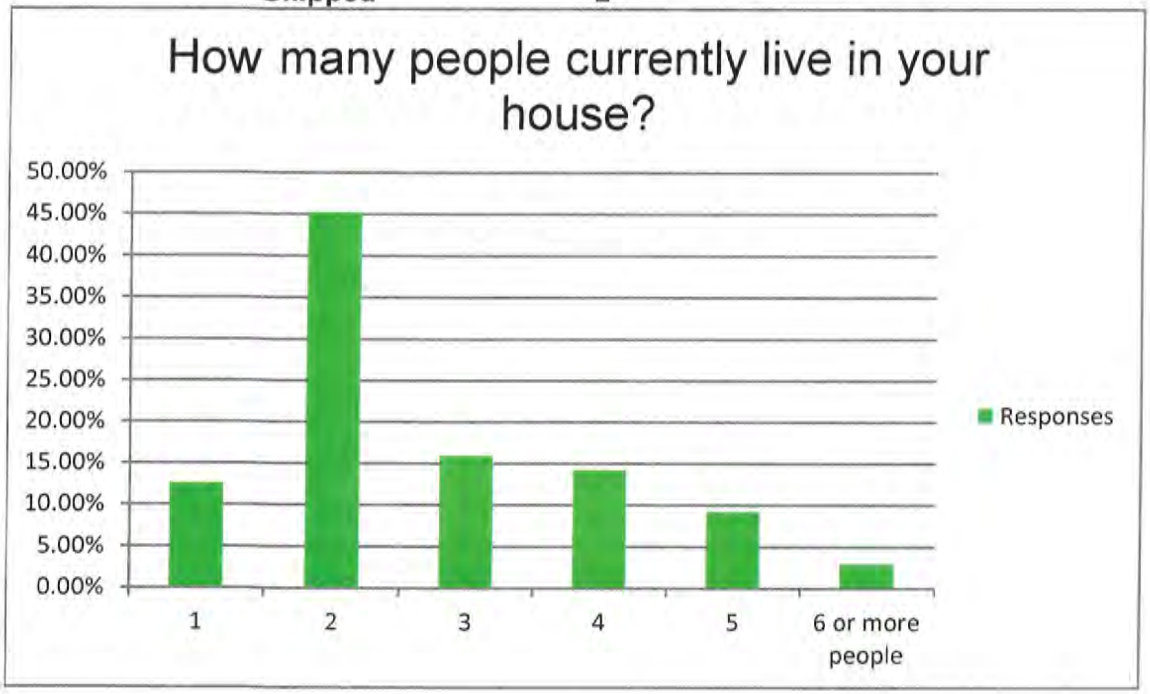
Answer Choices	Responses	
American Indian or Alaskan Native	2.11%	5
Asian or Pacific Islander	1.27%	3
Black or African American	12.24%	29
Hispanic, Latino/a, or of Spanish origin	2.53%	6
Middle Eastern or North African	0.00%	0
White / Caucasian	79.75%	189
Prefer not to say	6.33%	15
Other (please specify)	0.00%	0
	Answered	**237**
	Skipped	**4**



St. Clair County Hazard Mitigation Plan Public Survey

How many people currently live in your house?

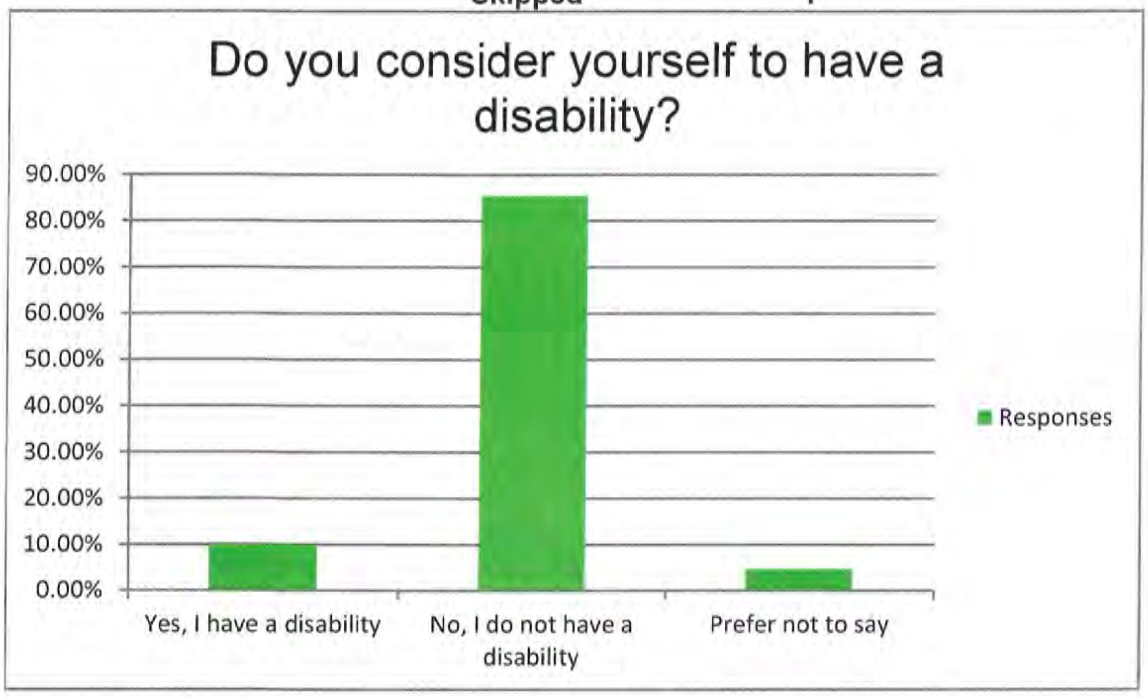
Answer Choices	Responses	
1	12.55%	30
2	45.19%	108
3	15.90%	38
4	14.23%	34
5	9.21%	22
6 or more people	2.93%	7
Answered		**239**
Skipped		**2**



St. Clair County Hazard Mitigation Plan Public Survey

Do you consider yourself to have a disability?

Answer Choices	Responses	
Yes, I have a disability	10.00%	24
No, I do not have a disability	85.42%	205
Prefer not to say	4.58%	11
	Answered	**240**
	Skipped	**1**



Appendix C – Adopting Resolutions

Resolution # 2918-24-R

ADOPTING THE ST. CLAIR COUNTY MULTI-HAZARD MITIGATION PLAN

WHEREAS, St. Clair County recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted multi-hazard mitigation plan is required as a condition of future grant funding for pre-disaster hazard mitigation grant projects; and

WHEREAS, St. Clair County participated jointly in the planning process with other local units of government within St. Clair County to prepare a Multi-Hazard Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, the St. Clair County Board hereby adopts the St. Clair County Multi-Hazard Mitigation Plan, in its final state as approved by the Federal Emergency Management Agency (FEMA), as an official plan; and

BE IT FURTHER RESOLVED that this resolution will be submitted by St. Clair County showing the adoption of the St. Clair County Multi-Hazard Mitigation Plan to the Illinois Emergency Management Agency and the Federal Emergency Management Agency for final review and approval.

ADOPTED THIS 29 Day of April, 2024.

Chief Elected Official

Attest:

COUNTY CLERK OF ST. CLAIR COUNTY ILLINOIS

Resolution # 2918-24-R

Approval and Adoption of the Updates to the St. Clair County Multi-Hazard Mitigation Plan

REVIEWED BY:

State's Attorney's Office

Director of Administration

EMERGENCY READINESS COMMITTEE

JUDICIARY COMMITTEE

Resolution # 2024-01

ADOPTING THE ST. CLAIR COUNTY MULTI-HAZARD MITIGATION PLAN

WHEREAS, the Village of Brooklyn, Illinois recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted multi-hazard mitigation plan is required as a condition of future grant funding for pre-disaster hazard mitigation grant projects; and

WHEREAS, the (Village of Brooklyn, Illinois) participated jointly in the planning process with other local units of government within St. Clair County to prepare a Multi-Hazard Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, the (Village of Brooklyn, Illinois) Board of Trustees hereby adopts the St. Clair County Multi-Hazard Mitigation Plan, in it final state as approved by the Federal Emergency Management Agency (FEMA), as an official plan; and

BE IT FURTHER RESOLVED that this resolution will be submitted by St. Clair County on behalf of the (Village of Brooklyn, Illinois) showing the adoption of the St. Clair County Multi-Hazard Mitigation Plan to the Illinois Emergency Management Agency and the Federal Emergency Management Agency for final review and approval.

ADOPTED THIS 19TH Day of APRIL, 2024.

Chief Elected Official

Attest:

ORIGINAL

8B

CITY OF EAST SAINT LOUIS
CITY COUNCIL • LEGISLATIVE BILL
501 RIVER PARK DRIVE, EAST SAINT LOUIS, IL 62201

LEGISLATIVE BILL FORM

☐ Ordinance
☒ Resolution
Bill No. 24-20022

Title RESOLUTION ADOPTING THE ST. CLAIR COUNTY MULTI-HAZARD MITIGATION PLAN

Account Code No.: _____ Title: _____

Availability of Funds: ☐ Yes ☐ No ☐ N/A ☐ Pending: _____

CITY COUNCIL COMMITTEE ACTIONS

Assigned: _____

Date: _____

☐ Community Development ☐ Public Works

☒ Public Safety ☐ Finance

☐ Government Operations

☐ APPROVE
☐ DISAPPROVE
☐ OTHERS: _____

Committee: Date: _____

☐ ☐

☐ APPROVE
☐ DISAPPROVE
☐ OTHERS: _____

COMMENTS: _____

EXPLANATORY STATEMENT

To adopt the plan for submission to the Illinois Emergency Management Agency and the Federal Emergency Management Agent for final review and approval.

Date Prepared: April 19, 2024

OFFICE OF THE CITY MANAGER
ORIGINATING DEPARTMENT

DIRECTOR'S APPROVAL 4/24/22 Date

OTHER DEPARTMENT(S) AFFECTED
DEPARTMENT: _____

SIGNATURE Date

CITY MANAGER: _____

SIGNATURE Date

SPONSORS

SIGNATURE Date

RECIEIVED BY: _____

Resolution # 24-20022

ADOPTING THE ST. CLAIR COUNTY MULTI-HAZARD MITIGATION PLAN

WHEREAS, the City of East Saint Louis recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted multi-hazard mitigation plan is required as a condition of future grant funding for pre-disaster hazard mitigation grant projects; and

WHEREAS, the City of East Saint Louis participated jointly in the planning process with other local units of government within St. Clair County to prepare a Multi-Hazard Mitigation Plan.

NOW, THEREFORE, BE IT RESOLVED, the Mayor and City Council of the City of East Saint Louis hereby adopts the St. Clair County Multi-Hazard Mitigation Plan, in it final state as approved by the Federal Emergency Management Agency (FEMA), as an official plan; and

BE IT FURTHER RESOLVED that this resolution will be submitted by St. Clair County on behalf of the City of East Saint Louis showing the adoption of the St. Clair County Multi-Hazard Mitigation Plan to the Illinois Emergency Management Agency and the Federal Emergency Management Agency for final review and approval.

ADOPTED THIS 9th Day of May, 2024.

Mayor Charles R. Powell III

Attest:

Debra Hamilton Tidwell, City Clerk

RESOLUTION NO 4551-2024

A RESOLUTION ADOPTING THE ST. CLAIR COUNTY MULTI-HAZARD MITIGATION PLAN

WHEREAS, the City of Fairview Heights recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted multi-hazard mitigation plan is required as a condition of future grant funding for pre-disaster hazard mitigation grant projects; and

WHEREAS, the City of Fairview Heights participated jointly in the planning process with other local units of government within St. Clair County to prepare a Multi-Hazard Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, the City of Fairview Heights hereby adopts the St. Clair County Multi-Hazard Mitigation Plan, in it final state as approved by the Federal Emergency Management Agency (FEMA), as an official plan; and

BE IT FURTHER RESOLVED that this resolution will be submitted by St. Clair County on behalf of the City of Fairview Heights showing the adoption of the St. Clair County Multi-Hazard Mitigation Plan to the Illinois Emergency Management Agency and the Federal Emergency Management Agency for final review and approval.

This Resolution shall be in full force and effect from and after its passage and approval as provided by law.

PASSED: 05/21/2024

APPROVED: 05/22/2024

MARK T. KUPSKY - MAYOR

CITY OF FAIRVIEW HEIGHTS

ATTEST:

KAREN J. KAUFHOLD - CITY CLERK

KAREN J. KAUFHOLD CITY CLERK CITY OF FAIRVIEW HGTS SEAL

Roll Call of Aldermen Voting "Yea"

Josh Frawley	Ryan Vickers
Barbara Brumfield	Bill Poletti
Brenda Wagner	Brenda Williams
Harry Zimmerman	Frank Menn
Pat Peck	

Alderman Anthony LeFlore was absent

RESOLUTION 2024-05-06 A

ADOPTING THE ST. CLAIR COUNTY MULTI-HAZARD MITIGATION PLAN

WHEREAS, the Village of Shiloh recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted multi-hazard mitigation plan is required as a condition of future grant funding for pre-disaster hazard mitigation grant projects; and

WHEREAS, the Village of Shiloh participated jointly in the planning process with other local units of government within St. Clair County to prepare a Multi-Hazard Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, the Village of Shiloh Board of Trustees hereby adopts the St. Clair County Multi-Hazard Mitigation Plan, in its final state as approved by the Federal Emergency Management Agency (FEMA), as an official plan; and

BE IT FURTHER RESOLVED that this resolution will be submitted by St. Clair County on behalf of the Village of Shiloh showing the adoption of the St. Clair County Multi-Hazard Mitigation Plan to the Illinois Emergency Management Agency and the Federal Emergency Management Agency for final review and approval.

ADOPTED THIS 6th day of May, 2024.

Robert L. Weilmuenster
Mayor

Brenda A. Kern
Attest: Brenda A. Kern, MMC
Village Clerk

OFFICIAL SEAL
SHILOH
ST. CLAIR CO. ILLINOIS

VILLAGE OF SHILOH
PAMPHLET COVER SHEET

Resolution 2024-05-06 A

Published in pamphlet form by the authority of the Village Board of Trustees of the Village of Shiloh, St. Clair County, Illinois.

POSTED FROM MAY 7, 2024 TO MAY 17, 2024

CERTIFICATE OF PUBLICATION

I, Brenda A. Kern, certify that I am the duly appointed Municipal Clerk of the Village of Shiloh, St. Clair County, Illinois.

I certify that on *May 6, 2024,* the corporate authorities of such municipality passed and approved this document.

The pamphlet form of this document, including the document and a cover sheet, was prepared, and a copy of such document was posted, commencing on *May 7, 2024,* and continuing for at least ten days thereafter. Copies of such documents were also available for public inspection upon request in the office of the Municipal Clerk.

Dated at Shiloh, Illinois, on May 7, 2024.

Brenda A. Kern

Brenda A. Kern, MMC
Village Clerk

OFFICIAL SEAL
SHILOH
ST. CLAIR CO. ILLINOIS

Appendix D – Historical Hazards

Tornados

Date: March 13, 1938

Description: Bystanders look over the destruction, including Joseph Roesch's wrecked car, right.

Source: Belleville News-Democrat

Date: March 13, 1938

Description: View of tornado approaching Okawville, IL.

Source: St. Louis Post-Dispatch

Date: March 13, 1938

Description: Residents of O'Fallon, IL, view the wreckage after the storm had passed.

Source: St. Louis Post-Dispatch

Date: March 13, 1938

Description: The Beal family clearing away debris in their wrecked home at 10 North 28th street, Belleville. From left, Mrs. Beal, Harry Jr., H. L. Beal, and Jessie May.

Source: St. Louis Post-Dispatch

Date: March 13, 1938

Description: General view of damaged homes along 28th street in Belleville.

Source: St. Louis Post-Dispatch

Date: March 13, 1938

Description: General view of the wreckage at 27th and W Main Streets. In the background at left is Suppiger Canning Co. plant and at right the Union Grade School.

Source: St. Louis Post-Dispatch

Date: March 13, 1938

Description: A Scott Field soldier patrol stops for show from an army truck near the edge of the tornado's path, three blocks south of West Main street in Belleville. A shorn tree and an almost new brick bungalow from which the second story disappeared form a foreground and background for this storm-torn scene.

Source: St. Louis Post-Dispatch

Date: March 13, 1938

Description: The refrigerator in the corner of this pile of wreckage is the only evidence it was the kitchen of the home of Mr. and Mrs. James Daniels at 4 South 29th Street.

Source: St. Louis Post-Dispatch

Date: Thursday, November 17, 1988

Description: Max Beare Jr. and his wife, Phyllis, prepare to rebuild their roof—peeled off by the tornado.

Source: Belleville News-Democrat, Page 6, Section D

Date: Thursday, November 17, 1988

Description: Grover Scharf inspects a damaged shed at Westview Auto Body

Source: Belleville News-Democrat/Brad Kellerman

Date: Thursday, November 17, 1988

Description: The roof of a house on Redwood Drive near Caseyville blankets a Firebird owned by Tom Burns.

Source: Belleville News-Democrat/Tim Vizer

Date: Thursday, November 17, 1988

Description: The Wayn Pfingsten house at Imbs Station Road and Illinois 163 stands in ruins after storm.

Source: Belleville News-Democrat/Brad Kellerman

Date: June 10, 2003

Description: Damage to large trees and the roof of a home between Mississippi Ave and North Main Street in North Dupo Illinois.

Source:http://www.crh.noaa.gov/lsx/science/surveys/DMG0610Casey5.php

Date: June 10, 2003

Description: Damaged house trailer and nearby trees on McBride Avenue in North Dupo Illinois.

Source: http://www.crh.noaa.gov/lsx/science/surveys/DMG0610Casey5.php

Date: June 10, 2003

Description: Roof of a large machine shed located on the east side of Black Lane severely damaged.

Source: http://www.crh.noaa.gov/lsx/science/surveys/DMG0610Casey5.php

Date: June 8, 2009

Description: Three tornados in St. Clair County Illinois and a fourth reported twister in Calhoun County kept officials busy early Monday evening. There were no reported injuries.

Source: KHQA
http://www.connecttristates.com/news/photos.aspx?id=310305

Date: June 8, 2009

Description: Damage to a house from an EF2 tornado.

Source:
http://www.crh.noaa.gov/lsx/?n=06_08_2009

Date: June 8, 2009

Description: Shiloh, Illinois rotating wall cloud

Source:
http://www.crh.noaa.gov/lsx/?n=06_08_2009

Floods

Date: May 1943

Description: Rowboats were the only practical means of travel on Van Buren Street, the main business district of New Athens, after the rising Kaskaskia river over-flowed route 13 through the town.

Source: Belleville Daily Advocate

Date: May 1943

Description: The river didn't stay away from the door of the home of Mrs. Maggie Heitman, 61, picturesque New Athens fisherwoman. It came right in and flooded the floor of her home, from which neighbors helped her remove her last belongings last night.

Source: Belleville Daily Advocate

Date: April 29, 1994

Description: French Village firefighter Bill Dachsteiner rides on a sheriff's department vehicle after helping residents.

Source: Belleville News-Democrat/Brad Kellerman

Date: May 21, 1995

Description: Motorists driving through Belleville Thursday were forced to slow down as they encountered flooding on the 900 block of North Illinois. The site was just one of several roadways that experienced flooding. Storms continued to drench the city throughout the afternoon before the sun broke through the clouds Friday.

Source: Belleville Journal, photo by T.L. Witt

Date: September 14, 2008

Description: Picture of the flooding in Cahokia, IL, on September 14, 2008.

Source: http://www.topix.com/album/detail/cahokia-il/NF9DD2UF214J6T3P

Date: March 23, 2008

Description: Ervin Smith, ferries customers to his bar on Saturday in New Athens, IL.

Source: msnbc

http://www.msnbc.msn.com/id/23755227/wid/11

Severe Thunderstorms, Wind or Hail Events

Date: February 27, 1999

Description: Significant wind damage occurred in north St. Clair County along County Road 24. The damaged area was about 2 miles in length, and one house had half of its roof blown off and a garage/apartment building was blown off its foundation.

Source: http://www.srh.noaa.gov/bmx/significant_events/1999/02_27/index.php

Date: February 27, 1999

Source: http://www.srh.noaa.gov/bmx/significant_events/1999/02_27/index.php

Appendix E- List of Critical Facilities

Not all data is available for every facility. Other facility specifics may be available upon request.

Emergency Operations Centers

Name	Address	City
BELLEVILLE FIRE DEPT	1125 S. ILLINOIS ST	BELLEVILLE
BELLEVILLE POLICE DEPT	720 WEST MAIN ST	BELLEVILLE
EAST ST. LOUIS CITY HALL	301 RIVER PARK DR	EAST ST. LOUIS
DUPO VILLAGE CIVIL DEFENSE	100 N 2ND	DUPO
FREEBURG ESDA EoC/OFFICE	#14 SOUTHGATE CENTER	FREEBURG
SMITHTON FIRE PROTECTION DISTRICT	711 N MAIN ST	SMITHTON
SMITHTON VILLAGE HALL	101 S MAIN ST	SMITHTON
ST. CLAIR COUNTY	101 WEST WASHINGTON	BELLEVILLE
MASCOUTAH CITY HALL	3 W MAIN	MASCOUTAH

Fire Stations

Name of Fire Station	Address	City
ALORTON FIRE DEPT	4821 BOND AVE	ALORTON
BELLEVILLE FIRE DEPT STATION 1	315 CARLYLE AVE	BELLEVILLE
BELLEVILLE FIRE DEPT STATION 2	2200 WEST WASHINGTON	BELLEVILLE
BELLEVILLE FIRE DEPT STATION 3	6200 WEST MAIN	BELLEVILLE
BELLEVILLE FIRE DEPT STATION 4	1125 S. ILLINOIS ST	BELLEVILLE
BROOKLYN FIRE DEPT	312 S. 5TH ST	LOVEJOY
CAHOKIA FIRE DEPT	103 MAIN ST	CAHOKIA
CAHOKIA FIRE DEPT	1400 DORIS AVE	CAHOKIA
CAMP JACKSON FIRE DEPT	3201 CAMP JACKSON RD	CAHOKIA
CASEYVILLE FIRE DEPT	321 SOUTH MAIN	CASEYVILLE
CHURCH ROAD FIRE DEPT	4901 GEORGE ST	CENTREVILLE
COLUMBIA FD	1020 N MAIN ST	COLUMBIA
DUPO FIRE DEPT	501 COLUMBIA RD	DUPO
EAST SIDE FIRE DEPT	3111 EAST B STREET ROAD	BELLEVILLE
EAST SIDE FIRE DEPT	1723 NORTH BELT EAST	BELLEVILLE
EAST ST. LOUIS FIRE DEPT	2708 STATE STREET	EAST ST. LOUIS
EAST ST. LOUIS FIRE DEPT	7203 STATE STREET	EAST ST. LOUIS
EAST ST. LOUIS FIRE DEPT	1700 CENTRAL AVENUE	EAST ST. LOUIS
EAST ST. LOUIS FIRE DEPT	1712 LINCOLN AVENUE	EAST ST. LOUIS
EAST ST. LOUIS FIRE DEPT	301 RIVER PARK DR	EAST ST. LOUIS
FAIRMONT CITY FIRE DEPT	2601 NORTH 41ST ST	FAIRMONT CITY
FAIRVIEW CASEYVILLE FIRE DEPT	214 ASHLAND AVE	FAIRVIEW HEIGHTS
FAIRVIEW CASEYVILLE FIRE DEPT	10045 BUNKUM ROAD	FAIRVIEW HEIGHTS
FAYETTEVILLE FIRE DEPT	2212 MAIN AVENUE	FAYETTEVILLE
FREEBURG FIRE DEPARTMENT	410 WEST HIGH STREET	FREEBURG
FRENCH VILLAGE FIRE DEPT	1406 2ND AVENUE	FAIRVIEW HEIGHTS
FRENCH VILLAGE FIRE DEPT	2904 N. 89TH STREET	FAIRVIEW HEIGHTS
GOLDEN GARDENS FIRE DEPT	413 JACKSON	CENTREVILLE
HOLLYWOOD HEIGHTS VOL FD	1214 HOLLYWOOD HEIGHTS ROAD	CASEYVILLE
LEBANON EMERALD MOUND FD	760 N. MONROE	LEBANON
LEBANON EMERALD MOUND FD	108 E. PEEPLES	SUMMERFIELD

Name of Fire Station	Address	City
LENZBURG FIRE DEPT	4 E. MAPLE	LENZBURG
MADISON FD	615 MADISON AVE	MADISON
MARISSA FIRE DEPT	200 WEST NORTH RAILROAD	MARISSA
MASCOUTAH FIRE DEPT	224 NORTH RAILWAY AVENUE	MASCOUTAH
MIDWAY FPD	200 NORTH 74TH ST.	CENTREVILLE
MILLSTADT FIRE DEPT	114 S. Jefferson	MILLSTADT
NEW ATHENS FIRE DEPT	909 SPOTSYLVANIA ST	NEW ATHENS
NEW BADEN FD	100 EAST HANOVER ST	NEW BADEN
NORTHWEST FIRE DEPT	1513 N. BELT WEST	BELLEVILLE
NORTHWEST FIRE DEPT	3407 SOUTH BELT WEST	BELLEVILLE
O'FALLON-SHILOH VALLEY-CASEYVILLE TSWP FIRE DEPT	1215 TAYLOR RD	O'FALLON
O'FALLON-SHILOH VALLEY-CASEYVILLE TSWP FIRE DEPT	106 E WASHINGTON	O'FALLON
O'FALLON-SHILOH VALLEY-CASEYVILLE TSWP FIRE DEPT	567 W. THIRD	O'FALLON
O'FALLON-SHILOH VALLEY-CASEYVILLE TSWP FIRE DEPT	102 OAK STREET	SHILOH
PRAIRIE DUPONT FIRE DEPT	811 FALLING SPRINGS ROAD	DUPO
PRAIRIE DUPONT FIRE DEPT	2117 SHORT STREET	E. CARONDELET
PRAIRIE DUPONT FIRE DEPT	825 STATE STREET	E. CARONDELET
ST. CLAIR SPECIAL EMERGENCY SERVICES	2900 FALLING SPRING ROAD	SAUGET
SAUGET FIRE DEPT	2897 FALLING SPRINGS ROAD	SAUGET
SCOTT AFB FIRE DEPT	177 HANGAR RD.	SCOTT A F BASE
SCOTT AFB FIRE DEPT	861 GEORGE WASHINGTON DR	SCOTT A F BASE
SCOTT AFB FIRE DEPT	2694 CONTROL TOWER RD	SCOTT A F BASE
SIGNAL HILL FIRE DEPT	329 HAZEL AVENUE	BELLEVILLE
SMITHTON FIRE DEPT	711 NORTH MAIN	SMITHTON
SMITHTON FIRE PROTECTION DISTRICT	711 N MAIN ST	SMITHTON
SOLUTIA FIRE DEPT	500 MONSANTO	SAUGET
ST. LIBORY FIRE DEPT	7322 STATE RD 15	ST. LIBORY
ST. LOUIS DOWNTOWN AIRPORT FIRE DEPARTMENT	1660 SAUGET INDUSTRIAL PARKWAY	SAUGET
STATE PARK FD	3218 ARLINGTON ST	COLLINSVILLE
SWANSEA FIRE DEPT	1350 NORTH ILLINOIS	SWANSEA
SWANSEA FIRE DEPT	144 HUNTWOOD ROAD	SWANSEA
TILDEN FD	650 BUTLER ST	TILDEN
VILLA HILLS FIRE DEPT	100 CONNISTON	BELLEVILLE
WASHINGTON PARK FD	5300 N. PARK RD	WASHINGTON PARK

Police Stations

Name of Police Station	Address	City
ALORTON PD	4821 BOND AVE	ALORTON
ALTON & SOUTHERN PD	1000 S 22ND STREET	E ST. LOUIS
BELLEVILLE PD	720 W. MAIN ST	BELLEVILLE
BELLEVILLE POLICE WEST END STATION	8800 WEST MAIN	BELLEVILLE
BROOKLYN PD	312 5TH STREET	BROOKLYN
CAHOKIA PD	103 MAIN ST	CAHOKIA
CASEYVILLE PD	10 W MORRIS ST	CASEYVILLE

Name of Police Station	Address	City
CENTREVILLE PD	5800 BOND AVE	CENTREVILLE
COLLINSVILLE FD	130 S CLINTON ST	COLLINSVILLE
DUPO PD	100 N SECOND ST	DUPO
E ST. LOUIS PARK DIST POLICE	2950 CASEYVILLE AVE	E ST. LOUIS
EAST CARONDELET PD	950 STATE ST	E. CARONDELET
EAST ST. LOUIS PD	301 RIVER PARK DRIVE EAST	EAST ST. LOUIS
FAIRMONT CITY PD	2568 N 41ST ST	FAIRMONT
FAIRVIEW HEIGHTS CITY PD	10027 BUNKUM ROAD	FAIRVIEW HEIGHTS
FAYETTEVILLE PD	2212 MAIN AVENUE	FAYETTEVILLE
FREEBURG PD	14 SOUTHGATE SHOPPING CTR	FREEBURG
HECKER FD	121 E BACK STREET	HECKER
LEBANON PD	403 WEST ST. LOUIS STREET	LEBANON
LENZBURG PD	215 N CHARLES ST	LENZBURG
MARISSA PD	932 N MAIN STREET	MARISSA
MASCOUTAH PD	3 W MAIN STREET	MASCOUTAH
MID AMERICA AIRPORT	8849 AIR SERVICE DRIVE	MASCOUTAH
MIDAMERICA PD	8849 AIR SERVICE DRIVE	MASCOUTAH
MILLSTADT PD	108 W WHITE STREET	MILLSTADT
NEW ATHENS PD	905 SPOTSYLVANIA STREET	NEW ATHENS
O'FALLON PD	285 N SEVEN HILLS RD	O'FALLON
SAUGET PD	2897 FALLING SPRINGS ROAD	SAUGET
SCOTT AIR FORCE BASE SECURITY	832 BLDG 755	SCOTT A F BASE
SHILOH PD	3498 LEBANON AVE	SHILOH
SIU CHARTER SCH OF EAST ST. LOUIS	601 JAMES R THOMPSON	EAST SAINT LOUIS
SMITHTON PD	116 S MAIN STREET	SMITHTON
SOUTHWESTERN IL COLLEGE POLICE	2500 CARLYLE AVE	BELLEVILLE
SOUTHWESTERN IL CORRECTIONAL CTR	950 KINGSHWY ST	E ST. LOUIS
ST. CLAIR COUNTY	101 WEST WASHINGTON	BELLEVILLE
ST. CLAIR COUNTY SHERIFF	700 N. 5TH STREET	BELLEVILLE
SUMMERFIELD PD	PO BOX 262	SUMMERFIELD
SWANSEA PD	1400 N ILLINOIS STREET	SWANSEA
WASHINGTON PARK PD	5621 FOREST BLVD	WASHINGTON PARK

Medical Care Facilities

Name	Address	City
CEDAR TRAILS	409 URBANA DRIVE	FREEBURG
DR CHRIS SCHENEWERK	4017 ILLINOIS STATE ROUTE 159 SUITE 101	SMITHTON
FREEBURG CARE CENTER	746 URBANA DRIVE	FREEBURG
FREEBURG TERRACE	4 HILL MINE ROAD	FREEBURG
MEMORIAL HOSPITAL	4500 MEMORIAL DRIVE	BELLEVILLE
MEMORIAL HOSPITAL EAST	1404 CROSS ST	SHILOH
SCOTT MEDICAL CENTER	310 WEST LOSEY ST	SCOTT AFB
ST ELIZABETH'S HOSPITAL	1 ST ELIZABETH'S BLVD	O'FALLON
TOUCHETTE REGIONAL HOSPITAL	5900 BOND AVENUE	EAST ST. LOUIS

Schools

Name	Address	City
ABRAHAM LINCOLN ELEM SCHOOL	820 ROYAL HEIGHTS RD	BELLEVILLE
ALTA SITA ELEM SCHOOL	2601 BOND AVE	EAST SAINT LOUIS
ALTERNATIVE ED CENTER	1722 WEST MAIN STREET	BELLEVILLE
ALTERNATIVE HIGH SCHOOL & CRISIS	4400 GRAND ST	ALORTON
ALTERNATIVE MIDDLE SCHOOL	2436 KANSAS AVE	EAST ST. LOUIS
ALTHOFF CATHOLIC HIGH SCHOOL	5401 WEST MAIN STREET	BELLEVILLE
ANNETTE OFFICER ELEMENTARY	27TH & HENRIETH AVE	EAST ST. LOUIS
APOSTOLIC LEARNING ACADEMY	400 LOUISA AVE	DUPO
B.A.S.S.C.	2401 PATHWAYS XING	BELLEVILLE
BELLE VALLEY	2465 AMANN DR	BELLEVILLE
BELLEVILLE HIGH SCHOOL-EAST	2555 WEST BLVD	BELLEVILLE
BELLEVILLE HIGH SCHOOL-WEST	4063 FRANK SCOTT PKY	BELLEVILLE
BELLEVILLE TWP HS-NIGHT/ALT SCH	4063 FRANK SCOTT PKY	BELLEVILLE
BEREAN CHRISTIAN SCHOOL	5100 NORTH ILL	FAIRVIEW HEIGHTS
BILLY JONES ELEMENTARY SCHOOL	1601 CLEVELAND	EAST ST. LOUIS
BLESSED SACRAMENT ELEM SCHOOL	8809 WEST MAIN STREET	BELLEVILLE
BLUFFVIEW ELEM SCHOOL	905 BLUFFVIEW LN	DUPO
BROWN ELEM SCHOOL	4850 MARKET ST	EAST SAINT LOUIS
CAHOKIA HIGH SCHOOL	800 RANGE LN	CAHOKIA
CALVARY BAPTIST ACADEMY	423 LUCINDA AVENUE	BELLEVILLE
CASEYVILLE ELEMENTARY SCHOOL	433 S 2ND ST	CASEYVILLE
CATHEDRAL GRADE SCHOOL	200 S 2ND STREET	BELLEVILLE
CATHOLIC DAYCARE CENTER	617 SUMMIT AVE	EAST SAINT LOUIS
CENTERVILLE ELEM SCHOOL	3429 CAMP JACKSON RD	CAHOKIA
CENTRAL ELEM SCHOOL	309 HARTMAN LN	OFALLON
CENTRAL JR HIGH SCHOOL	1801 CENTRAL SCH RD	BELLEVILLE
CHILDRENS CENTER FOR BEHAVIORA	353 N 88TH STREET	EAST SAINT LOUIS
CLARK MIDDLE SCHOOL	3310 STATE ST	EAST SAINT LOUIS
COLLINSVILLE AREA CAREER CTR	2201 S MORRISON AVE	COLLINSVILLE
COLLINSVILLE HIGH SCHOOL	2201 S MORRISON AVE	COLLINSVILLE
CORNERSTONE CHRISTIAN SCHOOL	111 S 2ND STREET	CASEYVILLE
CORPUS CHRISTI ELEMENTARY SCHO	116 EAST 1ST ST	CAHOKIA
DELORES MOYE ELEM SCHOOL	1010 MOYE SCHOOL RD	OFALLON
DISCOVERY SCHOOL	810 OBERNUEFEMANN RD	O'FALLON
DONALD MCHENRY ELEMENTARY SCHOOL	2700 SUMMIT AVE	EAST SAINT LOUIS
DOUGLAS ELEM SCHOOL	125 CARLYLE AVE	BELLEVILLE
DUNBAR ELEM SCHOOL	10TH OHIO AVE	EAST SAINT LOUIS
DUPO HIGH SCHOOL	600 LOUISA AVE	DUPO
DUPO JR HIGH SCHOOL	600 LOUISA AVE	DUPO
EAST ST. LOUIS SENIOR HIGH SCHOOL	4901 STATE ST	EAST SAINT LOUIS
EAST ST. LOUIS-LINCOLN MIDDLE SCH	12 S 10TH ST	EAST SAINT LOUIS
EDGEMONT ELEM SCHOOL	8601 WASHINGTON ST	EAST SAINT LOUIS
ELIZABETH ANN SETON CATHOLIC	111 S 2ND STREET	CASEYVILLE
ELIZABETH MORRIS ELEM SCHOOL	1500 ANDREWS DR	CAHOKIA

Name	Address	City
ELLIS ELEM SCHOOL	250 ILLINI DR	BELLEVILLE
EMGE JUNIOR HIGH SCHOOL	7401 WESTCHESTER DR	BELLEVILLE
ESTELLE KAMPMEYER ELEM SCHOOL	707 N SMILEY ST	OFALLON
ESTELLE SAUGET ACADEMIC CENTER	1700 JEROME LN	CAHOKIA
FAITH BAPTIST SCHOOL	405 EAST MAIN ST	BELLEVILLE
FORT BOWMAN ACADEMY	2734 CALVIN BLVD	CAHOKIA
FRANKLIN ELEM SCHOOL	301 N 2ND ST	BELLEVILLE
FREEBURG COMMUNITY HIGH SCH	401 S MONROE ST	FREEBURG
FREEBURG ELEM SCHOOL	408 S BELLEVILLE ST	FREEBURG
FREEBURG PRIMARY CENTER	650 S STATE	FREEBURG
FULTON JR HIGH SCHOOL	307 KYLE RD	OFALLON
GOVERNOR FRENCH ACADEMY	219 W MAIN ST	BELLEVILLE
GRANT MIDDLE SCHOOL	10110 OLD LINCOLN TR	FAIRVIEW HEIGHTS
HARDING ELEM SCHOOL	731 N 74TH ST	EAST SAINT LOUIS
HARMONY INTERMEDIATE CENTER	7401 WESTCHESTER DR	BELLEVILLE
HARMONY PRESCHOOL	500 WILSHIRE	BELLEVILLE
HAWTHORNE ELEM SCHOOL	1600 N 40TH ST	EAST SAINT LOUIS
HAZEL BLAND PROMISE CENTER	2900 STATE ST	EAST SAINT LOUIS
HENRY RAAB ELEM SCHOOL	1120 UNION AVE	BELLEVILLE
HIGH MOUNT ELEM SCHOOL	1721 BOUL AVE	SWANSEA
HOLLYWOOD HEIGHTS ELEM SCHOOL	6 N OAKLAND DR	CASEYVILLE
HOLY CHILDHOOD SCHOOL	215 NORTH JOHN STREET	MASCOUTAH
HOLY ROSARY SCHOOL	2727 N 43RD STREET	FAIRMONT CITY
HOLY TRINITY SCHOOL	15 LINCOLN HWY	FAIRVIEW HEIGHTS
HOPE CHRISTIAN SCHOOL	4101 EAST HIGHWAY 161	BELLEVILLE
HUFFMAN ELEM SCHOOL	600 ST ROBERT DR	CAHOKIA
ILLINI ELEM SCHOOL	21 CIRCLE DR	FAIRVIEW HEIGHTS
ILLINOIS CENTER FOR AUTISM	1306 WABASH AVE	BELLEVILLE
ILLINOIS CENTER FOR AUTISM	548 S RUBY LANE	FAIRVIEW HEIGHTS
J EMMETT HINCHCLIFFE SR ELEM SCH	1050 OGLE RD	OFALLON
JACKSON ELEM SCHOOL	1798 COLLEGE AVE	EAST SAINT LOUIS
JEFFERSON ELEM SCHOOL	1400 N CHARLES ST	BELLEVILLE
JEROME EARLY CHILDHOOD CENTER	1825 JEROME LN	CAHOKIA
JOHN ROBINSON ELEMENTARY SCHOOL	1435 MARKET AVE	EAST SAINT LOUIS
LALUMIER ELEM SCHOOL	6702 BOND AVE	CENTREVILLE
LAVERNA EVANS ELEM SCHOOL	802 DARTMOUTH DR	OFALLON
LEBANON ELEM SCHOOL	102 W SCHUETZ ST	LEBANON
LEBANON HIGH SCHOOL	200 W SCHUETZ ST	LEBANON
LILLY-FREEMAN ELEM SCHOOL	1236 E BROADWAY	EAST SAINT LOUIS
LINDENWOOD UNIVERSITY	2600 WEST MAIN ST	BELLEVILLE
LOVEJOY ELEMENTARY SCHOOL	PO BOX 250	LOVEJOY
LOVEJOY MIDDLE SCHOOL	PO BOX 250	LOVEJOY
LOVEJOY TECHNOLOGY ACADEMY	PO BOX 250	LOVEJOY
LUCAS ELEM SCHOOL	1620 RUSSELL AVE	EAST SAINT LOUIS
MAMIE O STOOKEY SCHOOL	1306 WABASH AVE	BELLEVILLE

Name	Address	City
MANNERS ELEM SCHOOL	1915 N 55TH ST	EAST SAINT LOUIS
MAPLEWOOD ELEM SCHOOL	600 JEROME LN	CAHOKIA
MARIE SCHAEFER ELEM SCHOOL	505 S CHERRY ST	OFALLON
MARISSA ELEM SCHOOL	206 E FULTON ST	MARISSA
MARISSA JR & SR HIGH SCHOOL	300 SCHOOL VIEW DR	MARISSA
MASCOUTAH ELEM SCHOOL	533 N 6TH ST	MASCOUTAH
MASCOUTAH HIGH SCHOOL	1313 W MAIN ST	MASCOUTAH
MASCOUTAH MIDDLE SCHOOL	846 N 6TH ST	MASCOUTAH
MILES D DAVIS ELEMENTARY SCHOOL	725 N 15TH ST	EAST SAINT LOUIS
MILLSTADT ELEM SCHOOL	211 W MILL ST	MILLSTADT
MONTESSORI SCHOOL-ST. CLAIR	2360 COUNTRY ROAD	BELLEVILLE
MORRISON ELEM SCHOOL	630 N 59TH ST	EAST SAINT LOUIS
NELSON MANDELA SCHOOL	1800 N 25TH ST	EAST SAINT LOUIS
NEW ATHENS ELEM	501 HANFT ST	NEW ATHENS
NEW ATHENS HIGH SCHOOL	501 HANFT ST	NEW ATHENS
NEW ATHENS JR HIGH	501 HANFT ST	NEW ATHENS
NOTRE DAME ACADEMY-CATHEDRAL CAMPUS	1900 W BELLE ST	BELLEVILLE
NOTRE DAME ACADEMY-ST. AUGUSTINE CAMPUS	1900 W BELLE ST	BELLEVILLE
O FALLON HIGH SCHOOL	600 S SMILEY ST	OFALLON
OUR LADY QUEEN OF PEACE SCHOOL	5915 N BELT WEST	BELLEVILLE
PATHWAYS SCHOOL	2401 PATHWAYS XING	BELLEVILLE
PENNIMAN ELEM SCHOOL	300 ANNUNCIATION CT	CAHOKIA
PONTIAC JR HIGH SCHOOL	400 ASHLAND DR	FAIRVIEW HEIGHTS
QUEEN OF PEACE	5923 N BELT W	BELLEVILLE
ROOSEVELT ELEM SCHOOL	700 W CLEVELAND AVE	BELLEVILLE
SCOTT ELEM SCHOOL	4732 PATRIOTS DR	SCOTT A F BASE
SHILOH ELEMENTARY SCHOOL	125 DIAMOND CT	SHILOH
SHILOH MIDDLE SCHOOL	1 WILDCAT XING	SHILOH
SIGNAL HILL ELEM SCHOOL	40 SIGNAL HILL PL	BELLEVILLE
SISTER THEA BOWMAN CATHOLIC SC	8213 CHURCH LANE	EAST SAINT LOUIS
SIU CHARTER SCH OF EAST ST. LOUIS	601 JAMES R THOMPSON	EAST SAINT LOUIS
SMITHTON CONSOLIDATED SCHOOL	316 S. HICKORY	SMITHTON
SMITHTON ELEM SCHOOL	PO BOX 395	SMITHTON
ST AGATHA ELEMENTARY SCHOOL	207 SOUTH MARKET	NEW ATHENS
ST AUGUSTINE OF CANTERBURY SCH	1900 WEST BELLE ST	BELLEVILLE
ST. CLAIR CO JUV DETENTION CENTER	9006 LEBANON RD	BELLEVILLE
ST. CLAIR CO REG OFFICE SAFE SCH	25 BELLEVUE PARK PLZ	BELLEVILLE
ST CLARE CATHOLIC SCHOOL	214 WEST 3RD ST	O'FALLON
ST HENRY ELEMENTARY SCHOOL	5303 WEST MAIN STREET	BELLEVILLE
ST JAMES SCHOOL	412 WEST WASHINGTON ST	MILLSTADT
ST JOHN THE BAPTIST SCHOOL	10 SOUTH LINCOLN STREET	SMITHTON
ST JOSEPH SCHOOL	2 N ALTON ST	FREEBURG
ST LIBORY ELEM SCHOOL	PO BOX 323	SAINT LIBORY

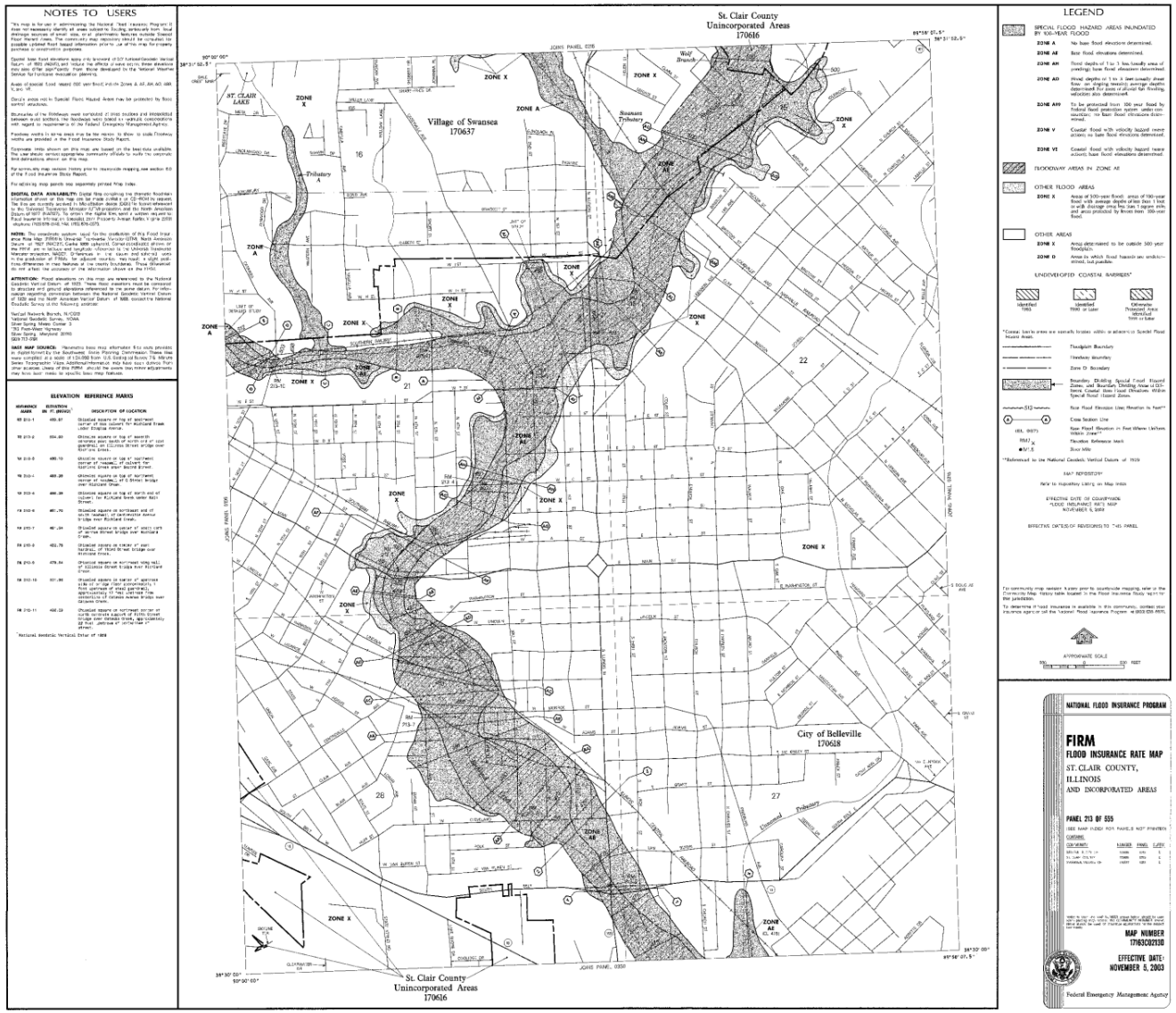
Name	Address	City
ST TERESA CATHOLIC SCHOOL	1108 LEBANON AVENUE	BELLEVILLE
SUMMERFIELD ELEM SCHOOL	PO BOX 424	SUMMERFIELD
THE GOVERNOR FRENCH ACADEMY	506 W STATE ST	O'FALLON
TOMORROWS BUILDERS CHARTER SCHL	PO BOX 6126	EAST ST. LOUIS
TWIN ECHO ELEM SCHOOL	1937 S MORRISON AVE	COLLINSVILLE
UNION ELEM SCHOOL	20 S 27TH ST	BELLEVILLE
VERNICE G NEELY SCHOOL	4400 GRAND ST	ALORTON
VINCENT GRAY ALTERNATIVE H SCH	P O BOX 428	EAST SAINT LOUIS
VIVIAN ADAMS EARLY CHILD CTR	501 N 10TH ST	EAST ST. LOUIS
WASHINGTON SCHOOL	400 S CHARLES ST	BELLEVILLE
WEST JR HIGH SCHOOL	840 ROYAL HEIGHTS RD	BELLEVILLE
WESTHAVEN ELEMENTARY	118 WESTHAVEN SCH RD	BELLEVILLE
WHITE OAK ACADEMY	463 N 88TH ST	EAST SAINT LOUIS
WHITESIDE ELEM SCHOOL	2028 LEBANON AVE	BELLEVILLE
WHITESIDE MIDDLE SCHOOL	111 WARRIOR WAY	BELLEVILLE
WILLIAM HOLLIDAY ELEM SCHOOL	400 JOSEPH DR	FAIRVIEW HEIGHTS
WIRTH-PARKS MIDDLE SCHOOL	1900 MOUSETTE LN	CAHOKIA
WOLF BRANCH ELEM SCHOOL	125 HUNTWOOD RD	SWANSEA
WOLF BRANCH MIDDLE SCHOOL	410 HUNTWOOD RD	SWANSEA
WYVETTER YOUNGE MIDDLE SCH	3939 CASEYVILLE AVE	EAST SAINT LOUIS
ZION LUTHERAN SCHOOL	1810 MCCLINTOCK AVE	BELLEVILLE

Appendix F – St. Clair County Flood Maps

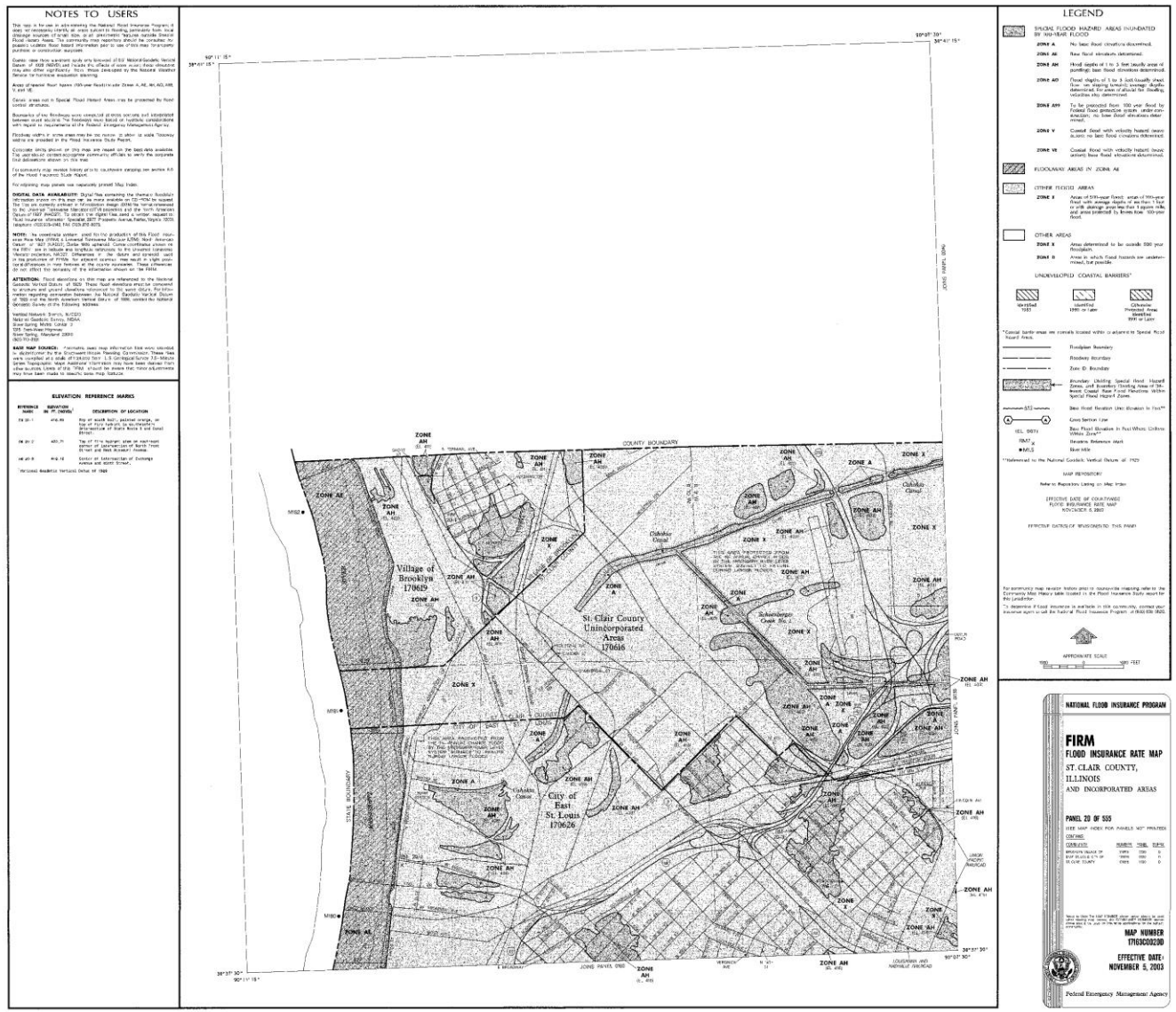
St. Clair County Flood Maps

Appendix of the 2024 Multi-Hazard Mitigation Plan

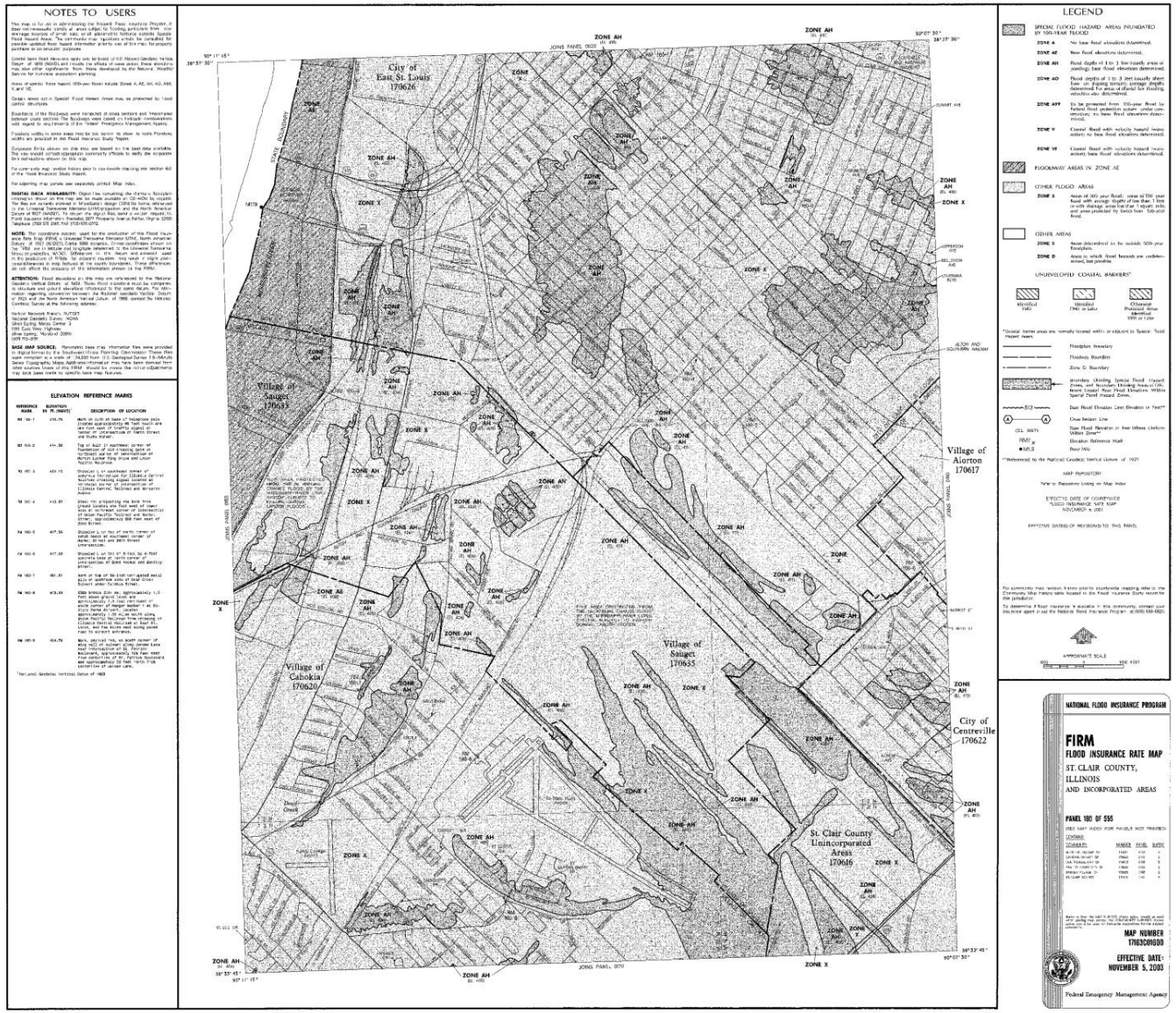
City of Belleville



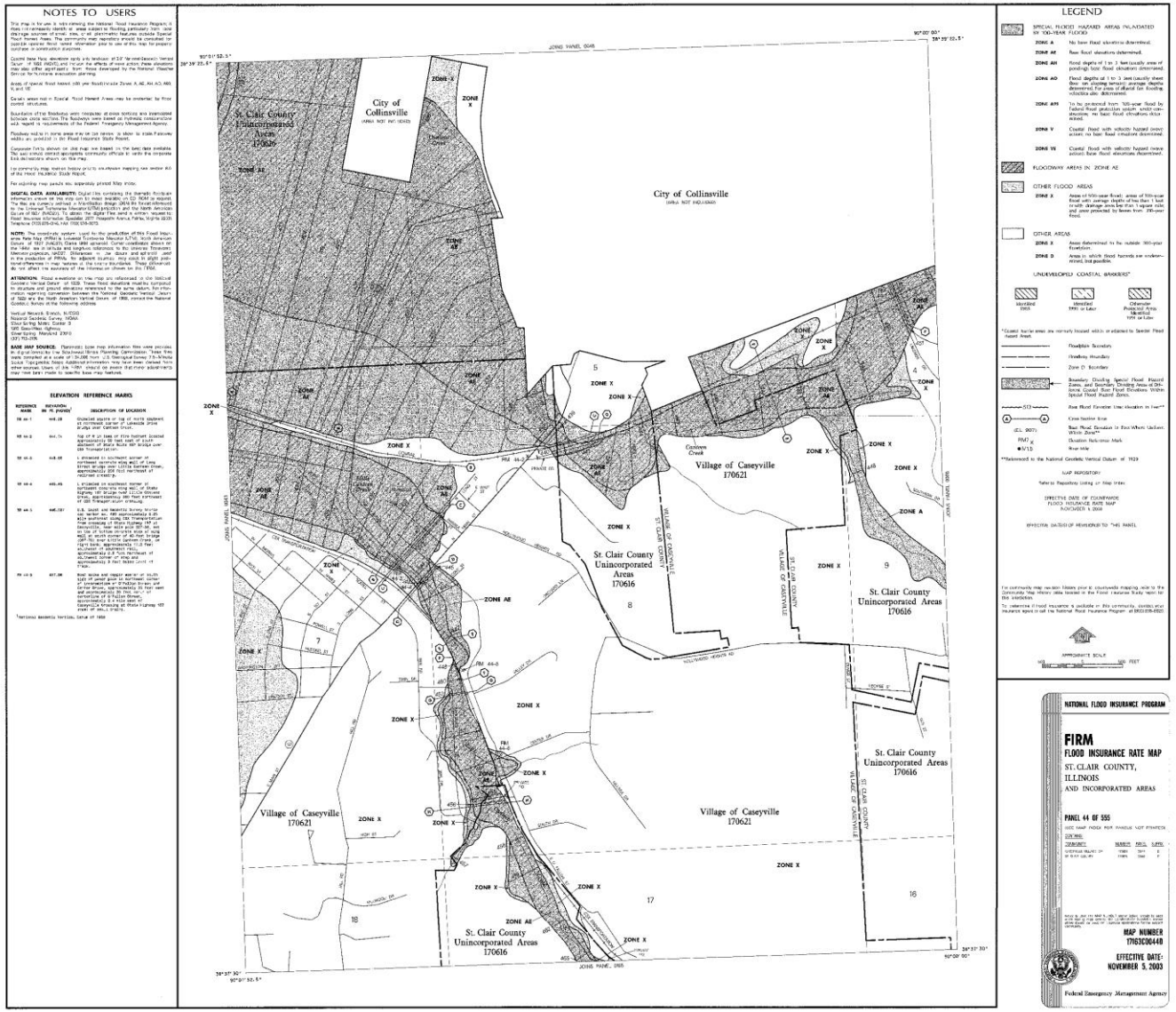
Village of Brooklyn



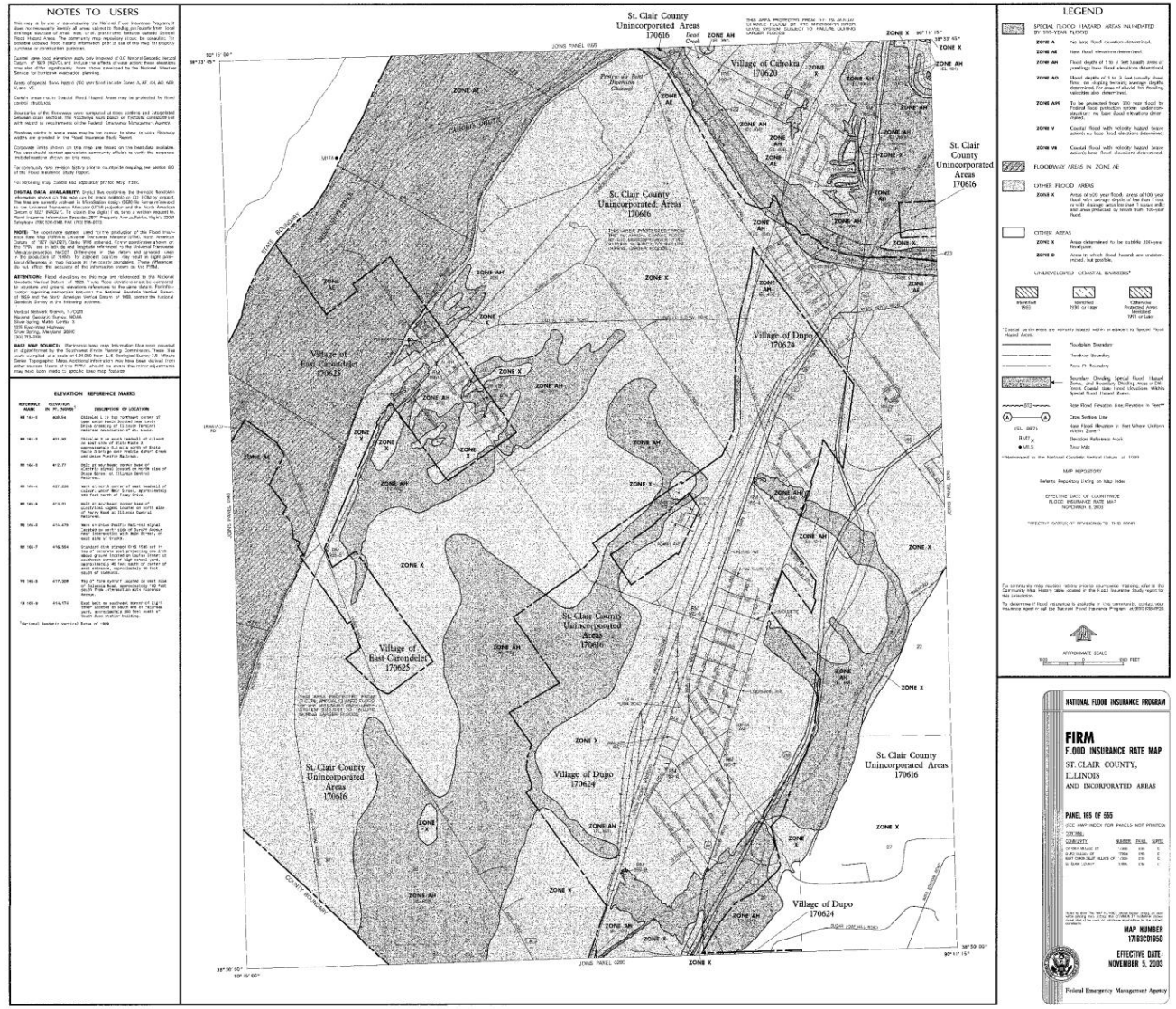
City of Cahokia Heights



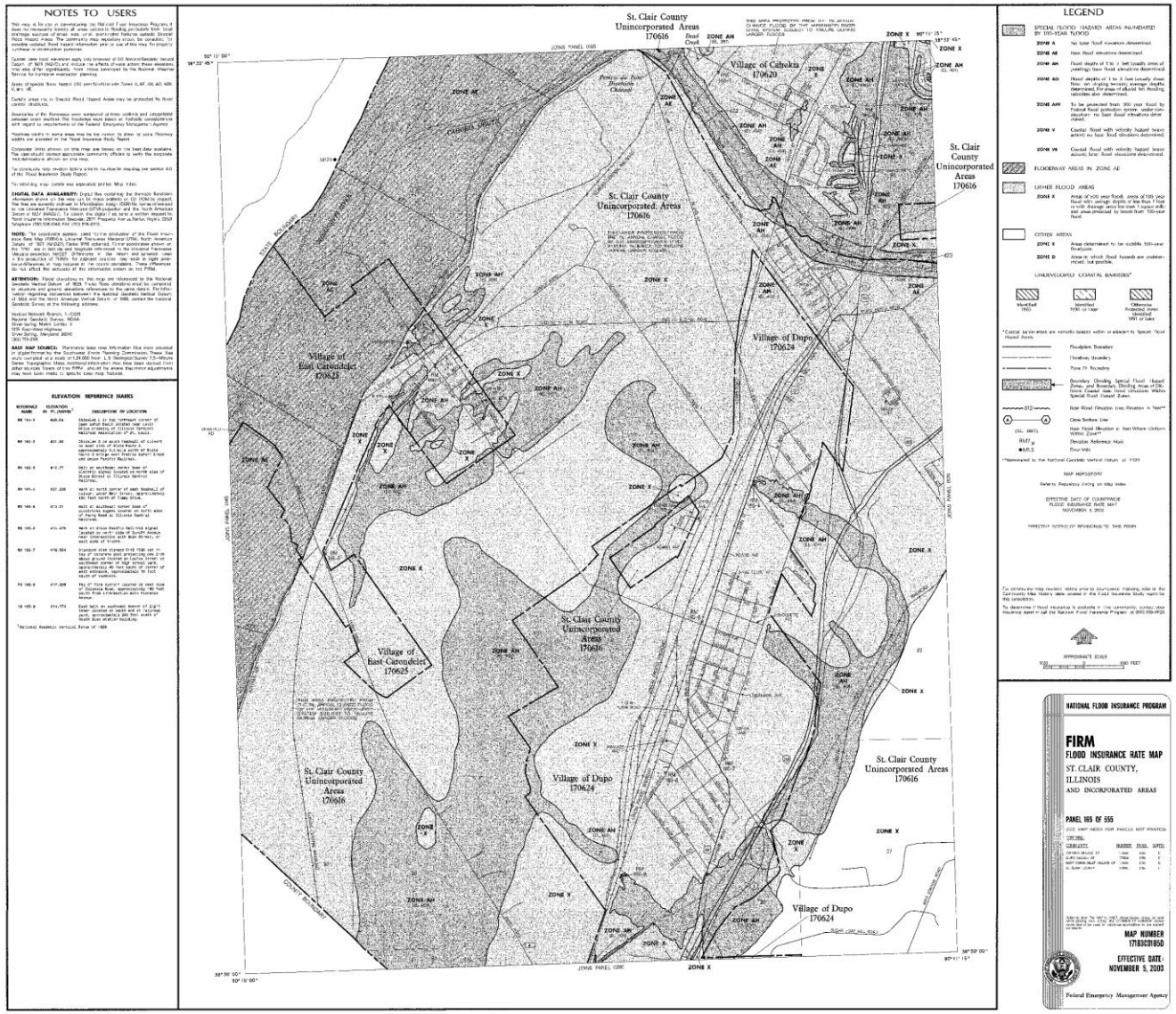
Village of Caseyville



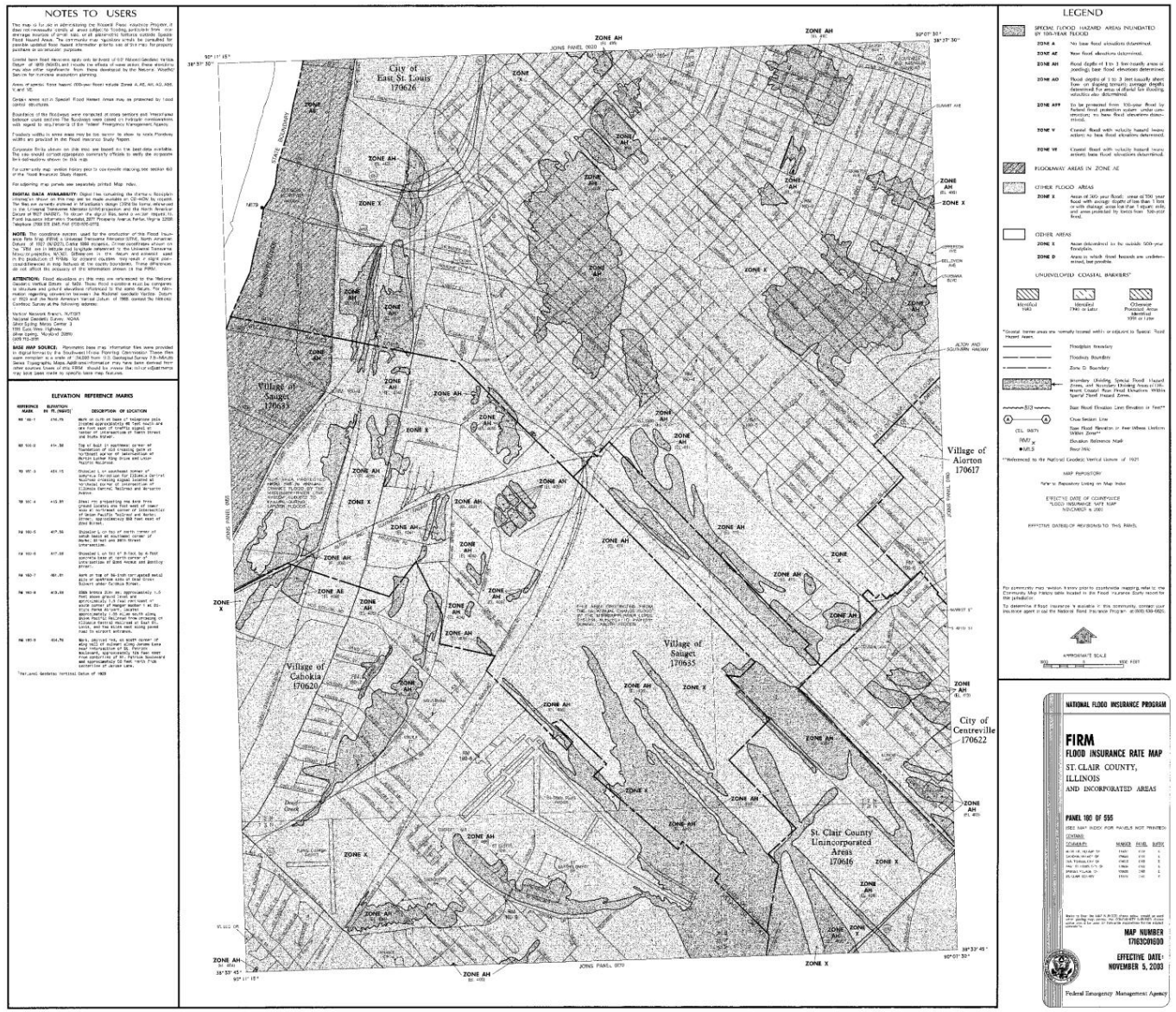
Village of Dupo



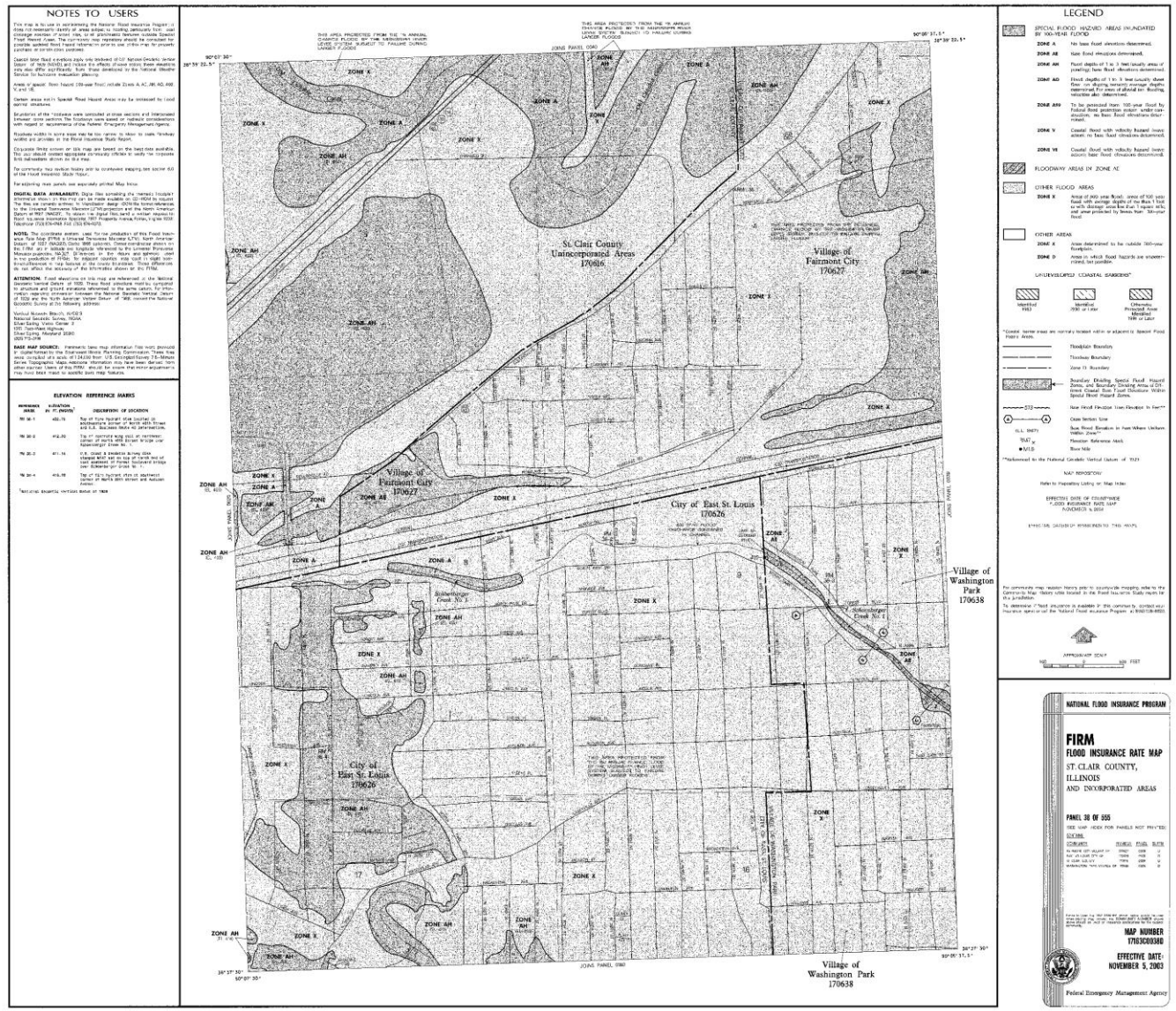
Village of East Carondelet



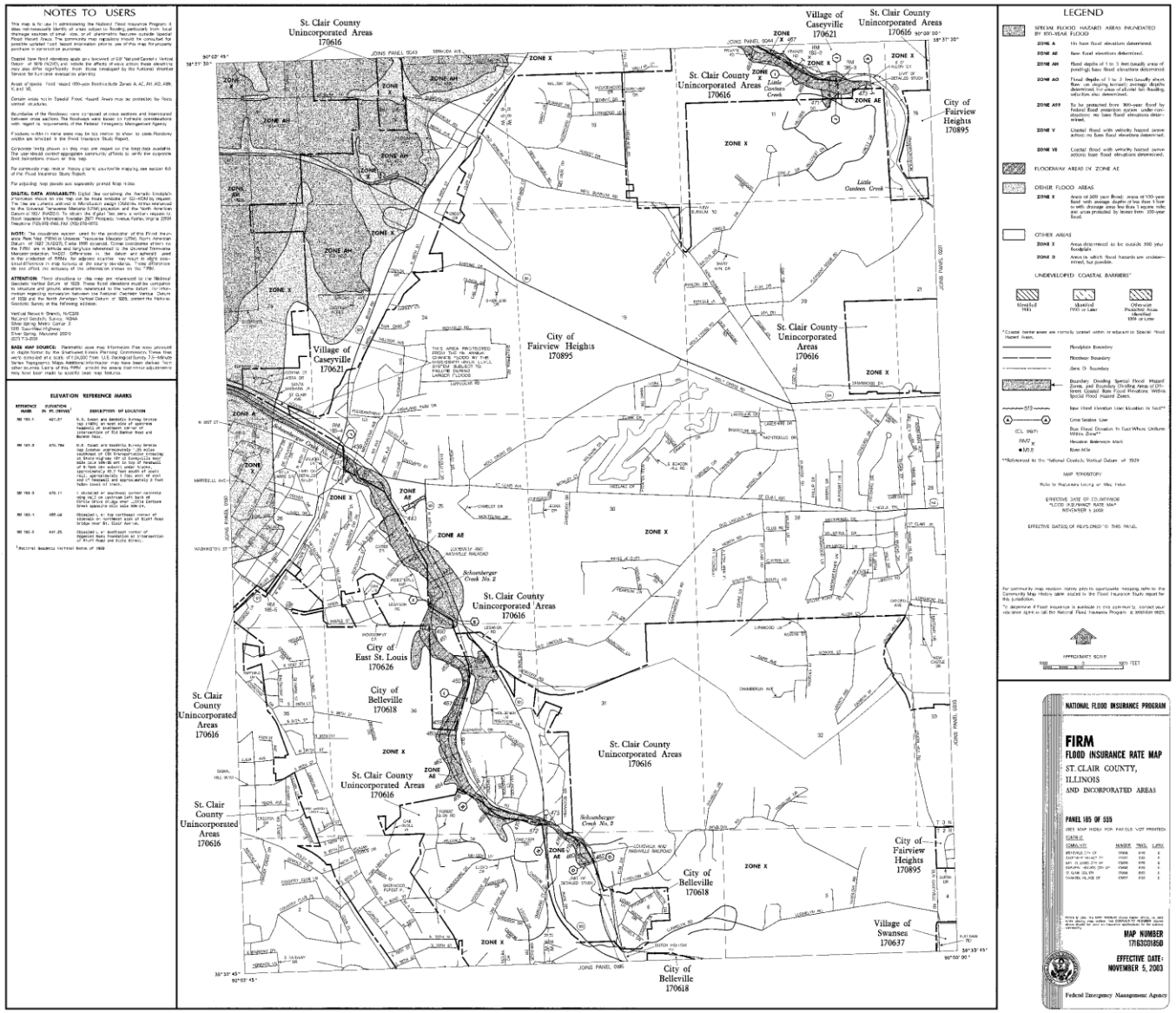
City of East St Louis



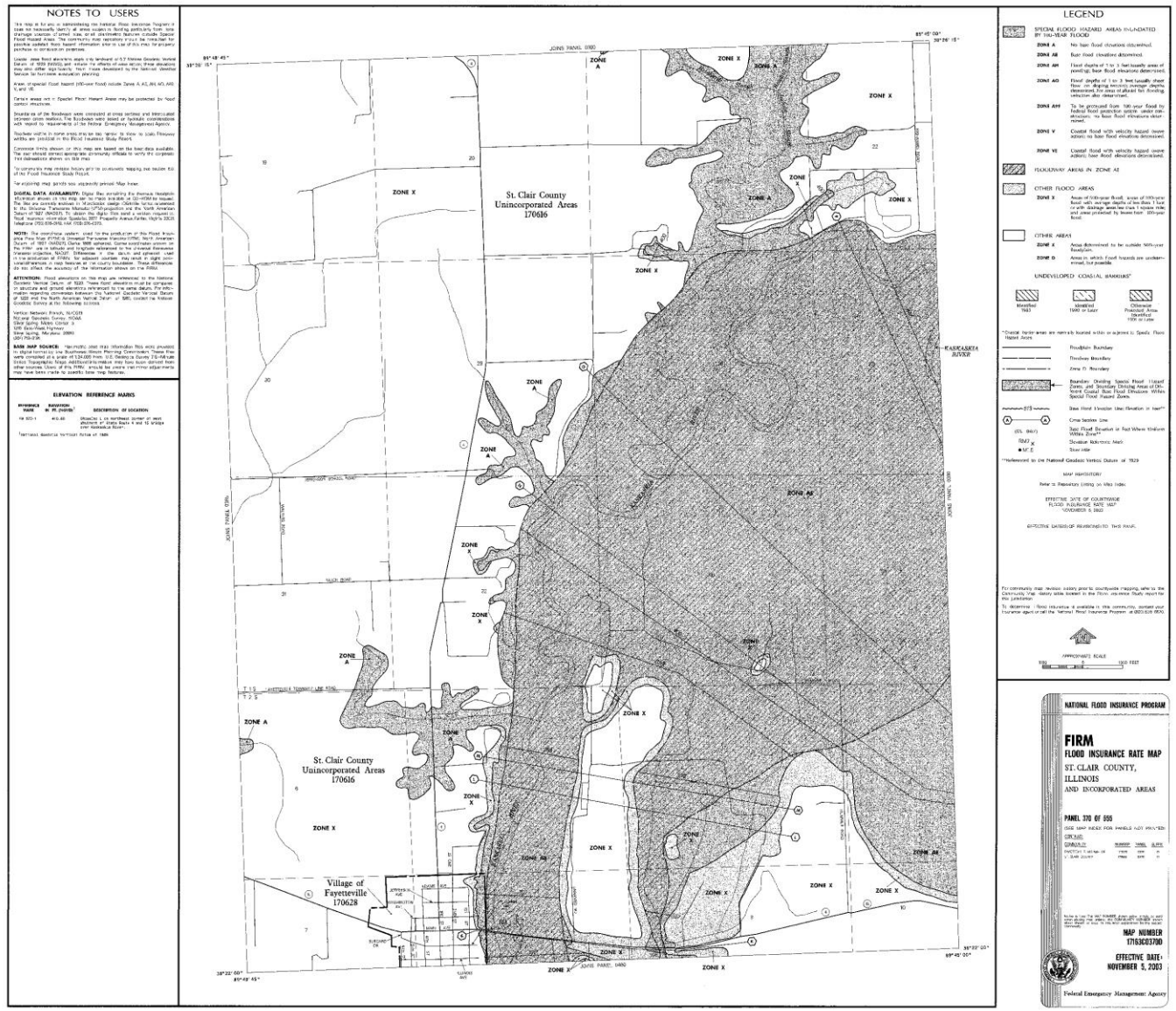
Village of Fairmont City



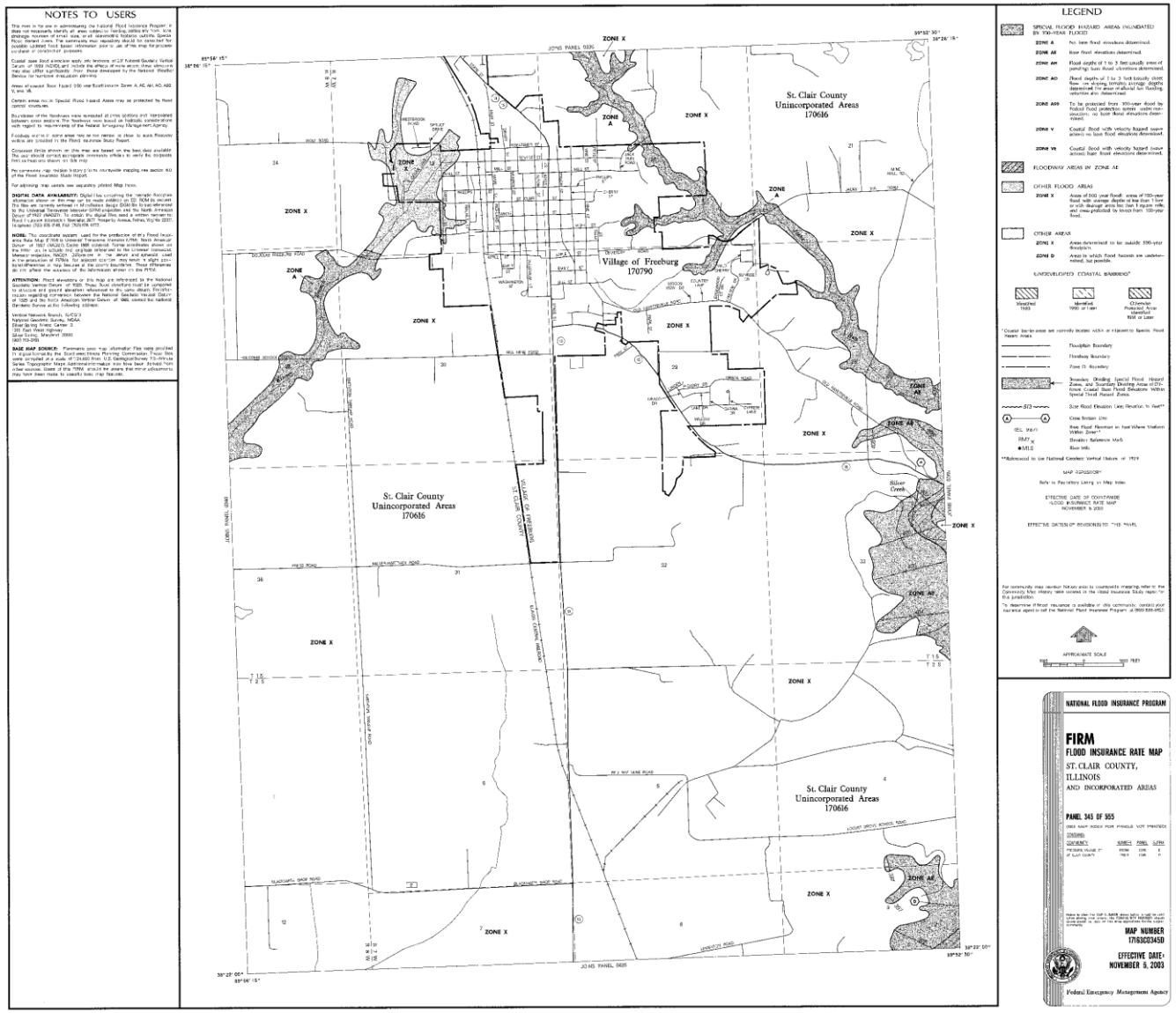
City of Fairview Heights



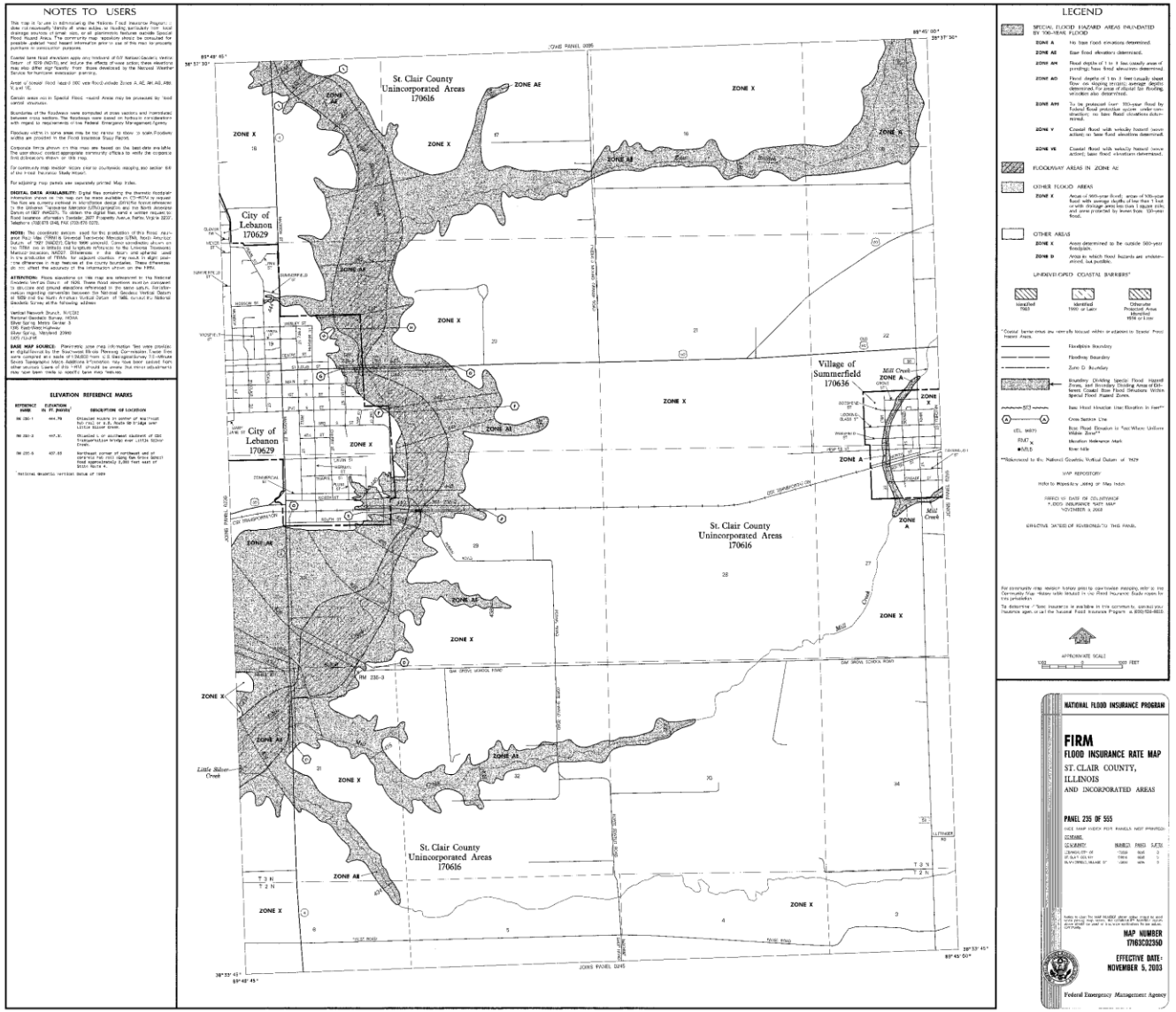
Village of Fayetteville



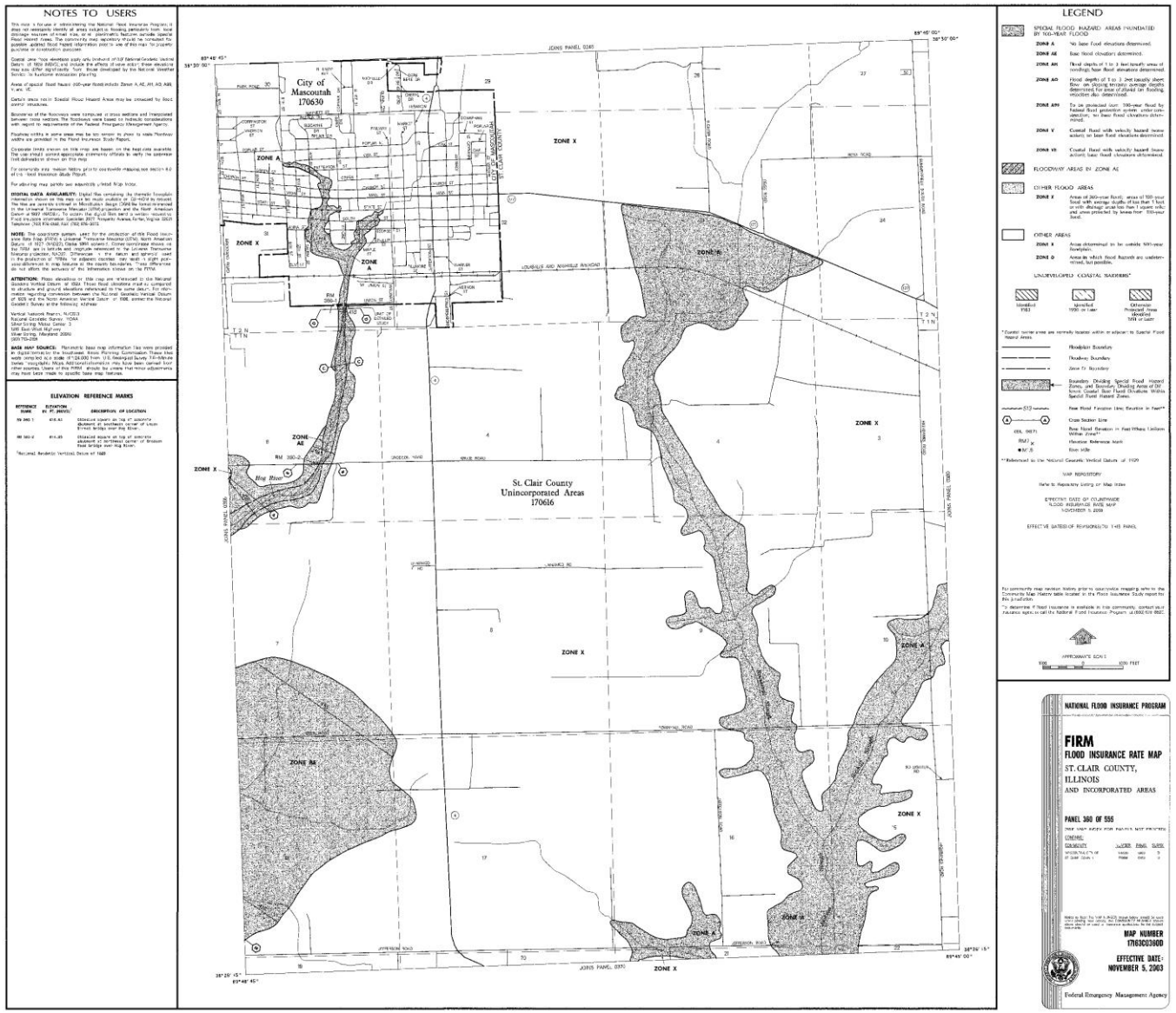
Village of Freeburg



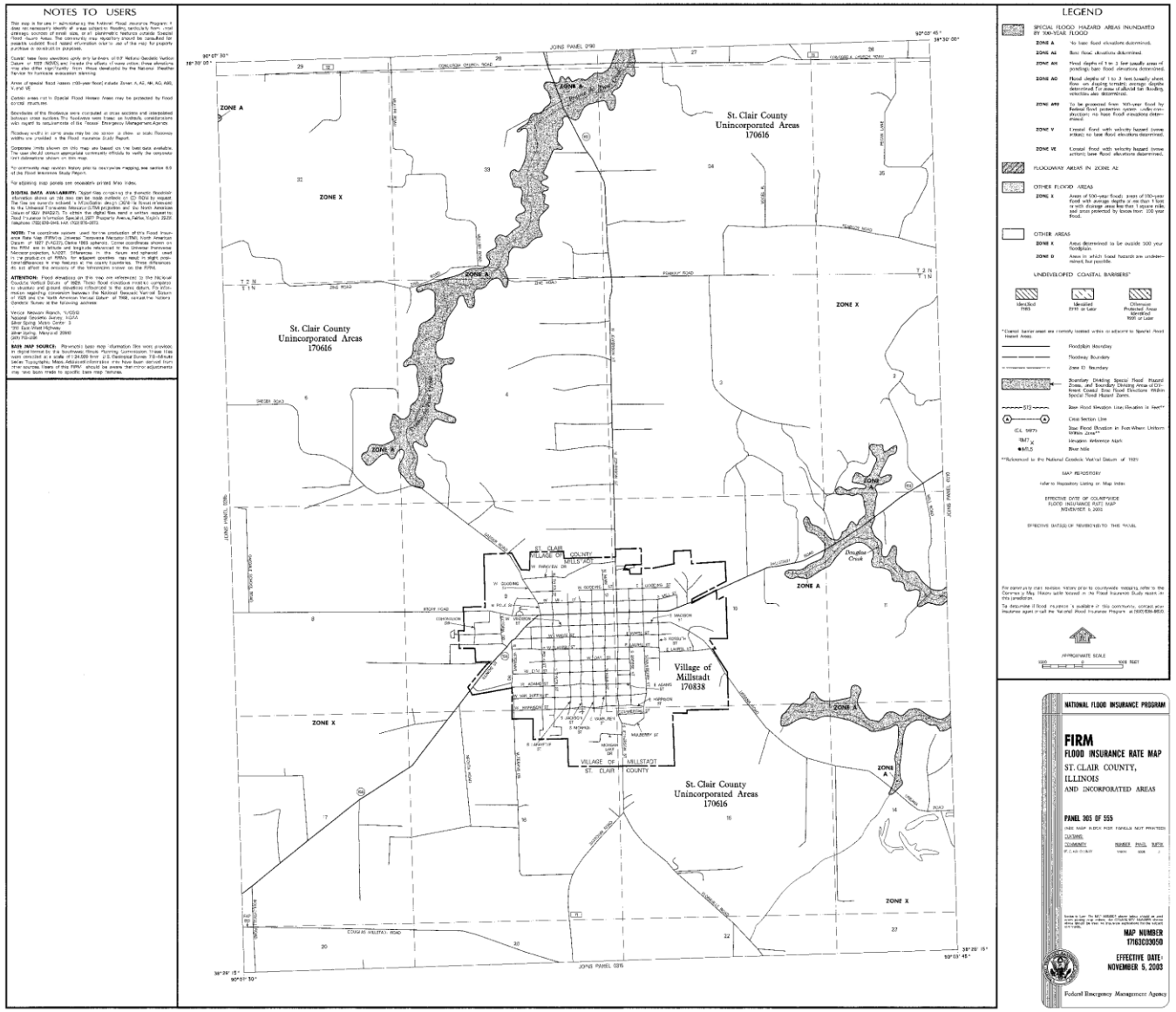
City of Lebanon



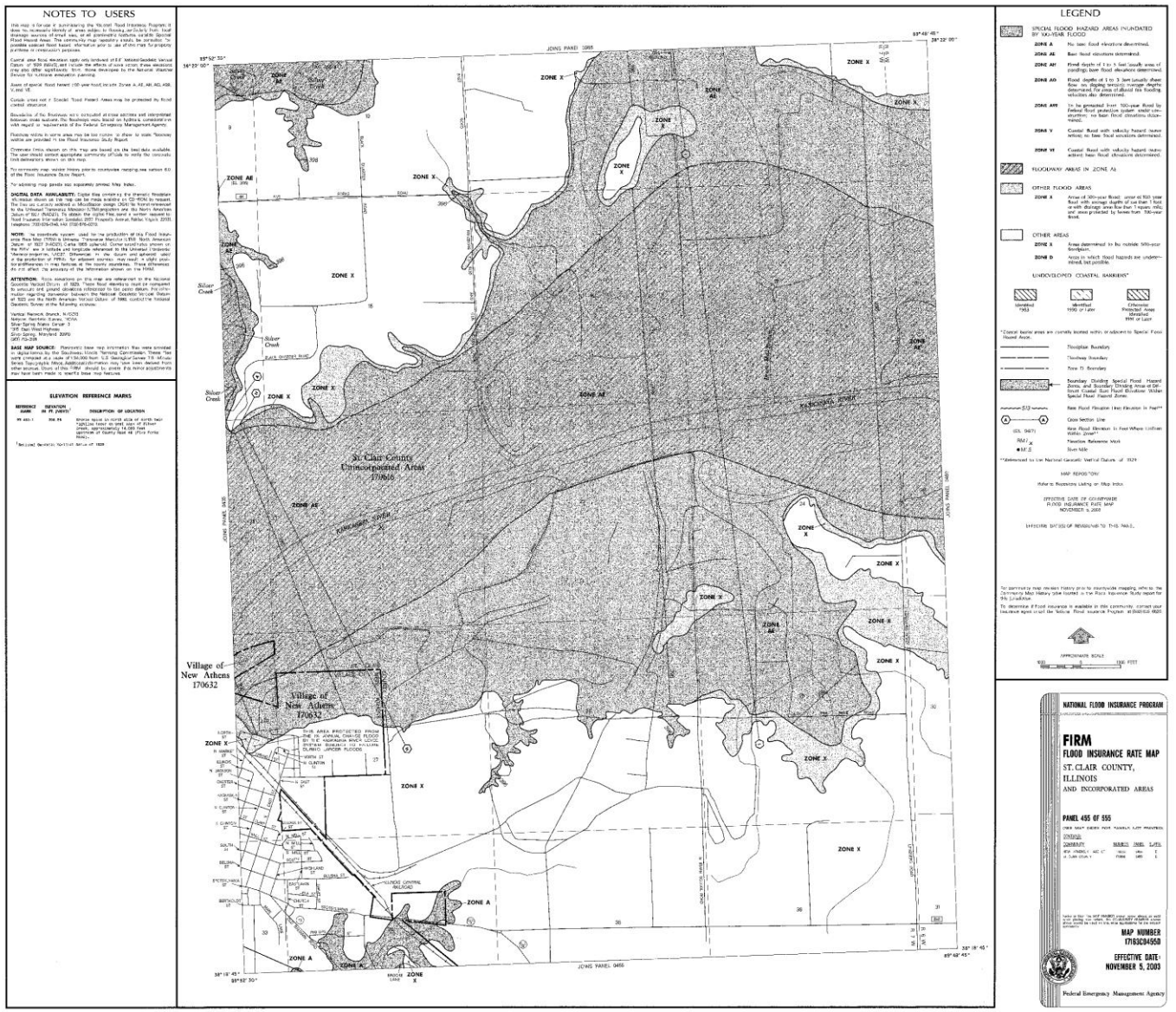
City of Mascoutah



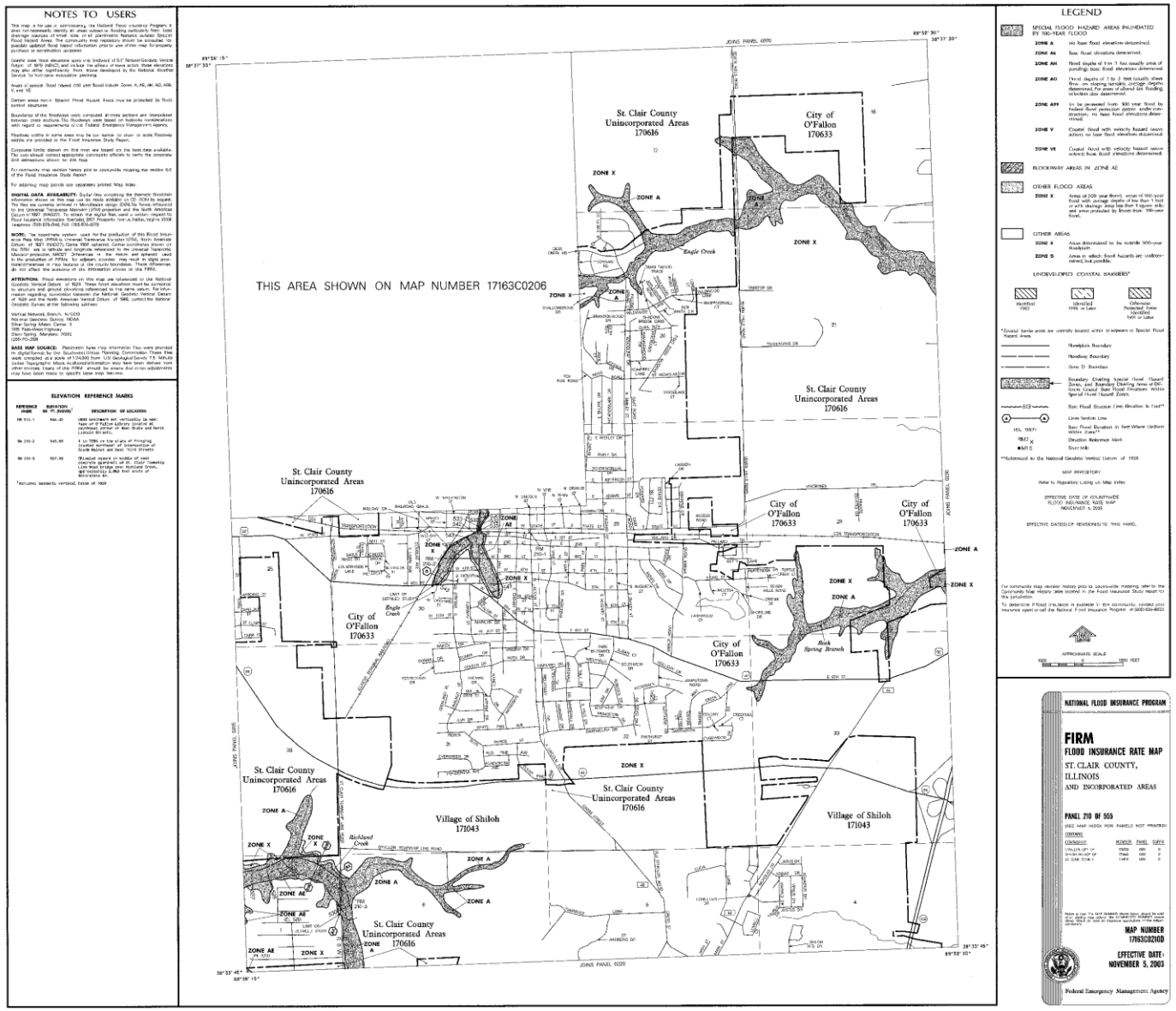
Village of Millstadt



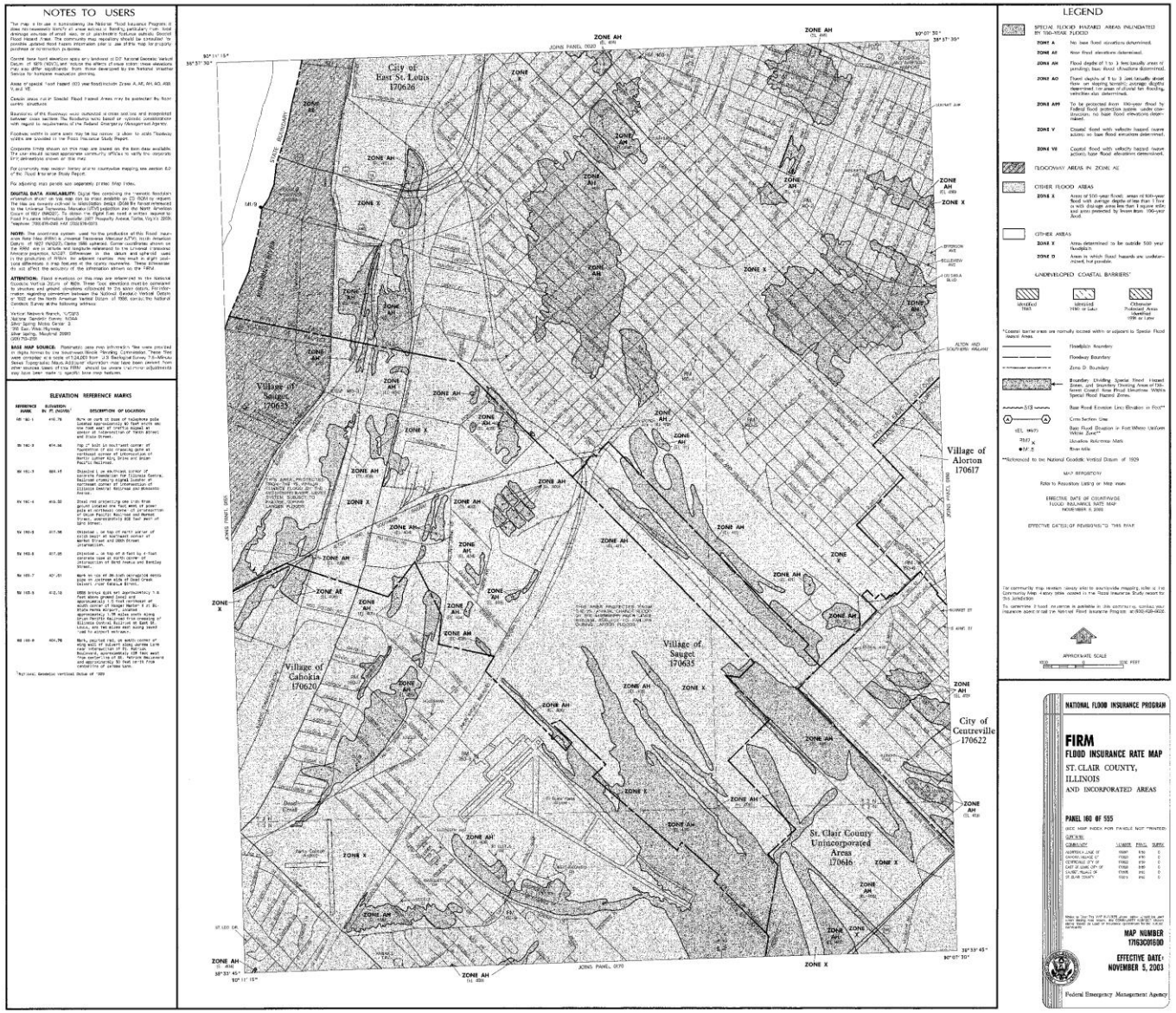
Village of New Athens



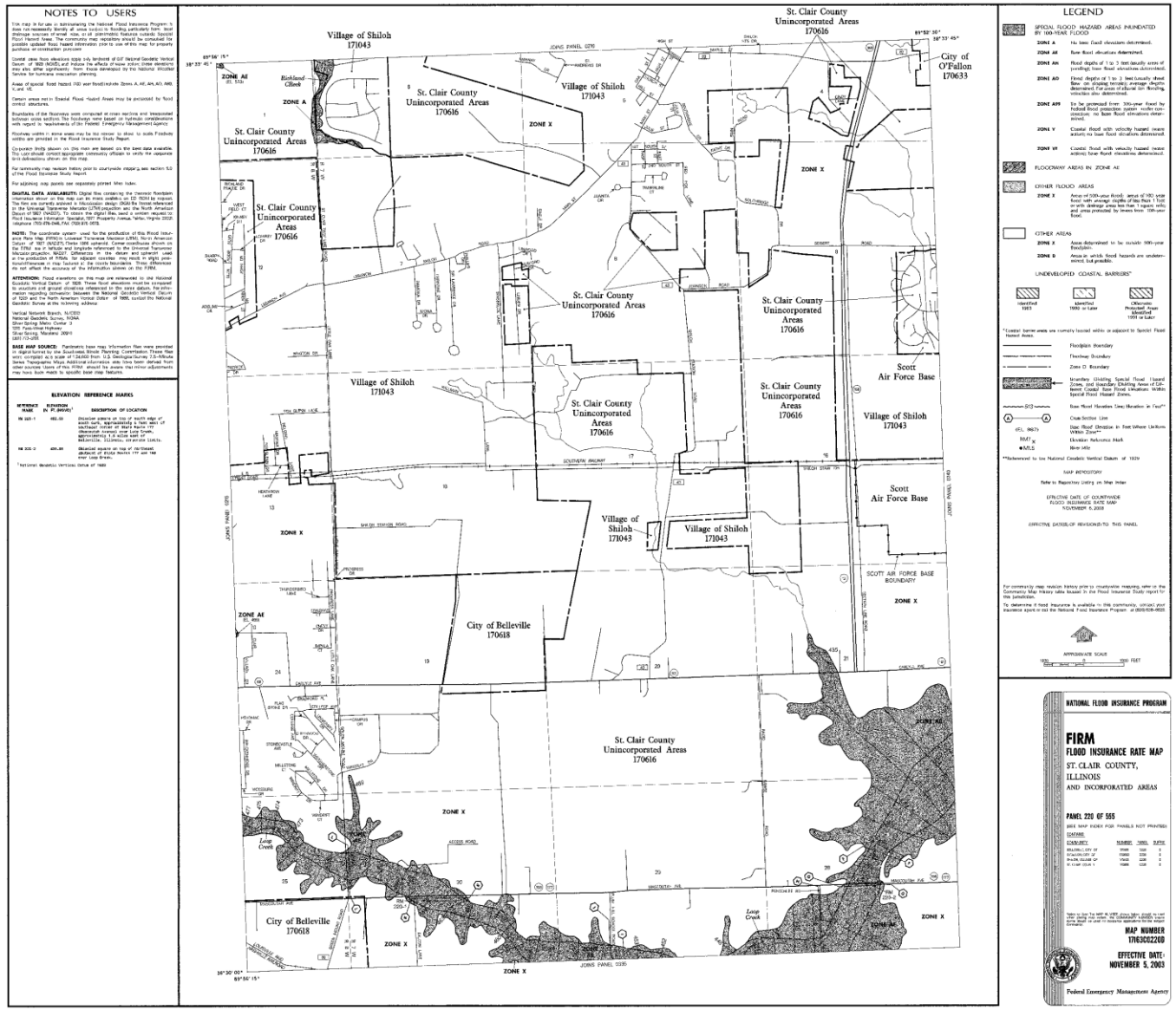
City of O'Fallon



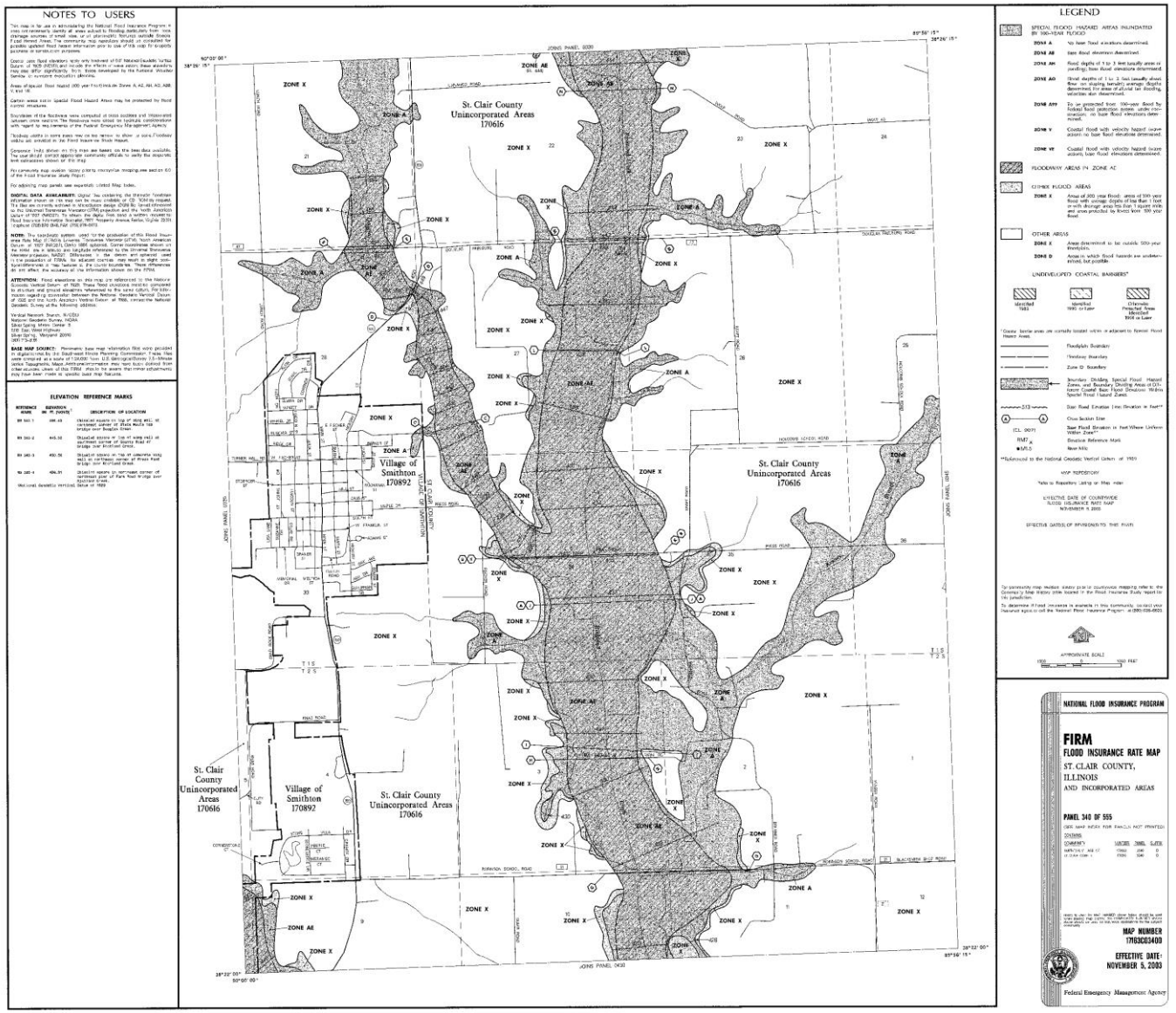
Village of Sauget



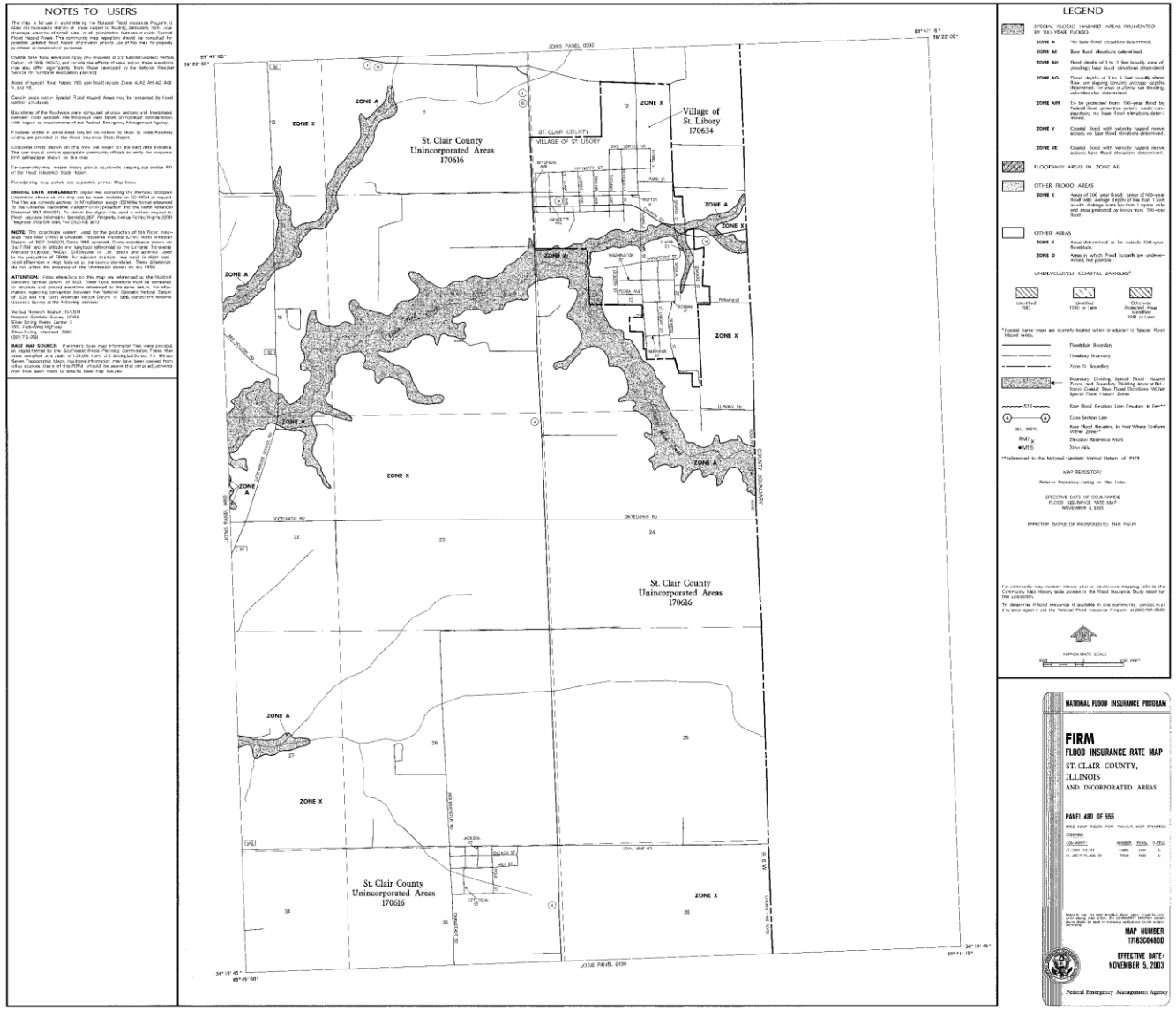
Village of Shiloh



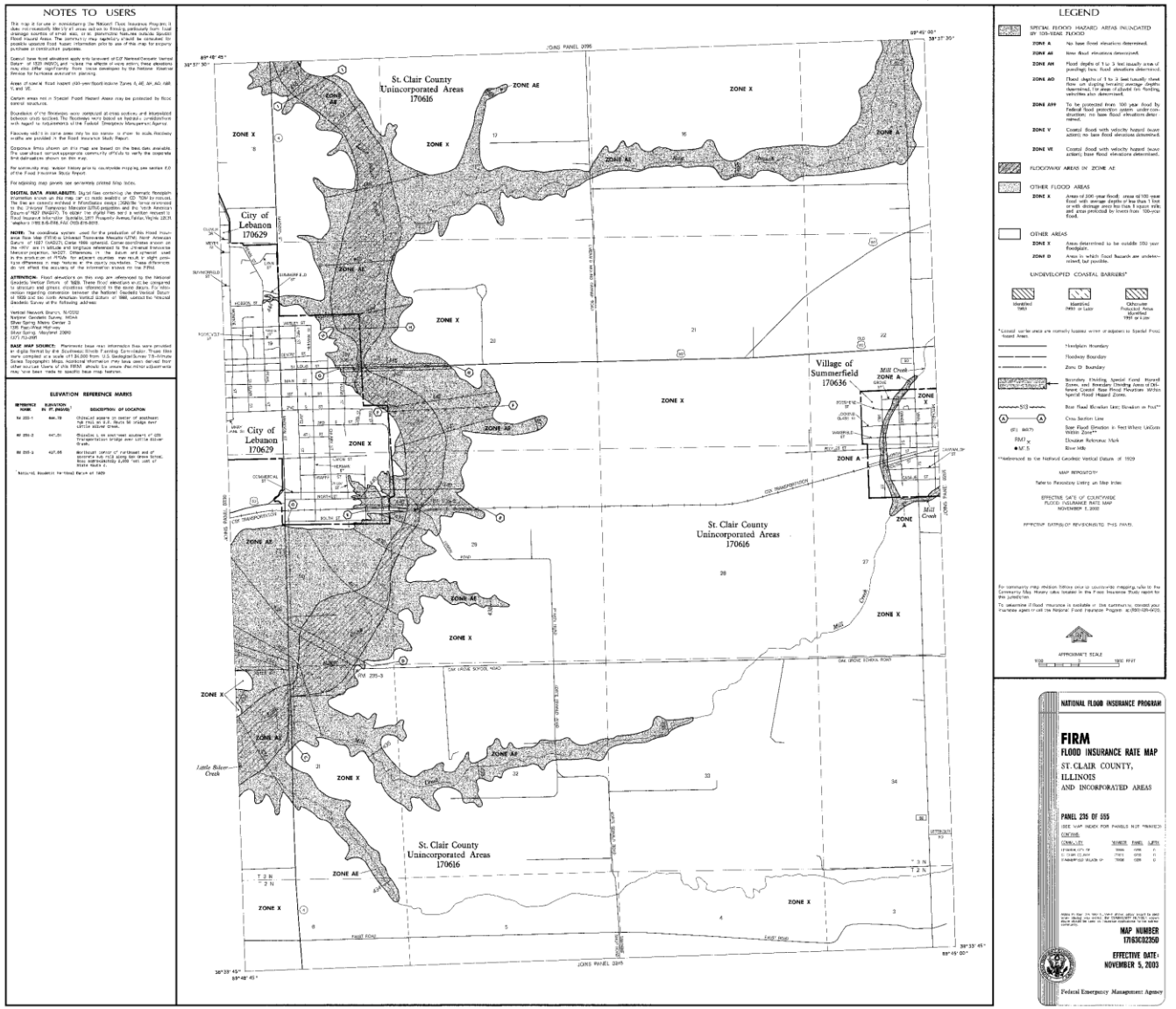
Village of Smithton



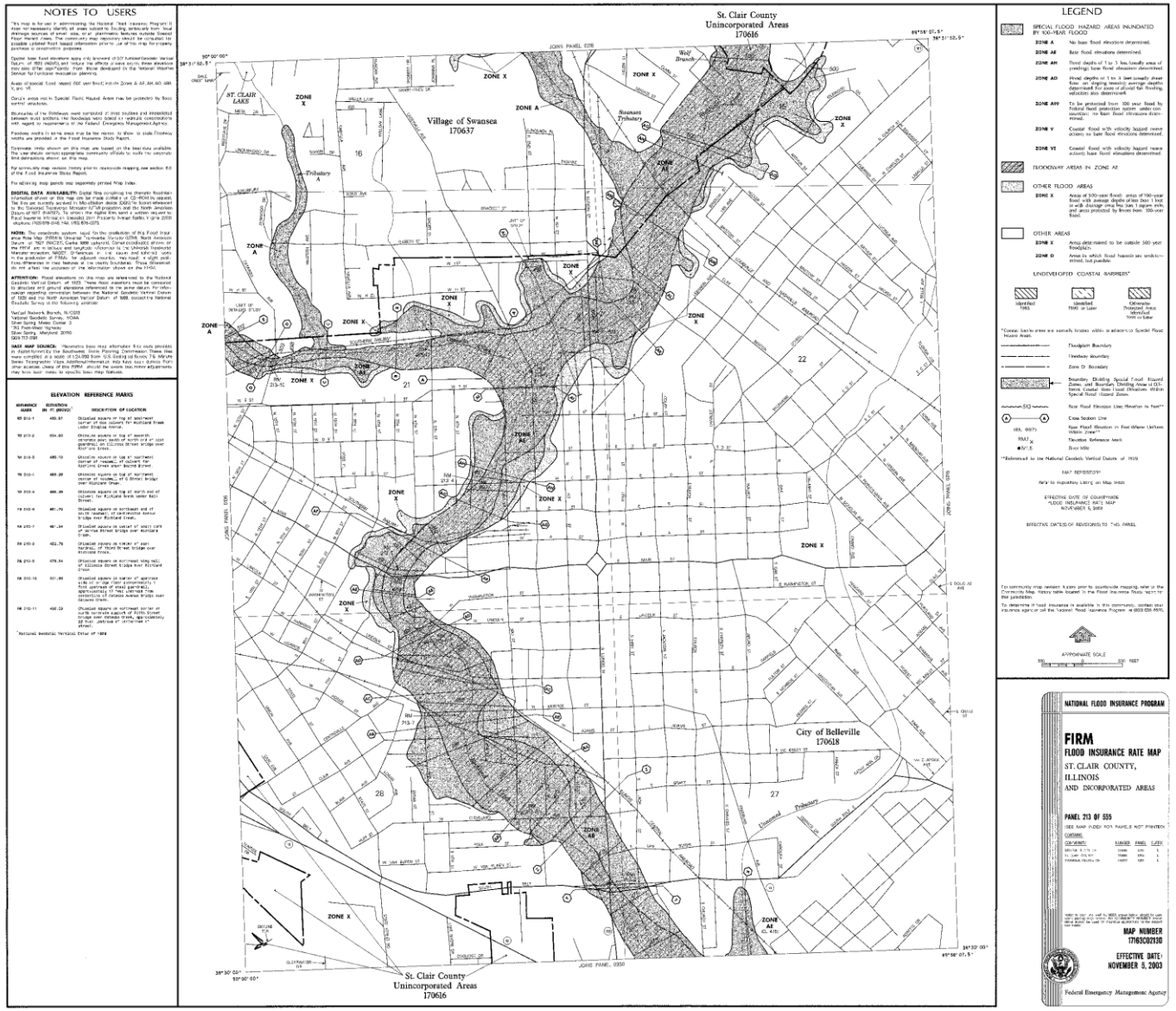
Village of St. Libory



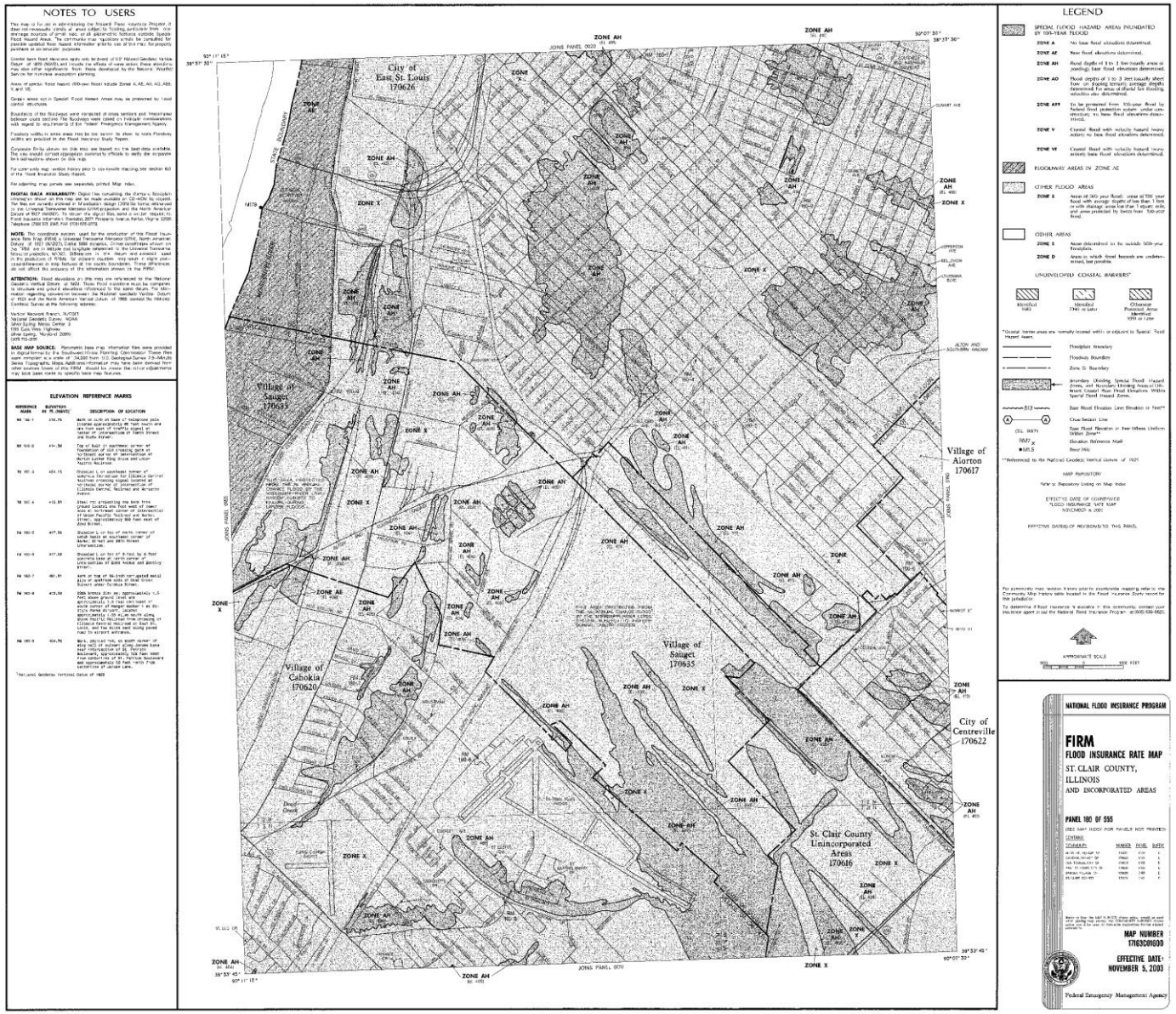
Village of Summerfield

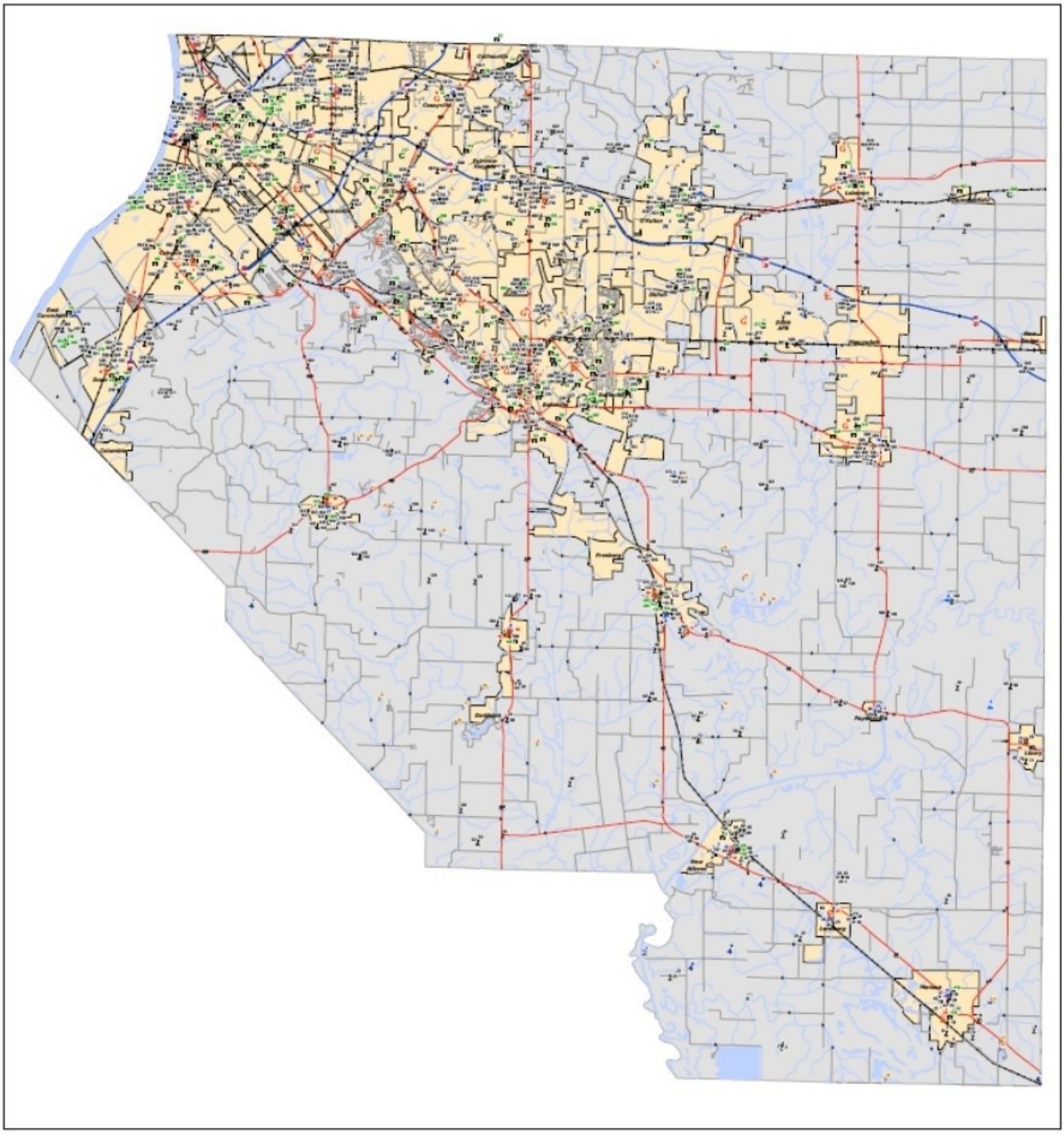


Village of Swansea



City of Washington Park





St. Clair County

Critical Facilities Map

Legend

- Care Facility
- Emergency Operation Center
- Fire Station
- Police Station
- School
- Airport
- Bus Facility
- Communication Facility
- Dams
- Electric Power Facility
- Hazardous Material
- Potable Water Facility
- Rail Facility
- Wastewater Facility
- Insterstate
- State Road
- Local Road
- Railroad
- Bridge
- River
- Lake
- City

Southwestern Illinois Metropolitan & Regional Planning Commission
2511 Vandalia Street
Collinsville, IL 62234
Phone: (618) 344-4250

Copyright 2008 Illinois Regional Planning Commission

Data Sources: Geographic Names Information System (GNIS); HAZUS-MH; Illinois Department of Health; Illinois State Fire Marshall; Environmental Protection Agency (EPA); Illinois Emergency Management Agency (IEMA)