

THE SANGAMON COUNTY MULTI-JURISDICTIONAL NATURAL HAZARDS MITIGATION PLAN

2015 Update



City of Auburn, Village of Buffalo, Village of Cantrall, Village of Chatham, Village of Divernon, Village of Jerome, City of Leland Grove, Village of Mechanicsburg, Village of New Berlin, Village of Pawnee, Village of Rochester, Village of Sherman, Village of Southern View, City of Springfield, Village of Williamsville, and Sangamon County

Prepared by:

THE SPRINGFIELD-SANGAMON COUNTY REGIONAL PLANNING COMMISSION

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Village of Chatham, Village of Divernon, Village of Jerome,
City of Leland Grove, Village of Mechanicsburg, Village of
New Berlin, Village of Pawnee, Village of Rochester, Village
of Sherman, Village of Southern View, City of Springfield,
Village of Williamsville, and Sangamon County**

Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan

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May 2015

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Fisher, Glenn	Illinois Capital Chapter of The American Red Cross
Franke, Tim	Abraham Lincoln Capital Airport
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MISSION STATEMENT
Sangamon County Multi-jurisdictional Natural Hazards
Mitigation Plan Task Force
(adopted November 14, 2007)

The mission of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force is to reduce the impact of natural hazards on citizens, infrastructure, private property, and critical facilities through a combined effort of communities, institutions, and citizenry to develop a mitigation action plan that will be adopted and implemented by each participating community.

Natural Hazards Being Considered

Dam failure
Drought
Earthquake
Extreme heat
Flood
Mine subsidence
Severe storm
Tornado
Winter storm

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Section I - Introduction

Overview of Multi-jurisdictional Area

Sangamon County is located in Central Illinois, and consists of 877 square miles and has a population of 197,465 as projected by the 2010 Census. The County is an area of generally flat topography with prime agricultural soils resulting in robust agricultural production.

Twenty-seven (27) incorporated communities are located in Sangamon County. The primary urbanized area includes Springfield which is the location of the state capitol. Several of the smaller incorporated communities are immediately adjacent to the City of Springfield while other communities are more rural in character. The outlying unincorporated areas are primarily agricultural.

Why a Mitigation Plan?

Communities look to protect the health, safety, and welfare of their citizens. Related to natural hazard events this has traditionally meant responding to the needs of the community after an event occurs. Mitigation looks to reduce the need for response by permanently removing people and structures from harm's way when a known area of impact can be identified (such as a floodplain) or significantly reducing the impact from a known risk (such as a tornado). This Plan provides an assessment of the risks to Sangamon County from natural hazard events and a comprehensive range of mitigation projects to lessen the impact of these hazards on our communities. With the availability of mitigation grant funding from the Federal Government, communities have the opportunity to implement mitigation projects that would not otherwise be financially possible. The preparation of this plan follows the guidelines to make participating communities eligible to apply for mitigation grant funding.

Why update a Mitigation Plan?

Regular plan maintenance is a vital component of the planning process. Such maintenance ensures that the plan reflects the current conditions of the participating communities. The process requires that communities analyze socioeconomic data, assess major changes in land use and development, review goals and objectives, review mitigation projects to reduce the impact of natural hazards, and identify new mitigation projects that will continue to protect communities. A key component of the planning process is to provide an opportunity for public participation in the process.

2015 Update to the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan

The Springfield-Sangamon County Regional Planning Commission was awarded a grant from the Federal Emergency Management Agency (FEMA) to coordinate the 2015 update to the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan. The following tasks were identified to ensure an effective and comprehensive process:

- Task 1: Organization of Task Force
- Task 2: Public involvement
- Task 3 : Risk assessment
- Task 4: Goal setting
- Task 5: Mitigation actions and strategy
- Task 6: Draft plan
- Task 7: Final Plan and Adoption of Plan

Community Participation in 2008 Plan Development and the 2015 Plan Update

The criteria that would constitute satisfactory participation in the planning process were established at the first meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force in 2007. Figure 1 shows the required participation elements established. The 2015 Task Force determined that the same criteria should be maintained for the Plan update.

Figure 1: Criteria for Participating Communities

Attended a minimum of 4 meetings (2/3 of 6 total meetings)
Submitted a list of relevant community documents
Confirmed hazards that affect community
Submitted a description of critical facilities at risk
Submitted a description of land use patterns
Developed goals for the community
Developed mitigation actions for the community
Prioritized mitigation actions
Hosted opportunities for public involvement
Reviewed and commented on draft plan

Of the 27 incorporated municipalities in the County, 15 participated in this Plan Update along with Sangamon County. The Villages of Pleasant Plains and Thayer participated in the 2008 plan but did not participate in the plan update process. The Village of Grandview which did not meet the participation requirements for the 2008 Plan also did not participate during the update. The Villages of Mechanicsburg and Spaulding, and the City of Leland Grove did not participate in the 2008 Plan, but opted to become part of the planning process for the update. The Villages of Curran, Dawson, Illiopolis, Riverton and Spaulding originally signed on to the Plan Update but did not satisfy participation requirements. However, all other communities met these requirements.

Socio-economic data on the communities is shown in Figure 2. The communities of Auburn, Chatham, New Berlin, Pawnee, Riverton, Rochester, and Sherman have experienced growth as was projected in the 2008 plan (see Figure 2). It was projected that Curran and Divernon would have slight growth, but those municipalities have decreased slightly in population along with Illiopolis and Southern View. Jerome had some sizeable growth due to an annexation project, but it is not expected that this growth will continue due to the unavailability of land to be annexed adjacent to its borders. Mechanicsburg did not participate in the 2008 planning process, but did experience a growth in population. The populations of Buffalo, Cantrall, and Dawson have remained stable and the trend is expected to continue into 2019. The population of unincorporated Sangamon County has decreased, as was projected, and will continue to do so as land is annexed into the municipalities to accommodate new development in communities. Some of the decrease is also attributable to the annexation of developed land that is contiguous to the City of Springfield, particularly around Lake Springfield, as a condition of providing city public water services.

While the communities of Curran, Dawson, Illiopolis, Riverton and Spaulding did not meet the participation requirements for the plan update, the socioeconomic data for those communities is included for purposes of tracking shifts in socioeconomic data that have occurred since the 2008 Plan was adopted.

Figure 2: Socioeconomic Data of Communities (Updated)

Community	Population in 2008	Population in 2010*	Anticipated Population in 2019**	Number of Housing Units*	Median Household Income (2014)**	Number of Students in Schools***
Auburn	4,317	4,771	4,703	1,868	\$50,669	1,189
Buffalo	491	503	535	209	\$71,560	575
Cantrall	139	139	148	55	\$87,138	647
Chatham	10,260	11,500	13,153	4,499	\$78,963	3,822
Curran	249	212	235	95	\$60,011	0
Dawson	466	509	235	95	\$60,011	0
Divernon	1,201	1,172	1,374	538	\$62,851	306
Illiopolis	916	891	848	384	\$61,357	357
Jerome	1,414	1,656	1,588	884	\$46,338	0
Leland Grove	1,592	1,503	1,540	717	\$103,078	0
Mechanicsburg	456	590	634	242	\$56,003	0
New Berlin	1,030	1,346	1,401	554	\$56,685	885
Pawnee	2,647	2,739	2,861	1,136	\$59,049	604
Riverton	3,048	3,455	3,526	1,431	\$56,685	1,540
Rochester	2,893	3,689	3,793	1,401	\$84,551	2,323
Sangamon County (Unincorporated)	37,106	35,876	36,544	15,390	\$59,990	1,495
Sherman	2,871	4,148	4,591	1,541	\$82,647	652
Southern View	1,695	1,642	1,576	795	\$42,285	236
Spaulding	559	873	918	323	\$71,561	0
Springfield (City of)	111,454	116,250	116,454	55,729	\$46,367	18,211
Williamsville	1,439	1,476	1,651	575	\$75,123	788
TOTAL	186,243	194,940	198,558	88,579	\$1,358,530	33,630

*2010 Census (except unincorporated Sangamon County, which used ESRI Community Analyst)

**ESRI Community Analyst

***Great Schools & other website search 1/22 -23/15

Major employers for each participating community are shown below.

Figure 3: Major Employers in Participating Communities

Community	Major Employers
Auburn	Dickey-John Corp., Springfield Plastics, Auburn School District, Beatty Implement Co., City of Auburn
Buffalo	Tri-City School District
Cantrall	Athens Community Unit School District #213
Chatham	Ball Chatham School District, Village of Chatham, RP Lumber, Co., Henry Technologies, County Market, Walgreens, Villas of Holly Brook, Reflections Memory Care, Memorial Medical Office, Goodwill Industries, MacDonald's, The Creek Pub
Divernon	United Community Bank, Illini Bank, Village of Divernon
Jerome	Shop N Save
Leland Grove	Illini Country Club
Mechanicsburg	Pryco, Village of Mechanicsburg
New Berlin	New Berlin School District, Brandt Consolidated, Inc., New Berlin Travel Plaza, Farmer's Elevator, Dollar General, Warren Boynton State Bank
Pawnee	Bank of Pawnee, Pawnee School District
Rochester	Rochester Public School District, Village of Rochester, Village Market, Rochester State Bank, Bank and Trust Company, HSHS Priority Care-Rochester, Public House 29, Beginning Steps Development Center, Silverleaf Children's Academy
Sangamon County (unincorporated)	Illinois Department of Natural Resources, Illinois Department of Agriculture, Illinois Department of Transportation, Agriculture
Sherman	Villa Health Care, Sherman Elementary School, Carter Bros. Lumber, Springfield Clinic
Southern View	Southern View Elementary School
Springfield	State of Illinois, City of Springfield, Memorial Medical Center, St. John's Hospital, Southern Illinois School of Medicine, University of Illinois-Springfield, Springfield Clinic, Springfield Public Schools, Horace Mann, Illinois National Guard, BlueCross BlueShield of Illinois
Williamsville	Williamsville School District, Donley, Inc., Williamsville Culver Fancy Prairie Co-op, Patterson Bros. Oil, Williamsville State Bank

Geography and floodplain information is shown in Figure 4. All communities that participate in the National Flood Insurance Program (NFIP) recognize the mitigation value of floodplain management and are committed to continued compliance with the NFIP. Only Sangamon County participates in the Community Rating System.

Figure 4: Geography of Participating Communities

Community	Square Miles of Land Area	Major Geographic Features	FEMA Floodplain	Nat'l Flood Insurance Participant*	NFIP Community Number
Auburn	4.0	None	Yes	Yes	170944
Buffalo	0.3	None	No	No	171056
Cantrall	0.2	None	No	No	171046
Chatham	6.5	Polecat Creek, Sugar Creek, Grindstone Creek	Yes	Yes	170601
Divernon	0.9	Brush Creek	Yes	Yes	170949
Jerome	0.5	Jacksonville Branch	Yes	Yes	171004
Leland Grove	0.6	Jacksonville Branch	Yes	Yes	170925
Mechanicsburg	1.0	Griffith Creek	Yes	No	170960
New Berlin	1.1	None	No	Yes	171052
Pawnee	1.5	Henkle Branch, Horse Creek	Yes	Yes	170602
Rochester	2.5	South Fork Sang. River, Black Branch	Yes	Yes	170840
Sangamon County (unincorporated)	776.5	Sang. River, Lake Spfld., Various Branches & Creeks	Yes	Yes	170912
Sherman	3.2	Sangamon River	Yes	Yes	170969
Southern View	0.5	None	No	No	171051
Springfield	65.8	Lake Spfld., Washington Park, Various Creeks / Branches	Yes	Yes	170604
Williamsville	1.6	None	Yes	Yes	171041

* "Yes" indicates the community participates in the National Flood Insurance Program making flood insurance available to property owners.

Section II – Planning Process

How the Plan Was Prepared

Preparation of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Update was facilitated by the Springfield - Sangamon County Regional Planning Commission and developed through the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force. The Task Force met six times: the first Tuesday of the month starting in August through December 2014, and March 2015, except for the November meeting which was held the first Wednesday, November 5, 2014. The final meeting was held on May 5, 2015. A synopsis of each meeting and any intervening activities follows.

October 10, 2013 Letters sent to the mayors of all communities regarding the need to update the plan. Mayors were asked to return the enclosed “Notice of Intent” forms indicating if the community would participate in the update process. Technical partners and citizens were identified and letters of invitation to participate were sent.

June 11, 2014 Invitations to participate in the plan were sent to all communities in Sangamon County. Communities that had not returned the “Notice of Intent” form also received the invitation. The invitation included a draft resolution for adoption by the municipality. Mayors were asked to appoint an individual to participate in the plan update and complete the “Contact Information Form” that was included in the invitation. Invitations to participate on the Task Force were also sent to technical partners and citizens that had been identified.

Task Force Meeting 1

August 5, 2014 This was the initial meeting of the Task Force. An overview of the Disaster Mitigation Act of 2000, the status of the 2008 Sangamon County Plan, the planning process and funding to be used to update the plan, community participation requirements, mission statement, and schedule were discussed. Content for a citizen survey was also discussed. Homework assignment: Task Force members were asked to review and provide updates to the information specific to their communities for the following sections of the existing plan: major employers, existing community documents, and critical facilities.

Task Force Meeting 2

September 2, 2014 The mission statement established in the 2008 Plan was evaluated and approved with no changes. The citizen survey was reviewed and approved with modifications. The Task Force discussed each hazard in Sangamon County and completed the Risk Priority Index (RPI). Communities were asked to begin reviewing the goals that were included in the 2008 plan in preparation for the October meeting. Homework assignment: Task Force members were asked to review and provide updates to the information specific to their communities for the following sections of the existing plan: land use worksheet, building permit worksheet, and Risk Priority Index (RPI).

Task Force Meeting 3

October 7, 2014 The Task Force reviewed the 2008 goals to determine if the goals were still applicable and made recommendations to keep, modify or eliminate the goals. Adoption of the final goals was deferred to the next meeting so that communities could thoroughly review the suggested changes and discuss with community officials as needed.

Task Force Meeting 4

November 5, 2014 The Task Force continued its discussion regarding the goals. Proposed changes to the goals were considered. A thorough discussion of the proposed changes occurred and suggested modifications were incorporated into the goals.

December 2, 2014 Task Force Meeting 5

The Task Force reconsidered two (2) goals for clarification. Consensus was achieved. Ron Davis from the Illinois Emergency Management Agency made a presentation regarding past and present sources of funding of community hazards mitigation actions that are included in plans.

Task Force Meeting 6

March 3, 2015

The Task Force reviewed mitigation items that had been submitted to date. Communities identified mitigation efforts for which working together would be beneficial.

Task Force Meeting 7

May 5, 2015

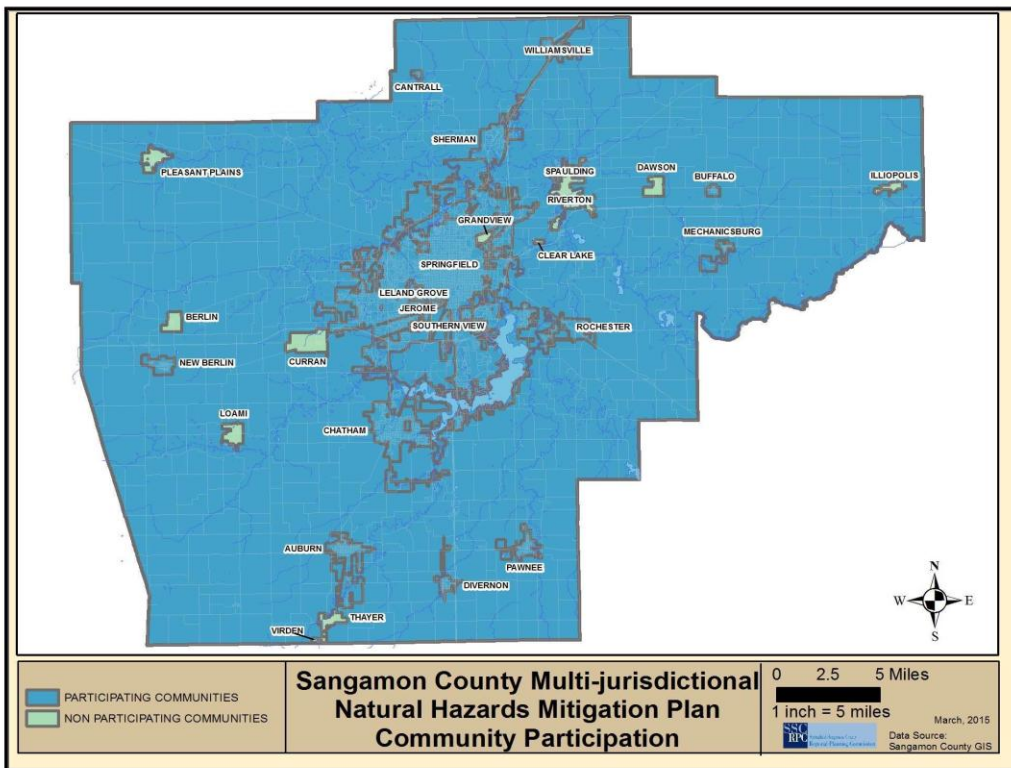
Presentation of finalized draft plan, public hearing and adoption of draft by Task Force members.

The Planning Team

The Plan Author, the Springfield - Sangamon County Regional Planning Commission, received a planning grant through the Hazard Mitigation Grant Program to prepare this plan and coordinated plan preparation and participation. Molly Berns, Assistant Director served as Plan Project Manager to coordinate the completion of the Plan update.

All 27 communities in Sangamon County were invited to participate in the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan. Figure 5 is a map showing the locations of the communities. To confirm their intent to be a part of the plan each participating community submitted a resolution passed by their Board of Trustees/City Council authorizing the Planning Commission to prepare the plan on their behalf. The President/Mayor then appointed a representative to the Task Force.

Figure 5: Participating and Non-participating jurisdictions in Sangamon County



The following lists all 27 communities with those participating shown in bold.

Auburn	Dawson *	Mechanicsburg	Southern View
Berlin	Divernon	New Berlin	Spaulding *
Buffalo	Grandview	Pawnee	Springfield
Cantrall	Illiopolis *	Pleasant Plains	Thayer
Chatham	Jerome	Riverton *	Viriden
Clear Lake	Leland Grove	Rochester	Williamsville
Curran *	Loami	Sherman	Sangamon County

* Curran, Dawson, Illiopolis, Riverton, and Spaulding initially opted to join the Task Force, but failed to meet the participation requirements.

Because it was recognized that there are many people in our communities with expertise that would benefit from this planning effort, a letter of invitation to be a member of the Task Force was sent to the following agencies. Those shown in bold agreed to participate and appointed a representative using the form in Section VI.

Abraham Lincoln Capital Airport
Ameren
City Water, Light & Power
Greater Springfield Area Chamber of Commerce
Illinois Capital Chapter of the American Red Cross
Illinois Emergency Management Agency
Illinois Medical District at Springfield
Illinois Secretary of State
Lincoln Land Community College
Rural Electric Convenience Cooperative
Sangamon County Department of Public Health
Sangamon County Department of Zoning
Sangamon County Farm Bureau
Sangamon County GIS
Sangamon County Highway Department
Sangamon County Office of Emergency Management
Springfield Black Chamber of Commerce
Springfield Department of Public Works
Springfield Area Home Builders Association
Springfield, Building & Zoning Department
Springfield Park District
Springfield Mass Transit District
Springfield Metro Sanitary District
Springfield School District #186
State of Illinois, Central Management Services
State of Illinois, Department of Agriculture
University of Illinois at Springfield

One citizen was invited to participate and accepted.

All participants on the final Planning Team participated fully in development of the Plan by attending meetings, providing input through discussion and group exercises, reviewing documents, and voting on issues coming before the Task Force.

Public Participation

The importance of public participation in the planning process was recognized by the Task Force. Efforts to educate the public regarding creation of the plan and to provide opportunities for the public to have input on the plan were an integral part of the planning process. These efforts are discussed below.

Plan	The existing website for the Sangamon County Multi-jurisdictional Natural Hazards Website Mitigation Plan was online August 24, 2007 and was updated by the Regional Planning Commission on a regular basis. This website has remained active and was updated with information related to the 2015 Plan Update. Information available on the website includes natural hazards profiles, pertinent documents, meeting agendas and minutes, press releases, task force member list, meeting dates, relevant links, and a contact link to the Planning Commission staff. Several communities also provided the links to the website from their community websites. The website address is www.co.sangamon.il.us/NHMP .
Community Websites	Each participating community with a website included information regarding the plan.
Press Releases	Press releases were sent to local television, radio, and print media to announce the awarding of the planning grant to the Planning Commission and prior to each task force meeting. An example of a press release is in Section VI.
Citizen Survey	A survey was made available on the plan website and through all the communities from July 22, 2014 through February 9, 2015. One community distributed copies of the survey to interested members of the general public. A total of 45 survey responses were received. A copy of the survey is in Section VI.
Task Force Meetings	Every Task Force meeting agenda included a time for public comment. No individuals who were not members of the Task Force attended the meetings.
Agendas	Agendas for each meeting were posted outside the Planning Commission Office and in the main hallway of the Sangamon County building as well on the Plan website. No individuals who were not members of the Task Force requested to be kept updated on the work of the Task Force. The agendas are in Section VI.
Newspaper Articles	The State Journal Register, the regional newspaper did not publish articles about the 2015 Plan Update.
Radio	No radio coverage was provided.
Television	WICS News Channel 20, a regional television station, provided coverage on July 30, 2014 about the plan update and the date of the first meeting. The story was also posted on the outlet's website. A copy of the website article is in Section VI.
Presentations	Reports on the progress of the plan were made to the Springfield - Sangamon County Regional Planning Commission at their monthly meetings. One copy of meeting minutes is in Section VI. Communities discussed the plan at Board of Trustees/City Council meetings. One copy of meeting minutes is in Section VI.
Direct Mailings	As part of Sangamon County's Community Rating System project a letter is sent to every owner of floodprone property in the unincorporated areas of the County each year. A copy of the letter is in Section VI.
Public Notices	Public Hearing Notices were placed in the State Journal Register inviting citizens to attend the meetings on March 3, 2015 and May 5, 2015. Copies of the notices are in Section VI.

Participation Opportunities for Interested Parties

Opportunities for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be included in the planning process were provided by direct invitation to serve on the Task Force by direct notification of the planning process via letter, and through the many other public participation activities listed above.

Community Survey

Methodology

A survey was utilized to obtain the public's knowledge and concern of natural hazards, level of preparedness, and assess how residents obtain information related to natural hazards. The survey was made available through the Springfield – Sangamon County Regional Planning Commission's website from July 22, 2014 through February 9, 2015. Respondents could reply to the survey via the website or by printing off the complete survey and returning it to one of the Task Force members or project staff. Task force members also had paper copies to distribute within their communities.

The survey was publicized through the local media and on the project website as well as by Task Force members within their communities. A total of 45 surveys were received.

Concerns about natural hazard impacts

Respondents were asked to describe concerns they have with natural hazards being studied for the mitigation plan. The raw response rates with the wording of the question are included on the table below in Figure 6. The response counts for this question ranged from 26 of 45 surveys to 42 of 45 surveys, depending on which natural hazard(s) respondents encountered. Severe storm (thunderstorm, lightning and hail) and winter storm were the two most prevalent hazards experienced by respondents followed by extreme heat, drought and tornado. Six respondents had experienced an earthquake hazard. This response rate is not supported by historical data which shows that Sangamon County has experienced no recent instances of earthquakes. About one-fourth of the respondents have experienced a tornado natural hazard.

Figure 6: Survey responses: types of natural hazard events experienced.

In the past 5 years, which of the following types of natural hazard events have you or someone in your household experienced within Sangamon County and how concerned are you about the following natural hazards impacting the County?						
Answer Options	Have Experienced	Not Concerned	Somewhat Concerned	Very Concerned	Extremely Concerned	Response Count
Dam Failure	0	26	0	0	0	26
Drought	13	7	17	7	0	35
Earthquake	6	12	12	1	0	26
Extreme Heat	18	10	18	3	2	38
Flood	7	10	13	4	1	30
Mine Subsidence	1	14	9	3	2	27
Severe Storm (thunderstorm, lightning, hail)	23	1	17	15	3	41
Tornado	11	2	9	16	7	36
Winter Storm	23	2	16	11	7	42
answered question						45
skipped question						1

Respondents were asked to report the level of concern with each hazard. Tornado, severe storm and winter storm were the top three hazards with respondents indicating that they were either “very concerned” or “extremely concerned”. Results are in Figure 7.

Figure 7: Respondents level of concern with hazards.

Disaster	Not Concerned	Somewhat Concerned	Very & Extremely Concerned
Dam Failure	100%	0%	0%
Drought	20%	49%	20%
Earthquake	46%	46%	4%
Extreme Heat	26%	47%	13%
Flood	33%	43%	17%
Mine Subsidence	52%	33%	19%
Severe Storm (thunderstorm, lightning, hail)	2%	41%	44%
Tornado	6%	25%	64%
Winter Storm	5%	38%	43%

An open-ended question asked survey respondents to specify what types of natural hazards they encountered in the past five years. The majority of the responses related to basement flooding, damage to property from severe storms, and winter weather. Loss of power, though only a by-product of natural hazards, appeared to be a particular concern; several respondents cited health and safety issues when the electricity is temporarily interrupted.

Preparedness for natural hazards.

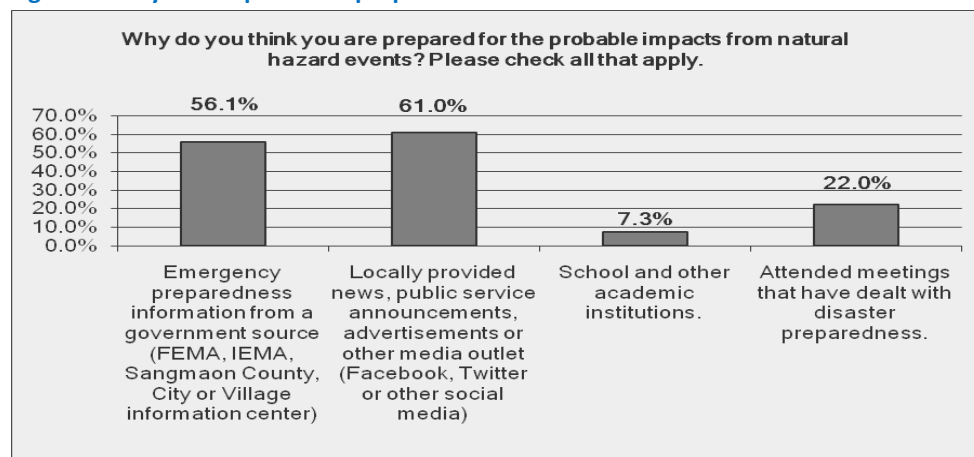
Respondents were asked to rank their level of preparedness for natural hazard events. Figure 8 shows that nearly 38 percent of the respondents believe they are at least fairly prepared for natural hazards. Only 4 percent believe they are not prepared for natural hazards.

Figure 8: Level of preparedness for impacts of natural hazard events.

Please rank how prepared you feel you and your household are for the probable impacts of natural hazard events. Rank on a scale of 1 to 5, with 5 representing the most prepared.		
Answer Options	Response Percent	Response Count
1 (not prepared)	4.4%	2
2	8.9%	4
3	48.9%	22
4	26.7%	12
5 (most prepared)	11.1%	5
<i>answered question</i>		45
<i>skipped question</i>		1

Respondents were also asked to specify why they think they are prepared for natural hazards. Figure 9 shows that a majority of respondents indicated that emergency preparedness information from government sources such as FEMA/IEMA or units of local government helps prepare them for natural hazards. A majority of respondents also indicated that local public service announcements, ads, or other social media helps them prepare for natural hazards.

Figure 9: Why are respondents prepared?



To assess the level of readiness for natural hazards, respondents were asked if certain features of emergency planning were present in home and work environments (Figure 10).

Figure 10: Emergency plans in home and work place

Do you currently have any of the following disaster and emergency plans and procedures in place?		
Answer Options	Response Percent	Response Count
I don't have any disaster or emergency plans in place.	25.6%	11
My home/family has an emergency plan prepared.	34.9%	15
My home/family has a disaster supply kit.	32.6%	14
My home/family has a shelter-in-place in our home if needed.	44.2%	19
My home/family has an evacuation route/routes to safety.	23.3%	10
My workplace has an emergency plan prepared.	37.2%	16
My workplace has a disaster supply kit.	11.6%	5
My workplace has a shelter-in-place if needed.	25.6%	11
My workplace has an evacuation route/routes to safety.	20.9%	9
answered question		43
skipped question		3

The three options with the highest response rates were the home environment has a shelter, the workplace has an emergency plan prepared, and the home has an emergency plan prepared. This indicates that emergency plans are somewhat common among the survey response group, both at home and at work. A second item of note is approximately one in four survey respondents did not have any disaster or emergency plans in place. This data could indicate that sources of information in a disaster are critical because at least a portion of the response group relies on outside sources of information without having an emergency plan.

Sources of information

Figure 11 below indicates that in the face of natural hazards, respondents obtained information from traditional media sources such as television, radio and weather radio. One-third of the respondents felt that electronic alerting systems were effective.

Figure 11: Method of obtaining information.

Information on the impacts of and how to prepare for a natural disaster can be disseminated to the public in various ways. Of the methods described below, please identify the top 3 ways which would be most effective in helping you make your home safer and better able to withstand the impacts of natural hazard events.		
Answer Options	Response Percent	Response Count
Newspaper	37.8%	17
Television	64.4%	29
Radio	46.7%	21
Social Media (Facebook, Twitter, Etc.)	31.1%	14
Weather Radio	55.6%	25
City/Village	28.9%	13
Utility Company	13.3%	6
Sangamon County	20.0%	9
Non-profit organizations	4.4%	2
Electronic Alerting System	33.3%	15
<i>answered question</i>		45
<i>skipped question</i>		1

Flooding

Four questions on the survey related to flooding to assess respondents' knowledge about floodplain designations, flood insurance, and mitigation of flood prone properties.

When asked if respondents know whether property they own is in the designated floodplain 9 percent indicated that they knew their property was in the floodplain, and 61 percent indicated that their property was not in the floodplain. Almost 30 percent of the respondents were not sure whether their properties are located in the designated floodplain.

Respondents were asked if they have flood insurance and 14 percent indicated they have flood insurance while 86 percent indicated they do not have flood insurance. The survey also asked respondents to identify why they do not have flood insurance. Figure 12 indicates the reasons why respondents did not have flood insurance.

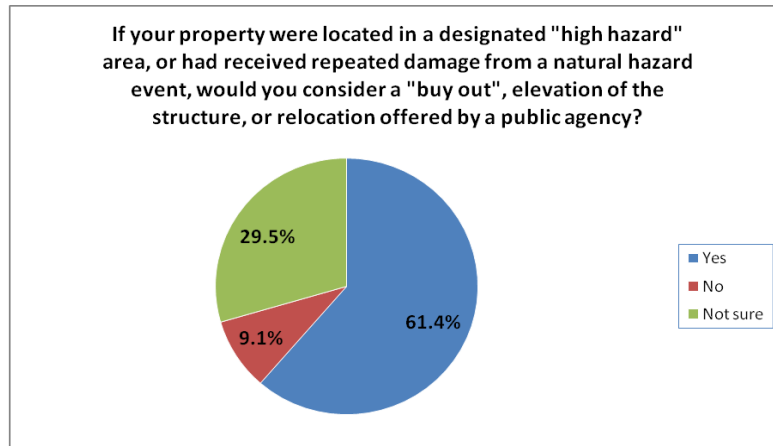
Figure 12: Why respondents have no flood insurance.

If you do not have flood insurance, what is the primary reason?		
Answer Options	Response Percent	Response Count
I don't need it / my property has never flooded.	29.4%	10
Don't need it / my house is not in the floodplain.	44.1%	15
Insurance company will not provide.	8.8%	3
My homeowners insurance will cover me.	0.0%	0
It is too expensive.	2.9%	1
It is not worth it.	2.9%	1
Not familiar with it / don't know about it.	11.8%	4
<i>answered question</i>		34
<i>skipped question</i>		12

Seventy-three percent of respondents indicated they did not need it because their properties never flooded or because their houses are not in the floodplain; 12 percent of respondents were not familiar with flood insurance; and 8 percent indicated that an insurance company will not provide flood insurance.

Respondents were asked if they would consider various methods to stop repetitive losses on property in a designated high hazard area. Figure 13 below shows that a large majority of the respondent group (61.4%) said they would consider a buyout, elevating the structure, or relocation offered by a public agency.

Figure 13: Mitigation strategies for flood prone properties.



Natural disaster impact on real estate decisions

Two questions on the survey asked respondents to reply if they considered the impact a natural disaster could have on a home prior to purchase and whether a disclosure would influence this decision.

Figure 14 indicates that about one-half of the respondents did not consider the impact a natural disaster could have on their homes prior to purchasing or moving into their homes. However, over two-thirds of those responding believe that they would have been influenced if natural hazard information would have been disclosed to them prior to purchasing or moving into their home (Figure 15).

Figure 14: Impact considered prior to moving into or purchasing home.

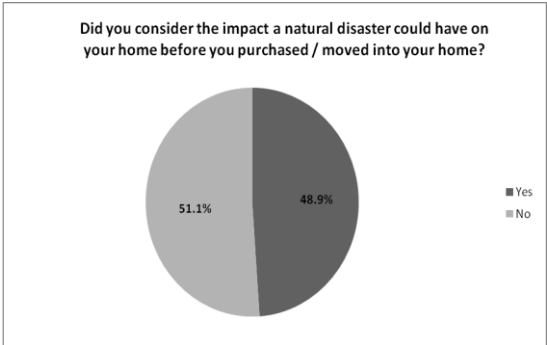


Figure 15: Level of disclosure influence.

Would the disclosure of this type of information influence your decision to purchase / move into a home?		
Answer Options	Response Percent	Response Count
Yes	66.7%	30
No	13.3%	6
Not sure	20.0%	9
<i>answered question</i>		45
<i>skipped question</i>		1

Demographics of respondents

The survey group included 59 percent women and 41 percent men. When comparing this to the general population as expressed by the last decennial Census in 2010, Sangamon County had 52 percent women and 48 percent men.

The survey group also included approximately 59 percent of responses from those aged 51 and over. These results could at least help explain some trends encountered in the responses, e.g. a reliance on traditional sources of media (television, radio, newspaper) as opposed to digital sources of information concerning natural hazard mitigation information.

A large number of the survey respondents are long-time residents of Sangamon County. Seventy-six percent of survey respondents lived in Sangamon County for greater than twenty years. This would seem to correspond with the high response rate of those aged 51 and over as noted in the demographics sub-section.

There were no glaring patterns in the geographic distribution of responses. The three largest numbers of responses by community were Buffalo (9), Cantrall (8), and Illiopolis (7) in descending order. It was interesting that the survey respondent group only included three responses from Springfield out of 45 received. These results could indicate an overreliance on rural areas and smaller municipalities in the survey group. Among residents of unincorporated Sangamon County, only Fancy Creek (4) and Illiopolis (2) townships had more than one response.

Conclusions of survey analysis

The results show that traditional sources of information such as the radio and television remain relevant during natural hazards. Floods and flood insurance, while uncommon among the survey response group, were also on the minds of survey respondents. If respondents were faced with flooding, using the strategies of elevating a structure or accepting governmental assistance to buyout or relocate the property might be acceptable in the event of high hazard/repetitive loss type properties. Respondents would consider utilizing natural disaster information if it were disclosed to them prior to purchasing or moving into a home.

Even though the availability of the survey was publicized, the survey sample was small and the majority of respondents were located in rural areas of the county. However, the responses were consistent with and confirmed the Task Force's assessments of natural hazards and need for mitigation planning.

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

At the first Task Force meeting, community representatives were given a Documents Form to update (see Section VI) in consultation with the leaders in their community. A combined listing of documents for participating communities is shown in Figure 16.

Natural hazards mitigation can be incorporated into existing plans and ordinances during updates. If a community does not have particular regulations that would promote hazard mitigation, such as building codes, these could be considered for adoption. Other documents could provide helpful information for assessing risks or determining appropriate mitigation projects.

Participating communities have responded to the need to incorporate natural hazards mitigation planning into existing plans and ordinances. Since the 2008 Plan, the Villages of Sherman and Williamsville and the City of Leland Grove have adopted Comprehensive Plans; Sangamon County developed a Regional Strategic Plan; the Village of Chatham adopted a Storm Water Management Plan; and, the Villages of New Berlin and Williamsville have adopted more strict regulatory standards through the passage of drainage ordinances.

Figure 16: Existing Community Documents for Participating Communities

DOCUMENT	Auburn	Buffalo	Cantrall	Chatham	Divernon	Jerome	Leland Grove	Mechanicsburg	New Berlin	Pawnee	Rochester	Sherman	Southern View	Springfield	Williamsville	Sangamon County
Comprehensive Plan	X	X		X			X		X	X	X	X		X	X	X
Subdivision Ordinance	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Zoning Ordinance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Zoning Map	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Building Codes	X	X		X	X	X	X		X	X	X	X	X	X		X
Land Use Plan				X					X			X	X	X	X	
Existing Land Use Map	X			X					X			X		X	X	
Flood Ordinance	X			X	X	X	X		X	X	X	X		X	X	X
Flood Insurance Rate Map	X			X	X	X	X		X	X	X	X		X	X	X
Flood/Eng.Studies for Streams	X			X		X			X					X	X	
Flood Insurance Claims List										X						
Repetitive Flood Loss List										X				X		X
Elevation Certificates for Bldgs														X		X
Capital Improvement Plan					X				X					X		
Historic Preservation Ordinance														X		X
Stormwater Management Plan				X		X			X	X	X	X	X	X		X
Hazard Mitigation Plan*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Emergency Management Plan	X	X		X	X					X	X	X	X	X		X
Drainage Ordinance	X			X						X	X	X		X	X	
Critical Facilities Map **	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hazard Vulnerability Analysis				X										X		
Infrastructure Map	X	X	X	X					X	X	X	X	X	X		
Topographic Map***	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Other														X		X
Community Website	X			X	X	X	X	X	X	X	X	X	X	X	X	X

* Participating communities adopting the 2015 Plan will have a Hazard Mitigation Plan.

** Participating communities adopting the 2015 Plan will be provided a map of critical facilities in their communities based on the information submitted during the natural hazards mitigation planning process.

*** Topographic mapping is available on the county-wide GIS system.

Section III – Risk Assessment

Description of All Natural Hazards Affecting Sangamon County

The 2008 Illinois Natural Hazard Mitigation Plan identifies seven hazards that affect Sangamon County: droughts, earthquakes, extreme heat, floods, severe storms, tornadoes, and winter storms. The 2008 Risk Assessment Committee of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force determined that mine subsidence and dam failure should also be addressed by the local plan. There have been many incidences of mine subsidence throughout the County and although there has never been a dam failure in the County, there are three dams with dam failure inundation areas in the County. The 2015 Task Force reviewed potential hazards and determined that no other hazards affect Sangamon County.

The 2008 Plan did not identify the hazard of extreme cold as being separate from the hazard of winter storm as cold temperatures in Sangamon County tend to be accompanied by snow. The Task Force for the plan update again evaluated the hazard of extreme cold and confirmed that the hazard occurs during periods of winter storms. In January 2009, there was a one-week period in which temperatures were considered to be below average. However, the average monthly low temperature for January 2009 was 14.2 °F. There were only eight other occurrences in the period of 1981 – 2014 in which the average monthly low was below this temperature. The Task Force will continue to monitor any occurrences of extreme cold that are not associated with winter storms and modify the plan as applicable.

There have been no occurrences of wildfire in Sangamon County. As such, the Task Force did not consider wildfire to be relevant to this area at this time. The Task Force will continue to monitor other areas of the country which are experiencing wildfires, determine if Sangamon County has a similar risk, and modify the plan as applicable.

Figure 17 shows the hazards considered by the 2008 Plan, their estimated annual probability of occurrence, the communities that could be affected, and the number of square miles that are vulnerable. In 2015 Regional Planning Commission staff verified the data related to the square miles affected for each municipality and was found to be accurate.

Figure 17: Overall Summary of Sangamon County's Vulnerability to Natural Hazards

Hazard	Annual Probability	Impact Location	Square Miles Affected
Dam Failure	*	Riverton, Rochester, Springfield, Sangamon County	30
Drought	*	Countywide	877
Earthquake	*	Countywide	877
Extreme Heat	45%	Countywide	877
Flood	15%	Auburn, Chatham, Dawson, Divernon, Jerome, Leland Grove, Mechanicsburg, Pawnee, Riverton, Rochester, Sherman, Spaulding Springfield, Sangamon County	87
Mine Subsidence	*	Auburn, Cantrall, Chatham, Dawson, Divernon, Jerome, Leland Grove, Mechanicsburg, Pawnee, Riverton, Sherman, Southern View, Spaulding, Springfield, Sangamon County	94
Severe Storm-Thunderstorm	83%	Countywide	877
Severe Storm-Hail	55%	Countywide	877
Tornado	44%	Countywide	877
Winter Storm	75%	Countywide	877

* Not enough data is available to calculate annual probability. Annual probability is based on recorded occurrences over the past 50 years (when data is available) in Sangamon County. There is no record of a dam failure or earthquake. Although droughts have occurred, no reliable records were found. A severe drought did occur in the 1950s. Mine subsidence has occurred and many of those locations have been documented, but the timeframe of occurrence is not recorded.

The 2015 Task Force also calculated a Risk Priority Index (RPI) for the seven hazards affecting the County and its participating communities. The RPI is designed to quantify the likelihood that a specific hazard would affect a region and the potential magnitude and severity of the hazard. Figure 18 outlines the parameters of the likelihood of a future occurrence.

Figure 18: Future Occurrence Ranking

Probability	Characteristics
4 - Highly Likely	Event is probable within the calendar year. Event has up to 1 in 1 year chance of occurring. (1/1=100%) History of events is greater than 33% likely per year.
3 - Likely	Event is probable within the next three years. Event has up to 1 in 3 years chance of occurring. (1/3=33%) History of events is greater than 20% but less than or equal to 33% likely per year.
2 - Possible	Event is probable within the next five years. Event has up to 1 in 5 years chance of occurring. (1/5=20%) History of events is greater than 10% but less than or equal to 20% likely per year.
1 - Unlikely	Event is possible within the next ten years. Event has up to 1 in 10 years chance of occurring. (1/10=10%) History of events is less than or equal to 10% likely per year.

While identifying the likelihood that an event will happen is important to mitigation planning, it is equally critical to estimate the potential magnitude and/or severity of the hazard. Figure 19 identifies the ranking and characteristics of magnitude/severity.

Figure 19: Hazard Magnitude

Magnitude/Severity	Characteristics
8 - Catastrophic	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.

Finally, the RPI was calculated by multiplying the probability by the magnitude/severity of the hazard. Using these values, the planning team was then asked to rank the hazards. Figure 20 identifies the RPI and ranking for each hazard of Sangamon County.

Figure 20: Risk Priority Index for Sangamon County Hazards

Hazard	Probability	Magnitude/ Severity	Risk Priority Index	Rank
Severe Storm	4-Highly Likely	2-Limited	8	1
Winter Storm	4-Highly Likely	2-Limited	8	1
Tornado	4-Highly Likely	2-Limited	8	1
Drought	3-Likely	2-Limited	6	2
Flood	3-Likely	2-Limited	6	2
Extreme Heat	4-Highly Likely	1-Negligible	4	3
Mine Subsidence	2-Possible	2-Limited	4	3
Dam Failure	1-Unlikely	2-Limited	2	8
Earthquake	1-Unlikely	1-Negligible	1	9

The Task Force was unable to differentiate between the likelihood and degree of magnitude/severity as Sangamon County tends to have an equal number of severe and winter storms. Tornadoes are also highly likely to occur, but the severity of tornadoes is limited. As a result, the Task Force ranked severe storms, winter storms and tornadoes as having the same RPI.

The 2013 Illinois Hazard Mitigation Plan (IHMP) calculated a hazard rating for each county based on a methodology established by the Illinois Natural Hazard Mitigation Planning Committee. The methodology analyzed data and quantified a rating for each hazard using data in four categories: historical/probability (frequency); vulnerability (percentage of people); severity of impact (injuries, fatalities, personal property and infrastructure); and population. The ratings for Sangamon County are shown in Figure 21.

Figure 21: Sangamon County Hazard Rating in the Illinois HMP

Severe Storm	Floods	Severe Winter Storms	Drought	Extreme Heat	Earthquake	Tornado
Severe	High	High	Elevated	Elevated	Elevated	High

Key:	
Severe	=49-60
High	=37-48
Elevated	=25-36
Guarded	=13-24
Low	=0-12

The value of structures in each community is shown in Figure 22. In 2008, the Risk Assessment Committee determined that obtaining the value of each structure would be a monumental task that could not realistically be accomplished. Therefore, the Committee decided that the value of critical facilities would be estimated using the replacement cost based on square footage. The value of all other structures would be the market value calculated from the assessed value as shown on County property tax records.

The same methodology was utilized to determine the value of critical structures for the 2015 update to the Plan. Utilizing the same methodology resulted in consistency between the 2008 Plan and the 2015 Plan update.

Two communities joined the planning process during the 2015 update and three communities experienced an increase in the number of critical facilities from those identified in the 2008 Plan. The estimated value of new critical facilities was determined by utilizing Marshall Swift estimating software. Property tax data from the Sangamon County Tax Assessor's Office was utilized to identify the property tax increase factor for Class 60 – Improved Commercial properties resulting in the estimated value of critical facilities and other structures as of December 2013. The 2013 estimated value of critical facilities and other structures were calculated for all communities using the same method.

Figure 22: Total Structures per Community (Participating and Non-participating)

Community	Critical Facilities			Other Structures	Total Value of all Structures
	# of Structures	Estimated Value of Critical Facilities 2008 Plan	Estimated Value of Critical Facilities (Dec. 2013)	Estimated Value of Other Structures (Dec. 2013)	
Auburn	19	\$38,725,812	\$41,404,350	\$167,366,220	\$208,770,570
Buffalo	5	8,259,069	8,830,322	14,245,608	23,075,930
Cantrall	4	3,994,917	4,271,232	3,434,997	7,706,229
Chatham	11	57,393,643	61,363,374	666,186,123	727,549,497
Curran	7	3,818,778	4,082,910	8,711,082	12,793,993
Dawson	2	675,323	722,033	15,272,064	15,994,097
Divernon	10	11,022,902	11,785,320	49,097,331	60,882,651
Illioopolis	10	8,320,988	8,896,524	24,779,136	33,675,660
Jerome	4	805,903	861,645	71,795,931	72,657,576
Leland Grove*	3	0	3,921,976	162,769,752	166,691,728
Mechanicsburg*	7	0	3,017,398	24,479,628	27,497,026
New Berlin	11	12,003,712	12,833,969	51,319,419	64,153,388
Pawnee	12**	24,637,611	26,341,714	111,028,947	137,370,661
Pleasant Plains	12	11,347,186	12,132,034	33,636,178	45,770,212
Riverton	11	10,168,754	10,872,093	111,991,707	122,863,800
Rochester	11**	47,452,378	50,734,504	231,393,825	282,128,329
Sherman	7	9,674,724	10,343,893	290,601,609	300,945,502
Southern View	6	1,313,733	1,404,600	60,677,136	62,081,736
Spaulding***	0	0	0	49,476,087	49,476,087
Springfield	186**	3,192,926,535	3,413,770,818	6,099,409,758	9,513,180,576
Thayer	2	1,108,614	1,185,293	19,695,762	20,881,055
Williamsville	12	19,282,600	20,616,314	76,876,890	97,493,204
Sangamon Co.	44	383,306,632	409,818,698	1,665,856,698	2,075,675,396
TOTAL	3,055	\$3,853,179,188	\$4,119,211,013	\$10,010,103,888	\$14,129,314,901

*New Communities

**Increase in the number of critical facilities

***Community did not participate in 2008 plan and no critical facilities were identified.

Note: Critical facilities included are: Government Facilities: city hall, fire station, government office/facility, library, military facility, police station, school. Infrastructure: airport, bus station, communication tower, media location, power plant, railroad, sewer plant, train station, utility substation, water plant, water tower. Medical Facilities: hospital, medical clinic. Gathering Places: fairgrounds, park, tourist attraction. Residential Facilities: nursing home, residential group home. Other: facility storing chemical hazard, grain elevator, social service agency providing disaster shelter/relief.

The City of Springfield identified 51 additional structures that are considered by that community to be “Tier II” critical facilities. These facilities do not specifically fit into one of the critical facility categories listed above, but would be of significance to the area if damaged or lost due to a natural hazard. The estimated value of these facilities is listed in Figure 23.

Figure 23: City of Springfield, Tier II Critical Facilities

Community	# of Tier II Structures	Estimated Value of Critical Facilities (2015)
Springfield	51	\$233,527,555

The following pages provide a detailed profile of each type of hazard including the location, extent, previous occurrences, and probability of future events; and a vulnerability assessment for each hazard.

DAM FAILURE HAZARD

Description

The Federal Emergency Management Agency (FEMA) defines a “dam” as an artificial barrier that has the ability to impound water, wastewater, or any liquid-borne material for the purpose of storage or control of water. Dam failure is a result from one or a combination of the following reasons:

- Overtopping caused by floods that exceed the capacity of the dam.
- Deliberate acts of sabotage.
- Structural failure of materials used in dam construction.
- Movement and/or failure of the foundation supporting the dam.
- Settlement and cracking of concrete or embankment dams.
- Piping and internal erosion of soil in embankment dams.
- Inadequate maintenance and upkeep.

How are dam failures categorized?

The Illinois Natural Hazard Mitigation Plan identifies two categories of dam failures:

Rainy day failure involves periods of excessive precipitation leading to an unusually high runoff. This high runoff increases the reservoir of the dam and if not controlled, the overtopping of the dam or excessive water pressure can lead to dam failure. Normal storm events can also lead to rainy day failures if water outlets are plugged with debris or otherwise made inoperable.

Sunny day failures occur due to poor dam maintenance, damage/obstruction of outlet systems, or vandalism. This is the worst type of failure and can be catastrophic because the breach is unexpected and there may be insufficient time to properly warn downstream residents.

Profile of dams in Sangamon County

What dams could pose a risk in Sangamon County?

According to the National Inventory of Dams, there are 18 dams in Sangamon County. Figure 24 is a list of these dams and the primary purpose of the dams. It should be noted that the list below contains 19 dams. The Task Force separated Spaulding Dam from Saddle Dam for the purposes of identifying the risks involved with flood inundation should dam failure occur.

Figure 24: List of dams in Sangamon County

NAME	RIVER, CREEK OR TRIBUTARY
Spaulding Dam	Sugar Creek
Saddle Dam	Sugar Creek
Lake Sangchris Dam	South Fork of Sangamon River Tributary
Crystal Lake Dam	Spring Creek Tributary
Theilen Pond Dam	Lick Creek Tributary
Denby Dam 1	Lick Creek
Benson Pond Dam 1	Richland Creek
Hunter Pond Dam 1	Snagamon River Tributary
Williamsville Lake Dam 1	Wolf Creek
Temporary Sangamon River Dam	Sangamon River
Hickory Hills Lake Dam	Sangamon River Tributary
Buffalo Drive Dam	Spring Creek Tributary
Braun Pond Dam	Richland Creek Offstream
Weingardt Pond Dam	Fancy Creek Tributary
Schmidgall Dam 1	Sangamon River Tributary
Cilca Lake Dam	Sangamon River Tributary
Springfield Lakeside Ash Disposal Pond Dam	Sugar Creek Offstream
Rising Moon Road Detention Area Dam	Lick Creek Tributary
Woodlake Estates Dam	Spring Creek Tributary

Of the 19 dams listed, three of these dams are large and could impact Sangamon County if they failed. These are the two dams on Lake Springfield: Spaulding Dam and Saddle Dam that are owned by City Water, Light and Power. The third large dam, Lake Sangchris Dam is located just over the county line in Christian County, but the impact of its failure would be almost entirely within Sangamon County. The Lake Sangchris Dam is owned by Dominion Resources. The location of these dams is shown in Figure 25.

The remaining 15 dams in Sangamon County are privately owned Class III dams according to the Illinois Department of Natural Resources, Office of Dam Safety. The classification indicates that there would be no life safety issues, damage to infrastructure or need for mitigation.

The locations affected by dam failure.

The locations that could be affected by complete failure of each of the dams are shown in Figures 26, 27, and 28. FLDWAV, dam failure software from the National Weather Service, was used to model the dam failure scenarios for Lake Sangchris Dam and Spaulding Dam. The Saddle Dam inundation area was determined using a less sophisticated method, but does provide some idea of the potential consequence of failure. The scenarios depict an immediate failure of the entire length of each dam which would be a worst case situation. The Task Force reviewed the dam failure scenarios and found that there are no changes in the locations that could be affected by complete dam failure.

Figure 25: Locations of Large Dams Affecting Sangamon County

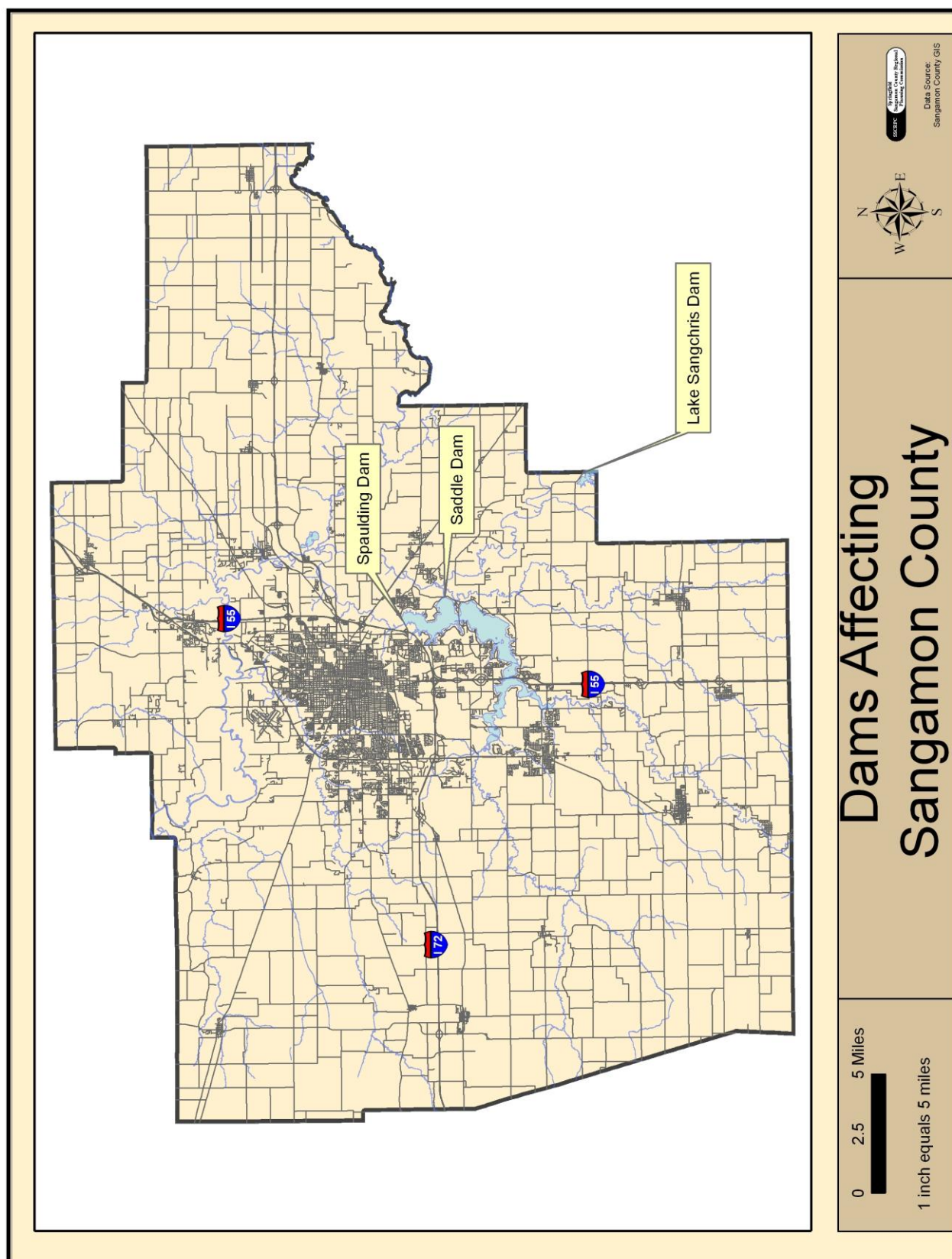


Figure 26: Spaulding Dam Flood Inundation Area

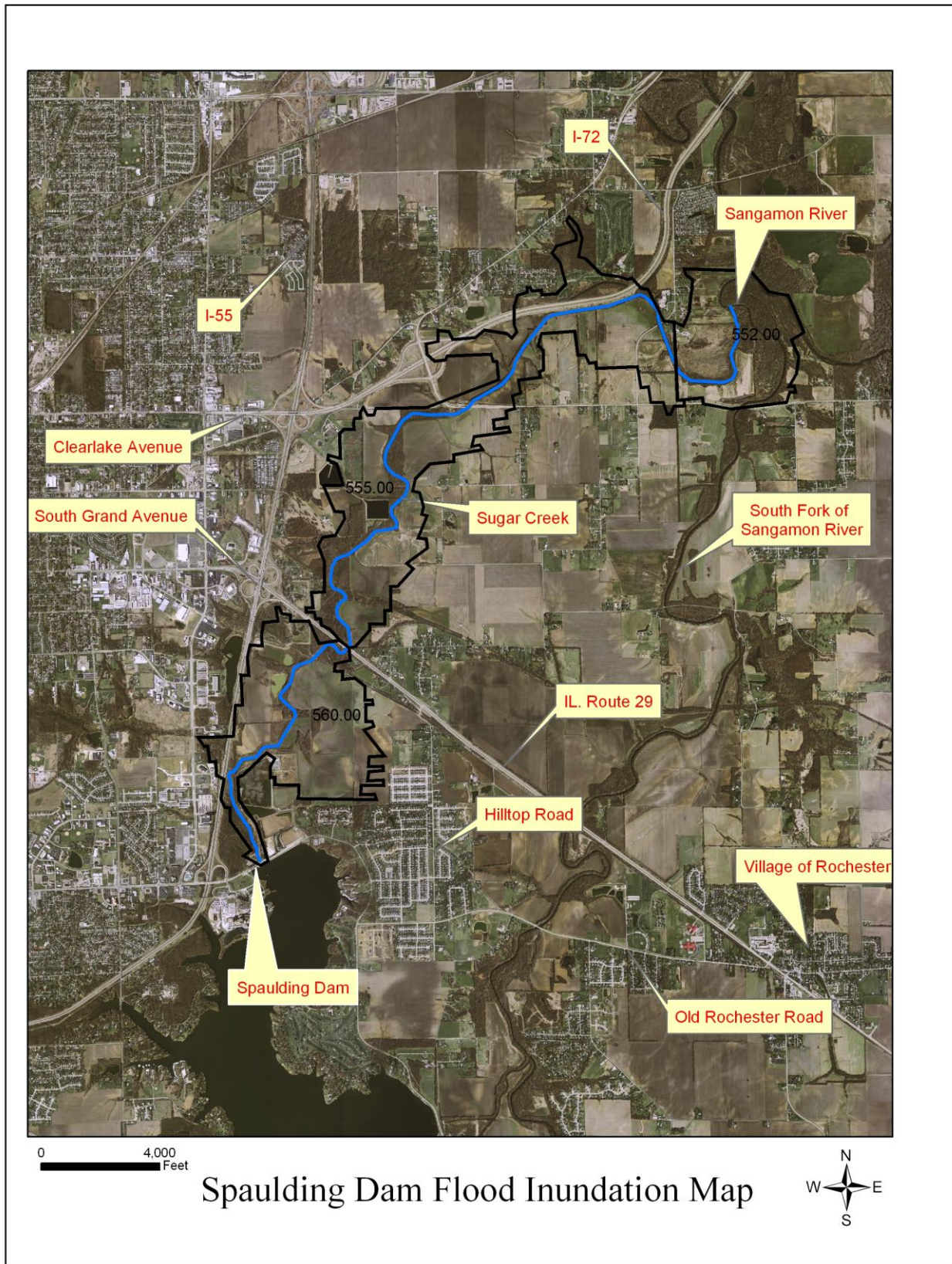


Figure 27: Saddle Dam Flood Inundation Area

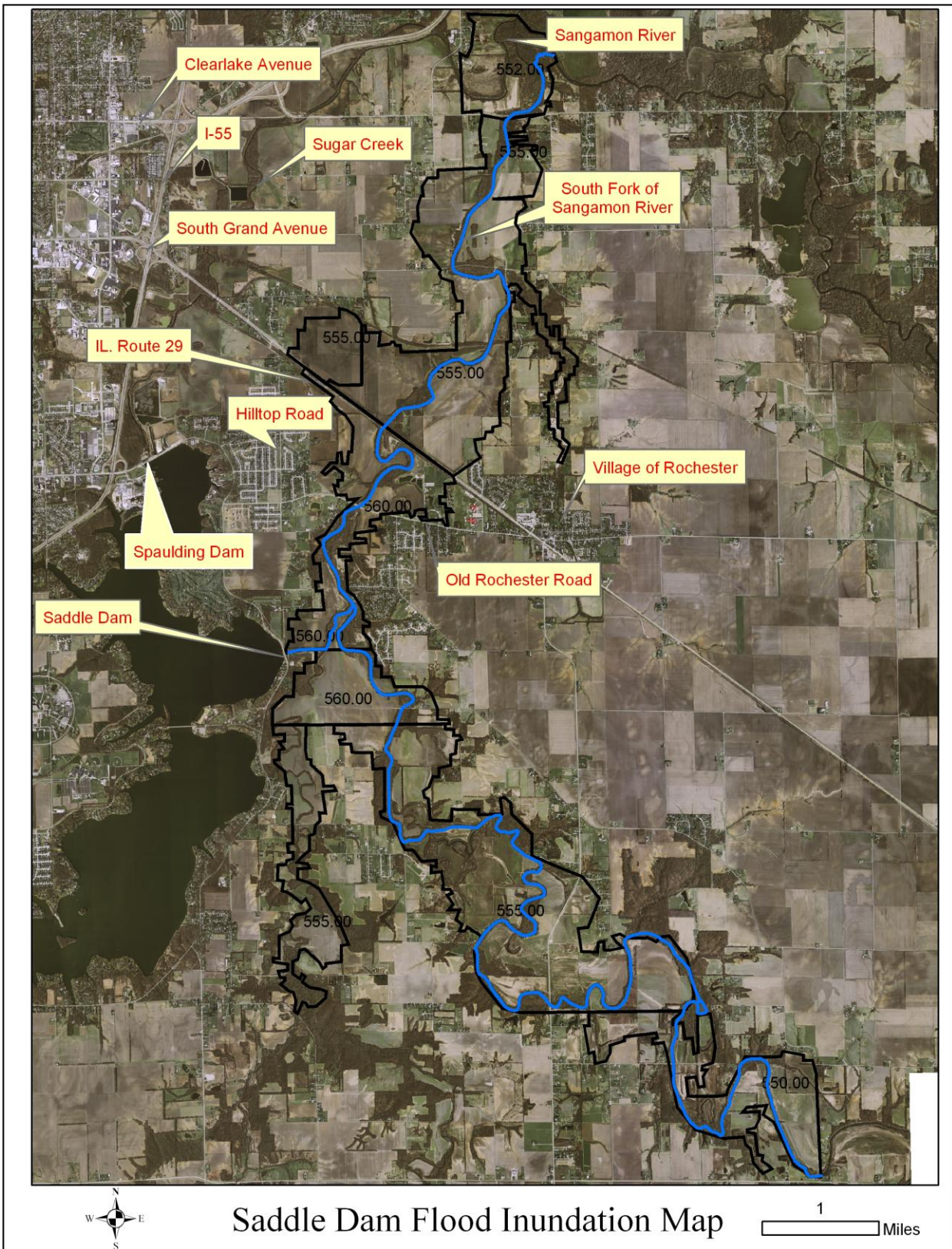
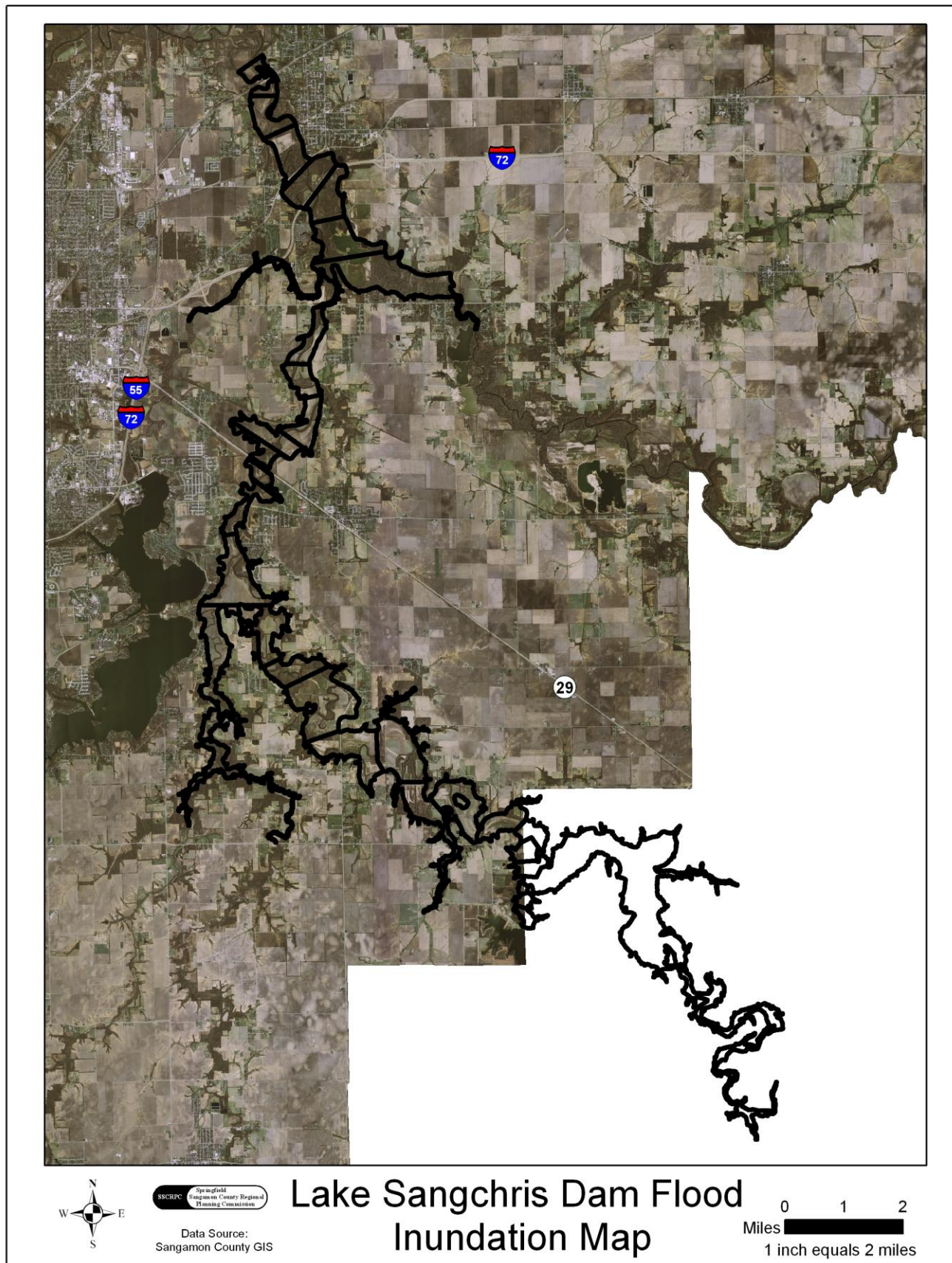


Figure 28: Lake Sangchris Dam Flood Inundation Area



Probability of future dam failure events.

To date, none of the dams have failed. As a result, the probability of a dam failure affecting the county cannot be specifically established, but it is estimated to be relatively low and complete failure is highly unlikely.

Dam Failure – Assessing Vulnerability

Dam failure flood inundation scenarios were generated that could occur if complete failure happened all at once. Each of the dams is earth filled, so it is more likely that failure would occur over time as scouring removes the soil comprising the structure.

Figure 29: Dam Failure, Estimated # of buildings

Dam	Buildings Affected*
Lake Sangchris Dam	65
Spaulding Dam	301
Saddle Dam	undetermined at this time

* The numbers of buildings indicated are derived from the planimetric layer of the County GIS map. The types of buildings affected are not specifically identified at this time.

Spaulding Dam is located on Lake Springfield which is the water source for the City of Springfield and several surrounding communities. The level of the lake is monitored daily and if found to be too high controlled release measures are deployed making a rainy-day failure highly unlikely.

Sufficient information needed to determine potential dollar losses if dam failure were to occur are not available at this time. The City of Springfield does plan to prepare an Emergency Action Plan addressing a breach of the Spaulding and Saddle dams. The Emergency Action Plan would look at the specific buildings affected.

DROUGHT HAZARD

Description

What is drought?

The Illinois State Climatologist Office identifies drought as:

“A complex physical and social phenomenon of widespread significance, and despite all the problems droughts have caused, drought has been difficult to define. There is no universally accepted definition because: 1) drought, unlike flood, is not a distinct event, and 2) drought is often the result of many complex factors acting on and interacting within the environment. Complicating the problem of drought is the fact that drought often has neither a distinct start nor end. It is usually recognizable only after a period of time and, because a drought may be interrupted by short spells of one or more wet months, its termination is difficult to recognize.”

Drought is also a temporary feature of the climate of Illinois, and we know it occurs only when less than adequate precipitation exists for an extended period of time. Because of the complex nature of droughts, there are many definitions, often reflecting a specific area of concern of an individual, a city, or a region.

The most commonly used drought definitions are:

1. Meteorological or Climatological Drought – a period of well-below-average precipitation that spans from a few months to a few years.
2. Agricultural Drought – a period when soil moisture is inadequate to meet the demands for crops to initiate and sustain plant growth.
3. Hydrological Drought – a period of below-average streamflow and/or depleted reservoir storage.

How are droughts measured?

The Illinois State Climatologist Office website provides a method for estimating drought conditions on a state-wide basis.

Figure 30: Severity of Precipitation Drought Expressed as Percent of the State-wide Average precipitation

Drought Duration	Moderate Drought	Severe Drought
3 months	45 to 60%	less than 45%
6 months	56 to 70%	less than 56%
12 months	70 to 80%	less than 70%
24 months	78 to 90%	less than 78%

Based on data from the Illinois State Climatologists' Office, when comparing the period of 1981 – 2008 to 2009 – 2014, Sangamon County experienced a decrease in average precipitation of .32 inch during the month of January and .57 inch in the month of August. In the months of July and November, Sangamon County experienced a decrease of more than 1.0 inch. Precipitation increased in the remaining months by over one-half inch with the exception of March which saw an increase of .48 inch and December which increased by .12 inch.

In 2012, the State of Illinois experienced varying degrees of drought according to the National Weather Service. The lack of rain was also experienced in Sangamon County. In July, 2012, the rain total was 6.43 inches lower than the average of the previous three years, and in August of that year, the rain total was 3.07 inches lower than the average of 2009-2011. Despite the dry conditions of 2012, when the plan update period of 2009 – 2014 is compared to the period of 1981 – 2008, precipitation is up overall by 4.90 inches.

The average precipitation by month for Sangamon County is shown in Figure 31.

Figure 31: Precipitation in Springfield from 1981-2014

Month	1981 - 2008 Average Precipitation (in inches)	2009 - 2014 Average Precipitation (in inches)	Difference (in inches)	% Change
January	1.88	1.56	-0.32	-0.17
February	1.81	2.33	0.52	0.28
March	2.48	2.96	0.48	0.19
April	3.42	4.76	1.34	0.39
May	4.03	5.93	1.90	0.47
June	4.22	5.66	1.44	0.34
July	3.90	2.73	-1.17	-0.30
August	3.20	2.63	-0.57	-0.18
September	2.68	3.52	0.84	0.31
October	2.94	4.37	1.43	0.49
November	3.24	2.13	-1.11	-0.34
December	2.48	2.60	0.12	0.05
TOTAL	36.29	41.18	4.90	0.13

Profile

The locations affected by drought.

The locations affected by drought are not isolated as the precipitation patterns throughout the region are similar. Many homes outside of municipalities use private wells to provide water, although there are also several water districts that supply public water to some rural areas. Municipalities in the County provide water to their residents from surface water or ground water sources. Severe drought affects all these water sources.

Since the 2008 Plan was adopted, several private water companies have emerged to provide potable water particularly to rural residents. There has also been an expansion of several municipalities' water systems to include service to home in unincorporated areas.

The extent of previous occurrences in Sangamon County.

Previous occurrences in Sangamon County were the periods in the 1930s and 1950s when drought was most frequent and troublesome according to Jim Angel, State Climatologist at the Illinois State Water Survey.

Sangamon County experienced a severe drought in 1953-1955. In September 1983 all counties in the state were declared State disaster areas because of high temperatures and low precipitation conditions that began in June.

Probability of future drought events.

According to the Illinois State Climatologist Office, the persistence of drought from one season to the next in Illinois is not as high as in other parts of the U.S., especially the West where multi-year droughts are common. Therefore, the ability to predict the onset or continuation of a drought is more problematic. Recent advances in our understanding of large-scale atmospheric and oceanic circulation features, such as El Niño and the Pacific Decadal Oscillation, may lead to some small degree of skill in predicting drought one or two seasons ahead. As global and regional climate models improve we may begin to realize the ability to predict changes in frequency, intensity, or location of drought.

Assessing Vulnerability

A drought in Sangamon County would impact two major aspects of our communities – water supply and agricultural production. No damage to buildings generally results from drought conditions.

(from: Illinois State Climatologist Office)

The first part of the hydrological cycle to be impacted by drought is the soil moisture. The changes in soil moisture can be quite rapid during the growing season when demand for moisture is high due to plant growth. Dry periods in Illinois typically have a near-normal number of days with rain, but the rains are more spotty and less intense. As a result, stream flow usually drops as well due to a lack of heavy rainfall events. Any rain that does fall is first absorbed into the ground because of the depleted soil moisture, reducing runoff.

According to the 2012 Census of Agriculture there were 1,092 farms in Sangamon County accounting for 514,043 acres of land. Ninety-three percent of this land was in crop production. Crop sales were \$336,504,000. Livestock sales were \$21,849,000. A severe drought would have a financial impact on the large agricultural community in Sangamon County particularly if it occurred during the growing season.

Water supplies from private wells, ground water sources, and surface water sources would also be impacted by a severe drought.

EARTHQUAKE HAZARD

Description

What is an earthquake?

The 2007 Illinois Natural Hazard Mitigation Plan describes earthquakes as follows: “Earthquakes occur when rocks forming the earth’s crust slip past each other along a fault. This slippage occurs when the buildup of stresses gets to the point that they are greater than the strength of the locked up section of rocks along the fault plane. When faulting takes place, the sudden release of energy produces vibrations or seismic (shock) waves that radiate from the main fault movements. These waves cause the shaking or “quaking” that lasts tens of seconds to a few minutes, depending on the magnitude of the event (energy released) and what kinds of rocks they travel through and the stiffness or lack of stiffness of the soils at a site. Where the faulting starts, at some depth below the Earth’s surface, is the hypocenter (focus) of an earthquake. The point on the surface directly above the focus is the epicenter.”

How are earthquakes measured?

There are two ways to measure earthquakes:

The magnitude is a calculation of the seismic energy released and is measured through ground vibrations with a seismograph. The familiar Richter Scale is one way of reporting magnitude. The increments of magnitude are logarithmic. An increase of 0.2 on the Richter Scale indicates a doubling of the amount of energy released. For example, a magnitude 7 earthquake releases about 32 times more energy than a magnitude 6 earthquake. A single magnitude number is calculated for each earthquake event.

The intensity relates to the effects of an earthquake and is based on descriptions provided by people experiencing the event rather than readings from an instrument. The intensity decreases when moving away from the epicenter. The type of soil influences intensity which will be stronger through the thick, loose, saturated soils found along river valleys. The Modified Mercalli Intensity Scale is used in the United States to report earthquake intensities. Many intensities are indicated for each earthquake event based on distance from the epicenter and soil type.

Figure 32 shows a comparison of the Richter Scale and Modified Mercalli Intensity Scale.

Profile

The locations affected by earthquakes.

To date there has been no earthquake damage recorded in Sangamon County. However, all of Sangamon County has some vulnerability to earthquake activity that occurs elsewhere. A relatively intense earthquake with an epicenter in Mason County would cause more costly damage in the north and west parts of the County. Another earthquake event along the New Madrid fault would more intensely affect the south/southeast parts of the County thus all of Sangamon County has some vulnerability to earthquake activity.

Figure 32: Comparison of Modified Mercalli Scale and Richter Scale (from: FEMA)

The Modified Mercalli Scale		Level of Damage	The Richter Scale
1-4	Instrumental to Moderate	No damage.	<4.3
5	Rather Strong	Damage negligible. Small, unstable objects displaced or upset; some dishes and glassware broken.	4.4-4.8
6	Strong	Damage slight. Windows, dishes, glassware broken. Furniture moved or overturned. Weak plaster and masonry cracked.	4.9-5.4
7	Very Strong	Damage slight-moderate in well-built structures: considerable in poorly-built structures. Furniture and weak chimneys broken, Masonry damaged. Loose bricks, tiles, plaster, and stones will fail.	5.5-6.1
8	Destructive	Structure damage considerable, particularly to poorly built structures. Chimneys, monuments, towers, elevated tanks may fail. Frame houses moved. Trees damaged. Cracks in wet ground and steep slopes.	6.2-6.5
9	Ruinous	Structural damage severe: some will collapse. General damage to foundations. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground; liquefaction.	6.6-6.9
10	Disastrous	Most masonry and frame structures/foundations destroyed. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Sand and mud shifting on beaches and flat land.	7.0-7.3
11	Very Disastrous	Few or no masonry structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Rails bent. Widespread earth slumps and landslides.	7.4-8.1
12	Catastrophic	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted.	>8.1

The extent of previous earthquakes in Sangamon County.

There is no earthquake history for Sangamon County although tremors have been felt in the past from earthquakes with epicenters elsewhere. Figure 33 shows earthquakes in Illinois over the past 218 years. The nearest earthquake of significant magnitude occurred on July 19, 1909 in Mason County between Petersburg and Havana. The estimated magnitude was 4.8 and no damage was recorded in Sangamon County.

On November 9, 1968 a magnitude 5.5 earthquake (the largest in the Central United States during the 20th century) occurred with an epicenter northeast of Harrisburg in Southern Illinois. The intensity felt in Sangamon County was 5 on the Modified Mercalli Intensity Scale, which indicates trembling was felt, but no damage resulted.

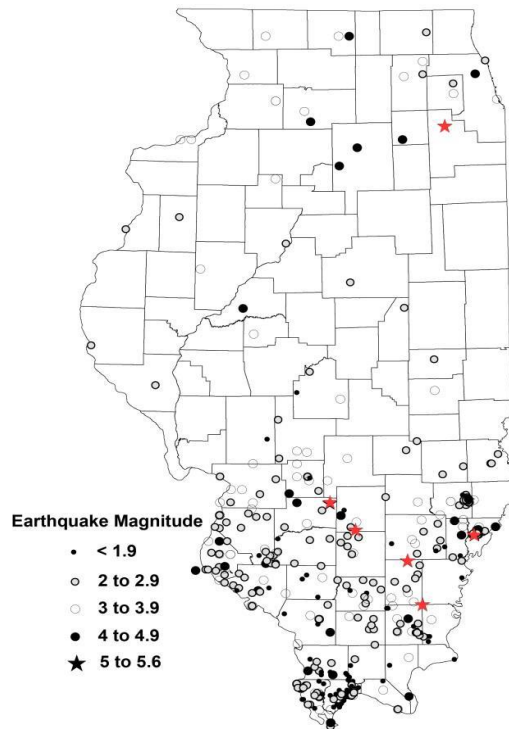
Evidence suggests that large magnitude earthquakes centered in the New Madrid area occurred in the years 300, 900, 1450, and 1811-1812. The shortest interval between events was 360 years (most recently). During the winter of 1811-1812 what is commonly known as the New Madrid earthquake occurred, but this actually consisted of four earthquakes of magnitude 7+ and hundreds of smaller earthquakes over a several month period. At that time the area that is now Sangamon County was sparsely populated and there is no record of the intensity experienced here from these events.

Probability of future earthquake events.

It is difficult to calculate the probability of future earthquake events in Sangamon County since there has not been one of any significance since records have been maintained. The New Madrid seismic zone is the most studied area for earthquake activity. The US Geological Survey estimates the probability of a repeat of the 1811-1812 magnitude earthquakes is 7-10% over a 50-year time period. The Illinois State Geological Survey estimates

the likelihood of a damaging earthquake (magnitude 6.3 or greater) occurring somewhere in the Central United States is 86-97% over a 50-year period.

Figure 33: Earthquakes in Illinois from 1795 to 2013
(from: Illinois Natural Hazard Mitigation Plan)



Assessing Vulnerability

To prepare the 2008 Plan, HAZUS software provided by FEMA was utilized to prepare an analysis of the damages that could be caused in Sangamon County today by a recurrence of the earthquake originating in Mason County in 1909. Although that earthquake had a magnitude of 4.8, a magnitude of 5.0 was used in the model as this appears to be the minimum value for getting accurate data from the software. Direct economic loss predicted is shown in Figure 34 and totals \$5,632,010. Figure 35 shows the areas of impact.

Figure 34: Total Economic Loss Estimates in Sangamon County for a Magnitude 5.0 Earthquake Centered in Mason County

Building Damage	Contents Damage	Inventory Loss	Relocation	Income Loss	Rental Income Loss	Wage Loss	Total Loss
\$3,496,160	\$1,345,180	\$2,431	\$1,754	\$197,730	\$262,150	\$288,940	\$5,632,010

Other notes of interest under this scenario:

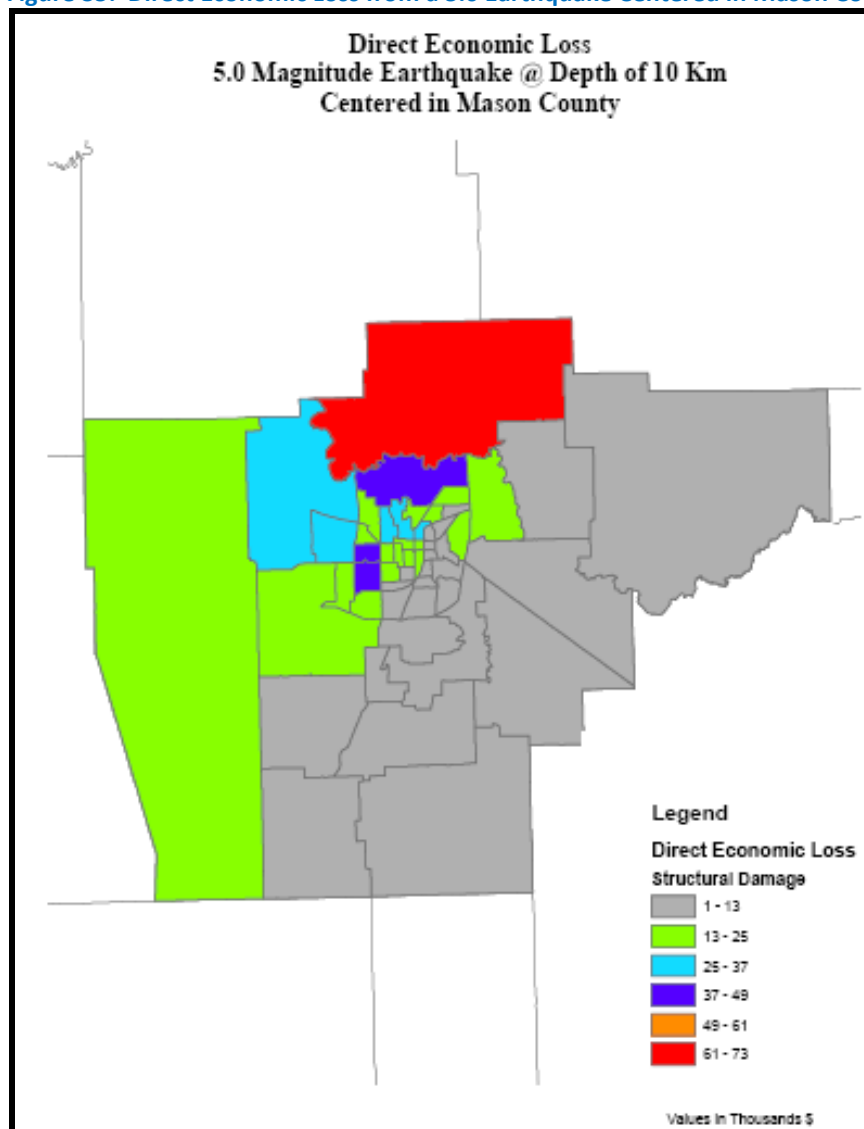
- It appears most likely there would be no damage to critical facilities in Sangamon County.
- Perhaps 40 households would be displaced, five of them requiring short-term shelter.

- The north-central part of the County could be susceptible to fire.
- There could be slight damage at Abraham Lincoln Capital Airport, although none to runways.
- Slight damage could be experienced by the Springfield Mass Transit District, but the operation would continue to function.
- No damage is expected to roads or bridges.
- Minimal impact on other infrastructure is anticipated (utilities, communication, water, and sewer).

It appears that a repeat of the Mason County earthquake would have only minimum impact in Sangamon County. The reason for the Mason County earthquake, however, is unclear as no fault line is in the area. This does present the thought that a similar earthquake could happen in Sangamon County, although the likelihood of this cannot be predicted.

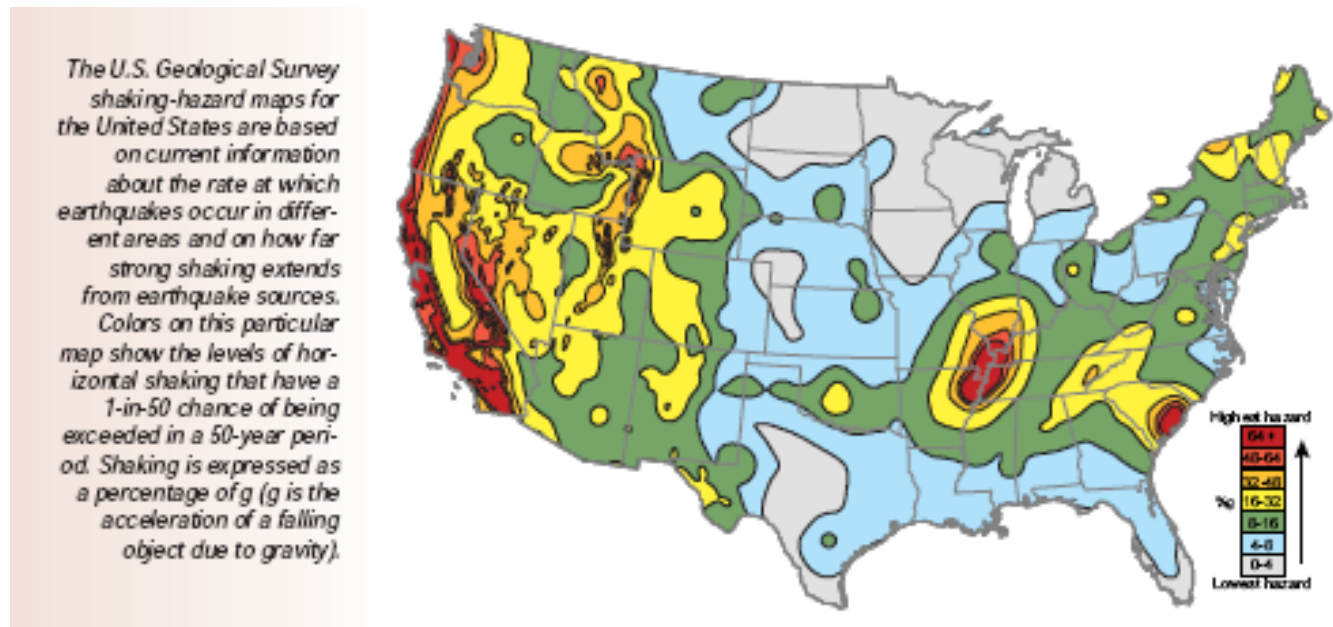
The 2015 Task Force reviewed the earthquake hazard information for Sangamon County and found the above information to be applicable for this plan update.

Figure 35: Direct Economic Loss from a 5.0 Earthquake Centered in Mason County



Another major earthquake centered in the New Madrid area could have an impact on Sangamon County. However, limitations in the HAZUS software prevent its use in estimating damages and no other mechanism is available to do so. Figure 36 is a shaking-hazard map that shows the levels of horizontal shaking that have a 1 in 50 chance of being exceeded in a 50-year period. Shaking is expressed as a % of g with g being the acceleration of a falling object due to gravity. Sangamon County is at the lower end of the scale with 8-16 %g (green on the map) while 64 is the %g felt at the location of an epicenter.

Figure 36: Shaking Hazard Map (from: the US Geological Survey)



EXTREME HEAT HAZARD

Description

What is extreme heat?

Extreme heat is a combination of high temperatures and high humidity. Conditions of extreme heat are dangerous and can cause injury and death.

The Heat Index is apparent temperature or a measure of how it feels when temperature and humidity are combined. It is the result of biometeorological studies and takes into account body size, core and body surface temperatures, clothing, the skin's resistance to heat and moisture transfer away from the body. The Heat Index assumes an average-sized adult with clothing in the shade with a 5-mph wind. Being in the full sun or in an area with little air movement can increase the apparent temperature.

What makes extreme heat dangerous?

According to the Illinois Climatologist Office of the Illinois State Water Survey, extreme heat is dangerous because the body cools itself by sweating because the evaporation of moisture has a cooling effect. High humidity reduces this evaporation and hinders the body's effort to cool itself. The dew point temperature is a much more useful measure of the moisture content of the atmosphere than the commonly used relative humidity. During summer in Illinois, dew point temperatures in the 50s are generally comfortable. Most people begin to feel the humidity when dew point temperatures are in the 60s. Dew point temperatures in the 70s are rare and cause significant discomfort.

Effects of extreme heat.

The effects of extreme heat are as follows:

Heat cramps: muscular pains and spasms due to heavy exertion. They usually involve the abdominal muscles or legs. It is generally thought that the loss of water from heavy sweating causes the cramps.

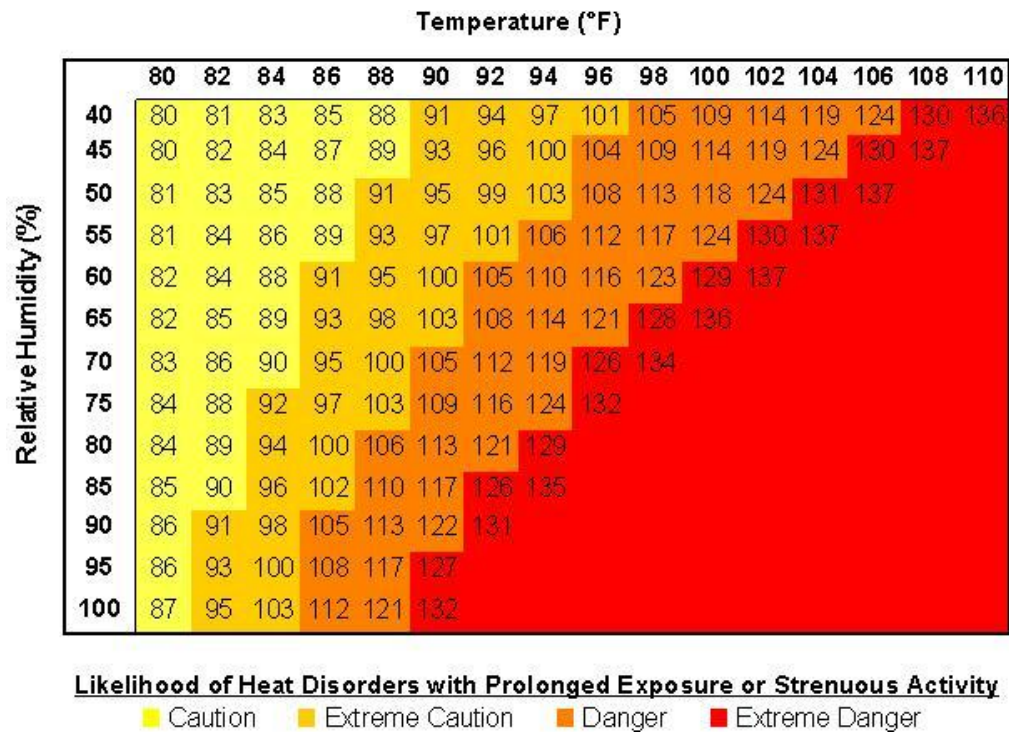
Heat exhaustion: occurs when people exercise heavily or work in a warm, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to decrease to vital organs. This results in mild shock.

Heatstroke/Sunstroke: LIFE THREATENING. The victim's temperature control system stops working as the body quits producing sweat. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.

Figure 37: Relationship of Heat Disorders to Heat Index (from National Weather Service)

Heat Index	Heat Disorder
130° +	heatstroke highly likely with continued exposure
105° - 130°	Heat cramps or heat exhaustion likely. Heatstroke possible with prolonged exposure or physical activity
90° - 105°	heatstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity
80° - 90°	fatigue possible with prolonged exposure and/or physical activity

Figure 38: Heat Index Derived from Humidity and Temperature (from the National Weather Service)



Extreme heat warnings.

The National Weather Service issues alerts related to extreme heat conditions in the Sangamon County area as shown in Figure 39.

Figure 39: National Weather Service Alerts (data from Illinois State Climatologist Office)

Type of Alert	Conditions
Heat Warning	when a maximum heat index of 115 or greater and a minimum heat index of 80 or greater is imminent or likely to occur in the next 12 to 24 hours
Heat Advisory	when a heat index of 105 or greater with a minimum heat index of 80 or greater is imminent or likely to occur in the next 12 to 24 hours
Heat Watch	if the heat warning criteria are expected to be reached in 12 to 48 hours
Heat Outlook	when a heat wave is several days away

Profile

The locations affected by extreme heat.

Extreme heat conditions generally occur throughout central Illinois during any single event. People in all of our communities are vulnerable to the dangers present during these conditions.

The extent of previous extreme heat events in Sangamon County.

Previous extreme heat events in Sangamon County are shown in Figure 40. Historical data is only available from 1996 to the present.

Figure 40: Extreme Heat Events in Sangamon County from Jan 1, 1996 – Dec 31, 2014 (from: National Climactic Data Center)

Dates	Temperature Ranges (degrees)	Heat Index Values (degrees)	Impact Reported
July 26 – July 27, 1997	95 - 100	105 - 115	heat related injuries, roads buckling
June 26 – June 28, 1998	middle to upper 90s	105 - 110	heat related injuries, roads buckling
July 20 – July 26, 1999	lower to middle 90s	105 - 110	heat related death and injuries
July 28 – July 31, 1999	lower to middle 90s	105 - 110	heat related injuries
July 22 – July 25, 2005	middle 90s to 100	105 - 115	heat related death and injuries
July 30 – Aug 2, 2006	94 - 100	105 - 110	heat related injuries
Aug 3 - Aug 4, 2010	middle 90s	105	none
Augt 9 - Aug 14, 2010	middle 90s	105	none
Aug 1 - Aug 2, 2011	middle 90s	110 - 115	none
June 29 - July 7, 2012	95 - 105	110	none

Previous occurrences of extreme heat.

As seen in Figure 40, extreme heat conditions in Sangamon County from January 1996 through December 2012 have occurred from late June to early August with late July to early August being the prime time. Extreme heat conditions have lasted from two days to nine days. In two cases deaths occurred due to the heat. In July 1999 a 62-year old woman was found in her Springfield home with all the windows closed and no fans or air conditioning. In July 2005 an elderly Springfield woman was found in her mobile home with malfunctioning air conditioning.

Probability of future extreme heat events.

In the 18 year period from January 1996 through December 2014, there were 8 years when at least one extreme heat event was recorded in Sangamon County. This indicates a 44% probability that an extreme heat event will occur in Sangamon County in any given year. This probability is consistent with the 2008 plan which indicated a 45% probability.

Assessing Vulnerability

Unlike other natural hazard events extreme heat does not damage buildings. The toll is on people and can lead to extreme medical conditions and death. Heat related injuries are a major concern with heatstroke being a severe medical condition that requires emergency medical treatment. The most vulnerable are the elderly, infants, young children, and people with chronic health problems. In central Illinois most deaths have occurred when people have been in a closed home with no air conditioning. There is a greater concern in urban areas because concrete and asphalt retain heat and release it at night, offsetting any relief that otherwise would have been felt. The loss of power can also exacerbate a serious situation.

FLOOD HAZARD

Description

What is a flood?

The standard definition of a flood as utilized in the Illinois Natural Hazard Mitigation Plan is: “A general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow of inland or tidal waters, (2) the unusual and rapid accumulation or runoff of surface waters from any source, or (3) mudflows or the sudden collapse of shoreline land”. A simpler definition is too much water in the wrong place. Since water circulates from clouds to the soil to streams to rivers to the oceans and returns to the clouds, a scientific definition of a flood is an imbalance in the “hydrological system” with more water flowing through the system than the system can draw off.

What types of floods occur in Sangamon County?

The majority of flooding in Sangamon County is riverine flooding, related to the overbanking of rivers and streams. Some flooding also occurs along the shoreline of Lake Springfield. Flash flooding unrelated to bodies of water also can result from heavy rainfall over a short period of time in areas where the ground is already saturated with water or there are large expanses of impermeable surfaces, such as urbanized areas developed with buildings, concrete sidewalks, and asphalt parking lots and roadways.

How are flood alerts issued?

The flood alert system utilized in Sangamon County is as follows:

Urban and small stream advisory or a flash flood watch: issued when heavy rains that could inundate streams or roadways are predicted. Flash floods can be very dangerous, occurring when water accumulates so rapidly that it cannot be absorbed by the ground or accommodated by storm sewers. Flood waters can move rapidly carrying away anything in its path and can create deep areas of standing water. During a flash flood watch residents should stay aware of the weather and take necessary precautions if conditions worsen.

Flash flood warning: issued when a flash flood is occurring. In addition to the information provided during a flash flood watch, areas of greatest hazard are identified. During periods of a warning, areas subject to flooding should be evacuated and avoided.

Flood warning: issued for the Sangamon River and South Fork of the Sangamon River when heavy rains occurring in areas to the east of Sangamon County will cause local flooding. These usually provide a couple of days lead time before flooding reaches our area and local weather forecasts will include this information along with predicted flood heights.

Watches and warnings are sent to radio and television stations by the National Weather Service in Lincoln, Illinois:

Local Television Stations

WAND Channel 17
WCIA Channel 3
WICS Channel 20
Cable Weather Channel 44

Local Radio Stations

WFMB 1450 AM
WTAX 1240 AM
WMAY 970 AM
NOAA Weather Radio– WXJ75 162.400kHz

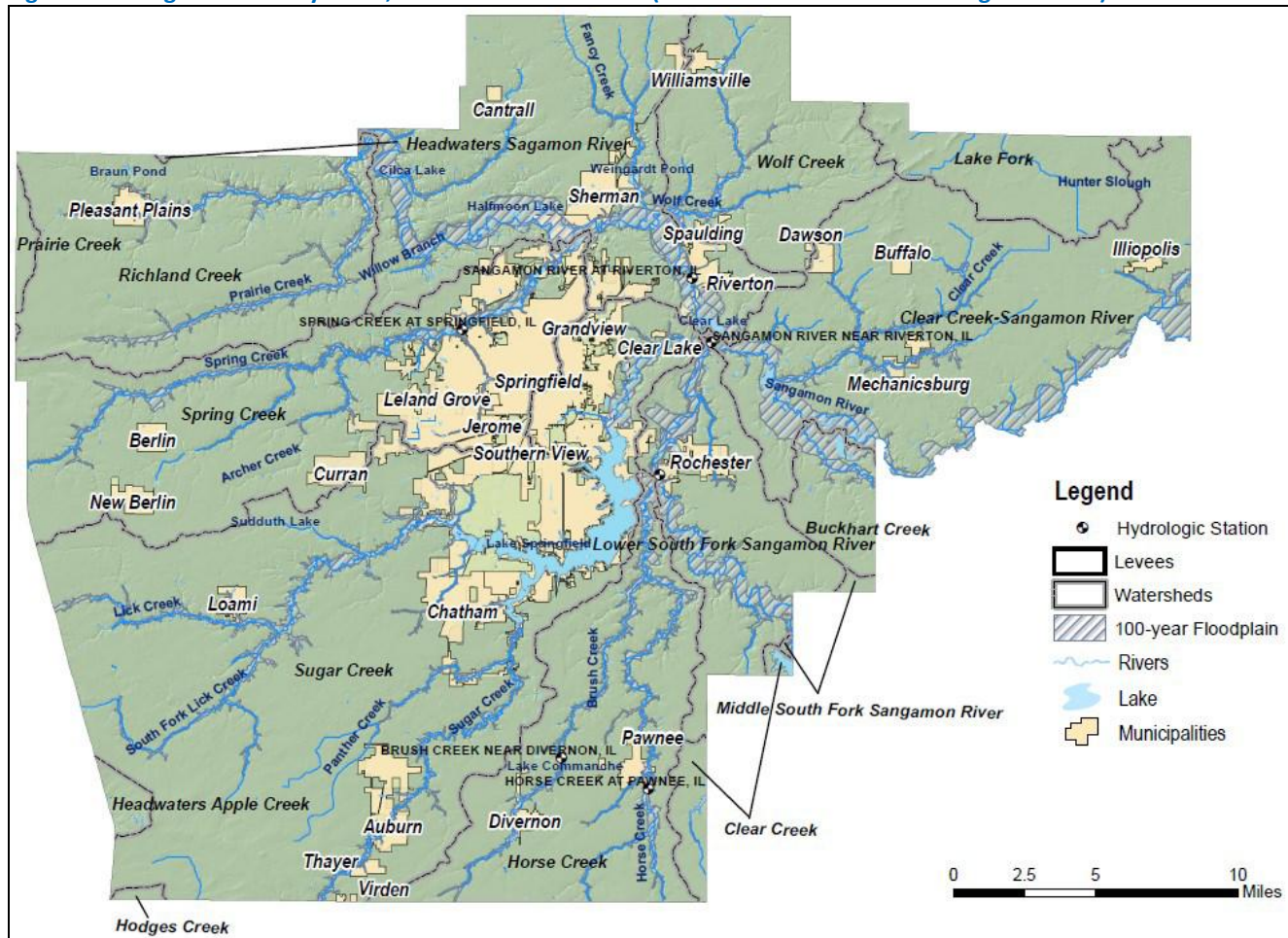
What are the benefits of floodplains?

When left undisturbed, a floodplain provides critical storage area for flood waters helping to reduce the height and flow of flooding. Floodplains also provide habitat for a diverse array of plants and animals, control erosion, filter runoff, and recharge groundwater. Particularly important is the fact that when there are no buildings in a floodplain, damage to human life and property by flooding is greatly diminished.

Profile

Sangamon County is rich with several lakes, rivers and watersheds that supply water as well as recreational opportunities for residents. A map of the county with the levees, watersheds, rivers, lakes and 100-year floodplain is provided in Figure 41.

Figure 41: Sangamon County Lakes, Rivers and Watersheds (source: Illinois Statewide Mitigation Plan)



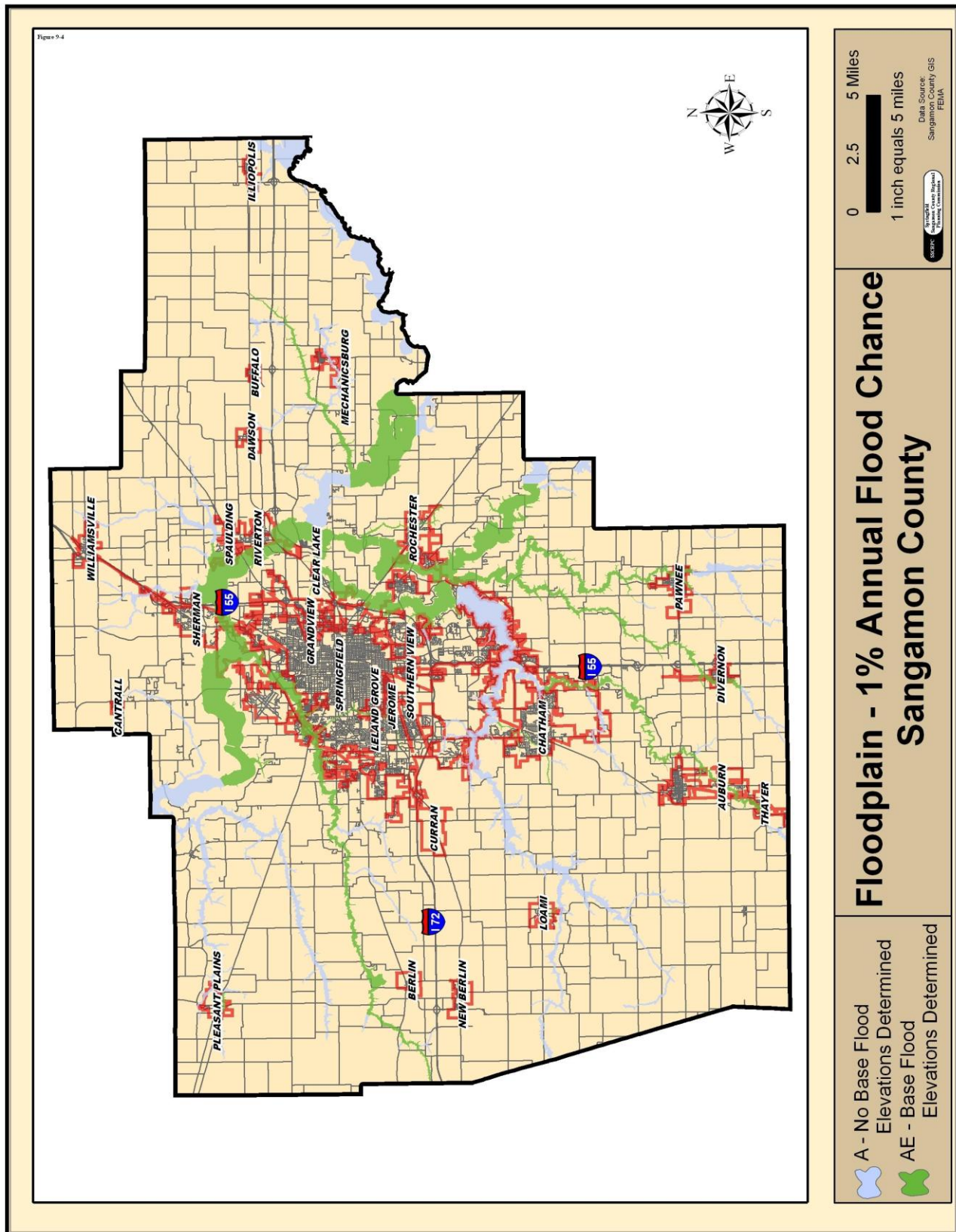
Approximately 10% of the area in Sangamon County is designated as a 100-year floodplain by the Federal Emergency Management Agency. The most recent Flood Insurance Rate Maps for the County are dated August 2, 2007. A large portion of the flood-prone area is in the unincorporated parts of the County although several communities are also vulnerable to flooding. The following chart in Figure 42 indicates which bodies of water are identified by FEMA with special flood hazard areas in each community. Communities that did not participate in the 2015 Plan update are included in the chart as flooding can affect the entire county and mitigation projects undertaken by one community can have an effect on a neighboring community.

Figure 42: Water Bodies Subject to Flooding in Each Community

Community	Water Bodies Subject to Flooding
Auburn	Sugar Creek
Buffalo	None
Cantrall	None
Chatham	Fox Creek, Polecat Creek, Panther Creek, Lake Springfield
Curran	None
Dawson	None
Divernon	Brush Creek
Illiopolis	None
Jerome	Jacksonville Branch
Leland Grove	Jacksonville Branch
Mechanicsburg	Griffiths Creek
New Berlin	None
Pawnee	Horse Creek, Henkle Branch
Pleasant Plains	Richland Creek, Branch of Richland Creek
Riverton	Sangamon River
Rochester	Black Branch, South Fork Sangamon River
Sherman	Sangamon River, Fancy Creek
Southern View	None
Spaulding	Sangamon River
Springfield	Lake Springfield, Lick Creek, Polecat Creek, Sugar Creek, Spring Creek, Sangamon River, Jacksonville Branch
Thayer	Sugar Creek
Williamsville	Wolf Creek
unincorporated Sangamon County	Black Branch, Brush Creek, Buckhart Creek, Cantrall Creek, Clear Creek, Fancy Creek, Horse Creek, Lick Creek, Panther Creek, Polecat Creek, Prairie Creek, Richland Creek, Spring Creek, Sugar Creek, Wolf Creek (and their tributaries), Sangamon River, South Fork of the Sangamon River, Lake Springfield

Figure 43 is a map of the floodprone areas of the County. The Flood Insurance Rate Map provides base flood elevations when a study has been performed for a particular body of water and these flood zones are designated AE. Flood zone A designates an area where a base flood elevation has not been established.

Figure 43: Floodplain – 1% Annual Flood Chance in Sangamon County



The extent of previous floods in Sangamon County.

Figures 44 and 45 provide data related to the extent of previous floods in Sangamon County. The Federal Emergency Management Agency has determined that there is a 1% chance of a flood occurring in any given year for areas of Sangamon County. These are designated as special flood hazard areas on the Flood Insurance Rate Maps and are commonly known as 100-year floodplains. This term, however, does mislead people to believe that a flood of that magnitude would only occur once in any 100-year period. To the contrary, Figure 44 shows the dates and heights of three “100-year” floods that have been recorded on the Sangamon River at the Old Route 36 Bridge in Riverton over the 101-year period from 1911-2014. Four additional floods rose to less than a foot below the 100-year flood level. High floods on the South Fork of the Sangamon River as recorded 100’ downstream of Horse Creek near Rochester are shown in Figure 45.

Figure 44: Historically High Flood Events on the Sangamon River at Riverton (100-year flood elevation = 537’)

Date	Elevation
5/19/1943	539.90
9/11/1926	538.53
5/14/2002	538.08
4/13/1994	536.66
4/11/1922	536.60
2/2/1916	536.41
6/6/1917	536.18
9/30/1911	535.60
6/9/2008	535.27
8/24/1915	535.23
4/12/1979	535.16

Figure 45: Historically High Flood Events on the South Fork of the Sangamon River at Rochester (100-year flood elevation = 545.5’)

Date	Elevation
5/13/2002	543.85
4/14/1994	543.70
4/14/1979	543.22
2/26/1985	542.09
9/18/2008	541.47
6/18/1970	541.26
4/21/2013	541.09
11/22/1985	540.44
1/23/1974	540.43
5/11/1996	540.22
9/27/1993	540.15
4/25/1973	540.14

Previous flood occurrences.

In May 2002, major flooding occurred in the County after excessive rainfall on already saturated ground. The South Fork of the Sangamon River reached the highest level in a 50 year period. The Sangamon River exceeded the 100-year flood elevation, although it did not reach the 1943 height of five feet above the 100-year flood elevation. Many homes in Riverton, Divernon, Pawnee, and unincorporated areas of the County received substantial damage when they were inundated with flood water for up to five days. Some buildings that were not located in a floodplain were also damaged due to the accumulation of water in areas where the ground was saturated. Major and minor roads were made impassable for varying amounts of time when I-55 flooded north of Divernon at Brush Creek, Mechanicsburg Road flooded east of the I-72 interchange at Sugar Creek, Peoria Road flooded south of Sherman at the Sangamon River, and several country roads flooded in low-lying areas. The widespread destruction resulted in Presidential Disaster Declaration 1416. (Other Presidential Disaster Declarations due to flooding were issued in 1982, 1994, and 1996.) After the 2002 flood, 36 properties that had

received substantial damage were acquired with hazard mitigation grants in Divernon, Pawnee, Riverton, and unincorporated Sangamon County.

In June 2008 major flooding again occurred with the Sangamon River cresting at 535.27 feet at Riverton and the South Fork of the Sangamon River cresting at 539.95 feet at Rochester on June 9. Only a few structures incurred damage because over 100 buildings have been removed from the floodplain throughout Sangamon County over the past two decades through acquisition projects and public health code enforcement and new buildings have not been constructed in special flood hazard areas due to enforcement of flood ordinances.

Probability of future flooding events.

Future flooding events are likely to occur in Sangamon County. FEMA calculates the elevation of a flood that has a 1% chance in any given year of occurring. Land that is located in a designated floodplain will flood at some point. Unlike other natural hazards, the properties that are affected by riverine and lake flooding are mapped so the risk is more easily pinned down. Figure 43 shows the areas of the County that are at risk of flooding. Some water bodies have a base flood elevation, or projected height of a 1% chance flood (100-year flood), determined. These are differentiated on this map from those areas of floodplain where the base flood elevation is not determined. The graphic depiction only shows the 1% percent chance flood. Flooding can reach elevations higher than shown and flash flooding due to heavy rainfall can create water accumulation in areas not designated as floodplains. Based on the four Presidential Disaster Declarations over the 26-year period from 1981 – 2007 the probability of a major flood occurring in Sangamon County in any given year is 15%.

Assessing Vulnerability

The following communities in Sangamon County have some floodplain according to the countywide Flood Insurance Rate Map effective August 2, 2007 provided by the Federal Emergency Management Agency.

Auburn, Chatham, Divernon, Jerome, Leland Grove, Mechanicsburg, Pawnee, Pleasant Plains, Riverton, Rochester, Sherman, Spaulding, Springfield, Thayer, Williamsville, and unincorporated Sangamon County.

Using the digitized Flood Insurance Rate Map overlay available via the Sangamon County GIS mapping system, all properties having a building shown in the floodplain were identified and the market values of the buildings were calculated using the property tax assessment records. Because the flood map is a graphic representation of the 1% chance flood and is not based on actual ground elevations, the data gathered is simply an estimate. The only way to know the exact number of buildings actually in the floodplain would be to determine the elevation of each of the buildings indicated below. Some property owners have obtained elevation certificates and received a Letter of Map Amendment (LOMA) from FEMA. A LOMA provides documentation that a particular building or parcel of land is above the base flood elevation and therefore is not subject to the 100-year flood. These buildings have been omitted from data in Figure 46.

The vulnerability of each structure cannot be established without building elevations. Even factoring in damage to contents, the actual dollar loss during a single flood event would most likely be less than shown in Figure 46. If funding becomes available, the Sangamon County GIS Department would like to implement a project to determine the elevation of all buildings in the floodplain.

Figure 46: Estimate of Buildings in a 100-Year Floodplain

Community	Buildings in Floodplain (2008)	Total Value of Buildings Exposed to Damage (2008)	Buildings in Floodplain (2014)	Total Value of Buildings Exposed to Damage (2014)
Auburn	8	\$1,142,883	37	\$2,364,951
Chatham	43	\$4,409,976	68	\$6,273,642
Divernon	53	\$2,557,380	98	\$3,625,698
Jerome	15	\$1,193,775	23	\$1,378,227
Leland Grove*	---	---	27	\$6,334,860
Mechanicsburg*	---	---	1	\$0
Pawnee	41	\$1,863,918	62	\$2,504,067
Pleasant Plains***	18	\$1,354,875	26	\$1,666,350
Riverton**	18	\$1,376,514	37	\$2,312,106
Rochester	31	\$3,278,490	50	\$4,920,369
Sherman	---	---	0	\$0
Spaulding**	---	---	5	\$956,364
Springfield	247	\$51,039,669	822	\$145,540,746
Thayer***	19	\$977,601	35	\$1,571,445
Sangamon County	450	\$55,303,158	271	\$89,975,592
TOTAL	943	\$124,498,239	1562	\$269,424,417

*Did not participate in 2008 Plan

** Did not meet 2015 participation requirements

***Did not participate in 2015 Plan update

Flood insurance.

The National Flood Insurance Program (NFIP) is an asset to property owners for which the land is in the floodplain. Figure 47 is the list of all communities in the planning area and the date the communities began participating in the National Flood Insurance Program (NFIP).

Figure 47: Participation in the NFIP

Community	Date	Community	Date
Auburn	08/19/85	Riverton**	12/01/81
Chatham	09/02/81	Rochester	06/15/82
Divernon	05/15/84	Sherman	11/16/83
Illioopolis**	04/17/09	Spaulding**	05/13/04
Jerome	11/16/83	Springfield	02/02/82
Leland Grove	12/16/82	Thayer*	05/03/82
New Berlin	03/14/14	Williamsville	09/14/95
Pawnee	05/03/82	Sangamon County	01/06/83
Pleasant Plains*	09/02/81		

* Did not participate in 2015 Plan.

** Did not meet the 2015 participation requirements.

Repetitive loss.

Repetitive loss properties must be addressed in all plans approved or updated after October 1, 2008 by analyzing the data related to structures within the National Flood Insurance Program that have been repetitively damaged by floods. FEMA defines a “repetitive loss structure” as a flood-insured structure that has received two or more flood insurance claim payments of more than 25% of the market value within any ten year period. The multi-jurisdictional area currently has 17 non-mitigated properties as of November 30, 2014. The amount of total county-wide claims paid for building damage and contents coverage is \$855,708.81.

Figure 48: Repetitive Loss Data (Sources: IEMA)

Community Number	Community Name	Type of Properties	Properties	Losses	Building Payments	Contents Payments
170602	Pawnee	SFR	1	2	0	5,054.22
170603	Riverton	SFR	1	2	13,110.27	7,320.39
170604	City of Springfield	4 SFR; 1 Non	5	12	332,866.55	30,146.91
170798	Pleasant Plains	SFR	1	2	7,994.81	0.00
170912	Sangamon County - unincorp	SFR	7	16	179,720.46	63,942.48
170925	Leland Grove	SFR	2	7	200,949.73	14,602.99
		TOTALS	17	41	734,641.82	121,066.99

Floods and development trends.

Each community in Sangamon County that is subject to flooding participates in the National Flood Insurance Program and has adopted a floodplain ordinance with the exception of Mechanicsburg. Enforcing this ordinance provides protection to any new structures built in a floodprone area. The Sangamon County Subdivision Ordinance requires any floodprone area in a new subdivision to be set aside as open space. Other floodprone communities with subdivision ordinances also include specific regulations to prohibit development in the floodplain.

MINE SUBSIDENCE HAZARD

Description

What is mine subsidence?

According to “Approaches to Mine Subsidence in Four U.S. Communities” mine subsidence is:

“the collapse of the ground surface over areas where coal or mineral ores were removed. Subsidence causes ground surface deformation resulting in a range of problems from deep holes with vertical sides that pose physical threats to people, to more subtle forms of subsidence characterized by sagging of the ground surface producing more damage, over larger areas, affecting nearly all man-made structures.

Subsidence is an onerous problem. The underground mine lays dormant and forgotten until, one day, failure within the mine has progressed upward far enough that it reaches the ground surface. Subsidence damages, therefore, tend to be sudden and unexpected. History has demonstrated that nearly any undermined area regardless of depth, where significant volumes of coal or mineral ore were extracted, is susceptible to subsidence.”

There are two types of subsidence. Pit subsidence creates a hole 6 to 8 feet deep and 2 to 40 feet across (although most are less than 16 feet in diameter). Sag subsidence creates a depression over a broad area up to several hundred feet long and a few hundred feet wide.

What are the consequences of mine subsidence?

The consequences of damage to buildings resulting from mine subsidence are identified in the publication

Mine Subsidence: A Guidebook for Local Officials as follows:

- A homeowner hears popping, creaking, and cracking sounds.
- Cracks start to appear in the foundation and exterior walls.
- Sections of a building begin to tilt. The doors swing open and shut.
- Windows begin to stick, jam, and even break.
- A hairline crack appears in the basement or garage floor and begins to widen.
- Separations between walls and floors develop.
- The foundation starts pulling away from the frame of the house.
- Long continuous cracks in the ground are seen.

Subsidence can also buckle roadways and break waterlines, gas lines, telephone lines, and sewer lines. Damage can occur adjacent to undermined lands as well.

Mining in Sangamon County

Mining in Sangamon County has been prevalent with the first coal mine in Springfield beginning operations in 1867 and the last one being abandoned in 1964. A total of 53 coal mines have operated in Sangamon County. It appears that most, if not all, of these mines used the room-and-pillar technique which leaves pillars to support the mine roof after 30-80% of the coal has been extracted. Unfortunately the pillars do not provide permanent structural support and subsidence can occur when:

- pillars become weak and fail
- the floor beneath the pillars fail, causing the pillars to sink
- the mine roof collapses

Profile

The locations affected by mine subsidence.

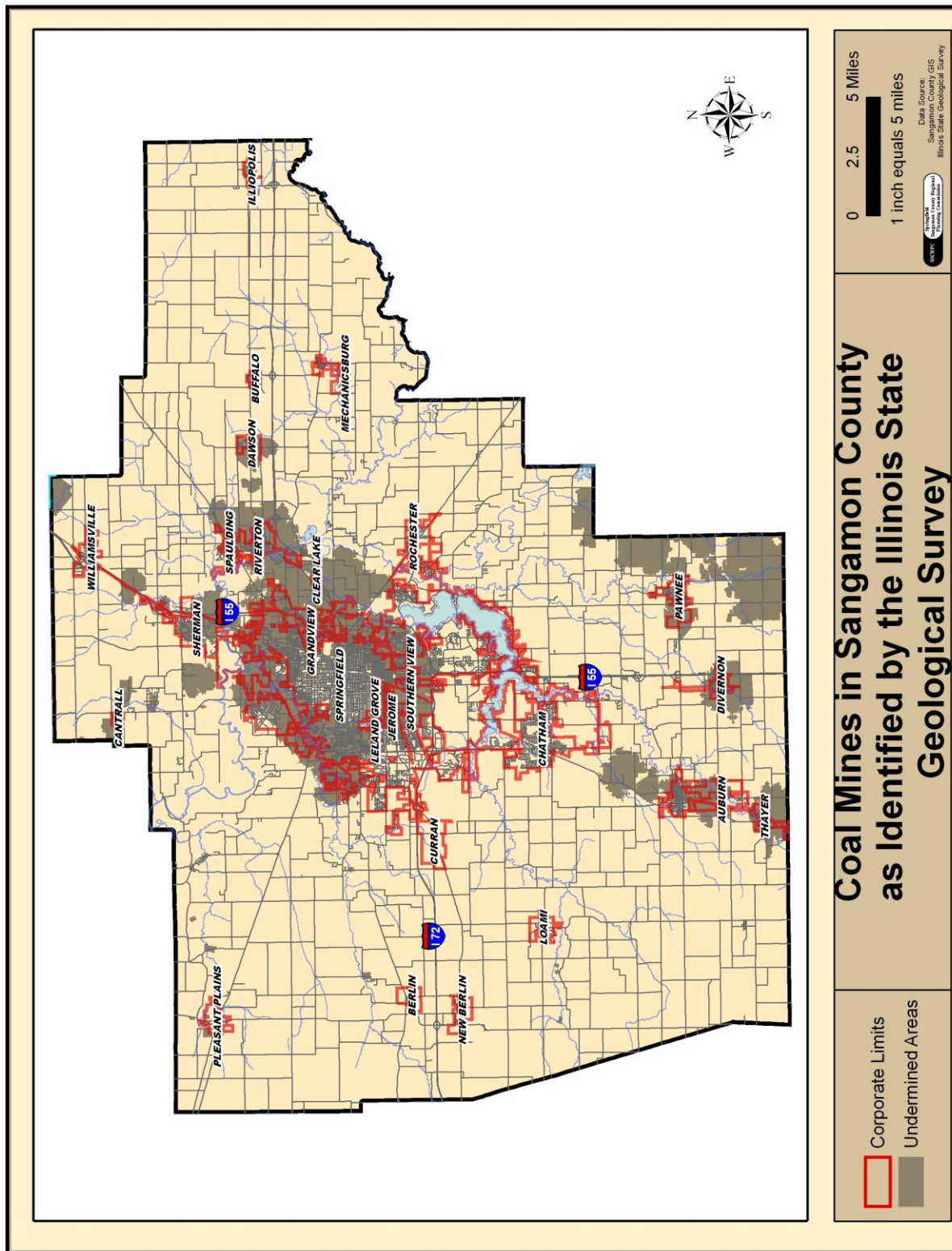
State law required all mine owners to record maps of coal mines. However, this law was not strictly enforced because mine safety was a bigger concern for regulators. Consequently, the mines identified by the Illinois State Geological Survey may not be all inclusive or necessarily accurate.

As seen in Figure 49, the known coal mines in Sangamon County are concentrated in the central area from north to south. Mines were often located in proximity to cities, which offered labor and a market. At times towns were established near coal mines to provide housing for miners. Therefore, several participating communities are located near or directly over mines: Auburn, Cantrall, Chatham, Dawson, Divernon, Jerome, Pawnee, Pleasant Plains, Riverton, Sherman, Southern View, Springfield, Thayer, Williamsville, and unincorporated Sangamon County.

The extent of previous occurrences of mine subsidence in Sangamon County.

There is no database of previous occurrences of mine subsidence in Sangamon County. However, there have been many instances when damage has occurred, although exact costs related to specific structures are not available. Vertical settlement of a structure is usually 2-4 feet.

Figure 49: Coal Mines in Sangamon County



Previous occurrences of mine subsidence.

Figure 51 shows places in the vicinity of Springfield where mine subsidence occurred from 1867 -1998 based on information available to the IDNR Office of Mines and Minerals. (It is believed that the number of subsidence events is underestimated on this map.) Approximately one-half of the data was collected from reports prepared prior to 1930. The remaining data is based on aerial imagery or direct observation and measurements.

Property taxes in Sangamon County are reduced on property that has been damaged by mine subsidence although no centralized records are maintained to identify these properties. Anecdotal information suggests that homes in Divernon and Riverton have been given reduced taxes because of subsidence damage.

The Illinois Mine Subsidence Insurance Fund was established in 1979 when mine subsidence insurance was made available through insurance companies for the first time in Illinois. Figure 50 provides a breakdown of data from the 2008 Plan and for the period of 2008 – 2015.

Since its inception through 2015, the Fund reports 1,398 mine subsidence claims have been filed for property in Sangamon County. Of these, 349 were confirmed as losses due to mine subsidence (318 residential and 31 commercial). The total amount paid was \$41.0 million with \$36.0 million for residential buildings and \$5 million for commercial buildings.

Table 50: Sangamon County Mine Subsidence Claims

TYPE OF CLAIM	1979 -2008			2008-March 31, 2015			2008-2015	
	<i>Confirmed # of Claims</i>	<i>Claims Paid (in millions)</i>	<i>Average Paid Per Structure</i>	<i>Confirmed # of Claims</i>	<i>Claims Paid (in millions)</i>	<i>Average Paid Per Structure</i>	<i>Total # of Claims</i>	<i>Total Claims Paid (in millions)</i>
Residential	220	\$18.8	\$85,455	98	\$17.2	\$175,510	318	\$36.0
Commercial	21	\$2.0	\$95,238	10	\$3.0	\$300,000	31	\$5.0
TOTAL	241	\$20.8		108	\$20.0		349	\$41.0

(Source: Illinois Mine Subsidence Insurance Fund)

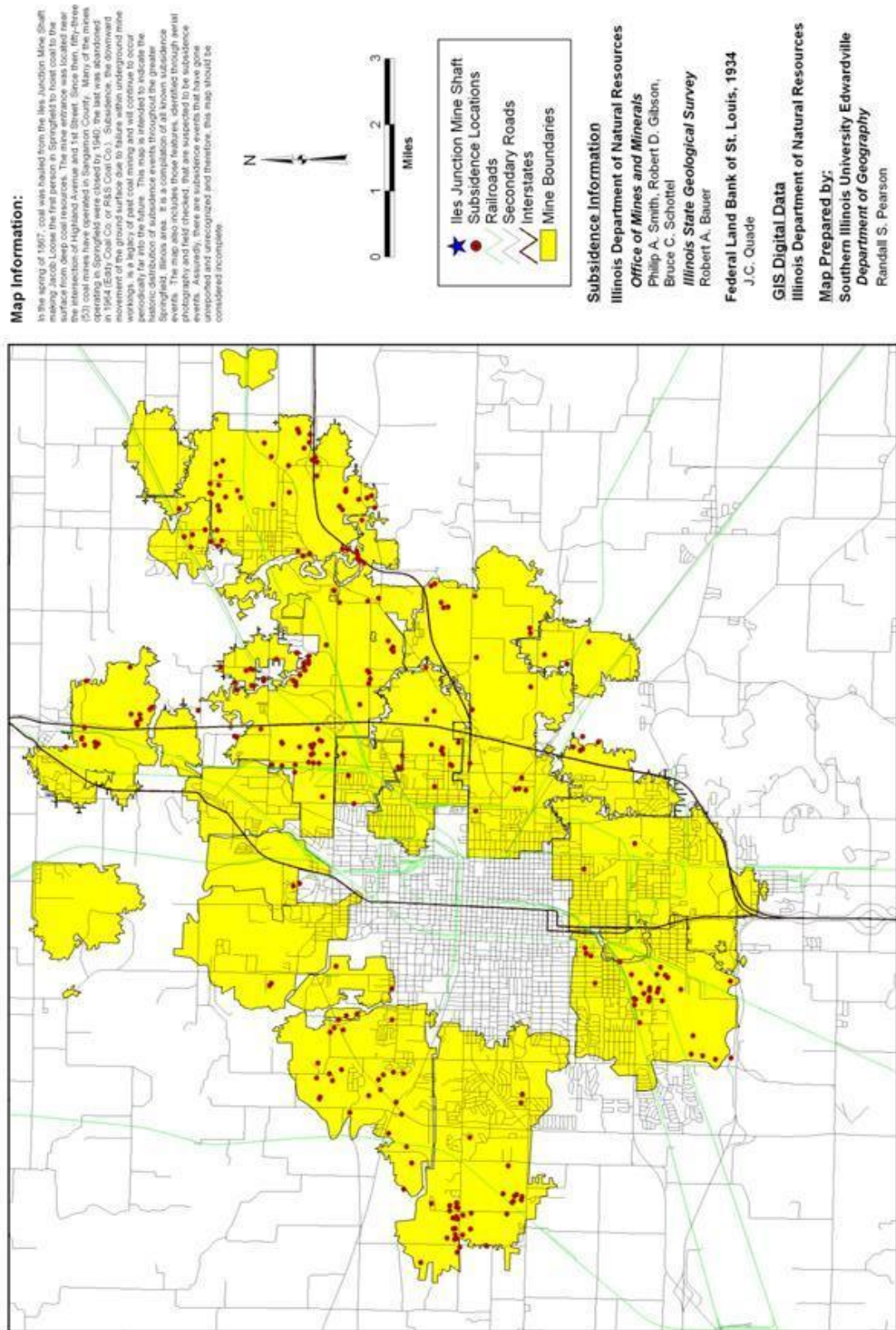
As of July 1, 2011 both residential and commercial structures can be insured for mine subsidence up to \$750,000. Condominium units may be limited on insurance coverage depending on the insurance requirements for the association and unit owners established in the bylaws of the condominium association. If a commercial master policy is issued to the condominium association, the limit on the entire structure would be subject to the \$350,000 maximum for commercial policies. If each individual living unit owner purchases coverage for their own unit, then the residential policy limit applies.

Probability of future mine subsidence events.

With no data available on mine subsidence events in Sangamon County, a probability of occurrence cannot be calculated. However, with coal mines under 94.4 square miles of land in the planning area there is a high likelihood that subsidence will continue to occur. Robert Gibson with the IDNR, Office of Mines and Minerals believes that on average, three mine subsidence events are experienced each year in Sangamon County.

Figure 51: Historic Distribution of Subsidence

Historic Distribution of Known and Suspected Subsidence Events Springfield, Illinois 1867-1998



Assessing Vulnerability

There are many areas in Sangamon County that have been mined leaving homes, businesses, critical facilities, and infrastructure vulnerable to damage from subsidence. Generally, when a subsidence event occurs there is a relatively small area (a few acres) affected compared to other natural hazards. Besides doing damage to buildings, there is also the accompanying decrease in property values for those properties affected, as well as nearby properties.

If there is a mined out area subsidence will occur, but the location or timing of mine subsidence cannot be predicted. The length of a subsidence event is also unpredictable and can happen quickly over a few hours or days or slowly over years.

SEVERE STORM HAZARD

Description

What are severe storms?

Severe storms in Sangamon County are thunderstorms with winds of 50 knots (58 mph) or more or thunderstorms with damaging hail.

(from: Federal Emergency Management Agency)

“All thunderstorms are dangerous. Every thunderstorm produces lightning. In the United States an average of 300 people are injured and 80 people are killed each year by lightning. Although most lightning victims survive, people struck by lightning often report a variety of long-term, debilitating symptoms.”

Facts about thunderstorms:

- Thunderstorms may occur singly, in clusters, or in lines.
- Some of the most severe occur when a single thunderstorm affects one location for an extended time.
- Thunderstorms typically produce heavy rain for a brief period, anywhere from 30 minutes to an hour.
- Warm, humid conditions are highly favorable for thunderstorm development.
- About 10% of thunderstorms are classified as severe – one that produces hail at least $\frac{3}{4}$ of an inch in diameter, has winds of 58 miles per hour or higher, or produces a tornado.

Facts about lightning:

- Lightning’s unpredictability increases the risk to individuals and property.
- Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.
- “Heat lightning” is actually lightning from a thunderstorm too far away for thunder to be heard.
- Most lightning deaths and injuries occur when people are caught outdoors in the summer months during the afternoon and evening.

Facts about hail:

- As a thunderstorm grows, updrafts will push water droplets into a region of the atmosphere which is below the freezing temperature. These water droplets collide with other droplets just before freezing, which is why some hailstones can grow to several inches in diameter. The stronger the updraft associated with a thunderstorm, the larger the hail associated with the storm will be.

Figure 52: Consequences of Severe Storms

Element	Consequence
Rain	flooding, poor visibility, auto accidents, sewer backup, crop damage
Wind	building damage, downed power lines, auto accidents, tree damage, crop damage
Lightning	injury, death, fire, power outage, damage to electronics/appliances
Hail	building damage, vehicle damage, crop damage

Profile

The locations affected by severe storms.

Severe storms can occur anywhere in Sangamon County and generally hit more than one location per event.

The extent of previous occurrences of severe storms in Sangamon County.

Figure 53 presents data on thunderstorms with high winds that have occurred in Sangamon County over the 59-year period from January 1, 1955 through April 30, 2014. During 50 of these years there was at least one thunderstorm with severe winds. Wind speeds are available for 95 of these thunderstorms and ranged from 50 knots to 95 knots. The thunderstorm with 95 knot wind speeds occurred in 1957 and produced the one F4 tornado that hit Sangamon County during this time period. The winds associated with thunderstorms in Sangamon County have otherwise averaged 56 knots (about 64.4 mph).

Figure 53: Thunderstorm and High Wind Events in Sangamon County

248 THUNDERSTORM & HIGH WIND event(s) were reported in Sangamon County, Illinois between 01/01/1955 and 4/30/2014.				
<i>From: National Climatic Data Center</i>				
Year	Location*	Date	Time	Magnitude
1955	1 SANGAMON	5/26/1955	1:33 PM	59 kts.
1956	2 SANGAMON	6/26/1956	2:12 PM	50 kts.
	3 SANGAMON	8/12/1956	9:30 PM	0 kts.
	4 SANGAMON	6/11/1957	1:15 PM	66 kts.
1957	5 SANGAMON	6/14/1957	2:05 PM	95 kts.
	6 SANGAMON	7/13/1957	7:40 PM	0 kts.
	7 SANGAMON	7/13/1957	7:40 PM	50 kts.
	8 SANGAMON	9/1/1957	1:30 PM	0 kts.
1959	9 SANGAMON	9/26/1959	4:00 PM	65 kts.
1961	10 SANGAMON	6/6/1961	3:08 PM	53 kts.
	11 SANGAMON	7/22/1961	4:16 PM	58 kts.
1962	12 SANGAMON	4/30/1962	12:30 PM	0 kts.
	13 SANGAMON	7/11/1962	6:00 PM	60 kts.
	14 SANGAMON	7/13/1962	1:17 PM	74 kts.
1963	15 SANGAMON	4/17/1963	6:49 PM	50 kts.
	16 SANGAMON	4/19/1963	3:00 AM	57 kts.
1964	17 SANGAMON	4/21/1964	5:00 AM	0 kts.
	18 SANGAMON	6/21/1964	5:00 AM	51 kts.
1965	19 SANGAMON	6/20/1965	6:05 PM	0 kts.
	20 SANGAMON	7/17/1965	3:45 AM	0 kts.
	21 SANGAMON	8/27/1965	8:30 AM	0 kts.
	22 SANGAMON	8/30/1965	8:35 PM	0 kts.
1966	23 SANGAMON	7/5/1966	9:35 PM	52 kts.
1967	24 SANGAMON	4/16/1967	9:40 PM	56 kts.
	25 SANGAMON	4/16/1967	10:41 PM	58 kts.
	26 SANGAMON	4/21/1967	1:50 PM	0 kts.
	27 SANGAMON	7/10/1967	3:50 PM	53 kts.
1969	28 SANGAMON	6/28/1969	8:00 PM	55 kts.
	29 SANGAMON	8/9/1969	2:12 AM	0 kts.
	30 SANGAMON	10/10/1969	8:13 PM	0 kts.
	31 SANGAMON	10/10/1969	8:20 PM	0 kts.

1970	32 SANGAMON	5/9/1970	1:05 PM	53 kts.
	33 SANGAMON	6/14/1970	2:30 PM	51 kts.
	34 SANGAMON	7/19/1970	4:50 PM	0 kts.
	35 SANGAMON	7/31/1970	2:34 PM	0 kts.
1972	36 SANGAMON	9/28/1972	9:30 PM	53 kts.
1973	37 SANGAMON	3/31/1973	3:57 PM	50 kts.
	38 SANGAMON	6/18/1973	4:45 PM	70 kts.
1974	39 SANGAMON	3/4/1974	4:30 PM	0 kts.
	40 SANGAMON	3/29/1974	2:00 PM	65 kts.
	41 SANGAMON	4/21/1974	3:43 PM	50 kts.
	42 SANGAMON	5/30/1974	2:15 PM	0 kts.
	43 SANGAMON	7/28/1974	3:24 PM	50 kts.
1975	44 SANGAMON	5/26/1975	12:30 PM	0 kts.
	45 SANGAMON	5/30/1975	1:25 PM	0 kts.
	46 SANGAMON	11/9/1975	10:00 PM	0 kts.
	47 SANGAMON	11/9/1975	10:01 PM	51 kts.
	48 SANGAMON	11/29/1975	10:56 PM	66 kts.
1977	49 SANGAMON	5/4/1977	4:55 PM	74 kts.
	50 SANGAMON	8/6/1977	4:00 PM	0 kts.
	51 SANGAMON	10/1/1977	1:20 AM	0 kts.
1978	52 SANGAMON	5/12/1978	4:23 PM	50 kts.
	53 SANGAMON	5/12/1978	5:14 PM	57 kts.
	54 SANGAMON	7/26/1978	3:25 PM	50 kts.
	55 SANGAMON	8/27/1978	2:45 PM	0 kts.
1980	56 SANGAMON	4/8/1980	12:00 AM	52 kts.
	57 SANGAMON	9/6/1980	6:38 PM	0 kts.
1981	58 SANGAMON	4/3/1981	11:25 PM	0 kts.
	59 SANGAMON	6/15/1981	6:48 PM	0 kts.
1982	60 SANGAMON	4/16/1982	6:35 PM	56 kts.
	61 SANGAMON	6/7/1982	10:35 PM	0 kts.
1983	62 SANGAMON	5/1/1983	7:00 PM	0 kts.
1986	63 SANGAMON	7/29/1986	2:14 AM	61 kts.
	64 SANGAMON	7/29/1986	2:40 AM	0 kts.
	65 SANGAMON	7/31/1986	3:06 AM	52 kts.
	66 SANGAMON	7/31/1986	3:40 AM	0 kts.
	67 SANGAMON	7/31/1986	3:45 AM	0 kts.
1987	68 SANGAMON	5/21/1987	8:57 PM	0 kts.
	69 SANGAMON	8/3/1987	7:30 PM	0 kts.
	70 SANGAMON	8/3/1987	8:12 PM	0 kts.
	71 SANGAMON	8/16/1987	8:32 PM	70 kts.
1988	72 SANGAMON	4/5/1988	6:36 PM	52 kts.
	73 SANGAMON	11/15/1988	10:00 PM	0 kts.
1989	74 SANGAMON	5/25/1989	12:30 AM	0 kts.
1990	75 SANGAMON	5/9/1990	12:30 PM	0 kts.
1991	76 SANGAMON	10/4/1991	5:00 PM	58 kts.
	77 SANGAMON	12/8/1991	3:00 PM	0 kts.
1992	78 SANGAMON	7/2/1992	3:30 PM	0 kts.
	79 SANGAMON	7/2/1992	8:00 PM	0 kts.
	80 SANGAMON	7/3/1992	12:35 AM	52 kts.
	81 SANGAMON	7/9/1992	5:38 PM	0 kts.
	82 SANGAMON	7/9/1992	5:54 PM	0 kts.
	83 SANGAMON	9/9/1992	5:40 PM	0 kts.

1993	84 Divernon	8/19/1993	4:00 PM	N/A
1994	85 Riverton	4/15/1994	3:34 AM	N/A
	86 Pawnee	4/26/1994	8:34 PM	N/A
	87 Pleasant Plains	6/16/1994	4:25 PM	N/A
	88 Pleasant Plains	6/23/1994	2:12 PM	N/A
	89 Pleasant Plains	7/2/1994	11:05 AM	N/A
	90 Cantrall	7/20/1994	5:25 PM	N/A
	91 Springfield	7/20/1994	5:40 PM	N/A
1995	92 Chatham	5/16/1995	7:30 PM	N/A
	93 Divernon	6/8/1995	7:22 AM	N/A
	94 Divernon	6/8/1995	8:15 AM	N/A
	95 Pleasant Plains	6/21/1995	8:10 PM	N/A
1996	96 Illiopolis	4/19/1996	6:17 PM	0 kts.
	97 Glenarm	5/8/1996	11:20 AM	70 kts.
1997	98 Springfield Airport	4/5/1997	3:15 PM	50 kts.
	99 Dawson	4/5/1997	3:40 PM	0 kts.
	100 Pleasant Plains	8/3/1997	11:15 PM	0 kts.
	101 New Berlin	8/15/1997	2:55 AM	0 kts.
	102 Pleasant Plains	3/27/1998	6:25 PM	0 kts.
1998	103 Glenarm	5/22/1998	8:30 AM	0 kts.
	104 Chatham	6/4/1998	6:58 PM	0 kts.
	105 Pleasant Plains	6/11/1998	2:00 PM	61 kts.
	106 Farmingdale	6/18/1998	6:40 PM	61 kts.
	107 Williamsville	6/28/1998	7:00 PM	0 kts.
	108 Countywide	6/29/1998	4:10 PM	61 kts.
	109 Divernon	7/22/1998	2:20 PM	0 kts.
	110 Pleasant Plains	11/10/1998	4:35 AM	55 kts.
1999	111 Pleasant Plains	4/8/1999	8:10 PM	0 kts.
	112 Divernon	6/1/1999	6:01 PM	61 kts.
	113 Riverton	6/4/1999	4:12 PM	61 kts.
	114 Auburn	6/8/1999	1:45 PM	0 kts.
	115 Pleasant Plains	8/12/1999	8:00 PM	0 kts.
	116 Auburn	8/12/1999	9:10 PM	52 kts.
	117 Pleasant Plains	8/23/1999	6:20 PM	0 kts.
2000	118 Chatham	4/20/2000	5:03 AM	0 kts.
	119 New Berlin	5/26/2000	10:50 PM	0 kts.
	120 Illiopolis	6/14/2000	11:35 AM	0 kts.
	121 Springfield	6/20/2000	6:45 PM	0 kts.
	122 Springfield	6/23/2000	5:35 PM	0 kts.
	123 Auburn	7/5/2000	4:15 PM	0 kts.
	124 Springfield	8/17/2000	5:15 PM	0 kts.
	125 Riverton	8/17/2000	6:20 PM	0 kts.
2001	126 Springfield	2/9/2001	8:20 AM	50 kts.
	127 Springfield	5/22/2001	12:00 PM	50 kts.
	128 Chatham	5/26/2001	12:30 PM	50 kts.
	129 Springfield Airport	7/4/2001	9:30 PM	50 kts.
	130 Springfield Airport	7/17/2001	4:02 PM	54 kts.
	131 Springfield	7/23/2001	4:05 PM	52 kts.
	132 Springfield	8/2/2001	5:45 PM	50 kts.
	133 New City	10/24/2001	11:24 AM	50 kts.
2002	134 Pleasant Plains	4/19/2002	7:00 PM	64 kts.
	135 Mechanicsburg	6/4/2002	5:45 PM	50 kts.

	136 Buffalo	7/26/2002	10:05 PM	50 kts.
	137 Sherman	8/19/2002	4:53 AM	52 kts.
2003	138 Springfield	4/24/2003	5:45 PM	52 kts.
	139 Chatham	5/9/2003	7:10 PM	60 kts.
	140 Springfield Arpt	6/29/2003	5:05 PM	55 kts.
	141 Andrew	7/8/2003	6:17 PM	60 kts.
	142 Springfield Airport	7/8/2003	10:05 PM	52 kts.
	143 Springfield	7/21/2003	3:30 AM	52 kts.
2004	144 Springfield	4/20/2004	11:30 PM	50 kts.
	145 Countywide	5/24/2004	11:05 PM	69 kts.
	146 Springfield	5/31/2004	6:30 PM	52 kts.
	147 Chatham	8/17/2004	8:30 PM	50 kts.
	148 Springfield	8/27/2004	7:10 PM	52 kts.
	149 Springfield	10/29/2004	11:30 PM	50 kts.
2005	150 Springfield	6/8/2005	2:33 PM	50 kts.
	151 Chatham	6/8/2005	2:35 PM	55 kts.
	152 Springfield	6/8/2005	2:50 PM	50 kts.
	153 Chatham	6/13/2005	5:23 PM	60 kts.
	154 Chatham	6/13/2005	10:00 PM	50 kts.
	155 Curran	8/18/2005	9:30 PM	55 kts.
	156 Salisbury	11/5/2005	9:00 PM	50 kts.
	157 Springfield	11/28/2005	12:50 AM	50 kts.
2006	158 Auburn	1/2/2006	7:20 AM	60 kts.
	159 New Berlin	3/12/2006	8:04 PM	60 kts.
	160 Auburn	3/12/2006	8:30 PM	52 kts.
	161 Loami	3/12/2006	8:30 PM	50 kts.
	162 Springfield	3/12/2006	8:30 PM	58 kts.
	163 Auburn	3/13/2006	2:46 AM	60 kts.
	164 Pawnee	3/13/2006	3:20 AM	60 kts.
	165 Springfield	4/2/2006	5:01 PM	52 kts.
	166 Springfield	4/16/2006	12:45 PM	55 kts.
	167 Springfield Airport	4/18/2006	11:04 PM	51 kts.
	168 Pleasant Plains	5/24/2006	2:30 PM	52 kts.
	169 Cantrall	7/19/2006	4:03 PM	56 kts.
	170 Chatham	7/19/2006	4:44 PM	52 kts.
	171 New Berlin	8/18/2006	8:20 PM	50 kts.
2007	172 Divernon	5/15/2007	12:07PM	52 kts.
	173 Lanesville	5/15/2007	12:33 PM	52 kts.
	174 Springfield	10/18/2007	1:46 AM	52 kts.
2008	175 Farmingdale	4/25/2008	5:18 PM	52 kts.
	176 Mildred	5/30/2008	5:06 PM	59 kts.
	177 Cantrall	5/30/2008	5:29 PM	52 kts.
	178 Springfield	6/3/2008	1:10 AM	61 kts.
	179 Chatham	6/3/2008	9:31 AM	56 kts.
	180 Sherman	6/3/2008	8:13 PM	52 kts.
	181 Leland Grove	7/8/2008	3:45 PM	52 kts.
	182 Starnes	7/8/2008	3:50 PM	61 kts.
	183 Chatham	7/11/2008	2:40 PM	52 kts.
	184 Berlin	7/27/2008	8:45 PM	52 kts.
	185 Springfield	12/27/2008	12:05 PM	61 kts.
	186 Springfield	12/27/2008	12:20 PM	61 kts.
	187 Springfield	12/27/2008	12:20 PM	52 kts.

	188 Springfield	12/27/2008	12:22 PM	52 kts.
	189 Springfield	12/27/2008	12:25 PM	52 kts.
	190 Springfield	12/27/2008	12:25 PM	61 kts.
	191 Spaulding	12/27/2008	12:26 PM	52 kts.
2009	192 Springfield	3/8/2009	10:44 AM	61 kts.
	193 Springfield	3/8/2009	10:45 AM	61 kts.
	194 Curran	3/8/2009	10:46 AM	61 kts.
	195 Jerome	3/8/2009	10:48 AM	61 kts.
	196 Springfield	5/13/2009	9:45 PM	52 kts.
	197 Williamsville	5/15/2009	5:45 PM	52 kts.
	198 Williamsville	6/2/2009	4:10 PM	52 kts.
	199 Springfield Airport	6/19/2009	4:40 PM	52 kts.
	200 Sherman	7/24/2009	11:20 PM	52 kts.
	201 Chatham	8/4/2009	7:20 AM	61 kts.
	202 Springfield	8/4/2009	7:27 AM	61 kts.
2010	203 Chatham	5/24/2010	6:30 PM	55 kts.
	204 Divernon	5/24/2010	6:40 PM	50 kts.
	205 Springfield	6/2/2010	12:58 AM	61 kts.
	206 Jerome	6/2/2010	1:03 AM	52 kts.
	207 Springfield	6/22/2010	1:35 AM	52 kts.
	208 Southern View	6/22/2010	1:51 AM	52 kts.
	209 South Lawn	9/2/2010	3:45 PM	52 kts.
	210 Springfield	10/24/2010	7:40 PM	52 kts.
2011	211 Mechanicsburg	2/27/2011	9:40 PM	52 kts.
	212 Loami	4/19/2011	5:00 PM	61 kts.
	213 Auburn	4/19/2011	5:02 PM	61 kts.
	214 Chatham	4/19/2011	5:05 PM	61 kts.
	215 Springfield	4/19/2011	5:06 PM	61 kts.
	216 Buffalo	4/19/2011	5:25 PM	61 kts.
	217 Pawnee	4/19/2011	5:30 PM	61 kts.
	218 Auburn	5/25/2011	4:41 AM	61 kts.
	219 Springfield	5/25/2011	5:03 AM	52 kts.
	220 Divernon	5/25/2011	3:45 PM	52 kts.
	221 Sangamon County	6/4/2011	6:39 PM	61 kts.
	222 Chatham	7/12/2011	2:47 PM	52 kts.
2012	223 Breckinridge	1/17/2012	2:00 AM	52 kts.
	224 Pleasant Plains	5/20/2012	3:35 PM	61 kts.
	225 Sherman	5/20/2012	4:08 PM	52 kts.
	226 Williamsville	5/20/2012	4:25 PM	52 kts.
	227 Pawnee	8/16/2012	1:45 PM	52 kts.
	228 Williamsville	10/17/2012	5:40 PM	61 kts.
	229 Springfield	4/15/2013	11:05 PM	61 kts.
2013	230 Rochester	4/15/2013	11:10 PM	61 kts.
	231 Buffalo	4/15/2013	11:15 PM	61 kts.
	232 Auburn	5/27/2013	1:37 PM	61 kts.
	233 Chatham	5/27/2013	1:43 PM	52 kts.
	234 Chatham	5/27/2013	1:45 PM	52 kts.
	235 Iles	5/27/2013	1:47 PM	52 kts.
	236 Mildred	5/27/2013	1:48 PM	61 kts.
	237 Grandview	5/27/2013	1:52 PM	52 kts.
	238 Springfield	5/27/2013	1:53 PM	61 kts.
	239 Clear Lake	5/27/2013	1:54 PM	61 kts.

	240 Southlawn	5/27/2013	1:55 PM	61 kts.
	241 Springfield	5/27/2013	1:55 PM	52 kts.
	242 Toronto	5/27/2013	1:55 PM	61 kts.
	243 Riverton	5/27/2013	2:00 PM	70 kts.
	244 Illiopolis	5/27/2013	2:16 PM	61 kts.
	245 Lowder	5/30/2013	6:48 PM	52 kts.
	246 Compro	5/30/2013	6:52 PM	61 kts.
	247 Compro	5/30/2013	6:52 PM	61 kts.
	248 Loami	5/30/2013	6:58 PM	61 kts.

* Prior to 1993 specific locations were not recorded

Figure 54 shows hail events from January 1, 1955 – April 30, 2014. During 36 of these 59 years at least one hail event occurred in Sangamon County. The size of the hail reached a diameter of 2.5 inches during a 1974 hailstorm and a diameter of 2.0 inches in a 2011 storm although most ranged from .75 – 1.75 inches. Fourteen of the hail events were associated with a tornado on the following dates – April 2, 1964, April 20, 2000, May 12, 2000, March 19, 2003, May 9, 2003, May 10, 2003, May 23, 2004, March 12, 2006, and May 30, 2008.

Figure 54: Hail Events in Sangamon County

177 HAIL events were reported in Sangamon County, Illinois between 01/01/1955 and 04/30/2014				
Year	Location*	Date	Time	Magnitude
1956	1 SANGAMON	5/22/1956	7:15 PM	1.75 in.
	2 SANGAMON	9/15/1956	12:22 AM	1.75 in.
1958	3 SANGAMON	7/30/1958	7:35 AM	0.75 in.
	4 SANGAMON	7/30/1958	7:35 AM	0.75 in.
1961	5 SANGAMON	4/24/1961	7:45 AM	0.75 in.
	6 SANGAMON	5/6/1961	4:12 PM	1.75 in.
1963	7 SANGAMON	4/29/1963	2:45 PM	1.75 in.
1964	8 SANGAMON	4/2/1964	5:32 PM	1.00 in.
	9 SANGAMON	4/2/1964	7:23 PM	0.75 in.
	10 SANGAMON	4/19/1964	9:00 PM	1.75 in.
1965	11 SANGAMON	4/15/1965	12:56 PM	0.75 in.
1967	12 SANGAMON	4/21/1967	1:20 PM	1.75 in.
1972	13 SANGAMON	3/12/1972	5:43 PM	1.00 in.
1973	14 SANGAMON	6/18/1973	4:40 PM	1.50 in.
	15 SANGAMON	10/3/1973	2:55 PM	0.75 in.
1974	16 SANGAMON	4/3/1974	12:42 PM	2.50 in.
	17 SANGAMON	5/30/1974	2:15 PM	0.75 in.
1975	18 SANGAMON	5/11/1975	4:00 PM	1.50 in.
1982	19 SANGAMON	5/20/1982	3:22 PM	1.00 in.
	20 SANGAMON	9/14/1982	1:02 PM	1.00 in.
1985	21 SANGAMON	6/2/1985	1:00 AM	1.75 in.
1986	22 SANGAMON	5/6/1986	5:31 PM	1.00 in.
	23 SANGAMON	5/6/1986	7:15 PM	1.00 in.
	24 SANGAMON	5/8/1986	7:15 PM	1.00 in.
	25 SANGAMON	7/10/1986	7:15 PM	0.75 in.
	26 SANGAMON	8/10/1986	12:44 AM	0.75 in.
1987	27 SANGAMON	6/2/1987	12:10 PM	1.00 in.
	28 SANGAMON	6/2/1987	12:45 PM	1.00 in.
1992	29 SANGAMON	2/15/1992	3:15 AM	1.75 in.
	30 SANGAMON	4/15/1992	3:50 PM	0.75 in.

1994	31 Springfield	5/24/1994	6:30 PM	0.75 in.
	32 Springfield	5/24/1994	6:37 PM	0.75 in.
1996	33 Springfield	4/18/1996	6:40 PM	1.75 in.
	34 Mechanicsburg	4/18/1996	7:31 PM	1.75 in.
	35 Springfield/Riverton	5/3/1996	8:25 PM	1.75 in.
	36 Divernon/Pawnee	6/2/1996	9:20 PM	1.75 in.
	37 Sherman	7/28/1996	6:40 PM	1.75 in.
	38 Williamsville	8/26/1996	2:45 PM	1.75 in.
1997	39 Pleasant Plains	3/28/1997	3:35 PM	1.75 in.
1998	40 New Berlin	4/7/1998	3:45 PM	1.75 in.
	41 Cantrall	4/7/1998	4:02 PM	1.75 in.
	42 Pawnee	4/7/1998	4:20 PM	1.75 in.
	43 Divernon	6/12/1998	4:57 PM	1.00 in.
1999	44 Divernon	5/5/1999	7:05 PM	0.88 in.
	45 Lanesville	6/4/1999	4:30 PM	0.75 in.
	46 Divernon	8/12/1999	9:15 PM	1.00 in.
2000	47 Springfield	4/20/2000	7:30 AM	1.00 in.
	48 Illiopolis	4/20/2000	8:05 AM	1.75 in.
	49 Illiopolis	5/12/2000	4:00 PM	0.75 in.
	50 Divernon	5/12/2000	5:00 PM	1.00 in.
	51 Auburn	5/23/2000	12:55 AM	1.00 in.
	52 Springfield	5/26/2000	11:13 PM	1.00 in.
2001	53 Buffalo	8/18/2001	2:15 PM	1.00 in.
2002	54 Auburn	5/1/2002	2:00 PM	1.75 in.
	55 Springfield	5/6/2002	11:05 PM	0.75 in.
	56 Springfield	5/7/2002	12:05 AM	1.75 in.
	57 Auburn	5/27/2002	2:35 PM	2.00 in.
	58 Auburn	3/19/2003	4:40 PM	1.75 in.
2003	59 Springfield	3/19/2003	6:58 PM	1.00 in.
	60 Loami	4/4/2003	3:22 PM	0.75 in.
	61 Pleasant Plains	4/4/2003	3:23 PM	1.75 in.
	62 Loami	4/24/2003	5:05 PM	1.00 in.
	63 Springfield	4/24/2003	5:45 PM	1.00 in.
	64 Jerome	5/8/2003	10:25 PM	0.88 in.
	65 Pleasant Plains	5/9/2003	6:52 PM	1.00 in.
	66 Springfield	5/9/2003	9:53 PM	0.75 in.
	67 Loami	5/10/2003	6:40 AM	1.75 in.
	68 Springfield	8/3/2003	10:53 PM	0.75 in.
2004	69 Loami	5/23/2004	5:18 PM	1.00 in.
2005	70 Springfield	3/30/2005	3:50 PM	0.88 in.
	71 Springfield	5/11/2005	4:45 PM	0.88 in.
	72 Chatham	5/11/2005	4:53 PM	0.75 in.
	73 Riverton	9/19/2005	5:35 PM	1.00 in.
	74 Riverton	9/19/2005	9:04 PM	1.75 in.
	75 Springfield	11/5/2005	9:35 PM	0.88 in.
2006	76 Pleasant Plains	3/11/2006	6:34 PM	0.88 in.
	77 New Berlin	3/11/2006	6:51 PM	1.00 in.
	78 Springfield	3/11/2006	7:05 PM	0.75 in.
	79 New Berlin	3/12/2006	7:53 PM	1.75 in.
	80 Springfield	3/12/2006	8:15 PM	1.00 in.
	81 Springfield	3/12/2006	8:27 PM	0.75 in.
	82 Auburn	4/30/2006	2:27 PM	0.75 in.

	83 Chatham	4/30/2006	2:39 PM	0.75 in.
	84 Riverton	6/26/2006	5:16 PM	0.88 in.
	85 Williamsville	7/19/2006	4:08 PM	0.88 in.
	86 Chatham	7/19/2006	4:44 PM	0.88 in.
	87 Springfield	9/22/2006	5:50 PM	0.75 in.
	88 Sherman	9/22/2006	5:54 PM	1.00 in.
2007	89 Sherman	4/3/2007	9:55 AM	0.75 in.
	90 Spaulding	7/10/2007	6:21 PM	0.75 in.
2008	91 New Berlin	4/25/2008	5:04 PM	0.75 in.
	92 Berlin	5/30/2008	4:35 PM	1.25 in.
	93 Springfield	5/30/2008	5:25 PM	1.75 in.
	94 Mechanicsburg	5/30/2008	5:33 PM	1.75 in.
	95 New Berlin	5/30/2008	6:16 PM	0.75 in.
	96 Prouty	5/30/2008	6:20 PM	3.00 in.
	97 Pawnee	5/30/2008	6:34 PM	1.75 in.
	98 Chatham	5/30/2008	6:36 PM	1.75 in.
	99 Divernon	5/30/2008	6:40 PM	2.50 in.
	100 Chatham	5/30/2008	6:45 PM	1.50 in.
	101 Buffalo	6/15/2008	2:52 PM	0.75 in.
	102 Sherman	6/22/2008	4:14 PM	0.75 in.
	103 Chatham	7/11/2008	2:35 PM	0.88 in.
	104 Jerome	7/21/2008	8:57 PM	0.75 in.
2009	105 Williamsville	5/7/2009	4:23 PM	1.75 in.
	106 Williamsville	5/7/2009	4:28 PM	0.75 in.
	107 Williamsville	5/7/2009	4:36 PM	0.88 in.
	108 Williamsville	5/7/2009	5:01 PM	0.88 in.
	109 Divernon	5/7/2009	5:03 PM	0.75 in.
	110 Cantrall	5/15/2009	4:28 PM	1.75 in.
	111 Springfield	5/15/2009	5:45 PM	1.75 in.
	112 Springfield	5/15/2009	5:45 PM	0.88 in.
	113 Springfield	5/15/2009	5:49 PM	0.75 in.
	114 Buffalo	5/30/2009	5:49 PM	1.00 in.
	115 Springfield	7/28/2009	1:56 PM	0.88 in.
	116 Springfield	7/28/2009	2:05 PM	1.50 in.
	117 Riverton	7/28/2009	2:10 PM	1.00 in.
2010	118 Riverton	5/24/2010	6:35 PM	0.75 in.
	119 Springfield	5/25/2010	10:57 AM	0.75 in.
	120 Springfield	5/26/2010	2:49 PM	1.75 in.
	121 Jerome	5/26/2010	3:03 PM	0.75 in.
	122 Springfield	5/26/2010	3:45 PM	0.75 in.
	123 Springfield	6/21/2010	3:30 AM	0.75 in.
	124 Springfield	9/2/2010	4:46 PM	0.75 in.
	125 Toronto	4/15/2011	4:45 PM	1.75 in.
	126 Springfield	4/15/2011	4:55 PM	1.75 in.
	127 Pawnee	4/15/2011	4:59 PM	1.75 in.
	128 Chatham	4/15/2011	5:06 PM	1.00 in.
	129 Southlawn	4/15/2011	5:12 PM	1.75 in.
	130 Springfield Airport	4/15/2011	5:22 PM	1.75 in.
	131 Buffalo	4/15/2011	6:00 PM	0.88 in.
	132 New Berlin	4/19/2011	4:50 PM	0.88 in.
	133 New Berlin	4/19/2011	4:55 PM	1.00 in.
	134 Sherman	4/19/2011	4:57 PM	1.25 in.

	135 Sherman	4/19/2011	5:00 PM	1.00 in.
	136 Williamsville	4/19/2011	5:10 PM	1.00 in.
	137 Williamsville	5/22/2011	2:11 PM	0.75 in.
	138 Springfield	5/22/2011	2:35 PM	0.75 in.
	139 Springfield	5/22/2011	2:37 PM	0.75 in.
	140 Southern View	5/22/2011	2:40 PM	0.88 in.
	141 Leland Grove	5/22/2011	2:40 PM	1.00 in.
	142 Mechanicsburg	5/25/2011	4:07 PM	1.25 in.
	143 Leland Grove	5/28/2011	1:27 PM	1.00 in.
	144 Springfield	5/28/2011	1:30 PM	1.00 in.
	145 Grandview	5/28/2011	1:32 PM	1.75 in.
	146 Grandview	5/28/2011	1:35 PM	1.50 in.
	147 Springfield Airport	5/28/2011	1:37 PM	1.25 in.
	148 Riverton	5/28/2011	1:40 PM	0.75 in.
	149 Sangamon County	6/18/2011	6:49 AM	0.75 in.
	150 Sangamon County	6/25/2011	7:04 PM	1.00 in.
	151 Sangamon County	6/25/2011	7:50 PM	0.88 in.
	152 Sangamon County	6/25/2011	8:13 PM	1.00 in.
	153 Leland Grove	8/13/2011	3:08 PM	0.88 in.
	154 Loami	8/13/2011	3:25 PM	0.88 in.
	155 Divernon	8/13/2011	3:43 PM	2.00 in.
	156 Cimic	8/13/2011	3:48 PM	0.75 in.
	157 Chatham	8/13/2011	4:28 PM	0.75 in.
2012	158 Loami	1/17/2012	1:04 AM	0.75 in.
	159 Loami	3/2/2012	7:41 AM	0.75 in.
	160 Loami	3/2/2012	8:35 AM	0.88 in.
	161 Grandview	3/2/2012	8:44 AM	0.75 in.
	162 Mildred	3/2/2012	8:50 AM	0.75 in.
	163 Cantrall	3/15/2012	7:14 PM	1.00 in.
	164 Sherman	3/15/2012	7:15 PM	1.00 in.
	165 Sherman	3/15/2012	7:20 PM	1.00 in.
	166 Sherman	3/15/2012	7:24 PM	0.75 in.
	167 Sherman	3/15/2012	7:27 PM	0.88 in.
	168 Springfield	3/15/2012	7:30 PM	0.88 in.
	169 Mechanicsburg	5/20/2012	4:42 PM	0.75 in.
	170 Springfield Airport	5/20/2012	5:05 PM	0.75 in.
2013	171 Dawson	4/10/2013	3:55 PM	0.75 in.
	172 Riverton	4/15/2013	11:08 PM	0.75 in.
	173 Sherman	6/21/2013	3:45 PM	0.88 in.
	174 Springfield	6/21/2013	4:10 PM	1.00 in.
	175 Williamsville	6/24/2013	4:19 PM	0.88 in.
	176 Williamsville	6/24/2013	4:25 PM	1.00 in.
2014	177 Auburn	4/3/2014	3:58 AM	0.75 in.

* Prior to 1993 specific locations were not recorded

Previous occurrences of severe storms in Sangamon County.

Severe storms occur with regularity in Sangamon County. Some examples of damage done are:

- Power outages leaving thousands of people without electricity.
- Numerous trees damaged or destroyed.
- In July 1994 many windows were broken at the grade school in Cantrall.
- In July 2001 two semitrailers were blown over on I-72 north of Curran.
- In February 1999 roof damage was done to the Illinois Supreme Court Building.
- Grain bins have been blown over and machine sheds damaged.
- In August 1987 fifty-eight people sustained minor injuries at the Illinois State Fair.
- Homes have been damaged and some mobile homes have been destroyed.
- Businesses have temporarily closed due to power outages.

Figures 55 and 56 show the breakdown of months and times of day when severe storms have occurred in Sangamon County from January 1955 through April 2014. Thunderstorms are most likely to occur in Central Illinois in the months of April through August and during the evening hours of 4:00 – 9:00 PM. Hailstorms are most likely to occur during April and May, also between the hours of 4:00 – 9:00 PM.

Figure 55: Thunderstorms in Sangamon County from 1/1/1955 – 4/30/2014

Month	# Events
January	2
February	2
March	14
April	35
May	53
June	44
July	42
August	26
September	6
October	9
November	7
December	8
TOTAL	248

Time of Day	# of Events
Midnight - 5:00 AM	28
5:00 AM - Noon	21
Noon - 4:00 PM	68
4:00 PM - 9:00 PM	101
9:00 PM - Midnight	30
TOTAL	248

Figure 56: Hailstorms in Sangamon County from 1/1/1955 – 4/30/2014

Month	# of Events
January	1
February	1
March	21
April	47
May	57
June	19
July	12
August	10
September	7
October	1
November	1
December	0
TOTAL	177

Time of Day	# of Events
Midnight - 5:00 AM	9
5:00 AM - Noon	13
Noon - 4:00 PM	47
4:00 PM - 9:00 PM	97
9:00 PM - Midnight	11
TOTAL	177

Probability of future events.

Severe storms are expected in Sangamon County. During the 59-year period from 1955 – 2014 there were 248 thunderstorms with severe winds that occurred during 51 of the years. (There were no severe thunderstorms recorded during nine of these years.) This indicates an 85% probability that in any given year at least one thunderstorm with severe winds will occur. During 43 years more than one such storm occurred. This indicates a 72% probability that in any given year more than one thunderstorm with severe winds will hit Sangamon County.

Hail events were reported during 36 of these 60 years. This indicates a 60% probability that in any given year a hailstorm will occur. During 26 years more than one hailstorm occurred. This indicates a 43% probability that in any given year more than one hailstorm will hit somewhere in Sangamon County.

Assessing Vulnerability

With the presence of lightning, high winds, driving rain, and hail posing the threat of injury and death, severe storms are a danger to people.

Additionally, building damage can occur from flying and falling debris, lightning strikes, blowing wind, hail, and rain if windows are broken, roofs are compromised, or other damage occurs. If one-third of the planning area were affected by a severe storm and 1% of the buildings sustained some damage then the costs could be:

$\$14,129,314,901$ (total value of all buildings) $\times .33 = \$4,662,673,917$ (value of 1/3 of buildings)

$\$4,662,673,917$ (value of 1/3 of buildings) $\times .01 = \$46,626,739$ (value of 1% of 1/3 of buildings = building value exposed to damage)

The critical facility that is most often a concern during a severe storm is the electrical supply infrastructure. Winds, lightning, and falling trees can damage power lines requiring many dollars and hours of work to repair. People's lives are disrupted by power outages and there is an economic impact to businesses when they are unable to operate.

TORNADO HAZARD

Description

What is a tornado?

(from the Federal Emergency Management Agency)

Tornadoes are nature's most violent storms. Spawned from powerful thunderstorms, tornadoes can cause fatalities and devastate a neighborhood in seconds. A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long. Every state is at some risk from this hazard.

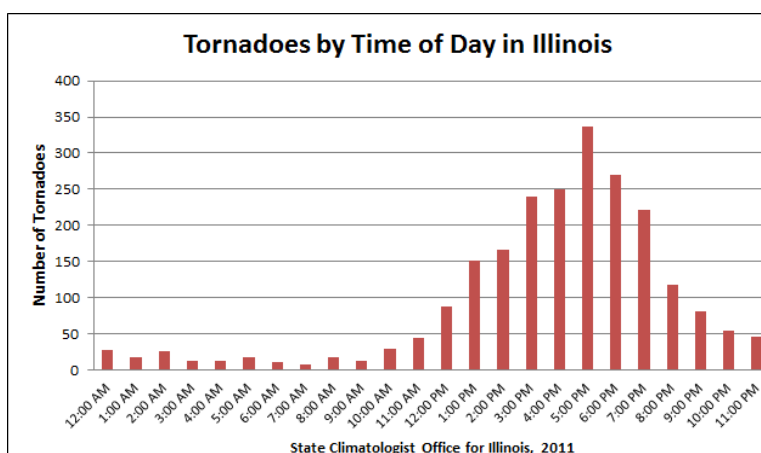
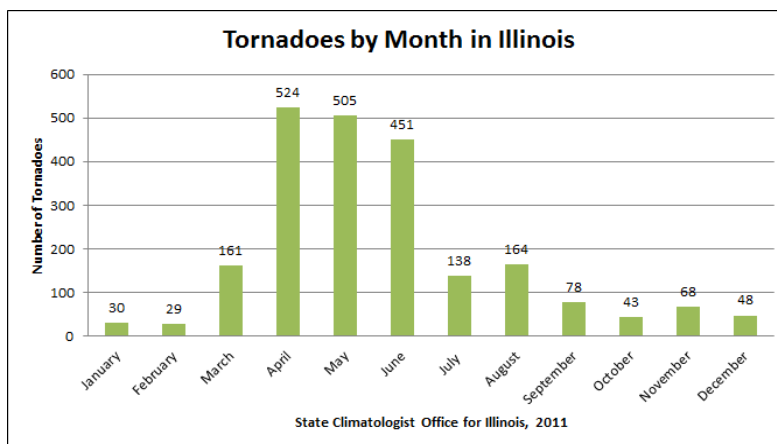
Some tornadoes are clearly visible, while rain or nearby low-hanging clouds obscure others. Occasionally, tornadoes develop so rapidly that little, if any, advance warning is possible.

Before a tornado hits, the wind may die down and the air may become very still. A cloud of debris can mark the location of a tornado even if a funnel is not visible. Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.

The following are facts about tornadoes:

- They may strike quickly, with little or no warning.
- They may appear nearly transparent until dust and debris are picked up or a cloud forms in the funnel.
- The average tornado moves southwest to northeast, but tornadoes have been known to move in any direction.
- The average forward speed of a tornado is 30 MPH, but may vary from stationary to 70 MPH.
- Waterspouts are tornadoes that form over water.
- Tornadoes are most frequently reported east of the Rocky Mountains during spring and summer months.
- Peak tornado season in the southern states is March through May; in the northern states, it is late spring through early summer.
- Tornadoes are most likely to occur between 3 p.m. and 9 p.m., but can occur at any time.

Figure 57: Previous Illinois Tornado Occurrences
(from: Illinois State Climatologist)



How are tornadoes rated?

The classification system used for tornadoes is the Fujita Scale, which is based on wind speed and damage caused. The original scale is shown in Figure 58. On February 1, 2007 an Enhanced Fujita Scale (see Figure 59) was implemented, although it would not apply to the historical data given for Sangamon County.

Figure 58: Original Fujita Scale (from: Illinois State Water Survey)

Scale	Wind Speeds	Typical Damage
F-0	40-72 mph	Tree branches broken
F-1	73-112 mph	mobile homes pushed off foundation
F-2	113-157 mph	Considerable damage, mobile home demolished, trees uprooted
F-3	158-205 mph	roofs and walls blown down, cars thrown
F-4	207-260 mph	well-constructed buildings leveled
F-5	261-318 mph	massive destruction, autos thrown as far as 100 meters

Figure 59: Comparison of Fujita Scale and Enhanced Fujita Scale

Fujita Scale			Enhanced Fujita Scale	
F Number	Fastest ¼-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85
1	73-112	79-117	1	86-110
2	113-157	118-161	2	111-135
3	158-207	162-209	3	136-165
4	208-260	210-261	4	166-200
5	261-318	262-317	5	Over 200

Profile

The locations affected by tornadoes.

Tornadoes can and have occurred throughout the County. The paths of the tornadoes recorded from 1950 – 2005 are shown in Figure 60, paths of the 2006 tornadoes are shown in Figures 61 and 62, and the path of the 2009 tornadoes are shown in Figure 63.

Figure 60: Tornadoes in Sangamon County 1950 - 2005 (from: National Weather Service)

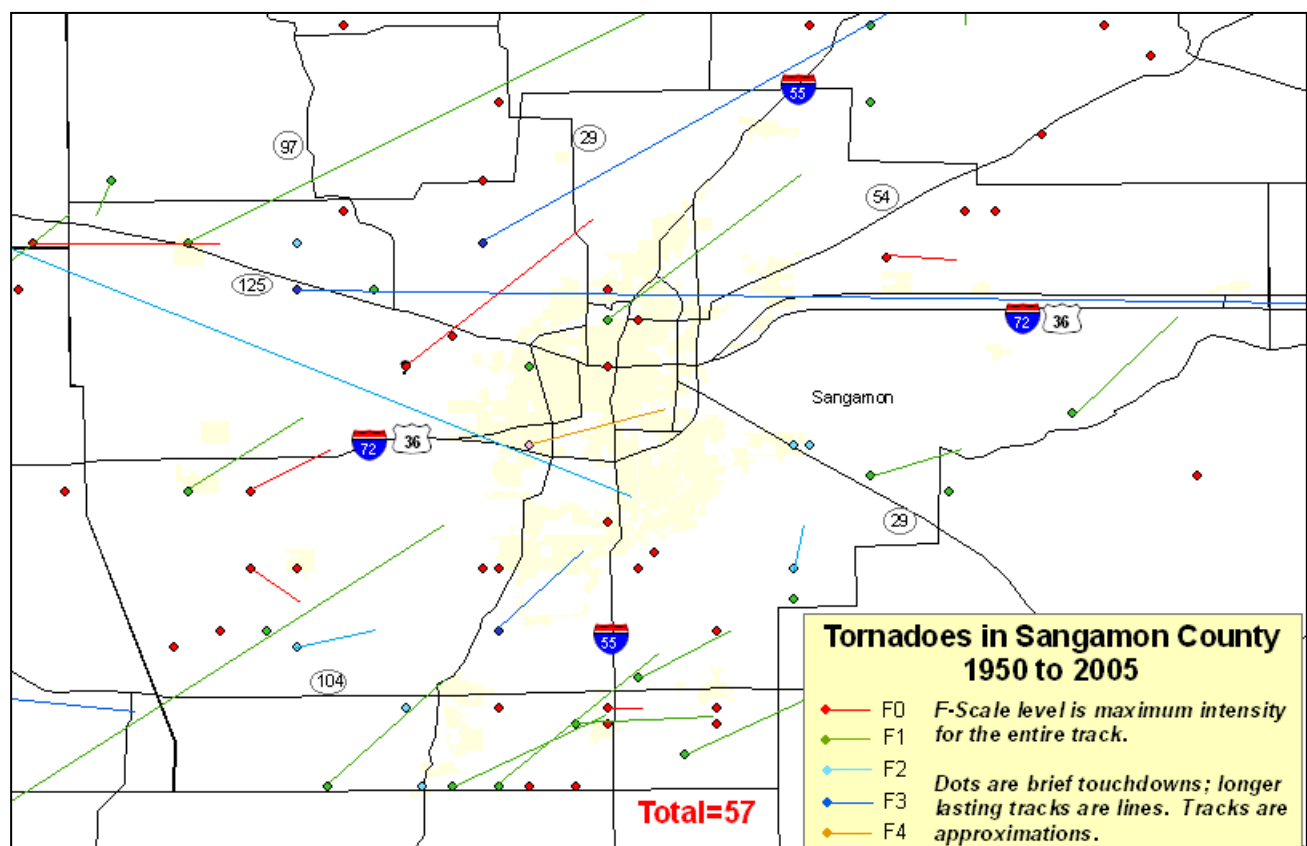


Figure 61: Tornado Tracks of March 12, 2006 (from: National Weather Service)

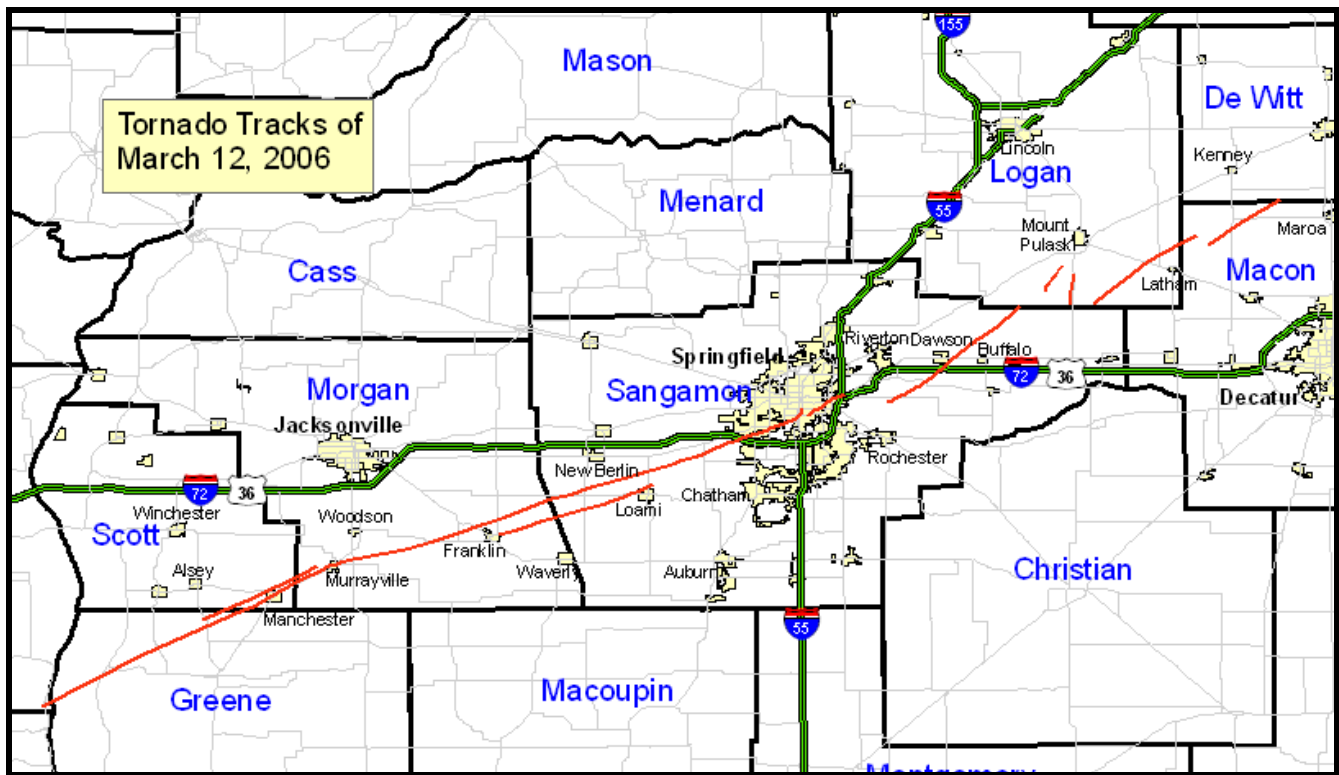


Figure 62: Tornado Tracks of April 2, 2006 (from National Weather Service)

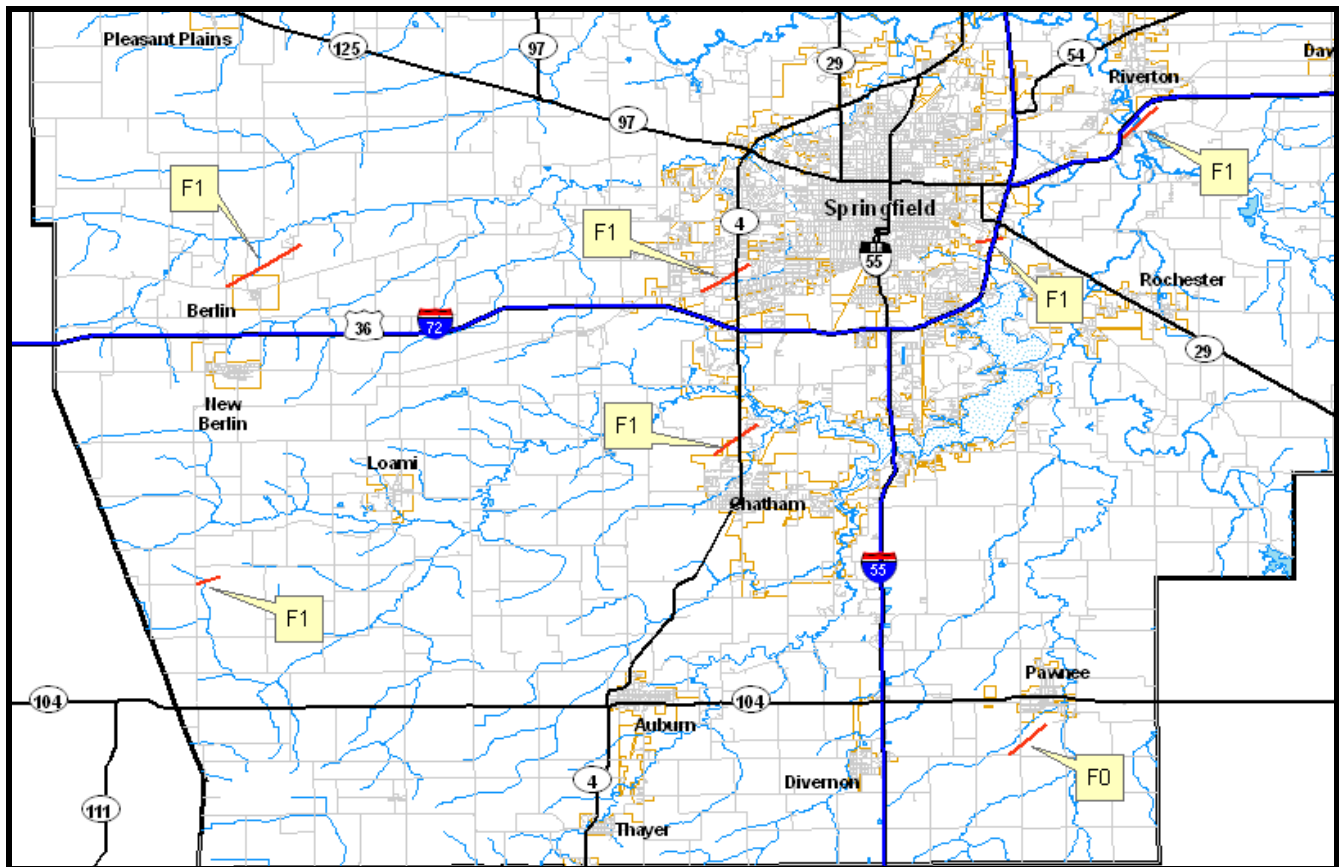
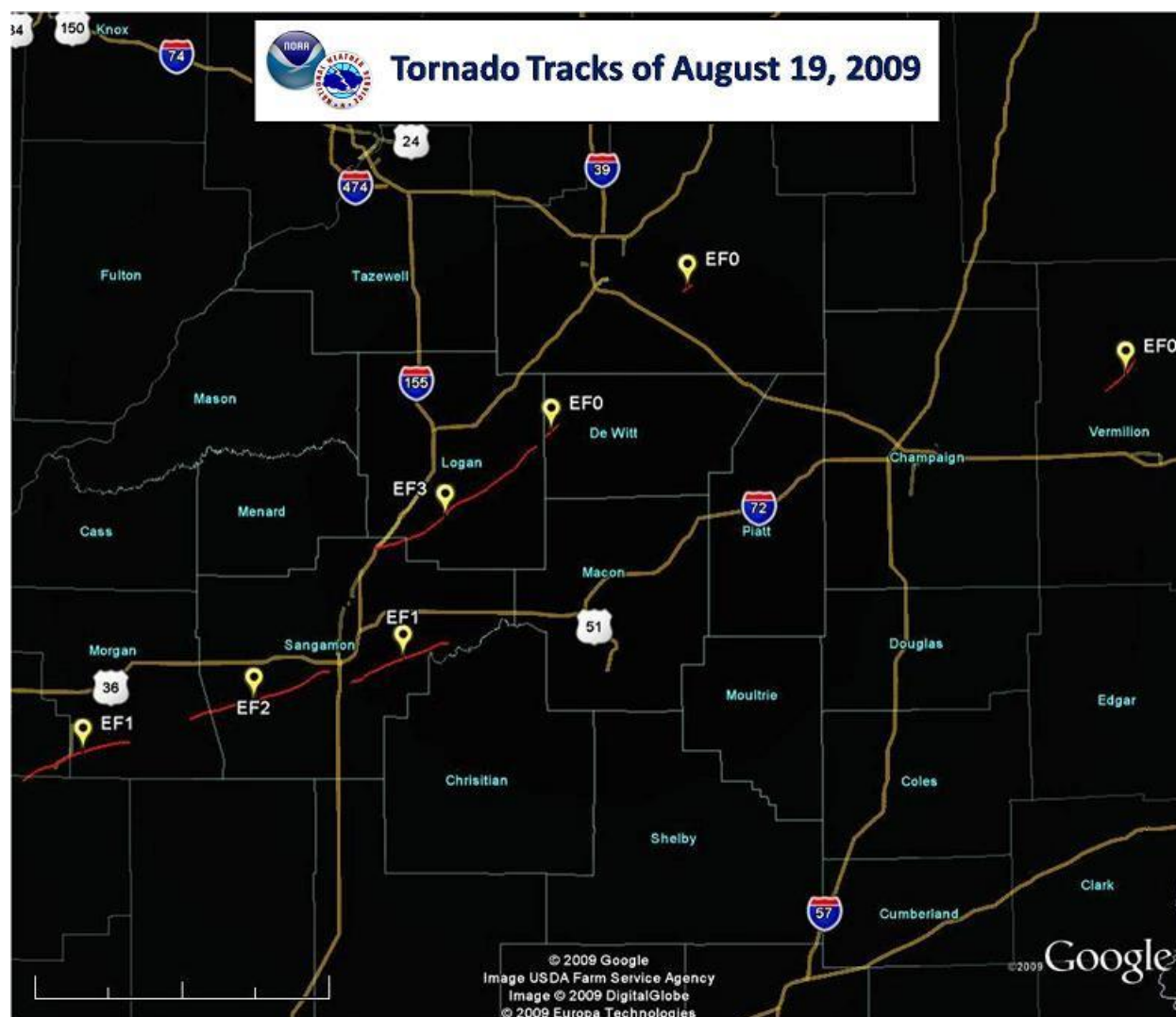


Figure 63: Tornado Tracks of August 19, 2009 (from USDA Farm Service Agency)



The extent of previous occurrences of tornadoes in Sangamon County.

Central Illinois is a prime area for tornadoes. During the time period of January 1, 1950 through February 20, 2014 there were 74 tornadoes reported. These occurred during 41 weather events, nine of which included more than one tornado (see Figure 64).

Figure 64: Tornadoes Reported in Sangamon County from January 1, 1950 – April 30, 2014

Date	Time	Magnitude	Deaths	Injuries	Property Damage
3/12/1954	6:00 PM	F1	0	0	250K
5/13/1957	11:00 AM	F1	0	0	0
6/14/1957	2:00 PM	F4	2	50	2.5M
6/23/1960	2:50 AM	F2	0	0	250K
5/14/1961	10:10 PM	F1	0	0	250K
5/26/1962	5:30 AM	F2	0	0	3K
4/22/1963	5:30 PM	F3	1	5	250K
4/2/1964	6:45 PM	F2	0	0	25K
6/16/1973	9:58 PM	F0	0	0	0
8/14/1975	5:58 PM	F2	0	0	25K
11/29/1975	11:20 PM	F1	0	1	250K
8/6/1977	3:25 - 4:10 PM	6-F0, 9-F1, 1-F2, 1-F3	0	0	3.8M
7/26/1978	3:30 PM	F?	0	0	250K
7/10/1980	5:00 AM	F2	0	0	250K
6/8/1981	8:40 PM	F0	0	0	0
7/14/1985	11:44 PM	F0	0	0	25K
5/16/1986	4:20 - 4:25 PM	2-F0	0	0	0
5/8/1988	5:18 PM	F2	0	0	250K
6/2/1990	4:30 PM	F1	0	0	25K
6/20/1990	12:15 AM	F1	0	0	25K
4/19/1996	5:32 PM	F0	0	0	250K
5/27/1996	9:45 PM	F0	0	0	0
6/29/1998	4:30 - 4:36 PM	2-F0	0	0	130K
4/8/1999	7:53 PM	F0	0	0	0
4/20/2000	8:05 PM	F0	0	0	0
5/12/2000	3:30 PM	F0	0	0	0
6/20/2000	6:44 PM	F0	0	0	1K
3/19/2003	1:25 PM	F0	0	0	0
5/9/2003	6:40 PM	F0	0	0	0
5/10/2003	6:53 - 6:58 AM	3-F0	0	0	45K
6/11/2003	5:20 - 5:22 AM	2-F0	0	0	0
5/23/2004	6:27 PM	F0	0	0	0
5/24/2004	11:09 PM	F1	0	0	0
8/26/2004	5:09 PM	F0	0	0	0
3/12/2006*	8:00 - 8:32PM	1-F1, 3-F2	0	0	unknown
4/2/2006*	5:46 - 6:13 PM	1-F0, 6-F1	0	0	unknown
9/6/2007*	5:28 PM	F0	0	0	0
5/30/2008*	6:23 PM	EF1	0	0	63K
3/8/2009*	10:32 AM	EF1	0	2	610K
8/19/2009*	1:51 PM - 2:19 PM	1-EF2, 1-EF1, 1-EF0	0	20	15.2M
2/20/2014*	3:43 PM - 3:57 PM	1 - EF0, 1 EF-1	0	0	1.02M

* from: National Climatic Data Center and National Weather Service

Previous occurrences.

For the time period between 1950 and 2012, Sangamon County is fourth in the State for the number of tornadoes per 100 square miles, behind Will, Logan, and McLean Counties. During that time period, Sangamon County recorded total losses of \$24,346,750 with an average of \$338,149.31 in property damage per event (source: Illinois Hazard Mitigation Plan).

Following is statistical data related to tornado events in Sangamon County:

Figure 65: Sangamon County Tornadoes 1/1/1950-4/30/2014

Time of Day	Number of Events	Number of Tornadoes
5:00 am - 8:00 am	4	7
8:00 - 11:00 am	1	1
11:00 am - 3:00 pm	4	6
3:00 pm - 10:10 pm	27	55
11:00 pm - 2:50 am	5	5
TOTAL	41	74
Month	Number of Events	Number of Tornadoes
January	0	0
February	1	2
March	4	7
April	6	12
May	12	15
June	9	11
July	3	3
August	4	22
September	1	1
October	0	0
November	1	1
December	0	0
TOTAL	41	74
Magnitude	Number of Tornadoes	Percent of Total
F0	30	45%
F1	23	34%
F2	10	15%
F3	2	3%
F4	1	1.5%
unknown	1	1.5%
TOTAL	67	100%
Magnitude	Number of Tornadoes	Percent of Total
EF0	2	29%
EF1	4	57%
EF2	1	14%
EF3	0	0%
EF4	0	0%
EF5	0	0%
TOTAL	7	100%

The months of April, May and June are the most likely time for weather events that spawn tornadoes, although in August 1977 one weather event produced 17 different tornadoes in the County.

Most of Sangamon County's tornadoes have been of a lower magnitude, although very destructive tornadoes can and do occur.

Seventy-nine percent of the tornadoes that occurred from 1950-2007 were lower magnitudes, F0 or F1, although up to \$250,000 damage per event was reported. Fifteen percent were rated F2. 4.5% were rated F3 or F4, while the remaining 1.5% were unknown.

In the period 2007-2014, eighty-six percent of the tornadoes that occurred were lower magnitude, EF0 or EF1. The remaining one tornado (14%) was an EF2.

Nine times a single weather event produced more than one tornado. In August 1977, seventeen tornadoes touched down over a 45-minute period. Three people have been killed and 78 people injured by tornado events since 1950 in Sangamon County.

The most damaging tornado touched down on June 14, 1957 and was rated F4. It caused two deaths, fifty injuries, and \$2.5 million in property damage, including 25 homes that were completely destroyed and 175 homes that were severely damaged.

Probability of future events.

The paths, magnitudes, and numbers of tornadoes are unpredictable over time, but with the history of tornado events in Sangamon County, the probability of occurrence in any one year is fairly high. As seen in Figure 65, in the 65-year period from 1950 to 2014, there were 28 years when at least one tornado was recorded in Sangamon County. This indicates a 43% probability that a tornado will hit somewhere in Sangamon County in any given year. There were 9 years (1957, 1975, 1990, 1996, 2000, 2003, 2004, 2006, and 2009) when more than one weather event spawned a tornado during the 65-year period. This indicates a 14% probability that tornado events will occur more than once during any given year in Sangamon County.

2006 tornado experiences in Sangamon County.

The tornadoes that came through the County in March 2006 caused major destruction and resulted in Presidential Disaster Declaration 1633. The two that came through Springfield and Jerome were rated as F2 and followed a path nearly identical to that of the F4 tornado that hit in 1957.

Although there was substantial property damage in 2006, no deaths or serious injuries were reported. The tornadoes varied in width from 100 yards to ½ mile. Many homes and businesses were damaged, some completely destroyed. Extensive damage occurred to electrical lines, telephone lines, and cable television lines with service unavailable for several days to over a week in areas hit by the tornadoes. There were numerous damaged and downed trees which in turn created damage to buildings, fences, utility lines, vehicles and blocked roadways. Recovery efforts started immediately, but with the extensive damage, debris removal alone took many months and property owners waited months and in some cases over a year for building repairs to be completed. Some businesses never reopened.

The State Journal – Register, a local newspaper, reported that some of the costs of tornado damage included:

FEMA Assistance to Local Governments:	\$12,774,995
FEMA Housing Assistance:	\$ 632,985 (264 households)
FEMA Moving/Storage/Personal Property/Transportation	\$ 434,269 (340 households)
FEMA Assistance to Those Put Out of Work	\$ 34,761 (24 applicants)
American Red Cross	\$ 588,564 (699 cases)
CWLP Utility Infrastructure Repair	\$11,600,000

2009 tornado experience in Sangamon County.

On August 19, 2009, Sangamon County experienced three separate tornadoes resulting in injuries and property damage. The first tornado, rated an EF2, crossed into western Sangamon County and moved east-northeast through the southern part of Loami. It lifted four miles northeast of Chatham at 3:16 p.m. The tornado started out around 200 yards wide and peaked around a quarter mile wide in rural portions of the county. It was about 200 yards wide as it passed through Loami where nine homes were destroyed and fifteen others severely damaged. Along its path, the tornado produced damage to several homes, machine sheds, and major tree and crop damage.

The second tornado first touched down six miles south-southeast of downtown Springfield on the west bank of Lake Springfield at 3:17 p.m. The tornado crossed the lake and tracked to a point southeast of Rochester then lifted two miles south-southeast of Mechanicsburg at 3:37 p.m. This tornado was rated an EF1 and resulted in no significant damage.

The third tornado touched down on the west side of Williamsville just west of I-55 at 3:19 p.m. and continued to move northeast through the village. There was no loss of life although several people sustained injuries. The width of the tornado through town ranged from 100 to 150 yards, had a maximum wind speed of 135 mph and was rated an EF2 while in Williamsville. As it left the village, the tornado gained momentum to an EF3 level and caused damage to homes, machine sheds, garages, and crops.

The damage included the total destruction of an antique mall, damage to a Casey's General Store causing the gas pump canopy to collapse, significant damage to a church, damage to a farm chemical business, and storage buildings. There were also losses of roofs from several houses.

The Illinois Office of Emergency Management staff examined 57 sites in Williamsville and parts of unincorporated Williams Township and estimated the total structural damage to be \$6,405,300. Figure 66 provides a breakdown of the estimated damages.

Figure 66: 2009 Tornado Losses

Williamsville	Losses
Nonresidential	\$ 3,815,000
Residential – Destroyed	\$ 944,100
Residential – Damaged	\$ 1,309,000
Williamsville Township	
Residential	\$337,200
TOTAL LOSSES	\$6,405,300

(source: Lincoln Courier, Lincoln, IL 10/19/2009)

Assessing Vulnerability

The magnitudes of tornadoes in Sangamon County have ranged from F0 – F4 although F5 tornadoes have occurred in other parts of Illinois so an F-5 tornado is not out of the realm of possibility here. The design wind speed for our area is 250 mph.

There is a high likelihood that any given tornado in Sangamon County will be of a lower rating (EF0 or EF1) although substantial damage has occurred at these magnitudes. Although less likely, tornadoes of higher intensity have occurred and should be addressed in the calculation of potential damage.

An EF4 tornado can cause substantial damage, leveling even well-constructed buildings. According to the Illinois State Water Survey website an EF4 tornado can have a path over 1,200 feet wide and over 20 miles long. This would translate to approximately 4.5 square miles of damage.

The first F2 tornado to hit Springfield on March 12, 2006 had already been on the ground for 60 miles. It traveled approximately 13 of those miles through an unincorporated area of the County and then continued for 5.5 miles through the urbanized area with a width ranging from 900 feet to 2,640 feet. The 2009 tornado which occurred on August 19, 2009 continued for 4.5 miles primarily through the Village of Williamsville.

Using the above information, the damage that could have been caused if the 2006 tornado had been of the magnitude of an EF4 tornado is extrapolated as follows.

Unincorporated Area of Sangamon County

13 miles x 1,200 feet (.23 mile) width = 3 square miles or .4% of the entire unincorporated area

.004 x \$1,864,123,450 (total value of buildings in the unincorporated area) = \$7,456,494 if property is damaged at 100% of value

Urbanized Area-Springfield

4.5 miles x 1,200 feet (.23 mile) = 1.035 square miles or 2% of the area of Springfield

.02 x \$8,504,333,579 (total value of buildings in Springfield) = \$170,086,672 if property is damaged at 100% of value

Urbanized Area-Jerome

1 mile x 1,200 feet (.23 mile) = .23 square mile or 58 % of the area of Jerome

.58 x \$60,485,110 (total value of buildings in Jerome) = \$35,081,364 if property is damaged at 100% of value

Total

\$7,456,494 + \$170,086,672 + \$35,081,364 = \$212,624,530 potential property damage at 100% of value

The “value of buildings” figures are based on the property tax assessment-based market value for all but critical facilities. For critical facilities, the replacement value based on square footage of the structure was used. Since the damage to buildings caused by the F4 tornado in 1957 was complete or severe, this would be a likely scenario for another such occurrence. An F4 tornado is estimated to damage 50% of a structures value. If the structure is a manufactured home, an F4 will result in 100% damage.

Fifty percent damage of structures would be \$106,312,265. Including contents value as well as damage to vehicles, it would be conceivable that between \$106 and \$212 million in property damage could occur if an EF4 tornado took the same path as the first tornado that hit Springfield in March 2006.

There is also the expectation that lives would be at great risk. The planning area has a population of 197,465 people (2010 U.S. Census) plus the area attracts tourists from around the world and commuters who travel here to work from nearby counties.

The economic loss to businesses and the community when workplaces are damaged is also a consideration. Businesses can be impacted in the short-term, such as downtime due to power outages, lack of access, and minor damage, or in the long-term if major damage occurs resulting in extended temporary closure or permanent closure.

WINTER STORM HAZARD

Description

What is a winter storm?

Winter storms in Sangamon County consist of snow and ice and at times result in blizzard conditions. Winter storms can produce flooding, storm surge, closed highways, blocked roads, downed power lines and hypothermia.

Snowfalls are generally measured in inches, but at times have reached over one foot. Blowing snow reduces visibility and is the cause of many vehicle accidents.

- A heavy snowstorm is one that produces at least 6" of snow within 48 hours.
- A blizzard is a winter storm with sustained winds or frequent gusts of 35 mph or greater and considerable falling or blowing snow reducing visibility to less than ¼ mile for three hours or longer. Drifting is a major concern with roadways being blocked and buildings and driveways becoming inaccessible.

Freezing rain and sleet create slippery roadways and sidewalks causing dangerous conditions and can weigh down tree limbs and power lines causing damage and power outages.

- Freezing rain is rain that freezes when it hits the ground, trees, power lines and buildings, creating a coating of ice.
- Sleet is rain that turns to ice pellets before reaching the ground and creates slippery conditions.

The information in Figure 67 was obtained from the National Weather Service in Lincoln, IL and shows historical snow data for Springfield (the only NOAA observing site in Sangamon County).

Figure 67: Average Monthly Snow Data

Normal Snowfall (1981-2014)			
January	6.4"	July	0.0"
February	5.5"	August	0.0"
March	2.5"	September	0.0"
April	0.3"	October	Less than 0.1"
May	0.0"	November	0.6"
June	0.0"	December	5.6"
		Annual	20.9"

The Springfield area can expect about 18 days of snowfall per winter with the largest amount coming in January and February. Of the 11 biggest snowstorms which occurred during a 24 hour period, five (45%) occurred in February, two (18 %) occurred in each of January, March and December (Figure 68).

Figure 68: Snow Data for Springfield (1881-2014)

Frequency of Snowfall Occurrence	
0.1" - 1"	12 days per year
1 - 2"	3 days per year
2 - 4"	2 days per year
4 - 6"	1 day per year
6"	once every 2 years
Total	about 18 days per year

Biggest Snowstorms (24 HR) (1881-2014)	
March 24-25, 2013	17.4"
February 28, 2000	15.0"
January 1-2, 1999	13.3"
January 30-31, 1914	12.6"
January 31 - February 1, 2008	11.3"
February 12-13, 2007	11.2"
December 19, 1973	10.9"
February 12, 1894	10.7"
December 24, 1915	10.5"
February 23-24, 1965	10.3"
March 19-20, 1906	9.4"

Profile

The locations affected by winter storms.

Winter storms generally occur throughout Central Illinois during any single event and the entire County is affected.

The extent of previous occurrences of winter storms in Sangamon County.

Figure 69 presents data on winter storms in the Central Illinois area, including Sangamon County, over the 19-year period from January 1, 1995 to April 30, 2014. During each of the 1995-96, 1996-97, 1997-98, and 2006-07 winter seasons, four winter storms were documented. During two winter seasons three snowstorms occurred. During three winter seasons two snowstorms occurred. During four winter seasons one snowstorm hit the area. During six winter seasons there were no winter storms.

The amount of snow that falls can vary throughout the County for any one winter storm event (See Figure 69). Of the snowstorms cited, the amount of snow ranged from 2" to 17". Along with the snow, heavy winds can create whiteout conditions and drifting. Wind speeds of between 20 and 50 mph have been recorded during snowstorms in Sangamon County.

Eight of these storms included ice or freezing rain.

Previous occurrences of winter storms in Sangamon County.

Winter storms create treacherous conditions for travel and dangerous situations when power outages also occur. Figure 69 shows data on winter storms in the central Illinois area. The statistics shown are for a multi-county area, but all of these storms hit Sangamon County. In this larger area during the 19 year period 11 people died and 47 people suffered injuries in relation to winter storms.

Figure 69: Winter Storm Events in Central Illinois from Jan 1, 1995 – April 30, 2014 (from: National Climatic Data Center)

Winter Season	Date	Time	Extent	Death	Injuries	Property Damage
1995-96	12/08/95	7:00 AM	≤ 5" snow, low temperatures, 20-30 mph winds, wind chill -45°, blowing snow	1	0	0
	12/18/95	7:00 PM	freezing rain, ≤6" snow, 20-30 mph winds, blowing snow	1	0	0
	01/04/96	3:00 AM	2"-7" snow	0	0	0
	01/18/96	10:00 AM	low temperatures, ice, 25-35 mph winds, wind chill -40°	0	2	0
1996-1997	01/08/97	9:00 PM	3"-11" snow	0	6	0
	01/15/97	9:00 PM	4"-6", 20-30 mph winds, blowing snow, low temperatures, wind chill -40°	1	7	0
	01/24/97	7:00 AM	freezing rain, sleet, ≤2" snow	0	0	0
	01/26/97	5:00 AM	1"-9" snow	0	9	0
	12/09/97	3:00 PM	≤ 6" snow	1	0	0
1997-1998	12/30/97	8:00 AM	3" - 6" snow	3	0	0
	01/14/98	6:00 AM	freezing rain, sleet, snow	0	0	0
	03/08/98	10:00 PM	freezing rain, snow, 50 mph winds	2	0	0
1998-1999	01/01/99	12:00 PM	≤ 6" snow, low temperatures, dangerous wind chills, blowing snow	1	1	0
	03/08/99	12:00 PM	freezing rain, 2" - 6" snow	0	5	0
1999-2000	03/11/00	4:00 AM	6" - 8" snow, blowing snow	1	9	0
2001-2002	02/26/02	1:00 AM	5.5" - 7" snow, 15-40 mph winds, blowing snow	0	0	0
	03/25/02	9:00 PM	freezing rain, sleet, 4" - 7" snow, blowing snow	0	0	0
2002-2003	02/14/03	11:00 PM	4" - 8" snow, blowing snow	0	0	0
2004-2005	11/24/04	3:00 PM	4" - 6" snow, 20-50 mph winds, blowing snow	0	4	0
2006-2007	11/29/06	10:00 PM	8" - 12" snow	0	0	0
	12/01/06	12:00 AM	8" - 12" snow	0	4	\$10.0M
	01/12/07	2:00 PM	ice storm	0	0	0
	02/13/07	12:00 AM	freezing rain, sleet, 9"-12" snow, 25-50 mph winds	0	0	0
2007-2008	12/08/07	12:00 PM	ice storm, ≤0.4" ice	0	0	0
	12/15/07	3:00 AM	6" - 9" snow	0	0	0
	01/31/08	1:00 PM	9" - 12" snow	0	0	0
2010-2011	02/01/11	9:30 AM	9-15" snow, 40-50 mph winds	0	0	\$350K
2012-2013	12/20/12	1:30 PM	≤1" snow, blizzard 50+ mph winds	0	0	0
	02/21/13	2:30 PM	5" - 6" snow	0	0	0
	03/24/13	2:00 AM	12"-18" snow	0	0	0
2013-2014	01/05/14	9:00 AM	6" - 10" snow	0	0	0
	02/05/14	7:00 PM	6"- 8" snow	0	0	0
TOTALS				11	47	\$10.35M

In March 1978 an ice storm hit Sangamon County that was accompanied by strong winds and rainfall bringing the area to a halt for many days. Just venturing outdoors was dangerous with power lines and trees falling due to the weight of the ice. The utility line damage was so overwhelming that restoring power took two weeks.

Two additional winter storms of significance occurred in Sangamon County since the adoption of the Natural Hazard Mitigation Plan. As shown on Figure 70, the February 1-2, 2011, snowstorm dumped approximately 15 inches of snow on portions of Sangamon County. This strong storm occurred over two days and caused many problems statewide, not just in Sangamon County. In addition, the largest snowfall in one 24-hour period

occurred during the March 24-25, 2013, snowstorm. This snow event included approximately 17.4 inches of snow, as indicated by Figure 68.

Probability of future events.

Winter storms are expected in Sangamon County. During the 19-year period from 1995-2014, thirty-two winter storms occurred during thirteen winter seasons. (There were no winter storms recorded during six winter seasons.) This indicates a 68% probability that in any given year at least one winter storm will occur. During nine winter seasons, more than one snowstorm occurred. This indicates a 47% probability that in any given year more than one winter storm will hit Sangamon County.

Assessing Vulnerability

Winter storms are very disruptive to a community. Roads can become impassable or extremely dangerous. Buses, trains, and airplanes can be cancelled or delayed. With transportation networks disrupted, emergency response can become delayed or non-existent, mail is not delivered, and shipments of food and other consumer items can be delayed. Schools close, businesses close, and some (or all) government services are not available. There is a toll that can be taken on people related to treacherous road conditions, snow shoveling exertion, and extremely low temperatures. About 70% of injuries caused by winter storms are the result of vehicle accidents while 25% of injuries occur to people caught out in the storm. Of the 11 deaths shown in Figure 68 that occurred in the larger Central Illinois region during 1995-2014 nine, or 82%, were due to vehicle accidents, one was due to exposure, and one occurred when a garage overhang collapsed.

Generally, buildings are not damaged on a large scale during a winter storm although a heavy snow could cause roof damage and the accumulation of ice in gutters can cause building damage. The roof snow load for structures in Sangamon County is 30 pounds per square foot. Any building constructed in a community that has adopted building codes must meet this standard.

There is a large cost to road departments for the removal of snow. The Sangamon County Highway Department spent \$126,000 to remove the eight inches of snow that fell during the December 15, 2007 snowstorm. The winter storm of February 1-2, 2011 produced between 9 and 15 inches of snow. The County Highway Department expended \$90,534 for snow removal for that winter storm alone while the City of Springfield expended over \$276,072.

The damage caused to power and communication lines can be extensive with the ability to bring them back on line delayed because of the adverse conditions. The cost of repair can be high and the consequences can range from being inconvenient to life-threatening.

Presidential Disaster Declaration 1681 included Sangamon County and was issued on February 9, 2007 after the massive snow storm that hit a large area of central Illinois.

Figure 70: Storm Total Snowfall, February 1- 2, 2011

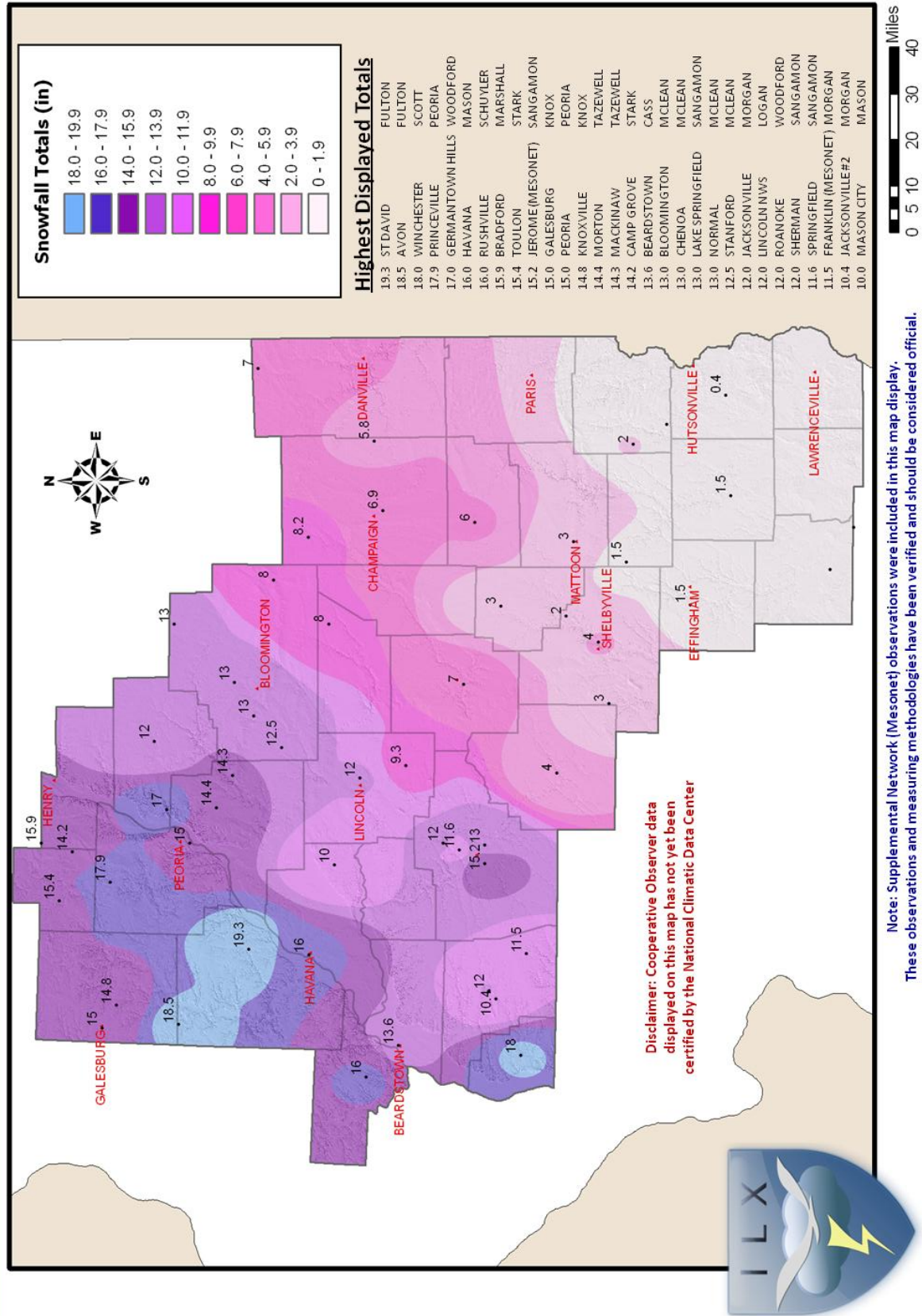
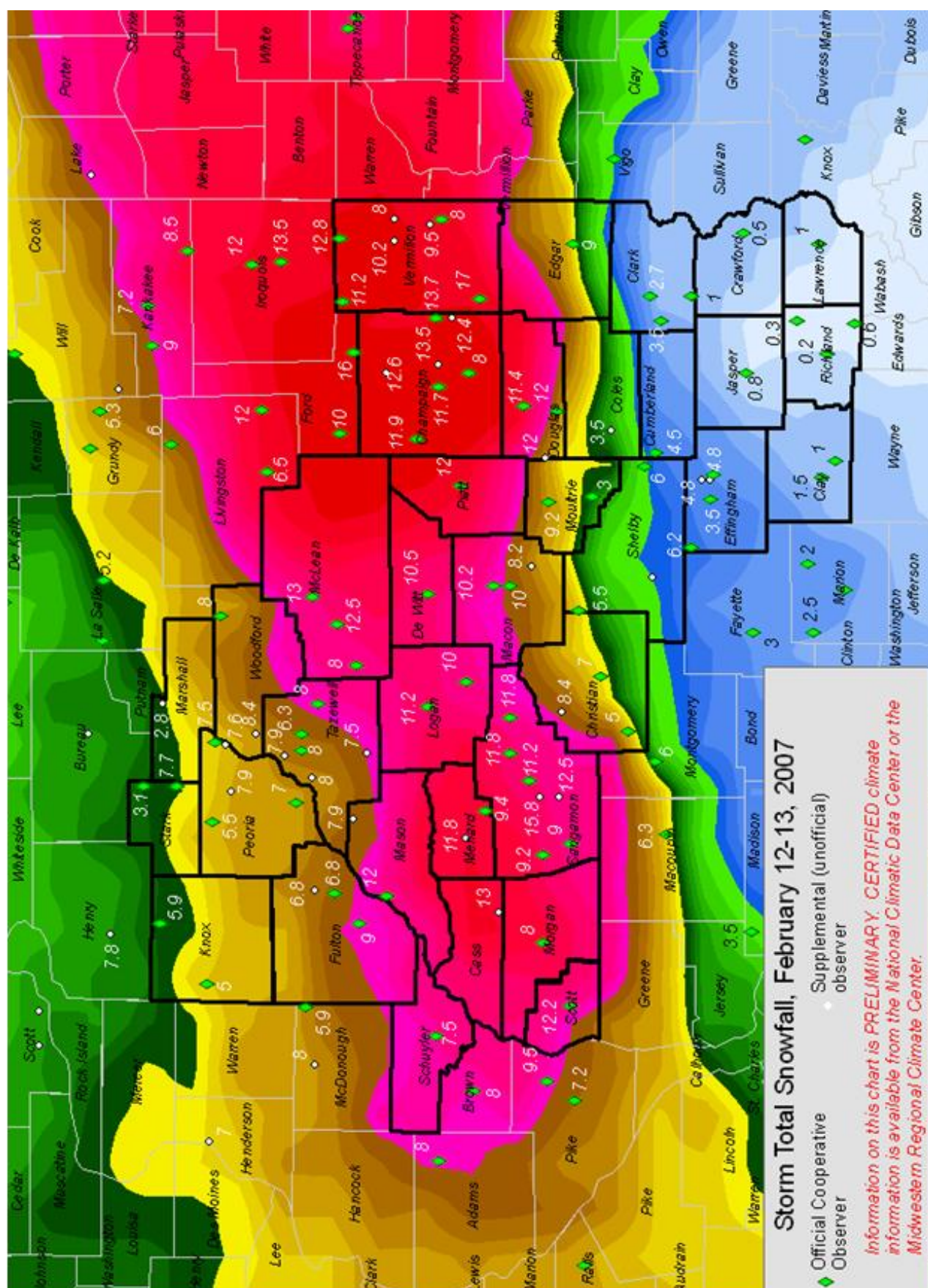


Figure 71: Storm Total Snowfall, February 12–13, 2007



Vulnerability of Future Buildings

Dam failure: the dam failure inundation areas are generally coterminous with the floodplain areas down stream. Future structures will be subject to the building protection requirements of local flood ordinances.

Drought: buildings are not generally affected by drought.

Earthquakes: there is no way to pinpoint where earthquake damage could occur and the probability of occurrence is low. The vulnerability of future buildings to earthquake damage is similar to that of existing buildings.

Extreme heat: buildings are not generally affected by extreme heat.

Floods: all communities in Sangamon County that experience flooding have flood ordinances that require the lowest floor of all new buildings to be elevated to at least one foot above the base flood elevation or any non-residential building to be flood-proofed below the base flood elevation. Floodplain ordinances are strictly enforced by the applicable local jurisdictions.

Mine subsidence: much of the plan area has been undermined for coal. There is no pattern to the occurrence of mine subsidence so specific vulnerability cannot be pinpointed.

Severe storms: the entire County is vulnerable to severe storms. Those communities that have or will adopt building codes will lessen the vulnerability for new structures.

Tornadoes: the entire County is vulnerable to tornadoes. Those communities that have or will adopt building codes will lessen the vulnerability for new structures.

Winter storms: the entire County is vulnerable to winter storms. Those communities that have or will adopt building codes will lessen the vulnerability for new structures.

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Section IV- Mitigation Strategy

2008 Development of Hazard Mitigation Goal, Objectives, and Mitigation Actions

The 2008 Task Force formulated goals and objectives for the plan through the use of small group brainstorming session. The group and the public members in attendance broke into six small groups led by Planning Commission staff. To generate ideas, participants were asked to write down the many ways they would end the sentence “During a natural hazard event a prepared community is a place where.....” Small group members grouped the responses through discussion and consensus according the common themes. Goal statements were created for each grouping.

The six small groups then reconvened and reported to the full Task Force the results of the group exercise. Four common themes were expressed and identified to serve as goals. Following the meeting, Planning Commission staff refined the goals and developed objectives based on the discussion from the meeting. The following goals and objectives were approved by the Task Force at the following meeting.

Following adoption of the goals and objectives, the 2008 Task Force members and others from the general public who were in attendance spent ten minutes writing ideas down on post-it notes for mitigation projects. Everyone then placed their ideas on large sheets of paper hanging on the walls designated with a specific objective under one of the goals. Those in attendance then broke out into four groups (one group per goal) led by Planning Commission staff to discuss the relationship between the projects and the goals and objectives.

Following the meeting, Planning Commission Staff created a project list by goal and objective showing all the suggestions submitted. The list was then sent to all Task Force members. It was suggested to the community representatives that the list be used as a basis for discussion with community leaders on projects that would be appropriate for their village or city.

2015 Task Force Review of Hazard Mitigation Goals and Objectives

The 2015 Task Force broke into groups to review the 2008 goals and objectives. The groups were asked to evaluate each goal and objective to determine if they were still applicable to the hazards identified in Sangamon County. Groups were also asked to identify any additional goals and/or objectives to be considered by the Task Force.

Following the small group discussions, the Task Force reconvened to discuss potential changes. After a thorough discussion, the Task Force voted to adopt changes to the 2008 Goals and Objectives. The 2015 Plan Update Goals & Objectives are listed below with the modifications and additions *highlighted in red*. The list below also includes the 2015 Mitigation Actions.

2015 Plan Update Goals and Objectives

Goal 1 Maintain and improve communication and cooperation between Sangamon County residents, government, and the private sector.

Objective 1.a. Establish adequate warning systems to alert the community to impending natural hazard events.

- Install storm siren – Auburn
- Signs to warn of storm hazards – Auburn
- Lightning signs at baseball & football fields and parks – Auburn
- Pursue local activation of storm sirens based on use of additional weather alert radios tuned to Auburn’s alert frequency – Auburn
- Investigate utilizing a Groupcast notification system to warn residents – Auburn
- Utilize website to post all hazards alerts and safety and preparedness information – Auburn
- Create email notifications to warn about natural hazards events – Auburn
- Provide weather radios to those in need – Cantrall
- Use e-alert system to educate and alert the community to impending natural hazard events as well as to transfer information after the storm – Divernon
- Notify residents of availability of police building to be used as an emergency information center – Jerome
- Purchase two additional storm warning sirens – Mechanicsburg
- Outdoor siren for west end of Village limits (new residential and commercial area) – New Berlin
- Provide weather radios to Village residents and public buildings including businesses – Sherman
- Supplement to civil defense siren system – Southern View
- Provide weather radios to citizens who can’t afford them – Southern View
- Install signage for flood prone areas with elevation markers – Springfield
- Install new storm siren and relocate existing siren to enhance coverage area – Williamsville
- Increase enrollment and utilization of existing electronic alerting system – Williamsville

Objective 1.b. Provide a system to monitor developing natural hazard event situations.

- Develop protocol for local EMS, police, fire and dispatch to more closely monitor National Weather Service, County OEM and dispatch alerts – Auburn
- Develop protocol for more regular contact with citizen hazard spotters – Auburn
- Provide weather radios to Village residents and public buildings including businesses - Sherman
- Monitor sensitive areas, then perform alternatives analysis to address sewer capacity issues - Springfield

Objective 1.c. Establish a method of communicating with the community after a natural hazard event to keep everyone updated on the status of recovery.

- Investigate utilizing a Groupcast notification system to warn residents - Auburn
- Utilize website to post all hazards alerts and safety and preparedness information - Auburn
- Create email notifications to warn about natural hazards events - Auburn

- Create a list of at-risk residents who need to be checked on during a hazard related event – Mechanicsburg
- Purchase additional radios for emergency responders –Mechanicsburg
- Improve communication technology issues between fire department and Sangamon County agencies – Mechanicsburg
- Establish protocol for mobile command center to respond to natural hazards – Mechanicsburg
- Educate public on County’s Road condition warning system – Sangamon County
- Utilize newsletter/website to provide information on natural hazard events and situations – Williamsville

Objective 1.d. Coordinate response plans with all levels of government, appropriate private agencies, and volunteers.

- Develop unified dispatch for fire, EMS, ambulance, police and utilities available to citizens 24/7 – Auburn
- Establish protocol for mobile command center to respond to natural hazards - Mechanicsburg
- Maintain current working response groups – Sangamon County OEM

Objective 1.e. Establish public information/outreach programs in regards to natural hazard event situations.

- Develop unified dispatch for fire, EMS, ambulance, police and utilities available to citizens 24/7 – Auburn
- Investigate utilizing a Groupcast notification system to warn residents - Auburn
- Utilize website to post all hazards alerts and safety and preparedness information - Auburn
- Create email notifications to warn about natural hazards events - Auburn
- Provide educational materials to teach residents the importance of maintaining a free flowing culvert and drainage system – Leland Grove
- Produce educational materials to inform residents who own property in the floodplain about regulatory requirements and encourage those residents to maintain private bridges and culverts – Leland Grove
- Make preparedness brochure available in print as well as the existing digital format - Sherman
- Provide weather radios to Village residents and public buildings including businesses - Sherman

Goal 2 Protect the lives, health, and safety of the people and animals of Sangamon County from the impact and effects of natural hazards.

*Objective 2.a. Provide storm shelters and cooling/**warming** centers for residents.*

- Construct shelters – Auburn
- Construct new municipal center building to withstand severe weather – Auburn
- Provide central storm shelter: reinforce/upgrade Village Hall to survive storm disaster situations and be able to handle needs of citizens using building as a shelter - Buffalo
- Construct lightning and storm shelters in parks – Auburn
- Shatter-proof glass for municipal building – Auburn
- Develop agreements with churches and businesses with basements to be used as storm shelters – Auburn

- Provide alternate storm shelters: utilize the Buffalo Fire Station and Lutheran Church – Buffalo
- Notify residents of availability of police building to be used as an emergency information center – Jerome
- Purchase backup generators for Village Hall and fire station – Mechanicsburg
- Emergency generator for high school emergency shelter – New Berlin
- Establish warming/cooling stations in Village – Rochester
- Provide shelter in new Village Hall – Sherman
- Provide shelter in Waldrop Park – Sherman
- Establish, install or identify storm shelters for existing mobile home developments – Springfield
- Construct safe shelters at Centennial Park and Southwind Park – Springfield Park District
- Provide lightning warning signage through Park District – Springfield Park District
- Construct lightning/storm shelters on golf course and parks – Springfield Park District

Objective 2.b. Educate residents on the steps to take to protect themselves and their property from the impacts of natural hazard events.

- Continue educational program in schools and for other citizens - Auburn
- Utilize website to post all hazards alerts and safety and preparedness information – Auburn
- Educate residents to protect themselves and property – Auburn
- Provide disaster preparedness materials to residents – Buffalo
- Brochures/newsletters sent out for weather emergencies, heating/cooling places and what to do in case of emergency – Divernon
- Educate residents who own property in the floodplain about regulatory requirements – Divernon
- Distribute mitigation information through Neighborhood Watch – Jerome
- Provide educational materials to teach residents the importance of maintaining a free flowing culvert and drainage system – Leland Grove
- Prepare mine subsidence informational materials – Sangamon County
- Make preparedness brochure available in print as well as the existing digital format – Sherman
- Create pamphlet specific to Southern View with information regarding preparation and recovery related to natural hazards – Southern View
- Educate citizens regarding proper actions to take to mitigate and prepare for natural hazards – Springfield
- Provide educational display at Southwind Park – Springfield Park District
- Provide lightning warning signage through Park District – Springfield Park District
- Install severe weather warning signage in parks, golf courses, and ball fields – Springfield Park District

Objective 2.c. Educate local businesses on the steps to take to protect their employees, assets, and property from the impacts of natural hazard events.

- Make preparedness brochure available in print as well as the existing digital format - Sherman

Objective 2.d. Identify the most vulnerable populations in the community.

- Collect names and addresses for elderly and special needs citizens for wellness checks and potential need for additional resources – Auburn

- Create a list of at-risk residents who need to be checked on during a hazard related event – Mechanicsburg
- Identify residents with special needs – Sherman
- Identify residents with special needs and coordinate with neighborhood watch lists to provide assistance in seeking shelter and during recovery – Southern View
- Identify at-risk populations within the community and establish a list – Springfield

Objective 2.e. Support volunteer mitigation efforts that allow residents/businesses/agencies to work together in neighborhoods and the community to assist those who are vulnerable to the impacts of natural hazards.

- Develop unified dispatch for fire, EMS, ambulance, police and utilities available to citizens 24/7 – Auburn
- Develop a storm water master plan and regulations - Springfield

Objective 2.f. Remove and/or limit placement of structures in the known paths of natural hazards such as flood, dam failure, and mine subsidence.

- Produce educational materials to inform residents who own property in the floodplain about regulatory requirements and encourage those residents to maintain private bridges and culverts – Leland Grove
- Acquire repetitively damaged flood prone properties – Sangamon County, Springfield
- Develop a storm water master plan and regulations - Springfield
- Update Land Subdivision Ordinance and Comprehensive Plan - Springfield

Objective 2.g. Maximize immunity to natural hazards for critical facilities and services.

- Improve storm drainage in Western Acres, South of Jackson Street - Auburn
- Provide flood protection for sanitary lift station at Divernon Road – Auburn
- Grade and clean all storm water drainage ditches and culverts – Auburn
- Purchase backup generators for Village Hall and fire station - Mechanicsburg
- Storm sewer repair on North Walnut – Rochester
- Flood protection for southwest sewage pumping station – Rochester
- Provide safe rooms in new county facilities – Sangamon County
- Provide shatter proof glass at Police Department and Village Hall – Sherman
- Bury power lines going to critical facilities – Sherman
- Design and construct a new municipal building to withstand severe weather – Southern View
- Develop a storm water master plan and regulations - Springfield
- Install signage for flood prone areas with elevation markers - Springfield
- Improve local drainage areas prone to flooding – Springfield
- Implement facilities plan – Springfield
- Establish back-up power agreement with CWLP and Ameren to ensure continued sewer plant operations – Springfield Metro Sanitary District
- Upgrade Sugar Creek Plant to handle combined sewer overloads – Springfield Metro Sanitary District
- Upgrade pump stations in collection system and add backup generators – Springfield Metro Sanitary District

Goal 3 Protect existing infrastructure and design new infrastructure to be resilient to the effects of natural hazards. (roads, bridges, mass transit, utilities, water supplies, sewers, dams)

Objective 3.a. Assure power is available for essential services.

- Generator for fire department, police and dispatch, and city garage – Auburn
- Mobile generator for lift stations – Auburn
- Bury power lines going to critical facilities – Chatham
- Develop electrical GIS system – Chatham
- Purchase back-up generator for municipal center – Jerome
- Purchase backup generators for Village Hall and fire station - Mechanicsburg
- Install generator in new Village Hall – Sherman
- Bury power lines going to critical facilities - Sherman
- Install generator for Public Works Complex - Springfield

*Objective 3.b. Assure **potable** water is available in case of drought.*

- Install water loop line to serve the Route 4 and Route 104 areas – Auburn
- Connect Griffith Creek Subdivision to city water by installing 1.2 miles of 6" water line – Mechanicsburg
- Pursue supplemental water supply - Springfield

Objective 3.c. Build and maintain roads and bridges to provide safe passage of vehicles.

- Improve drainage in areas that are flood prone on the northwest side of town and in Griffith Creek Subdivision – Mechanicsburg
- Install storm sewer from 10th Street to Horse Creek – Pawnee
- Relocate sanitary lift station on Highway 104 East that is located in the floodplain – Pawnee
- Increase installation of snow fences along problem stretches of road – Sangamon County
- Implement natural barrier area for Route 124 and Business Route 55 to mitigate blizzard road conditions – Sherman
- Develop a storm water master plan and regulations - Springfield
- Install signage for flood prone areas with elevation markers - Springfield
- Improve local drainage areas prone to flooding - Springfield
- Implement facilities plan - Springfield
- Update Land Subdivision Ordinance and Comprehensive Plan - Springfield
- Construct water drainage systems - Williamsville

Objective 3.d. Establish an inspection and maintenance program that monitors the condition of infrastructure.

- Grade and clean all storm water drainage ditches and culverts – Auburn
- Look at improving drainage water coming from new school – Cantrall
- Better drainage by keeping culverts clean – Jerome
- Maintain Jacksonville Branch by dredging, trimming trees, removing brush, and cleaning culverts, and coordinate activities with Jerome and Springfield – Leland Grove
- Maintain and improve the Town & County storm water drainage system between MacArthur Blvd and Jacksonville Branch and coordinate activities with Jerome and Springfield – Leland Grove
- Deepen, grade and clean all storm water drainage ditches and culverts, and coordinate activities with Jerome and Springfield – Leland Grove
- Improve drainage in areas that are flood prone on the northwest side of town and in Griffith Creek Subdivision - Mechanicsburg
- Clean and repair other storm sewers and culverts – Rochester
- Monitor condition of culverts – Rochester

- Create volunteer network to monitor condition of road culverts (modified to communicate with Township Commissioners – Sangamon County)
- Develop a storm water master plan and regulations - Springfield
- Continue tree trimming efforts around power lines – Springfield
- Develop a maintenance and an inspection plan rating public infrastructure – Springfield
- Trim trees of excessive height and remove dead material – Springfield Park District

Goal 4 Incorporate natural hazard mitigation into community plans and regulations.

Objective 4.a. Adopt regulations that protect buildings (such as building codes).

- Adopt building codes – Cantrall
- Promote adoption of International Building Codes in Sangamon County communities and provide opportunity to enter into an inter-governmental agreement with the County Building Department for enforcement – Sangamon County
- Assess local regulations (building codes, zoning ordinances, subdivision ordinances, public health codes, etc.) to determine how they can better address the impacts of natural hazards – Sherman
- Develop a storm water master plan and regulations - Springfield
- Adopt Building Codes to ensure safe structures - Williamsville

Objective 4.b. Assure flood ordinance meets or exceeds minimum requirements for participation in the National Flood Insurance Program.

- Adopt a floodplain ordinance – Mechanicsburg
- Shoot elevations of buildings in the FEMA floodplain – Sangamon County
- Continue participation in the Community Rating System – Sangamon County
- Provide information to NFIP communities about the CRS program – Sangamon County
- Assess local regulations (building codes, zoning ordinances, subdivision ordinances, public health codes, etc.) to determine how they can better address the impacts of natural hazards – Chatham, Sherman
- Participate in the Community Rating System - Springfield

Objective 4.c. Assess local regulations (building codes, zoning ordinances, subdivision ordinances, public health codes, etc.) to determine how they can better address the impacts of natural hazards.

- Convene county-wide Task Force to develop storm water, drainage and erosion control practices plan – Sangamon County
- Assess local regulations (building codes, zoning ordinances, subdivision ordinances, public health codes, etc.) to determine how they can better address the impacts of natural hazards – Chatham, Sherman
- Participate in the Community Rating System - Springfield

Objective 4.d. Consider natural hazards when updating/creating plans for the community.

- Include natural hazards mitigation information in future changes/updates to the County Comprehensive Plan – Sangamon County
- Implement natural barrier area for Route 124 and Business Route 55 to mitigate blizzard road conditions - Sherman
- Develop a storm water master plan and regulations - Springfield

- Include natural hazards mitigation ideas in future changes/updates to the City Comprehensive Plan – Springfield
- Implement facilities plan - Springfield

Objective 4.e. Update/create a response plan that addresses each natural hazard that could affect the community.

- Develop a storm water master plan and regulations - Springfield
- Update Overflow Emergency Response Plan – Springfield
- Implement facilities plan - Springfield

Goal 5 Preserve and protect the rivers and floodplains of Sangamon County.

Objective 5.a. Establish a county-wide task force to develop a storm water drainage and erosion control master plan.

- Participate in county-wide task force to develop a storm water drainage and erosion control master plan – Jerome, Leland Grove, Mechanicsburg, Springfield
- Convene county-wide Task Force to develop storm water, drainage and erosion control practices plan – Sangamon County
- Develop a storm water master plan and regulations - Springfield

Objective 5.b. Assure water is available in case of drought.

- Maintain Jacksonville Branch by dredging, trimming trees, removing brush, and cleaning culverts, and coordinate activities with Jerome and Springfield – Leland Grove
- Maintain and improve the Town & County storm water drainage system between MacArthur Blvd and Jacksonville Branch and coordinate activities with Jerome and Springfield – Leland Grove
- Deepen, grade and clean all storm water drainage ditches and culverts, and coordinate activities with Jerome and Springfield – Leland Grove
- Pursue supplemental water supply - Springfield

Mitigation Actions – Priorities and Implementation

The 2008 Project Prioritization Committee created the following method for prioritizing actions. It is important to recognize that the implementation of all actions is desirable regardless of prioritized order. Actions assigned to Priority A have a permanent or more far-reaching affect than actions under Priority B, although both address the most significant natural hazards in the County. Priority C actions all address the less significant natural hazards. Priority J actions are ready for implementation within the next year and can be accomplished within existing budgets. All actions will aid in the mitigation effort and should be implemented as opportunities arise.

Project Prioritization Method

Priority A: projects permanently eliminate property damages and/or eliminate or reduce injuries and deaths in a specific area OR have a high probability to systematically reduce property damages, injuries and deaths across a wide area. Priority A projects address the most significant natural hazards – extreme heat, flood, severe storm, tornado, and winter storm.

Priority B: projects reduce property damages in a specific area OR have the potential to reduce property damages, injuries and deaths across a wide area OR educate the public on disaster preparedness and mitigation. Priority B projects address the most significant natural hazards – extreme heat, flood, severe storm, tornado, and winter storm.

Priority C: projects eliminate or reduce property damages, injuries and deaths from the less significant natural hazards OR educate the public on disaster preparedness and mitigation related to the less significant natural hazards – dam failure, drought, earthquake and mine subsidence.

Priority J: projects can “just be done” without requiring outside funding and are able to be implemented within one year of Plan adoption. These can be one-time projects or ongoing projects and may address any hazard.

The 2015 Task Force reviewed the previously utilized project prioritization method and found it effective.

Cost/Benefit Analysis

A cost/benefit analysis will be needed for any of these projects to be implemented. A cost/benefit analysis will be performed at the time of project selection.

Natural Hazard Mitigation Actions by Community – Prioritized (including a Comprehensive Range of Actions for Each Hazard)

AUBURN	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	A	Storm/tornado shelter to hold 100 people	Auburn City Council	75% Federal 25% City	3 yrs.	2.a.	Deferred (Funding)
	SS, T	A	Construct new municipal center building able to withstand severe weather	Auburn City Council	75% Federal 25% City	3 yrs.	2.a.	NEW
	SS, T	A	Provide additional storm siren	Auburn City Council	City	3 yrs.	1.a.	Deferred (Funding)
	SS, T	A	Construct lightning and storm shelters for all parks	Auburn City Council	City	3 yrs.	2.a.	NEW
	SS, T, F	A	Purchase generator for fire department, police, dispatch, and City Garage	Auburn City Council	75% Federal 25% City	3 yrs.	3.a.	NEW
	ALL	A	Purchase mobile generator for lift stations	Auburn City Council	75% Federal 25% City	3 yrs.	3.a.	NEW
	SS, F	B	Improve storm drainage in Western Acres	Auburn City Council	75% Federal 25% City	3 yrs.	2.g.	NEW
	SS, F	B	Improve storm drainage South of Jackson Street	Auburn City Council	75% Federal 25% City	3 yrs.	2.g.	NEW
	F	B	Provide flood protection for sanitary lift station at Divernon Road	Auburn City Council	75% Federal 25% City	3 yrs.	2.g.	NEW
	F	B	Grade and clean all storm water drainage ditches and culverts	Auburn City Council	75% Federal 25% City	3 yrs.	2.g., 3.d.	NEW
	D	B	Install water loop line to serve the Route 4 and Route 104 areas	Auburn City Council	75% Federal 25% City	3 yrs.	3.b.	NEW
	SS, T	B	Shatter-proof glass for municipal building	Auburn City Council	75% Federal 25% City	3 yrs.	2.a.	Deferred (Funding)
	SS, T	B	Signs to warn of storm hazards	Auburn City Council	75% Federal 25% City	2 yrs.	1.a.	Deferred (Funding)
	SS	B	Lightning signs at baseball, football fields and parks	Auburn City Council	75% Federal 25% City	2 yrs.	1.a.	Deferred (Funding)
	ALL	J	Educate residents to protect themselves & property	Auburn City Council	75% Federal 25% Village	Ongoing	2.b.	Ongoing
	SS, T, F	J	Develop protocol for local EMS, police, fire & dispatch to more closely monitor National Weather Service, County OEM & dispatch alerts	Auburn City Council	City	1yr.	1.b.	NEW
	SS, T	J	Pursue local activation of storm sirens based on use of additional weather alert radios tuned to Auburn's alert frequency	Auburn City Council	City	1 yr.	1.a.	NEW
	ALL	J	Utilize Village website to post all hazards alerts, safety and preparedness information	Auburn City Council	City	1 yr.	1.a., 1.c., 1.e., 2.b.	NEW
	ALL	J	Continue educational program in schools and for other citizens	Auburn City Council	City	Ongoing	2.b.	NEW
	ALL	J	Collect names and addresses for elderly and special needs citizens for wellness checks and potential need for additional resources	Auburn City Council	City	1 yr.	2.d.	NEW
	SS, T	J	Develop agreements with churches & businesses with basements to be used as storm shelters	Auburn City Council	City	1 yr.	2.a.	NEW
	ALL	J	Develop protocol for more regular contact with citizen hazard spotters	Auburn City Council	City	1 yr.	1.b.	NEW
	ALL	J	Investigate utilizing a Groupcast notification system to warn residents	Auburn City Council	City	1 yr.	1.a., 1.c., 1.e.	NEW
	ALL	J	Develop unified dispatch for Fire, EMS, ambulance, Police & utilities available to citizens 24 / 7	Auburn City Council	City	1 yr.	1.d., 1.e., 2.e.	NEW
	ALL	J	Create email notifications to warn about natural hazards events	Auburn City Council	City	1 yr.	1.a., 1.c., 1.e.	NEW

BUFFALO	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, WS	A	Provide central storm shelter: reinforce upgrade Village Hall to survive storm disaster situations and be able to handle needs of citizens using building as a shelter	Buffalo Village Board, Buffalo Fire District	75% Federal 25% Village	3yrs.	2.a.	Deferred (space & funding)
	SS, T, WS	J	Provide alternate storm shelters utilizing the Buffalo Fire Station and Lutheran Church	Buffalo Village Board Buffalo Fire District	No cost	1 yr.	2.a.	NEW
	SS, T, WS	J	Provide disaster preparedness materials to the residents of Buffalo	Buffalo Village Board	Village Board	1 yr.	2.b.	NEW

CANTRALL	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	F	B	Look at improving drainage water coming from new school	Cantrall Village Board	Village	2 yrs.	3.d.	Deferred (Funding)
	SS, T, WS	J	Provide weather radios to those in need	Cantrall Village Board	Village	Ongoing	1.a.	Ongoing
	EA, F, SS, WS, T	J	Adopt Building Codes	Cantrall Village Board	Village	1 yr.	4.a.	NEW

CHATHAM	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, WS	A	Bury power lines going to critical facilities	Chatham Electric Dept.	75% Federal 25% Village	1 yr.	3.a.	In progress
	SS, T, WS	J	Develop electrical GIS system	GIS/Chatham Electric Dept.	75% Federal 25% Village	1 yr.	3.a.	In progress
	ALL	J	Utilize automated telephone system to notify residents of impending hazards as well as information transfer after storm	Chatham Village Board	Village	3 yrs.	1.a., 1.c.	Deleted other opt. utilized

CURRAN	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	A	Construction of safe room	Curran Village Board	75% Federal 25% Village	2 yrs.	2.a.	Unknown
	SS, T	B	Installation of storm siren	Curran Village Board	Village	1 yr.	1.a.	Unknown
	F	B	Improve drainage and retrofit storm sewer	Curran Village Board	Village	1 yr.	3.c.	Unknown
	SS, T, WS	J	Trim trees of excessive height and remove dead material	Curran Village Board	Village	1 yr.	3.d.	Unknown

DAWSON	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, WS	A	Put power lines underground at Village Hall	Dawson Village Board	75% Federal 25% Village	2 yrs.	3.a.	Unknown
	F	B	Build a dike to protect water plan from flooding	Dawson Village Board	75% Federal 25% Village	3 yrs.	2.g.	Unknown
	SS, T, WS	J	Insist Ameren does better maintenance work on trees close to power lines	Dawson Village Board	No cost	1 yr.	3.d.	Unknown

DIVERNON	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, WS	J	Give away weather radios to those in need	Divernon Village Board	Village	1 yr.	1.a.	Completed
	ALL	J	Brochures/newsletters sent out for weather emergencies, heating /cooling places and what to do in case of emergency	Divernon Village Board	Village	1 yr.	2.b.	Ongoing
	SS, T, WS	J	Use e-alert system to educate and alert the community to impending natural hazard events as well as to transfer information after the storm	Divernon Village Board	Village	1 yr.	1.a.	Ongoing
	F	J	Educate residents who own property in the floodplain about regulatory requirements	Divernon Village Board	Village	1 yr.	2.b.	NEW

ILLIOPOLIS	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	ALL	B	Educate residents and local businesses on steps they can take to protect their lives and property in a natural hazard event	Illioapolis Village Board	Village	1 yr.	2.b.	Unknown

JEROME	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	EH, SS, T, WS	B	Purchase backup generator for municipal center	Jerome Village Board	Village	1 yr.	3.a.	Deferred (Funding)
	ALL	J	Distribute mitigation information through Neighborhood Watch	Jerome Police Dept	Village	1 yr.	2.b.	Ongoing
	F	J	Better drainage by keeping culverts clean	Jerome Public Works	Village	1 yr.	3.d.	Ongoing
	ALL	J	Notify residents of availability of police building to be used as an emergency information center	Jerome Village Board	Village	1 yr.	1.a., 2.a.	NEW
	F	J	Participate in county-wide task force to develop a storm water drainage and erosion control master plan	Jerome Village Board, Jerome Public Works	Village	1 yr.	5.a.	NEW

LELAND GROVE	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	F, SS	A	Maintain Jacksonville Branch by dredging, trimming trees, removing brush, and cleaning culverts and coordinate activities with Jerome and Springfield	City of Leland Grove	75% Federal 25% City	3 yrs	3.d., 5.b.	NEW
	F, SS	A	Maintain and improve the Town & Country storm water drainage system between MacArthur Blvd and Jacksonville Branch and coordinate activities with Jerome and Springfield	City of Leland Grove	75% Federal 25% City	3 yrs	3.d., 5.b.	NEW
	F, SS	A	Deepen, grade and clean all storm water drainage ditches and culverts and coordinate activities with Jerome and Springfield	City of Leland Grove	75% Federal 25% City	3 yrs.	3.d., 5.b.	NEW
	F	J	Participate in county-wide task force to develop a storm water drainage and erosion control master plan	City of Leland Grove	Village	1 yr.	5.a.	NEW
	F	J	Produce educational materials to teach residents the importance of maintaining a free flowing culvert and drainage system	City of Leland Grove	75% Federal 25% City	3 yrs.	1.e., 2.b.	NEW
	F, SS	J	Produce educational materials to inform residents who own property in the floodplain about regulatory requirements and encourage those residents to maintain private bridges and culverts	City of Leland Grove	75% Federal 25% City	3 yrs.	1.e., 2.f.	NEW

MECHANICSBURG	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, F, WS	B	Improve drainage in areas that are flood prone on the northwest side of town and in Griffith Creek Subdivision.	Village of Mechanicsburg	75% Federal 25% Village		3.c., 3.d.	NEW
	ALL	B	Purchase additional radios for emergency responders	Village of Mechanicsburg	75% Federal 25% Village		1.c.	NEW
	ALL	B	Improve communication technology issues between fire department and Sangamon County agencies	Village of Mechanicsburg Fire Dept.	75% Federal 25% Village		1.c.	NEW
	ALL	B	Purchase backup generators for Village Hall and fire station	Village of Mechanicsburg Fire Dept.	75% Federal 25% Village		2.a., 2.g., 3.a	NEW
	T	B	Purchase two additional storm warning sirens	Village of Mechanicsburg	75% Federal 25% Village	3 yrs.	1.a.	NEW
	DR	C	Connect Griffith Creek Subdivision to city water by installing 1.2 miles of 6" water line	Village of Mechanicsburg	75% Federal 25% Village		3.b.	NEW
	ALL	J	Create list of at-risk residents who need to be checked on during a hazard related event	Village of Mechanicsburg	Village		1.c., 2.d.	NEW
	F	J	Adopt Floodplain Ordinance	Village of Mechanicsburg	Village	1 yr.	4.b.	NEW
	F	J	Participate in county-wide Task Force to develop stormwater drainage and erosion control plan	Village of Mechanicsburg	Village	1 yr.	5.a.	NEW
	ALL	J	Establish protocol for mobile command center to respond to natural hazard events	Village of Mechanicsburg	Village	1 yr.	1.c., 1.d.	NEW

NEW BERLIN	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, WS	A	Emergency generator for high school emergency shelter	New Berlin School Dist	New Berlin School District	1 yr.	2.a.	Deferred (funding)
	SS, T	B	Outdoor siren for west end of Village limits (new residential and commercial area)	New Berlin Village Board	Village	1 yr.	1.a.	Completed

PAWNEE	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	F	B	Sidewalk and storm sewer replacement	Pawnee Village Board	State Village	1 yr.	3.c.	Completed
	F	A	Install storm sewer from 10th Street to Horse Creek	Pawnee Village Board	75% Federal 25% Village	1 yr.	3.c.	NEW
	F	B	Relocate sanitary lift station on Hwy 104 East that is located in the floodplain	Pawnee Village Board	75% Federal 25% Village	3 yrs.	3.c.	NEW

PLEASANT PLAINS	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	F	B	Southwest storm sewer project-repair and maintenance	Pleasant Plains Village Board	Village	2 yrs.	3.c.	Unknown

RIVERTON	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, WS	A	Bury power lines to Village wells	Riverton Village Board	75% Federal 25% Village	1 yr.	3.a.	Unknown
	SS, T, WS	A	Create storm shelter(s) or safe room(s) for use in severe weather	Riverton Village Board	75% Federal 25% Village	2 yrs.	2.a.	Unknown
	F	B	Drainage improvements in 200 block of Blackburn	Riverton Village Board	Village School District	1 yr.	3.c.	Unknown
	SS	B	Erect signage "Ballparks to be evacuated during periods of lightning"	Riverton Village Board	75% Federal 25% Village	6 mo	1.a	Unknown
	ALL	J	Create volunteer network for checking on citizens with disabilities during storm / inclement weather	Riverton Village Board	Village	6 mo	2.e.	Unknown

ROCHESTER	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	A	Safe room in middle school	Rochester School District	75% Federal 25% School District	6 mo	2.a.	Removed
	F	A	Storm sewer repair on N. Walnut	Rochester Public Works	Village Public Works Dept	1 yr.	2.g.	In progress
	F, T	B	Community information on potential flooding	Rochester Emergency Management	75% Federal 25% Village		1.a.	Completed
	F	B	Shifting main sewer line due to flooding erosion	Rochester Public Works Dept.	75% Federal 25% Village	1 yr.	2.g.	Completed
	F	B	Flood protection for sewage pump house in Rochester Community Park	Rochester Village Board	Village	1 yr.	2.g.	Completed
	F	B	Clean and repair other storm sewers and culverts	Rochester Public Works	Village Public Works Dept	Ongoing	3.d.	Ongoing
	EH, WS	J	Establish warming / cooling stations in Village	Rochester Citizen Corp	Village Citizen Corps	1 yr.	2.a	In progress
	F	J	Monitor condition of culverts	Rochester Public Works Dept.	Village	1 yr.	3.d.	Ongoing
	F	B	Flood protection for southwest sewage pumping station	Rochester Public Works Dept.	Village	1 yr.	2.g.	New

SANGAMON COUNTY	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	F	A	Acquire repetitively damaged flood prone properties	Regional Planning Comm.	75% Federal 25% County	Ongoing	2.f.	Ongoing
	SS, T	A	Provide safe rooms in new county facilities	County Board	75% Federal 25% County	Ongoing	2.g.	Ongoing
	EA, F, MS, SS, T, WS	B	Create education program for builders and home owners regarding building designs that will provide protection during hazard events	County Bldg Dept.	75% Federal 25% Springfield Area Home-builders assoc. and Energy Education Council	1 yr.	2.b.	Deleted (Budget)
	ALL	B	Create and present school programs regarding the many aspects of natural hazards	County Bldg Dept.	75% Federal 25% County	1 yr.	2.b.	Completed
	WS	C	Increase installation of snow fences along problem stretches of road	County Highway Dept.	75% Federal 25% County	2 yrs.	3.c.	Ongoing
	DF, EA, F, MS, SS, T, WS	C	Provide a mobile building permit department to be activated in damaged areas after a natural hazard	County Bldg Dept.	County	3 yrs.	4.c.	Deleted Use other Co. unit
	F	C	Shoot elevations of buildings in the FEMA floodplain	County GIS Dept.	75% Federal 25% County	3 yrs.	4.b.	Deferred (Budget)
	EA, F, SS, T, WS	J	Promote the adoption of International Building Codes in Sangamon County communities and provide opportunity to enter into an inter-governmental agreement with the County Building Dept. for enforcement	County Bldg Dept.	Permit fees	Ongoing	4.a.	Ongoing
	F	J	Create education materials regarding the importance of erosion control	County Bldg Dept., County Highway Dept.	County	1 yr.	2.b.	Deleted (Budget)
	F	J	Create volunteer network to monitor condition of road culverts (modified to communicate with Township Commissioners)	County Highway Dept	County	3 yrs.	3.d.	Modified
	F	J	Create award program to recognize good erosion control practices	County Board	County	1 yr.	4.c.	Deleted (Budget)
	F	J	Adopt Erosion Control Ordinance	County Board	County		4.c.	Completed
	SS, T, WS	J	Create educational program regarding use of weather radios	County OEM	County	6 mo.	1.a.	Completed
	WS	J	Educate public on County's Road condition warning system	County Board Office	County	1 yr.	1.c.	Ongoing
	MS	J	Prepare mine subsidence informational materials	County Bldg Dept., Regional Planning Comm.	County	1 yr.	2.b.	Deferred (Budget)
	F	J	Continue participation in the Community Rating System	Regional Planning Comm.	County	Ongoing	4.b.	Ongoing
	SS, T	J	Work with state legislators to provide business tax credit for manufactured home parks that install storm shelters	County Board, County Bldg Dept.	County	1 yr.	2.a.	Deleted (Budget)
	ALL	J	Work with local humane groups to explore creating accommodations for pets displaced by natural hazard events in Sangamon County	County Animal Control, County OEM	County	3 yrs.	2.a.	Completed
	ALL	J	Maintain current working response groups	County OEM	County	Ongoing	1.d.	Ongoing
	ALL	J	Develop response plans to ensure that all small communities are involved	County OEM	County	2 yrs.	1.d.	Completed
	F	J	Convene county-wide Task Force to develop storm water, drainage and erosion control practices plan.	County Board, Regional Planning Comm., County Highway Dept.	County	3 yrs.	4.c., 5.a.	NEW
	F	J	Provide information to NFIP communities about the CRS program	Regional Planning Comm.	County	3 yrs.	4.b.	NEW
	DF	J	Use GIS and latest aerial photography to review and update inundation impact below the Lake Sangchris Dam	County GIS Dept.	County	2 yrs.	2.d.	
	ALL	J	Include natural hazards mitigation information in future changes and updates to county comprehensive plan	County Board	County	3 yrs.	4.d.	NEW

SHERMAN	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	A	Provide shelter in new Village Hall	Sherman Village Board	75% Federal 25% Village	5 yrs	2.a.	In progress
	ALL	A	Install generator in new Village Hall	Sherman Village Board	75% Federal 25% Village	5 yrs	3.a.	NEW
	SS, T	A	Provide shelter in Waldrop Park	Sherman Village Board	75% Federal 25% Village	2 yrs	2.a.	NEW
	WS	B	Implement natural barrier area for Route 124 and Business Route 55 to mitigate blizzard road conditions	Sherman Village Board	75% Federal 25% Village	Ongoing	3.c., 4.d.	
	SS, T	B	Provide shatter proof glass at Police Dept	Sherman Village Board	75% Federal 25% Village	1 yr.	2.g.	NEW
	SS, T	B	Provide shatter proof glass at Village Hall	Sherman Village Board	75% Federal 25% Village	5 yrs	2.g.	NEW
	SS, T, WS	B	Bury power lines going to critical facilities	Sherman Village Board	75% Federal 25% Village	5 yrs	2.g., 3.a.	NEW
	ALL	C	Publication of preparedness brochure	Sherman EMA	75% Federal 25% Village	1 yr.	2.b.	Completed
	ALL	C	Make preparedness brochure available in print as well as the existing digital format	Sherman Village Board	Village	1 yr.	1.e., 2.b., 2.c.	NEW
	ALL	C	Identify residents with special needs	Sherman EMA	Village	1 yr.	2.d.	NEW
	ALL	J	Purchase 2-way radios for use during a natural hazard event	Sherman EMA	Village	6 mo.	1.a., 1.d.	Completed
	ALL	J	Assess local regulations (building codes, zoning ordinances, subdivision ordinances, Public health codes, etc.) to determine how they can better address the impacts of Natural hazards.	Sherman Village Board, Sherman Zoning Dept	Village	1 yr.	4.a., 4.b., 4.c.	Ongoing
	ALL	J	Provide weather radios to Village residents and public buildings including businesses	Sherman Village Board	75% Federal 25% Village	1 yr.	1.a., 1.b., 1.e.	NEW

SOUTHERN VIEW	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T, WS	A	Design and construct a new municipal building to withstand severe weather	Southern View Village Board	75% Federal 25% Village	3 yrs.	2.g.	
	SS, T	B	Supplement to civil defense siren system	Southern View Village Board	Village	3 yrs.	1.a.	
	SS, T, WS	J	Provide weather radios to citizens who can't afford them	Southern View Village Board	Village	3 yrs.	1.a.	
	ALL	J	Identify residents with special needs and coordinate with neighborhood watch ists to provide assistance in seeking shelter and during recovery	Southern View Village Board	Village	3 yrs.	2.d.	
	ALL	J	Create pamphlet specific to Southern View with information regarding preparation and recovery related to natural hazards	Southern View Village Board	Village	1 yr.	2.b.	

SPRINGFIELD	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	A	Establish, install or identify storm shelters for existing mobile home developments	Office of Public Works	75% Federal 25% City	1 yr.	2.a.	Ongoing
	SS, T, WS	A	Bury power lines to critical infrastructure facilities	CWLP-Electric Division	75% Federal 25% City	1 yr.	3.a.	Deleted (Budget)
	F	A	Acquire repetitively flood-damaged properties in the floodplain	Office of Public Works	75% Federal 25% City	Ongoing	2.f.	Ongoing
	SS, WS, F	A	Develop a storm water master plan and regulations	Office of Public Works	75% Federal 25% City	2 yrs.	2.e., 2.f., 2.g., 3.c., 3.d., 4.a., 4.d., 4.e., 5.a.	NEW
	SS, WS	A	Update Overflow Emergency Response Plan	Office of Public Works	75% Federal 25% City	Ongoing	4.e.	NEW
	ALL	A	Install generator for Public Works Complex	Office of Public Works	75% Federal 25% City	1 yr.	3.a.	NEW
	DR	A	Pursue supplemental water supply	CWLP-Water Division	City	Ongoing	3.b., 5.b.	NEW
	ALL	B	Educate citizens regarding proper actions to take to mitigate and prepare for natural hazards	Springfield Homeland Security	75% Federal 25% City	1 yr.	2.b.	Ongoing
	SS, WS	B	Monitor sensitive areas, then perform alternatives analysis to address sewer capacity issues	Office of Public Works	City	Ongoing	1.b.	NEW
	FF, SS	B	Install signage for flood prone areas with elevation markers	Office of Public Works	City	1 yr.	1.a., 2.g., 3.c.	NEW
	F	B	Improve local drainage areas prone to flooding	Office of Public Works	City	Ongoing	2.g., 3.c.	NEW
	DF	C	Develop Emergency Action Plan in the event of a breach of Spaulding and/or Saddle Dams	CWLP- Water Division	City	1 yr.	4.d.	Completed
	DR	C	Develop Emergency Action Plan in the event of a loss of the City water supply	CWLP-Water Division	City	1 yr.	3.b.	Completed
	ALL	J	Explore possibility of developing and purchasing a reverse 911 system for the City, Sangamon County and E-911	Springfield Homeland Security	City, County, E-911	1 yr.	1.a.	Completed (use Alert Sense)
	ALL	J	Identify at-risk populations within the community and establish a list	Springfield Community Relations and Homeland Security	City Staff	1 yr.	2.d.	Ongoing
	ALL	J	Include natural hazards mitigation ideas in future changes and updates to	Office of Public Works	City Staff	Ongoing	4.d.	Ongoing
	SS, T, WS	J	Continue tree trimming efforts around power lines	CWLP-Electric Division	City	Ongoing	3.d.	Ongoing
	F, SS, WS	J	Participate in the Community Rating System	Office of Public Works	City	1 yr.	4.b., 4.c.	NEW
	FF, SS, WS	J	Develop a maintenance and inspection plan rating public infrastructure	Office of Public Works	City	2 yrs.	3.d.	NEW
	F, SS, WS	J	Implement facilities plan	Office of Public Works	City	Ongoing	2.g., 3.c., 4.d., 4.e.	NEW
	ALL	J	Update Land Subdivision Ordinance and Comprehensive Plan	Office of Public Works	City	2 yrs.	2.f., 3.c.	NEW
	ALL	J	Develop and purchase a text messaging and email alert system	Springfield Homeland Security	City	1 yr.	1.a.	Completed (use Alert Sense)

T H A Y E R	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	A	Have an engineer evaluate the Headstart School Building and Community Center for a safe area	Thayer Village Board	75% Federal 25% Village	1 yr.	2.a.	Unknown
	SS, T, WS	B	Bury power lines to critical facilities	Thayer Village Board	75% Federal 25% Village	2 yrs.	3.a.	Unknown
	ALL	B	Backup generator for safe haven	Thayer Village Board	Village	2 yrs.	2.a.	Unknown
	SS, T	J	Siren testing once a month	Thayer Village Board	Village	1 mo.	1.a.	Unknown
	ALL	J	Prepare a list of at-risk citizens	Thayer Village Board	Village	3 mo.	2.d.	Unknown
	ALL	J	Develop a list of supplies to have on hand	Thayer Village Board	Village	3 mo.	2.b.	Unknown
	ALL	J	Construct "Okay/Need Help" signs for residents to put in their windows during a natural disaster	Thayer Village Board	Village	6 mo.	2.e.	Unknown
	ALL	J	Have an ESDA Plan	Thayer Village Board	Village	3 mo.	4.e.	Unknown

W I L L I A M S V I L L E	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	B	Install new storm siren and relocate existing siren to enhance coverage area	Williamsville Village Board	Village	1 yr.	1.a.	NEW
	MS	C	Educate public on underground mines	Williamsville Village Board	Village	6 mo.	2.b.	Completed
	F	B	Construct water drainage systems	Williamsville Village Board	Village	3 yrs	3.c.	In progress
	SS, T, WS	J	Assistance to public (priority to special needs) to obtain emergency radios	Williamsville Village Board	Village	1 yr.	1.a.	Completed
	EA, EH, SS, T, WS	J	Let people know where to go when power is out	Williamsville Village Board	Village	6 mo.	2.a.	Completed
	EA, F, SS, T, WS	J	Adopt Building Codes to ensure safe structures	Williamsville Village Board	Village	1 yr.	4.a.	In progress
	EA, EH, SS, T, WS	J	Increase enrollment and utilization of existing electronic alerting system	Williamsville Village Board	Village	1 yr.	1.a.	NEW
	EA, EH, SS, T, WS	J	Utilize newsletter/website to provide information on natural hazard events and situations	Williamsville Village Board	Village	1 yr.	1.c.	NEW

AMERICAN RED CROSS Illinois Capital Area Chapter	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	ALL	B	Take the lead on educating residents to take steps to protect themselves	Colleen Stone	75% Federal 25% Red Cross	6 mo.	2.b.	Unknown
	ALL	B	Take the lead on educating local businesses on steps to take to protect their employees	Kyle Belz	75% Federal 25% Red Cross	6 mo.	2.c.	Unknown
	SS, T, WS	J	Assist with obtaining bulk purchasing of crank weather radios	Colleen Stone	75% Federal 25% Red Cross	6 mo.	1.a.	Unknown

SPRINGFIELD MASS TRANSIT DISTRICT	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	EA, SS, T	A	Include wind resistance and seismic activity in design and construction of multi-modal center	SMTD Board	75% Federal 25% SMTD	7 yrs.	2.g.	Unknown
	SS, T, WS	A	Bury power lines to existing mass transit facility	SMTD Board	75% Federal 25% SMTD TRC	1 yr.	3.a.	Unknown

SPRINGFIELD METRO SANITARY DISTRICT	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	F	B	Emergency pumps for storm, sewer, and flood pumping	SMSD, Springfield Dept. of Public Works	SMSD	1 yr.	2.g.	Completed
	F	B	Provide Vactor sewer cleaning trucks for emergency drain cleaning and flood cleanup	SMSD, Springfield Dept. of Public Works	SMSD	6 mo.	2.g.	Completed
	F	B	Install monitors at Combined Sewer Overflows to assist with flood tracking and warnings	SMSD, Springfield Dept. of Public Works	SMSD	2 mo.	1.b.	Completed
	EA, F, SS, T, WS	J	Establish tiered system for supply of fuel (gasoline and diesel) for generators, pump stations, and plant operations	SMSD	SMSD	6 mo.	2.g.	Completed
	SS, T, WS	B	Establish back-up power agreement with CWLP and Ameren to ensure continued sewer plant operations	SMSD	SMSD	6 mo.	2.g.	NEW
	F	B	Upgrade Sugar Creek Plan to handle combined sewer overloads	SMSD	SMSD	5 yrs.	2.g.	NEW
	F, SS, T, WS	B	Upgrade pump stations in collection system and add backup generators	SMSD	SMSD	5 yrs.	2.g.	NEW

SPRINGFIELD PARK DISTRICT BOARD	Hazard	Priority	Project	Implementation Responsibility	Funding Sources	Time Frame	Goal	Status
	SS, T	A	Construct safe shelters at Centennial Park and Southwind Park	Springfield Park District Board	75% Federal 25% Park District	1-3 yrs.	2.a.	
	SS, T	B	Provide educational display at Southwind Park	Springfield Park District Board	75% Federal 25% Park District	1 yr.	2.b.	
	SS	B	Provide lightning warning signage through Park District	Springfield Park District Board	75% Federal 25% Park District	1 yr.	2.a, 2.b.	
	SS, T	A	Construct lightning/storm shelters on golf course and parks	Springfield Park District Board	75% Federal 25% Park District		2.a.	NEW
	SS, T	A	Install severe weather warning signage in parks, golf courses, and ball fields	Springfield Park District Board	75% Federal 25% Park District		2.b.	NEW
	SS, T	J	Trim trees of excessive height and remove dead material	Springfield Park District Board	Park District		3.d.	NEW

Section V – Monitoring, Evaluating & Updating

The 2015 Natural Hazards Mitigation Plan is an action document based on the assessment of risks to the participating communities. It contains projects to be implemented, but also serves as a tool to integrate the concept of natural hazards mitigation into comprehensive planning efforts and regulatory structures on a regionalized basis. However, as communities grow, weather patterns change, or other variables take on a modified significance, the Hazard Mitigation Plan will need to be reviewed and updated.

Plan Adoption, Implementation and Maintenance

The following jurisdictions met the requirements to be participants in the planning process:

Auburn, Buffalo, Cantrall, Chatham, Divernon, Jerome, Leland Grove, Mechanicsburg, New Berlin, Pawnee, Rochester, Sherman, Southern View, Springfield, Williamsville, and Sangamon County.

The draft plan was approved by the Task Force at its May 5, 2015 meeting. The Regional Planning Commission submitted the draft plan to the Illinois Emergency Management Agency (IEMA) and FEMA for review. Upon receiving final approval from FEMA, jurisdictions adopted resolutions adopting the 2015 Plan. A draft resolution as provided to the jurisdictions is included in the Appendix of this plan.

Each project included in the plan has been assigned to specific communities, or by groups of communities for implementation. Some of the mitigation actions items can be implemented by the jurisdictions with relative ease through ensuring that hazard mitigation planning efforts become part of every facet of local government. For example, several communities worked together to develop an action item to explore the development of a cross-jurisdictional storm water management plan. However, other action items that focus on improving physical infrastructure require funding resources that are not readily available. As those resources become available, communities will proceed with implementation of the actions items.

The strategy for monitoring and evaluating the Plan is the formation of a Workgroup consisting of all community representatives and technical partners who volunteered to continue their involvement. Upon adoption of the Plan, the initial Workgroup will be structured as shown on the next page.

The Workgroup members will be responsible for monitoring and documenting implementation of the Plan by their communities. Monitoring the Plan assures that the many parties identified for implementation of projects remain aware of their responsibilities and that community leaders will continue to integrate natural hazards mitigation into local planning mechanisms. Workgroup members will also evaluate the Plan in relation to changing circumstances.

The Workgroup will meet at least twice a year to review the progress of the communities in implementing the Plan and to prepare a progress report to be submitted to the governing bodies of all communities. The report will include an evaluation of the Plan and identify any areas that may need to be revisited. The report year will start on the date the first community adopts the final Plan. Each meeting will provide time for the Workgroup members to network and explore opportunities for working together in mitigation efforts.

Every five years the Plan will be updated taking into account changing circumstances and risks. The Workgroup may schedule additional meetings for this process which needs to start early enough to provide adequate time for the review, concurrence, and adoption of each community and the approval of FEMA by the five-year anniversary date of the first community's adoption of the Plan.

Any non-participating community may choose to join the Multi-jurisdictional Plan during the 5-year update and will be responsible for providing all information needed to be integrated into the Plan.

Public participation will remain a vital part of the planning process. The website established by the Regional Planning Commission will be maintained, meetings will be open to the public, meeting notices will be posted in communities, and the media will be notified of meetings and Plan reports and updates.

Maintenance Workgroup of the
2015 Sangamon County
Multi-jurisdictional Natural Hazards Mitigation Plan

Auburn – Rich Marx
Buffalo – Daniel Miller
Cantrall – Phil Holler
Chatham – Patrick McCarthy
Divernon - Jim Copelin
Jerome – Dale Lael
Leland Grove – Paul LaMantia
Mechanicsburg – Kenneth Metcalf, Sr.
New Berlin – Terry Nydegger
Pawnee – Dave Skinner
Rochester – Joe Hill
Sherman – Mike Moos
Southern View – Judy Gordon
Springfield – Nate Bottom
Williamsville – John Brennan
Sangamon County – Brian McFadden

Springfield Homebuilders Association – Steve Sturm
Sangamon County Office of Emergency Management – Bill Russell

Section VI – Appendices

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COMMUNITY CORRESPONDENCE

Letter of Intent (Mailed to Participants in 2008 Plan)

Village of
Address

Dear Sir or Madame:

The Disaster Mitigation Act of 2000 requires that there be an update to the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan (Plan), which includes your municipality as a participant. In a previous letter sent from David Butt with the Sangamon County Office of Emergency Management, Southern Illinois University was going to take the lead in the plan update, but a different course of action has been established. The Springfield-Sangamon County Regional Planning Commission, who wrote the initial plan, will be writing the plan update as well.

During the last half of 2008, your municipality adopted the Plan. A copy of it can be found at <http://www.co.sangamon.il.us/NHMP/default.asp>. At page 86, the Plan indicates that your representative for the initial planning process was Greg Hashman.

At this time, we need a reply from you on your interest to continue being part of the Plan and participate in this required update. Please sign and return the enclosed "Notice of Intent" by October 31st.

If you have questions, you may call me or e-mail me, as provided below.

Sincerely,

Abby Bybee, Associate Planner
Springfield-Sangamon County Regional Planning Commission
535-3110
abbyb@co.sangamon.il.us

Letter of Intent (Mailed to Non- Participants in 2008 Plan)
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City/Village of

Dear Sir or Madame:

The Disaster Mitigation Act of 2000 requires that there be an update to the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan (Plan). A copy of the Plan can be found at <http://www.co.sangamon.il.us/NHMP/default.asp>. In a previous letter sent from David Butt with the Sangamon County Office of Emergency Management, Southern Illinois University was going to take the lead in the plan update, but a different course of action has been established. The Springfield-Sangamon County Regional Planning Commission, who wrote the initial plan, will be writing the plan update as well.

Nineteen municipalities joined with Sangamon County to be part of the initial Plan. Your municipality did not. At this time, as we are asking the nineteen whether they wish to continue with the Plan and participate in its update. There is the opportunity for your community to join the Plan.

We need a reply from you on your interest toward becoming part of the Plan and being a participant in this required update. Should you be of interest, please sign and return the enclosed "Notice of Intent" by October 31st.

If you have questions, you may call me or e-mail me, as provided below.

Sincerely,

Abby Bybee
Springfield-Sangamon County Regional Planning Commission
535-3110
abbyb@co.sangamon.il.us

Statement of Intent to Participate

Date

Organization
Street Address
City, State and Zip

Statement of Intent to Participate in Natural Hazard Mitigation Planning

As a potential participant in the Hazard Mitigation Assistance Program, our municipality hereby states its interest to participate in the Sangamon County Multi-Jurisdictional Natural Hazard Mitigation Plan Five-Year Update.

After FEMA funding approval and during the planning implementation, our municipality agrees to participate in the hazard mitigation planning process.

We understand that the process will include a variety of meetings and/or workgroups that will require a degree of participation from a designated representative(s) from the municipality.

As, signed, we understand this is a voluntary program and that participation may benefit our municipality by identifying hazards and prioritizing potential projects to mitigate the effects of natural hazards.

Signature of Authorized Representative

Date

Print Name of Authorized Representative

Title

Please return form by **October 31st** to:

Abby Bybee
Springfield-Sangamon County Regional Planning Commission
200 South Ninth Street, Room 212
Springfield, IL 62701

Contact Form for Participants

VILLAGE OF _____ CONTACT INFORMATION

_____, President
Village of _____
ADDRESS _____

Phone # _____

E-mail _____

Representative appointed to Multi-jurisdictional Natural Hazards Mitigation Planning Task Force:

Name: _____

Address: _____

Phone #: _____

E-mail: _____

The above named person is authorized to represent the Village of _____ on the Multi-jurisdictional Natural Hazards Mitigation Planning Task Force and will participate in all activities associated with development of the Plan.

_____, President
Village of _____

Participation Resolution Format
--

Jurisdiction:
Governing Body:
Address:

RESOLUTION

WHEREAS, adopting a natural hazards mitigation plan would benefit the Village (or City) of _____ by identifying activities that could mitigate the impact of natural hazards events on the citizens of the Village and provide eligibility for the Village to receive federal hazard mitigation grant funding; and

WHEREAS, the Village (or City) of _____ has limited resources to undertake the preparation of a natural hazards mitigation plan; and

WHEREAS, the Springfield Sangamon County Regional Planning Commission has received a grant from the Federal Emergency Management Agency to prepare a multi-jurisdictional natural hazards mitigation plan for Sangamon County; and

WHEREAS, the Springfield Sangamon County Regional Planning Commission is preparing a multi-jurisdictional natural hazards mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Springfield Sangamon County Regional Planning Commission will provide opportunities for public comment during the planning process and prior to adoption.

NOW THEREFORE, The _____ Village Board authorizes the Springfield Sangamon County Regional Planning Commission on behalf of the Village of _____ to prepare the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan which shall be reviewed and considered for adoption by the _____ Village Board upon completion. A representative from the Village will be appointed by the Village President to participate in meetings, provide information needed for the plan, facilitate opportunities for public involvement, and act as a liaison between the multi-jurisdictional natural hazards mitigation planning task force and the Village Board.

ADOPTED this _____ day of _____, 2014 at the meeting of the _____ Village Board.

(Village or City), Mayor

Adoption Resolution

(To be adopted by all participating communities)

RESOLUTION _____

WHEREAS, the update to the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan has been prepared by the Springfield Sangamon County Regional Planning Commission through the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force; and,

WHEREAS, the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the _____ is a local unit of government that has afforded the citizens an opportunity to comment and provide input to the Plan and the actions in the Plan; and,

WHEREAS, the _____ has reviewed the Plan and affirms to participate in the Workgroup that will review the Plan every year and update it no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the _____ that the _____ adopts the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan as this jurisdiction's Multi-hazard Mitigation Plan, and resolves to execute the actions in the Plan.

ADOPTED this _____ day of _____, 2016 at the meeting of the _____.

Mayor

PUBLIC ENGAGEMENT

Meeting Agendas & Minutes

Public Notices

Press Releases

**Sangamon County Multi-jurisdictional Natural Hazards
Mitigation Plan Update Task Force**

August 5, 2014 Meeting
5:30pm

AGENDA

1. Call to order
2. Approval of minutes
3. Orientation to purpose of task force and planning process
4. Community participation requirements/Project timeline
5. Mission statement
6. Citizen survey
7. Public comment
8. Adjournment

**Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force
Meeting Minutes
August 5, 2014**

TASK FORCE MEMBERS	Aug.	Sept.	Oct.	Nov.	Dec.	Feb.
Citizen Member – Greg Michaud, Chair	X					
Auburn – Rick Marx						
Cantrall – Phil Holler	X					
Chatham – Patrick McCarthy	X					
Curran – Tim Luckey	X					
Dawson – Robin Ashton-Hale	X					
Divernon – Jim Copelin	X					
Illiopolis – Jonathan Honsley						
Jerome – Dale Lael	X					
Leland Grove – Paul LaMantia						
Mechanicsburg – Kenneth Metcalf, Sr.	X					
New Berlin – Terry Nydegger						
Pawnee – Dave Skinner	X					
Riverton – Louie Rogers	X					
Rochester – Gael Kent	X					
Sangamon County – Brian McFadden						
Sherman – Mike Moos						
Southern View – Judy Gordon	X					
Spaulding – Mike Foster	X					
Springfield – Ken Fustin						
Williamsville – John Brennan						
Abraham Lincoln Cap. Airport – Tim Franke						
Ameren – Gretchen Jarrett	X					
American Red Cross – Glen Fisher	X					
CWLP – Rick Meadows	X					
Central Management Services – Diane Hoots	X					
Rural Electric Convenience Coop. – Lou Delaby	X					
Sang. Co. Dept. of Public Health – Diana Wade	X					
Sang. Co. Dept. of Zoning. – Trustin Harrison, Vice-chair						
Sang. Co. GIS. – Tracy Garrison						
Sang. Co. Farm Bureau – Paul Rice						
Sang. Co. Highway Dept. – Brian Wright	X					
Sang. Co. Office of Emergency Mgmt. – Bill Russell	X					
Springfield Homebuilders Assoc. – Steve Sturm	X					
Springfield Park District – Marcus Miller	X					
Springfield School District #186 – Darrell Schaver	X					
Springfield Mass Transit District – Frank Squires						
Springfield Metro Sanitary Dist. – Mike Ashenfelter	X					
Springfield Metro Sanitary Dist. – Gregg Humphrey	X					
University of Illinois at Springfield – Dave Barrows						
Greg Michaud – Citizen Member	X					

STAFF:						
Abby Bybee	X					
Gail Weiskopf	X					

Call to order:

The first meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force was called to order.

Greg Michaud, Chair explained the purpose of updating the original plans at the five year update point. Michaud briefly touched on the importance of making sure the plan included any new projects or existing projects, so that if a Federal disaster is declared in Sangamon County, the residents of the communities would be assured the projects would be paid for by FEMA.

Welcome and Introductions:

Abby Bybee, project facilitator for the Multi-jurisdictional Natural Hazards Mitigation Plan, thanked everyone for coming to the meeting. Bybee started by introducing herself and the task force members introduced themselves to the group. There were 25 task force members present, 12 of those being community representatives

Orientation the purpose of task force and planning process:

Bybee reviewed a power point presentation to explain what the task force's purpose is, mission, goals and what is to be accomplished in updating the current plan by May 2015. This task force was organized to create a plan that identifies activities within the communities in Sangamon County that we can implement that will reduce hardships that can accompany natural hazard events such as tornadoes, winter storms or flooding. This will not be a response plan, but rather a plan that when implemented will reduce the amount of response that will be needed.

Bybee noted that taking actions to protect citizens and property is motivation enough to prepare a hazard mitigation plan. The Federal Government has provided an additional motivation with the Disaster Mitigation Act of 2000 (known as DMA2K). This legislation targets disaster related federal funding available through the Federal Emergency Management Agency such as the Pre-Disaster Mitigation Program and the Hazard Mitigation Grant Program. Each state is required to have a hazard mitigation plan in order for funding to be available at the local level. Bybee pointed out that Illinois updated its plan in 2013. For a community to be eligible to receive project grants under these programs, that community must have adopted a DMA2K compliant plan. The Act specifically allows for the creation of a multi-jurisdictional plan rather than requiring each community to have their own plan. Each community is required to participate fully in the creation of a multi-jurisdictional plan and adopt the plan.

Community participation requirements/ Project timeline:

Bybee went on to explain that under the Hazard Mitigation Grant Program grant money becomes available after a presidential disaster declaration in a state. The amount is a percentage of the total estimated federal assistance provided for a major disaster. For approved grants FEMA provides 75% funding with a 25% local in-kind match needed, which is different than the original plan where the 25% was matched by the county. Bybee explained a local in-kind match includes the work done to produce the plan such as mileage to and from the meetings, the amount of time spent on homework. Each individual is to document the information on the sheet provided in the packet.

What IEMA wants when the grant is closed out is a narrative of how the plan was completed. When an auditor comes in and reviews the plan in 5 years it will be broken down in a report stating the hours,

mileage and cost of the project. Bybee noted this time a calculation of what each taskforce member's time is worth will need to be documented. This is calculated by taking their hourly rate plus fringe benefits. Since there will be different scenarios, she will be happy to answer individual questions. Bybee explained that it is very important for everyone to sign in at all meetings in order to document participation. This is very important, as attending meetings is a requirement for being considered a participating community.

A maintenance plan was developed in order to monitor, evaluate and update the plan every five years. Updates should reflect current conditions with population, land use changes and major developments. Evaluating the new risk information from data and accessing the goals and objectives outlined in the old plan to check validity of the community's needs for the future.

Bybee reviewed the steps and project timeline and emphasized the importance of public outreach required by FEMA this time. The timeline is including in the packet. Step one organization is a basic informational meeting. Public involvement starts right when the process starts and will continue throughout the end. Step two is re-assessing the risk looking at changes in land use and development trends that have occurred since 2008 within the communities. Step three will update goals and objectives and see if they are still relevant to current conditions. Step four is mitigation actions will be revisited – what actions have been completed, which ones aren't valid and don't apply. Also included is a plan maintenance section. FEMA requires an update every five years and the plan to be reviewed yearly in between. Sixth and final step is final plan submission to FEMA and formal adoption by local communities will be step five a public hearing for the draft plan.

Mission Statement:

Bybee indicated the original plans mission statement in the packets could be changed as the task force sees fit. She wanted all task force members to think about what they would like in the mission statement and bring these ideas to the September meeting.

Citizen Survey:

Bybee noted the citizen survey that is in the task force packets. She requested that all task force members need to review the citizen survey and bring any suggestions for changes to the September meeting. Bybee suggested an online survey to be more current than a direct mailing. The new survey could be posted to the county hazard website and even posted to each community website.

Meeting Schedule:

The meeting schedule will remain the first Tuesday of the month at 5:30pm in the County Board Chambers, except for the November which will be the first Wednesday November 5, 2014.

Public Comment:

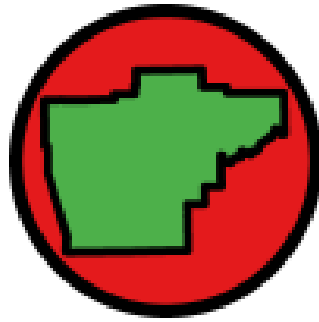
There was no public comment.

Adjournment:

The meeting was adjourned at 6:15pm.

Respectfully Submitted,

Gail Weiskopf



**Sangamon County Multi-jurisdictional
Natural Hazards Mitigation Plan Update
Task Force
Meeting**

September 2, 2014

5:30 pm

Sangamon County Board Chamber – 200 S. 9th St.

AGENDA

1. Call to order
2. Approval of minutes
3. Updates
4. Mission Statement
5. Citizen Survey
6. Risk Assessment
7. Next meetings
8. Public comment
9. Adjournment

**Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force
Meeting Minutes
September 2, 2014**

TASK FORCE MEMBERS	Aug.	Sept.	Oct.	Nov.	Dec.	Feb.
Citizen Member – Greg Michaud, Chair	X					
Auburn – Rick Marx		X				
Cantrall – Phil Holler	X					
Chatham – Patrick McCarthy	X					
Curran – Tim Luckey	X					
Dawson – Robin Ashton-Hale	X					
Divernon – Jim Copelin	X					
Illiopolis – Jonathan Horsley						
Jerome – Dale Lael	X					
Leland Grove – Paul LaMantia		X				
Mechanicsburg – Kenneth Metcalf, Sr.	X					
New Berlin – Terry Nydegger		X				
Pawnee – Dave Skinner	X	X				
Riverton – Louie Rogers	X					
Rochester – Gael Kent	X	X				
Sangamon County – Brian McFadden		X				
Sherman – Mike Moos		X				
Southern View – Judy Gordon	X					
Spaulding – Mike Foster	X					
Springfield – Ken Fustin		X				
Williamsville – John Brennan		X				
Abraham Lincoln Cap. Airport – Tim Franke		X				
Ameren – Gretchen Jarrett	X	X				
American Red Cross – Glen Fisher	X	X				
CWLP – Rick Meadows	X					
Central Management Services – Diane Hoots	X					
Rural Electric Convenience Coop. – Lou Delaby	X					
Sang. Co. Dept. of Public Health – Diana Wade	X					
Sang. Co. Dept. of Zoning. – Trustin Harrison, Vice-chair		X				
Sang. Co. GIS. – Tracy Garrison		X				
Sang. Co. Farm Bureau – Paul Rice		X				
Sang. Co. Highway Dept. – Brian Wright	X	X				
Sang. Co. Office of Emergency Mgmt. – Bill Russell	X	X				
Springfield Homebuilders Assoc. – Steve Sturm	X					
Springfield Park District – Marcus Miller	X	X				
Springfield School District #186 – Darrell Schaver	X					
Springfield Mass Transit District – Frank Squires						
Springfield Metro Sanitary Dist. – Mike Ashenfelter	X	X				
Springfield Metro Sanitary Dist. – Gregg Humphrey	X					

University of Illinois at Springfield – Dave Barrows						
Greg Michaud – Citizen Member	X					
STAFF:						
Abby Bybee	X	X				
Gail Weiskopf	X	X				

Call to order:

Trustin Harrison, Vice-chair called to order the second meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force and requested introductions to be followed.

Approval of Minutes:

Abby Bybee acknowledged the changes submitted by Tracey Garrison and asked if there were any other additions or corrections to the minutes of the August 5, 2014 meeting. Tracey Garrison made a motion to approve the minutes as submitted. Brian Wright seconded the motion. The vote to approve was unanimous.

Updates:

Bybee welcomed the Village of Buffalo, who had experienced change in administration, but will be joining the plan.

Bybee announced that the Rochester, Williamsville, New Berlin, and Divernon have provided links to the Hazard Mitigation Plan website (<http://www.co.sangamon.il.us/NHMP>) on their website. She pointed out that any community that has done this should let her know because this counts as public participation. She thanked those communities that have done so already.

Bybee reminded everyone the importance of the paperwork that FEMA is requesting. The following communities are still missing contact forms from Chatham and Clearlake and resolutions forms from Auburn, Chatham, Jerome and Springfield.

Bybee stressed the value of signing in every meeting in order to document participation. This is very important, as attending meetings is a requirement for being considered a participating community. She noted the mileage and homework sheet will need to be submitted every meeting. She explained the hourly rate sheet is a one time submission so your hourly rate can be figured.

Bybee recapped the fundamental points of Hazard Mitigation for those who were new to the plan. The Regional Planning Commission is facilitating the project. Sangamon County is participating along with 19 of its jurisdictions. We are doing Hazard Mitigation efforts, those are projects taken before a disaster happens to lessen the impact of future disasters. This process takes approximately 9-12 months with a plan update required every 5 years. We are doing this because funding is available for plans that are updated every 5 years. If they are not updated FEMA will not give money for it. The first plan was done in 2008 and the plan expired in August 2014. This is being done through a collaborative planning process in which we will review and update the existing plan. The risks are being re-assessed at this meeting. In future meetings, we will update the goals & objectives, update mitigation actions and update plan maintenance.

Bybee went on to explain that under the Hazard Mitigation Grant Program grant money becomes available after a presidential disaster declaration in a state. The amount is a percentage of the total estimated federal assistance provided for a major disaster. For approved grants FEMA provides 75% funding with a 25% In-kind Cost Share needed.

Mission Statement:

Bybee read the mission statement and asked the task force if there were any recommendations for change to the 2008 mission statement that is the packet. She entertained questions. Harrison entertained a motion to approve the mission statement as it originally read. Gael Kent made a motion to approve the mission statement. Paul LaMantia seconded the motion. The vote to approve was unanimous.

Discussion – Mike Moos asked if the mission statement could be amended to change. Bybee said it could be amended to change.

Citizen Survey:

Bybee noted that it would be best to go through the citizen survey question by question to add, change or delete recommendations.

The first five questions are general and the group agreed they were okay.

Question #6: Have you been impacted by a natural hazard in the last 5 years while living or working in Sangamon County? For example: Flooding of your home, severe winter storm damage or utility disruption? If you answer is “yes”, please describe your experience. If your answer in “no”, please leave the answer blank.

Mike Moos suggested moving Question #9 before question #6, so they would have the hazards to go through as example.

Moos wanted to know if there was some significance in the 5 years and the 10 years between question #5 and question #10. He wanted clarification; he thought it was redundant.

Question #6 wants the participant to elaborate on their experience, which would be a more detailed answer.

Question # 7: Please rank how prepared you feel you and your household are for the probable impacts of natural hazard events. Rank on a scale of 1 to 5, with 5 representing the most prepared.

There was no comment.

Question #8: Why do you think you are prepared for the probable impacts from natural hazard events? Please check all that apply.

- ☐ Emergency preparedness information from a government source.
- ☐ Locally provided news or other media outlet (Facebook, Twitter or other social media)
- ☐ School and other academic institutions.
- ☐ Attended meetings that have dealt with disaster preparedness.

Gael Kent suggested to break government sources out for Question #8 like (FEMA, IEMA, and Village Information Center). Also include (Public Service Announcements, Ads or TV spots) in the breakdown of news and media outlet.

Question #9: In the past 10 years, which of the following types of natural hazard events have you or someone in your household experienced within Sangamon County and how concerned are you about the following natural hazards impacting the County?

	Have Experienced	Not Concerned	Somewhat Concerned	Very Concerned	Extremely Concerned
Dam Failure	☐	☐	☐	☐	☐
Drought	☐	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐	☐
Extreme Heat	☐	☐	☐	☐	☐
Flood	☐	☐	☐	☐	☐
Mine Subsidence	☐	☐	☐	☐	☐
Sever Storm (thunderstorm, lightning, hail)	☐	☐	☐	☐	☐
Tornado	☐	☐	☐	☐	☐
Winter Storm	☐	☐	☐	☐	☐

Change Question#9 to 5 years.

Question #10 – Information on the impacts of and how to prepare for a natural disaster can be disseminated to the public in various ways. Of the methods described below, please identify the top 3 ways which would be most effective in helping you make your home safer and better able to withstand the impacts of natural hazard events.

- ☐ Newspaper
- ☐ Television
- ☐ Radio
- ☐ Social Media (Facebook, Twitter, etc.)
- ☐ Weather Radio
- ☐ City / Village
- ☐ Utility Company
- ☐ Sangamon County
- ☐ Non-profit organizations

Moos explained add Electronic Alerting Systems to Question10.

Question #11: Do you currently have any of the following disaster and emergency plans and procedure in place?

- ☐ My home has an emergency plan prepared.
- ☐ My workplace has an emergency plan prepared.
- ☐ My home has a disaster supply kit.
- ☐ My workplace has a disaster supply kit.
- ☐ My family knows how to shelter-in-place in our home if needed.
- ☐ My colleagues and I know how to shelter-in-place in our workplace if needed.
- ☐ My family knows our evacuation routes to safety.
- ☐ My colleagues and I know our workplace evacuation routes to safety.

Moos asked if it could be broke down by category, Question 11 seems redundant.

Emergency Plan Prepared	☐	Home	☐	Workplace	☐	School	☐	No	☐
Disaster Supply Kit	☐	Home	☐	Workplace	☐	School	☐	No	☐
How to shelter-in-place	☐	Home	☐	Workplace	☐	School	☐	No	☐
Evacuation routes to safety	☐	Home	☐	Workplace	☐	School	☐	No	☐

Question #12: To the best of your knowledge, is your property located in the designated floodplain?

- ☐ **Yes**
- ☐ **No**
- ☐ **Not sure**

Moos asked possibly include a website for information about flood plain or insurance and/or include a comment box for Question #12.

Question #13: Do you have flood insurance?

- ☐ **Yes**
- ☐ **No**

There was no comment.

Question #14: If you do not have flood insurance, what is the primary reason?

- ☐ **I don't need it / my property has never flooded.**
- ☐ **Don't need it/ my house in not in the floodplain.**
- ☐ **Insurance Company will not provide.**
- ☐ **My homeowners insurance will cover me.**
- ☐ **It is too expensive.**
- ☐ **It is not worth it.**
- ☐ **Not familiar with it/don't know about it.**

There was no comment.

Question #15: Did you consider the impact a natural disaster could have on your home before you purchased/moved into your home?

- ☐ **Yes**
- ☐ **No**

There was no comment.

Question #16: Would the disclosure of this type of information influence your decision to purchase/move into a home?

- ☐ **Yes**
- ☐ **No**

There was no comment.

Question #17: If your property were located in a designated "high hazard" area, or had received repeated damage from a natural hazard event, would you consider a "buy out", elevation of the structure, or relocation offered by a public agency?

- ☐ **Yes**
- ☐ **No**
- ☐ **not sure**

There was no comment.

Question #18: If you would like to be kept inform of the process or receive additional information concerning natural hazard mitigation n Sangamon County, please provide you contact information below. Providing this information is optional and all contact information will be kept confidential.

Question #19: Additional comments are welcome.

Bybee noted that she would finalize the survey with the changes and email it to everyone. Harrison entertained a motion to approve the survey subject to the changes. Brian Wright made a motion to approve the survey subject to the changes. Dave Skinner seconded the motion. The vote to approve was unanimous.

Risk Assessment:

Bybee started out by describing the meaning of a risk assessment. She explained it is merely the likelihood of a natural hazard to cause damage to human health and property within Sangamon County.

After identifying the hazard, the Risk Priority Index (RPI) is calculated for each hazard. Take the probability by determining which hazards are more likely than others to occur in Sangamon County and multiply by a magnitude/severity associated with past events of the hazard.

The Task Force discussed each hazard in the Sangamon County and ranked them as shown in the following table.

Hazard	Future Occurrence Ranking		Hazard Magnitude	Total Assessed	Rank
Dam Failure	1 - Unlikely	Multiply	2- Limited	2	
Drought	3 - Likely		2- Limited	6	Tie for 2 nd
Earthquake	1 - Unlikely		1- Negligible	1	
Extreme Heat	4 - Highly Likely		1- Negligible	4	Tie for 3rd
Flood	3 - Likely		2- Limited	6	Tie for 2 nd
Mine Subsidence	2 – Possible		2- Limited	4	Tie for 3rd
Severe Storms	4 – Highly Likely		2- Limited	8	Tie for 1st
Tornado	4 – Highly Likely		2- Limited	8	Tie for 1st
Winter Storm	4 – Highly Likely		2- Limited	8	Tie for 1st

Next Meetings:

Bybee noted the homework sheets that were handed out: 1) Bybee announced that the next meeting would be the first Tuesday October 7, 2014 at 5:30pm in the County Board Chambers.

Public Comment:

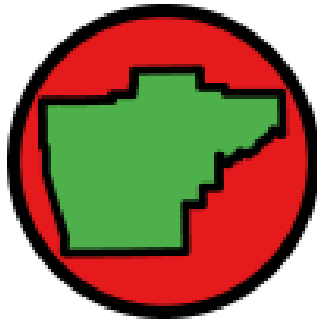
There was no public comment.

Adjournment:

Harrison entertained a motion to adjourn. Gael Kent made the motion and John Brennan seconded it. The vote was unanimous.

Respectfully Submitted,

Gail Weiskopf



**Sangamon County Multi-jurisdictional
Natural Hazards Mitigation Plan Update
Task Force
Meeting**

October 7, 2014
5:30 pm
Sangamon County Board Chamber – 200 S. 9th St.

AGENDA

1. Call to order
2. Approval of minutes
3. Updates
4. Goals and Objectives
5. Next meetings
6. Public comment
7. Adjournment

**Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force
Meeting Minutes
October 7, 2014**

TASK FORCE MEMBERS	Aug.	Sept.	Oct.	Nov.	Dec.	Feb.
Citizen Member – Greg Michaud, Chair	X		X			
Auburn – Rick Marx		X	X			
Buffalo – Daniel Miller			X			
Cantrall – Phil Holler	X		X			
Chatham – Patrick McCarthy	X		X			
Curran – Tim Luckey	X		X			
Dawson – Robin Ashton-Hale	X		X			
Divernon – Jim Copelin	X		X			
Illiopoliis – Jonathan Horsley						
Jerome – Dale Lael	X		X			
Leland Grove – Paul LaMantia		X	X			
Mechanicsburg – Kenneth Metcalf, Sr.	X		X			
New Berlin – Terry Nydegger		X	X			
Pawnee – Dave Skinner	X	X				
Riverton – Louie Rogers	X					
Rochester – Gael Kent	X	X				
Sangamon County – Brian McFadden		X				
Sherman – Mike Moos		X	X			
Southern View – Judy Gordon	X		X			
Spaulding – Mike Foster	X		X			
Springfield – Ken Fustin, Jeph Basset		X	X			
Williamsville – John Brennan		X	X			
Abraham Lincoln Cap. Airport – Tim Franke		X	X			
Ameren – Gretchen Jarrett	X	X	X			
American Red Cross – Glen Fisher	X	X				
CWLP – Rick Meadows	X		X			
Central Management Services – Diane Hoots	X		X			
Rural Electric Convenience Coop. – Lou Delaby	X		X			
Sang. Co. Dept. of Public Health – Diana Wade	X		X			
Sang. Co. Dept. of Zoning. – Trustin Harrison, Vice-chair		X				
Sang. Co. GIS. – Tracy Garrison		X	X			
Sang. Co. Farm Bureau – Paul Rice		X	X			
Sang. Co. Highway Dept. – Brian Wright	X	X	X			
Sang. Co. Office of Emergency Mgmt. – Bill Russell	X	X	X			
Springfield Homebuilders Assoc. – Steve Sturm	X		X			
Springfield Park District – Marcus Miller	X	X	X			
Springfield School District #186 – Darrell Schaver	X		X			
Springfield Mass Transit District – Frank Squires						
Springfield Metro Sanitary Dist. – Mike Ashenfelter	X	X				
Springfield Metro Sanitary Dist. – Gregg Humphrey	X					
University of Illinois at Springfield – Dave Barrows						

STAFF:						
Abby Bybee	X	X	X			
Molly Berns			X			
Gail Weiskopf	X	X	X			

Call to order:

Greg Michaud, Chair called to order the third meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force and requested introductions to be followed.

Approval of Minutes:

Michaud, Chair asked if there were any additions or corrections to the minutes of the September 2, 2014. Brian Wright made a motion to approve the minutes as submitted. John Brennan seconded the motion. The vote to approve was unanimous.

Updates:

Bybee announced that Southern View, Jerome, Rochester, Williamsville, New Berlin, and Divernon have provided links to the Hazard Mitigation Plan website (<http://www.co.sangamon.il.us/NHMP>) on their website. She pointed out that any community that has done this should let her know because this counts as public participation. She thanked those communities that have done so already.

Bybee announced that the Village of Clearlake would not be participating in the plan. They did not have the resources available to partake.

Bybee announced that she will no longer be with the Springfield Sangamon County Regional Planning Commission after October 30, 2014. She introduced Molly Berns who will be the new project facilitator. She noted the transition should be smooth and dates of meetings and locations will be the same as planned.

Bybee advised the task force the importance of signing in every meeting in order to document participation. She explained one of the criteria for participation in the plan is to attend 4 of the 6 meetings. She noted the mileage and homework sheets lets the Planning Commission know the miles you traveled and the hours you spent working on your plan which counts toward the local match, as well as the hourly rate sheet.

Bybee summarized what has been completed so far with the mitigation plan: 1) established criteria for participation, 2) finalized the Mission Statement and voted on, 3) reviewed, finalized, and posted the Citizen Survey to community websites, 4) established a risk priority index for Sangamon County which was homework for the individual villages or towns to establish a risk priority index for the community, and 5) continued public participation by announcing at the village board meetings, posting flyers around your community, encouraging citizens to take the survey about the mitigation project.

Goals and Objectives

Bybee announced that tonight the focus would be reviewing the goals in the 2008 Plan. She quoted FEMA: "It is not necessary to change goals from the previous plan if they remain valid; however, the plan must document that goals were re-evaluated and that they were determined to remain valid and effective."

Bybee noted some things to keep in mind about the goals of the plan are the following: 1) Goals represent basic desires of the community, 2) Goals encompass all aspects of the community, public and

private, 3)Goals are non-specific, in that they refer to the quality (not quantity) of the outcome, 4)Goals are future-oriented, in that they are achievable in the future; and goals are time-dependent, in that they are not scheduled events, 5)Goals are stated without regard for implementation such as cost, schedule and means, 6)Goals are defined before considering how to accomplish them so that the goals are not dependent on the means of achievement, and 7)Goal statements form the basis for objectives & actions that will be used as a means to achieve the goals.

Bybee had the task force members separate into small groups to review the 2008 Plan goals. Bybee also instructed the task force members to consider the Illinois plan goals and other examples to incorporate into Sangamon County goals by combining, or revising the statements provided or develop new ones, keeping risk assessment in mind.

After a fifteen minute discussion, the task force joined back together as a group. Bybee read each goal and entertained discussion.

Goal #1 - Maintain and improve communication and cooperation between Sangamon County residents, government, and the private sector.

After group discussion it was suggested to Revise and explain: **add** improve communication, **education** and cooperation.

Goal #2 - Protect the lives, health and safety of the people and animals of Sangamon County from the impact and effects of natural hazards.

After group discussion it was suggested to Keep/No Changes.

Goal #3 - Protect existing infrastructure and design new infrastructure to be resilient to the effects of natural hazards (roads, bridges, mass transit, utilities, water supplies, sewers, dams).

After group discussion it was suggested to Revise and explain: **add etc** within the parenthesis. So it would not be inclusive.

Goal #4 - Incorporate natural hazard mitigation into community plans and regulations.

After group discussion it was suggested to Keep/No Changes.

Bybee asked if any new goals were discussed. There was discussion to add a goal for protecting and preserving the rivers in the floodplains in Sangamon County.

The task force members agreed to wait until the November 5, 2014 meeting to finalize and vote on the goals.

Bybee reminded the task force members of the homework from the August meeting – major employers, existing community documents, critical facilities and from the September meeting – land use worksheet, building permit worksheet, RPI (hazard ranking) for your community. As part of the homework everyone is expected to turn these into Bybee. She reiterated that it very important for each community to update its plan so it is relevant to their needs. She assured all task force members if they have questions to please feel free to call her. For next month she stated to think about the goals and to begin to review action items (page 77) specific for your community and details on those.

Next Meetings:

Bybee announced that the next meeting would be the first Wednesday, November 5, 2014 at 5:30pm in the County Board Chambers.

Public Comment:

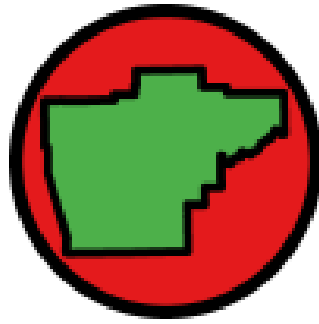
There was no public comment.

Adjournment:

Michaud, Chair thanked everyone for the work put into this group project. Michaud, Chair entertained a motion to adjourn. Brian Wright made the motion and Tracy Garrison seconded it. The vote was unanimous.

Respectfully Submitted,

Gail Weiskopf



**Sangamon County Multi-jurisdictional
Natural Hazards Mitigation Plan Update
Task Force
Meeting**

Wednesday
November 5, 2014
5:30 pm
Sangamon County Board Chamber

AGENDA

1. Call to order
 2. Approval of minutes
 3. Goals and objectives consensus
 4. Mitigation projects
 5. Next steps
 6. Public comment

Adjournment

**Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force
Meeting Minutes
November 5, 2014**

TASK FORCE MEMBERS	Aug.	Sept.	Oct.	Nov.	Dec.	Feb.
Citizen Member – Greg Michaud, Chair	X		X	X		
Auburn – Rick Marx		X	X	X		
Buffalo – Daniel Miller			X	X		
Cantrall – Phil Holler	X	X	X	X		
Chatham – Patrick McCarthy	X		X	X		
Curran – Tim Luckey	X		X			
Dawson – Robin Ashton-Hale	X		X			
Divernon – Jim Copelin	X		X	X		
Illioopolis – Jonathan Horsley				X		
Jerome – Dale Lael	X		X	X		
Leland Grove – Paul LaMantia		X	X	X		
Mechanicsburg – Kenneth Metcalf, Sr., Lee Ann Burgener	X		X	X		
New Berlin – Terry Nydegger		X	X	X		
Pawnee – Dave Skinner	X	X		X		
Riverton – Louie Rogers	X					
Rochester – Gael Kent / Joe Hill	X	X		X		
Sangamon County – Brian McFadden		X				
Sherman – Mike Moos		X	X	X		
Southern View – Judy Gordon	X		X	X		
Spaulding – Mike Foster	X		X	X		
Springfield – Ken Fustin, Jeph Basset, Kenny Scarlette, Nate Bottom		X	X	X		
Williamsville – John Brennan		X	X	X		
Abraham Lincoln Cap. Airport – Tim Franke		X	X	X		
Ameren – Gretchen Jarrett / Robert Swafford	X	X	X			
American Red Cross – Glen Fisher	X	X				
CWLP – Rick Meadows	X		X			
Central Management Services – Diane Hoots	X		X	X		
Rural Electric Convenience Coop. – Lou Delaby	X		X			
Sang. Co. Dept. of Public Health – Diana Wade	X		X			
Sang. Co. Dept. of Zoning. – Trustin Harrison, Vice-chair		X				
Sang. Co. GIS. – Tracy Garrison		X	X			
Sang. Co. Farm Bureau – Paul Rice		X	X			
Sang. Co. Highway Dept. – Brian Wright	X	X	X			
Sang. Co. Office of Emergency Mgmt. – Bill Russell	X	X	X	X		
Springfield Homebuilders Assoc. – Steve Sturm	X		X	X		
Springfield Park District – Marcus Miller	X	X	X	X		
Springfield School District #186 – Darrell Schaver	X		X			
Springfield Mass Transit District – Frank Squires						
Springfield Metro Sanitary Dist. –G Humphrey/ M Ashenfelter	X	X		X		
University of Illinois at Springfield – Dave Barrows						
STAFF:						
Abby Bybee	X	X	X			
Molly Berns			X	X		
Gail Weiskopf	X	X	X	X		

Call to order:

Greg Michaud, Chair called to order the fourth meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force.

Approval of Minutes:

Michaud, Chair asked if there were any additions or corrections to the minutes of the October 7, 2014. Steve Sturm made a motion to approve the minutes as submitted. John Brennan seconded the motion. The vote to approve was unanimous.

Goals and Objectives

Molly Berns referred to the stapled hand-out, titled *Finalization of Goals and Objectives*. Berns noted that at the last meeting the task force had worked on the goals which are listed in boxes on the hand-out. The goals were not approved because of some discussion about adding a new goal to the plan. The goals were offered for consideration. Berns reviewed each goal.

Goal #1 - Maintain and improve communication, education and cooperation between Sangamon County residents, government, and the private sector. The suggestion was to add “education” to the goal.

Goal #2 - Protect the lives, health and safety of the people and animals of Sangamon County from the impact and effects of natural hazards. The suggestion was to keep the goal with no changes.

Goal #3 - Protect existing infrastructure and design new infrastructure to be resilient to the effects of natural hazards (roads, bridges, mass transit, utilities, water supplies, sewers, dams, etc.) The suggestion was to add “etc.” to the goal.

Goal #4 - Incorporate natural hazard mitigation into community plans and regulations. The suggestion was to keep the goal with no changes.

And Goal #5: Preserve and protect the rivers and floodplains in Sangamon County. This was suggested by the task force to add as a new goal.

Berns asked for discussion of the first four goals and then discuss whether or not to add Goal #5.

Michaud, Chair asked for any comments on the draft goals. There were no further comments so Michaud entertained a motion to accept the goals. There was a motion made by Bill Russell to approve the goals. Judy Gordon seconded this motion. The vote to approve was unanimous.

Michaud, Chair asked for any comments on adding Goal #5. There were no further comments so Michaud entertained a motion to accept adding Goal #5. There was a motion made by Mike Moos to approve the Goal #5. Steve Sturm seconded this motion. The motion passed with one objector.

Berns specified that the objectives from the 2008 plan were listed under each goal on the same hand-out. The task force needs to look at each of them and decide if these objectives are still applicable to the current needs. Going forward each task force member needs to be aware of how each objective could be used for their individual community.

Michaud, Chair asked for the task force to consider the objectives under the first four goals for any changes needed.

Several ideas were presented – since education was added to the first goal it should probably be mentioned in the objections, cost of printing brochures and also distributing them.

Michaud, Chair stated that education and public information is a project or an activity that FEMA will fund.

Berns spoke to the fact that FEMA does place a big emphasis on education. She stated that Sangamon County (unincorporated parts) just completed its five-year cycle visit with FEMA for participation in the National Flood Insurance Program and the community rating system. This cycle visit fell under a new manual that was changed by FEMA over the course of the last two years. She stated that public outreach, education, public information plan are currently receiving a lot of focus for participation in the National Flood Insurance Program so much so that they redid their point structure for the community rating system and there is given an incredible amount of points for certain outreach activities like printing and distributing brochures and other educational outreach. She stated that each community should consider emphasizing education components for their plan for funding and other opportunities.

The objective to be added as 1.e. was suggested as follows: “Establish public information/outreach program in regards to Natural Hazard Event Situations”.

The subject of placement of warning sirens was discussed by the group and that more organizing of the location of sirens should be implemented. The example of the City of Springfield having a siren in Piper Glen that was so close to the north side of Chatham was shared with the group and that in the future some sort of community cost-sharing could occur.

Michaud, Chair stated IEMA has made a decision that they do not fund sirens or organization of sirens. Other counties do use other systems like Code Red, Reverse 911, and notification systems using Social Media. Sangamon County gives the communities flexibility to decide among their municipalities the best fit their situation.

Michaud, Chair shared that the cost of replacing or organizing sirens could be put as a mitigation item because there are other non-FEMA grants that are available to replace sirens.

Patrick McCarthy from Chatham stated that with new developments, the developer is required to fund a new siren after a certain amount of new homes have been constructed as part of the developer’s agreement. Although a siren may not be needed where the new development is located, the funding contributes to a new siren when and where it is needed.

Steve Sturm with Springfield Home Builders Association stated Sangamon County takes the lead to call out storm spotters for severe weather, and then the spotters can sound the sirens.

Michaud, Chair asked for a vote for the new objective. The vote to approve was unanimous.

Some discussion was brought up about debris management following a natural disaster event and how that could be handled. It was stated that if the community did not have a plan for debris removal by default does it go to the county. Diane Hoots raised the issue if debris removal is considered to be hazard mitigation or if it fit more into the category of hazard response. It was also stated that if land or

a certain area is set aside as a known zone in an event then the street department can come in and pick up.

Michaud, Chair stated Diane Hoots brought up a very important question that while reviewing and updating the objectives task force members should know because FEMA draws a very hard line between mitigation and response. He stated that if a community's list of projects is really response oriented, then FEMA will not provide funding. Hoots clarified communities need to word projects carefully so that it is obvious that a project is mitigation and not a response.

Michaud, Chair asked if any changes were needed for the objectives under the first four goals.

Suggestions that came from a group discussion:

Goal 2 Objective 2.a. add "warming centers" to this objective.

Goal 3 Objective 3.d. duplicate and add to Goal 5 as objective 5.a.

Several members offered some information regarding their experiences with flooding in communities and suggested that even if a community did not have floodplain, every community should be concerned because development in one community can affect the drainage for another community. Members also offered information about how subdivision developments are handled in their communities and the process by which problems are handled.

Michaud, Chair suggested if a community has flooding issue as a mitigation project, we needed to determine if funds were available. The Chair asked Molly to contact Ron Davis at IEMA prior to the next meeting to see if that would indeed be funded because there are many instances where the property is privately held, FEMA won't fund that unless there is an intergovernmental agreement between the two municipalities or an agreement with the property owner.

It was suggested that a new task force be established to develop a long-term plan to address drainage issues. It was then suggested that the development of the task force be put into the Natural Hazards Mitigation Plan as a new objective. The group all agreed that this would be an important objective and such a plan would be beneficial.

Berns suggested, "Establish a county-wide task force to analyze and compile information related to drainage issues and prepare a plan to address the issues." Nate Bottom offered, "Establish a county-wide task force to develop a storm water drainage master plan and erosion control." The group decided to add Bottom's wording to the plan.

Michaud, Chair asked if any other changes were needed for the objectives under the first four goals.

Goal 3 Objective 3.b. duplicate wording and add to Goal 5 as objective 5.b.

Append the Water Shed Map available through Illinois Department of Natural Resources.

Goal 4 and Objective 4.b. duplicate the thought and add to Goal 5 as Objective 5.c.
Add Erosion control.

Michaud, Chair asked if there were any other thoughts before moving on to mitigation projects.

Berns explained the hand-out titled, *Mitigation Actions & Strategies*, this primarily came from the original plan. When updating a plan each action item for individual communities must be reviewed in the current plan. Part of the process is to identify the completed, deleted or deferred actions and, if deleted or deferred, identify why. Noting the reasons why the action item wasn't completed is necessary under the new crosswalk to get the updated plan approved by FEMA. New mitigation actions that are going to be identified during the planning process that fit in with these goals will need to be noted as well. If mitigation actions remain unchanged, explain why changes are not necessary. Mitigation actions will be revised based on new community information, any updates to each jurisdiction's participation in the National Flood Insurance Program (NFIP) and the Task Force will identify, analyze and prioritize actions related.

Berns explained that the Mitigation Actions – Priorities and Implementation used in the current plan seem to be adequate for the updated plan.

Berns noted homework for each jurisdiction consists of going through the old plan and comparing each action item, determining if the item was completed, deleted or deferred. Community representatives should make notes to identify why and identify each jurisdiction's priority to the projects using the Project Prioritization Method. This can be used as a tool for village board members to identify new actions items, projects that need to be omitted, items that have been completed, and generate new ideas from the general public and local officials. Task force members may copy the old plan and make notes or complete a new list just so long as it is legible. Berns asked the members to begin to work through their community's action items and provide copies at the next meeting with the understanding that due to the holidays, members may not be able to meet with their Village leaders until early December. Berns commented that while this would be an ongoing process, members should plan to have it completed by late December.

Next Meetings:

The next meeting is Tuesday, December 2, 2014 at 5:30 pm in the County Board Chambers, and will be the last meeting before the draft plan is prepared. At that meeting all loose ends will be finalized and the group would also need to decide on a maintenance plan. The plan would need maintained and is not a plan that will be adopted by the communities and forgotten. Berns explained that this plan is an ongoing process and would require a review every year and an update every five years.

Public Comment:

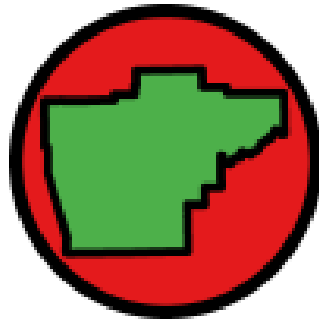
There was no public comment.

Adjournment:

Michaud, Chair entertained a motion to adjourn. Mike Moos made the motion and Steve Sturm seconded it. The vote was unanimous.

Respectfully Submitted,

Gail Weiskopf



**Sangamon County Multi-jurisdictional
Natural Hazards Mitigation Plan Update
Task Force
Meeting**

Tuesday
December 2, 2014
5:30 pm
Sangamon County Board Chamber

AGENDA

1. Call to order
2. Approval of minutes
3. Goals and objectives final approval
4. Presentation by Ron Davis, IEMA regarding possible funding of drainage projects.
5. Mitigation projects, community action items
6. Next steps
7. Public comment
8. Adjournment

**Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force
Meeting Minutes
December 2, 2014**

TASK FORCE	Aug.	Sept.	Oct.	Nov.	Dec.	Feb.
MEMBERS						
Citizen Member – Greg Michaud, Chair	X		X	X	X	
Auburn – Rick Marx		X	X	X	X	
Buffalo – Daniel Miller			X	X	X	
Cantrall – Phil Holler	X	X	X	X	X	
Chatham – Patrick McCarthy	X		X	X		
Curran – Tim Luckey	X		X			
Dawson – Robin Ashton-Hale	X		X			
Divernon – Jim Copelin	X		X	X	X	
Illioopolis – Jonathan Horsley				X		
Jerome – Dale Lael	X		X	X	X	
Leland Grove – Paul LaMantia		X	X	X	X	
Mechanicsburg – Kenneth Metcalf, Sr., Lee Ann Burgener	X		X	X	X	
New Berlin – Terry Nydegger		X	X	X	X	
Pawnee – Dave Skinner	X	X		X	X	
Riverton – Louie Rogers	X					
Rochester – Gael Kent / Joe Hill	X	X		X	X	
Sangamon County – Brian McFadden		X				
Sherman – Mike Moos		X	X	X	X	
Southern View – Judy Gordon	X		X	X	X	
Spaulding – Mike Foster	X		X	X		
Springfield – Ken Fustin, Jeph Basset, Kenny Scarlette, Nate Bottom		X	X	X		
Williamsville – John Brennan		X	X	X	X	
Abraham Lincoln Cap. Airport – Tim Franke		X	X	X		
Ameren – Gretchen Jarrett / Robert Swafford	X	X	X		X	
American Red Cross – Glen Fisher	X	X				
CWLP – Rick Meadows	X		X			
Central Management Services – Diane Hoots	X		X	X	X	
Rural Electric Convenience Coop. – Lou Delaby	X		X		X	
Sang. Co. Dept. of Public Health – Diana Wade	X		X		X	
Sang. Co. Dept. of Zoning. – Trustin Harrison, Vice-chair		X				
Sang. Co. GIS. – Tracy Garrison		X	X			
Sang. Co. Farm Bureau – Paul Rice		X	X			
Sang. Co. Highway Dept. – Brian Wright	X	X	X		X	
Sang. Co. Office of Emergency Mgmt. – Bill Russell	X	X	X	X	X	
Springfield Homebuilders Assoc. – Steve Sturm	X		X	X	X	
Springfield Park District – Marcus Miller	X	X	X	X	X	
Springfield School District #186 – Darrell Schaver	X		X			
Springfield Mass Transit District – Frank Squires					X	
Springfield Metro Sanitary Dist. – G Humphrey / M Ashenfelter	X	X		X	X	
University of Illinois at Springfield – Dave Barrows						
STAFF:						
Abby Bybee	X	X	X			
Molly Berns			X	X	X	

Steve Keenan					X	
Gail Weiskopf	X	X	X	X	X	
General Public:						
Ron Davis (IEMA)					X	

Call to order:

Greg Michaud, Chair called to order the fifth meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force.

Approval of Minutes:

Michaud, Chair asked if there were any additions or corrections to the minutes of the November 5, 2014. Bill Russell made a motion to approve the minutes as submitted. Dave Skinner seconded the motion. The vote to approve was unanimous.

Goals and objectives final approval

Michaud, Chair stated that two questions need to be address:

Question 1 - Should the following language be listed under both Goal (4 b) and Goal (5 c) or should it be clarified differently? “Assure flood ordinance meets or exceeds minimum requirements for participation in the National Flood Insurance Program.” Mike Moos opinion was that it was related more to regulations and that it should be removed from Goal 5.

Michaud, Chair asked if there was any contrary opinion or does the group feel that is sufficient and captures the intent. There being none, Michaud, Chair asked for a motion to make that change to the Goals and Objectives which is to eliminate (5 c) since it is duplicated under (4 b). John Brennan made a motion to approve. Mike Moos seconded the motion.

Question 2 - Goal (5 a) has two parts. Does both parts need to be listed or do they need to be edited to make it two objectives or is it sufficient the way it stands. There is a slight clarity issue with both parts.

Mike Moos noted that (5a) is basically establishing a new program. Not sure how comfortable local government is establishing a new program, by forming a task force would be able to establish a concern, a need, and a possible plan that could lead to an inspection and maintenance program. Moos believed that was the original idea when it was discussed.

Michaud, Chair stated that Moos’ feeling was the shared sentiment concerning (5a). Michaud, Chair asked if everyone felt the same or had any different opinions. There being none, Michaud, Chair asked for a motion to make that change to the Goals and Objectives just as Mike Moos outlined it for us. Brian Wright made a motion to approve. Frank Squires seconded the motion.

Presentation by Ron Davis, IEMA regarding possible funding of drainage projects.

Michaud, Chair introduced the quest speaker Mr. Ron Davis who is the State Mitigation Officer with Illinois Emergency Management Agency.

Ron Davis stated that the agenda said he would be talking about funding, but IEMA does not have money for everything, they receive a limited amount of money. By doing this plan it is not that you will receive a ton of money. Davis expressed the importance of remembering to have a mitigation mindset when doing projects within a jurisdiction. Think the project through to make sure if a natural hazard would happen all critical information or materials would be safe. Having the foresight to do things the right way is key with Natural Hazard Mitigation. Think about what could go wrong. How is this set up? What would happen if? The major problem in Sangamon County is basement flooding.

Citizens need to be informed, basements are not a good place to store things and if they going to store stuff in the basement it should placed on cinder blocks. The flood doesn't have to come from rain it could be a water pipe bursting on the 1st floor. Davis gave the example of a funnel where the water will end up at the bottom.

Funds

Before the flood of '93 there was the cycle of construction, destruction, reconstruction. Meaning a structure would be flooded and then rebuilt and the cycle would continue. So when the flood of '93 came IEMA took a step back and started buying out those properties and gave the owners what their property was worth before the flood, so they could move somewhere else. The Hazard Mitigation Grant Program is available when there is a presidentially declared disaster. 15% of the money goes to IEMA that FEMA spent on that disaster. Last year, there was \$100 million dollars spent on individual assistance (home-owners), \$100 million dollars spent on public assistance (government agencies), so FEMA spent \$200 million and IEMA received \$30 million dollars to allocate. IEMA received approximately \$150 million in applications that were applicable. Davis noted that before a community puts the effort in to submit an application, the community should contact IEMA to discuss the idea. Currently HMPG has no money, but as soon as a storm comes in the money will as well. Over the course of 20 years there has been approximately \$200 million in funds to spend. IEMA tries to focus the funds on the area that has been hit with the disaster where there is a great need. The funds are not only for flooding they are for all natural disasters. Structural projects like building a flood wall or a detention pond are more expensive than buyouts. Another problem with structural projects is where the water goes, it doesn't disappear it simply goes on to someone else's property. Cost analysis has to be done because for every dollar spent, a dollar of taxpayers' funds must be saved. Benefit cost and environmental analysis are completed by using computer software.

For the Pre- Disaster – Flood Mitigation Assist Program on an annual basis, the application is submitted to IEMA where staff rates the application and sends it to FEMA. FEMA then selects the most appropriate project. The projects range from earthquake mitigation, wind shelters, drainage issues. The program only accepts applications that are perfectly done. A check-off list is very helpful because the smallest missing piece can take it out of contention. There is a Benefit Cost Hotline that may approve a certain methodology to use when calculating the project, but this phone call must be noted and included when submitting the application. This program is not as friendly as the Hazard Mitigation Program because of measures like the lack of an appeals process, a priority declaration and a deadline. There is a lot of red tape and rules do change. This is very time sensitive as well, the funds must be coordinated so there will be no pre-work done before is approved otherwise the project will be thrown out. Shelters have very specific guidelines and definitions. Recently rules for shelters have changed to allow for dual purposes. People must be able to seek shelter within 10 minutes within a half a mile. So this would be good for a mobile home park, state park, schools, etc.

Warning sirens or backup generators are not funded because of shortage of staff. When dealing with basement flooding a couple of options that get asked about a lot are back flow valves and overhead sewers. These do not solve the problem; they just pass it on to someone else. A pilot program in Chicago using Inlet control valves which change the amount of water that empties into the street which is clean rain water not sewer water and reportedly showed an eighty percent decrease in basement flooding when used.

Davis opened up his discussion for questions. Mike Moos ask what the next step in the process for community projects application. Davis explained the website has an E-grant application that can be filled out once and used for both grants. A password is needed to access the grant which he can help set up. Before taking on the task to fill out the long grant application there is a pre-application that is a shorter version to complete to see if the project is considered a priority. If it is not a priority that does

not mean it is a bad project, but due to the limited amount of funds it will be rejected. There are two main reasons why the buyouts are popular: Buyouts solve the problem and get the people out of there. Buyouts also prevent future damages, and provide a human services advantage because the homeowner either elevates the structure or tears it down. Approval is done by a committee.

Joe Hill, Rochester asked about optional funding. Although they were awarded a grant from IEMA, he explained the Village of Rochester rejected bids and took out some of the specifications of the original plan for the Pump Station. The new bids are double that of the grant. Davis stated the most IEMA can fund is 75% of the cost and the other 25% comes from local match. Davis explained they are currently seeking more money for this project. One of the ways in which to do this is a Global Match where Department of Natural Resources and Department of Commerce and Economic Opportunity (DCEO) may have money. IDNR has funding available for flood projects, buy-outs and small flood control projects. The contact person would be Loren Wobig, P.E., Division Manager, (217) 782-9130. DCEO also had funding from HUD in the aftermath of the floods up north which has to be used in counties that were declared a disaster. They tend to do bigger projects. The contact person would be Frankie Atwater (217) 785-6174.

The question was asked if the DNR and DCEO funds came from the state or federal level. Davis explained when HUD Community Development Block Grants are provided to the state the money loses its federal identity. IDNR funds are state bond funds.

FEMA is pushing for procurement on projects. Make sure FEMA has procured the plan and architect, etc.

Molly Berns spoke of the objective in the plan update to establish a county-wide task force to develop a storm water drainage and erosion control master plan that preserves and protects the rivers and floodplains of Sangamon County. Davis responded that coordination with other communities through a joint project may be one way for DCEO to fund a project like Rochester's since that would empty into the Sangamon River and therefore involve more communities.

Mr. Ron Davis contact information at Illinois Emergency Management Agency phone number (217) 524-1003, email: ron.davis@illinois.gov

Berns noted now that she has the Statewide Flood Coordinator list and occasionally receives grant notifications she would be willing to do an Email blast. If you receive a notice in the future and do not wish to be on the list just forward a note and she will remove you.

Berns noted homework for each jurisdiction consists of going through the old plan and comparing each action item, determining if the item was completed, deleted or deferred. Community representatives should make notes to identify why and identify each jurisdiction's priority to the projects using the Project Prioritization Method. This can be used as a tool for village board members to identify new actions items, projects that need to be omitted, items that have been completed, and generate new ideas from the general public and local officials. Task force members may copy the old plan and make notes or complete a new list just so long as it is legible. Berns noted each community will need to decide how the new goals and objectives will be added to their plan and how they could be used. Berns asked the members to begin to work through their community's action items and provide copies as soon as possible with the understanding that due to the holidays, members may not be able to meet with their Village leaders until early December. Berns commented that while this would be an ongoing process, members should plan to have it completed by late December.

Next Meetings:

The next meeting is Tuesday, February 3, 2014 at 5:30pm in the County Board Chambers and will be a public meeting, so plan on it lasting until 7:00 PM or 7:30 PM.

Berns introduced Steve Keenan and stated that he has been working at the Planning Commission in other capacities and has accepted Abby's previous position.

Public Comment:

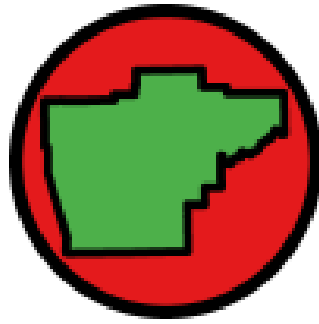
There was no public comment.

Adjournment:

Michaud, Chair entertained a motion to adjourn. Mike Moos made the motion and Dave Skinner seconded it. The vote was unanimous.

Respectfully Submitted,

Gail Weiskopf



**Sangamon County Multi-jurisdictional
Natural Hazards Mitigation Plan Update
Task Force
Meeting**

Tuesday
March 3, 2015
5:30 pm
Sangamon County Board Chamber

AGENDA

1. Call to order
2. Approval of minutes
3. Review of draft plan
4. Next steps
5. Public comment
6. Adjournment

**Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force
Meeting Minutes
March 3, 2015**

TASK FORCE	Aug.	Sept.	Oct.	Nov.	Dec.	Mar.
MEMBERS						
Citizen Member – Greg Michaud, Chair	X		X	X	X	X
Auburn – Rick Marx		X	X	X	X	X
Buffalo – Daniel Miller			X	X	X	X
Cantrall – Phil Holler	X	X	X	X	X	X
Chatham – Patrick McCarthy	X		X	X		X
Curran – Tim Luckey	X		X			
Dawson – Robin Ashton-Hale	X		X			
Divernon – Jim Copelin	X		X	X	X	X
Illiopropolis – Jonathan Horsley				X		
Jerome – Dale Lael	X		X	X	X	X
Leland Grove – Paul LaMantia		X	X	X	X	X
Mechanicsburg – Kenneth Metcalf, Sr., Lee Ann Burgener	X		X	X	X	X
New Berlin – Terry Nydegger		X	X	X	X	X
Pawnee – Dave Skinner	X	X		X	X	X
Riverton – Louie Rogers	X					
Rochester – Gael Kent / Joe Hill	X	X		X	X	X
Sangamon County – Brian McFadden		X				
Sherman – Mike Moos		X	X	X	X	
Southern View – Judy Gordon	X		X	X	X	X
Spaulding – Mike Foster	X		X	X		
Springfield – Ken Fustin, Jeph Basset, Kenny Scarlette, Nate Bottom		X	X	X		X
Williamsville – John Brennan		X	X	X	X	X
Abraham Lincoln Cap. Airport – Tim Franke		X	X	X		
Ameren – Gretchen Jarrett / Robert Swafford	X	X	X		X	
American Red Cross – Glen Fisher	X	X				
CWLP – Rick Meadows	X		X			
Central Management Services – Diane Hoots	X		X	X	X	
Rural Electric Convenience Coop. – Lou Delaby	X		X		X	
Sang. Co. Dept. of Public Health – Diana Wade	X		X		X	X
Sang. Co. Dept. of Zoning. – Trustin Harrison, Vice-chair		X				
Sang. Co. GIS. – Tracy Garrison		X	X			X
Sang. Co. Farm Bureau – Paul Rice		X	X			
Sang. Co. Highway Dept. – Brian Wright	X	X	X		X	
Sang. Co. Office of Emergency Mgmt. – Bill Russell	X	X	X	X	X	X
Springfield Homebuilders Assoc. – Steve Sturm	X		X	X	X	X
Springfield Park District – Marcus Miller	X	X	X	X	X	
Springfield School District #186 – Darrell Schaver	X		X			
Springfield Mass Transit District – Frank Squires					X	X
Springfield Metro Sanitary Dist. – G Humphrey / M Ashenfelter	X	X		X	X	X
University of Illinois at Springfield – Dave Barrows						
STAFF:						
Abby Bybee	X	X	X			
Molly Berns			X	X	X	X

Steve Keenan					X	X
Gail Weiskopf	X	X	X	X	X	X
General Public:						
Ron Davis (IEMA)					X	

Call to order:

Greg Michaud, Chair called to order the sixth meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force.

Approval of Minutes:

Michaud, Chair asked if there were any additions or corrections to the minutes of the December 2, 2014. John Brennan made a motion to approve the minutes as submitted. Steve Sturm seconded the motion. The vote to approve was unanimous.

Review of draft plan:

Molly Berns, project manager for the Multi-jurisdictional Natural Hazards Mitigation Plan, gave the attached power point presentation to stress the importance of completing the plan to the task force. Berns gave specific details about what has been completed, what still needs to be completed by the individual communities, and informed the task force of the mandatory deadlines.

Berns explained since 2008, FEMA required regulations with new and existing plans have gotten much more stringent. Documentation is a key and critical part of the process to complete the plan. Berns noted to confirm that the criteria for participation have been met by each participating community and to be in compliance with the regulator standards copies of each task force meeting sign in sheets and copies of each community's paperwork must be submitted.

Berns explained once this is completed than as communities apply for individual grants because your community was part of this process and FEMA has already confirmed the data review and documentation with the plan than that alleviates some of the burden from the community.

Berns stated because this is an updated plan the requirements for participation from the communities and other entities are the same as they were in 2008. Berns stated each of the requirements. Berns stressed that attendance of two-thirds of meetings is a must. Berns noted a hosted opportunity for public involvement would be like this meeting, village board meetings, or posting information on community websites and has been completed by each of the communities. Berns said the draft plan will be reviewed and commented on at the end of the month.

Berns reported as of now, the Task Force and the Planning Commission have been working to complete the obligations to finalize the draft. Berns stated all of obligations necessary to finalize the draft and stress the following obligations still need to be completed: 1) document which objectives have been met and identify new objectives- the Task Force has did this to some extent as the RPC receives the updates for each of the communities mitigation items that were in the 2008 plan then the RPC will complete the narrative for adding this to the plan, 2) address floodplain Repetitive Loss Structures – Berns noted this was new to the plan. Berns defined Repetitive Loss Structures is a FEMA term for a structure in the floodplain that buys flood insurance and has losses repetitively, eventually FEMA, IEMA, IDNR, and the County would like to see the communities to purchase the property when grant rounds come about and turn into green space. Berns explained that FEMA supplied the data and RPC will complete this information for the plan.

Berns stated what's left is the main purpose of this meeting, and some deadlines. The Task Force needs to update community specific data, major employers and critical facilities. Berns thanked the communities that have met their obligations and supplied all the pertinent information. But Berns said there were still some missing components from the other communities. Berns explained everyone needs to review the major employers who were in the 2008 plan and add any that need to be included or delete them if necessary.

The critical facilities list shown in Figure 8 in the original plan by community is incredibly important. Every critical structure must be included, so a Fair Market Value for replacing each of the structures can be determined. For floodplain issues and other disaster related issues, FEMA will check the data for accuracy and the numbers must track.

Berns stated that some of the communities are still missing their mitigation items. Berns broke down each of the mitigation items and explained how to review each item and update them for the new plan. Berns noted the underlined words are FEMA's language. When FEMA starts to review the plan and we do the crosswalk, FEMA makes it very clear in describing what Should means *strongly encouraged* and Must and shall means *if it is not done the plan will not be approved*. Berns noted that FEMA mandates that a minimum of two (2) action items per community per top hazards. The top hazards here are severe storms, tornado and winter storms, so each community needs to have two (2) action items for each of the top hazards. Berns explained this is a big change because the NFIP wants details. The rating system allows a community to do additional activities to lower their score and receive discounts on black flood insurance. Several communities are in compliance with the NFIP because of how they keep drainage culverts clean.

Berns paused for questions but there were no questions.

Berns said the task force needed to clarify tonight if objectives 3.b. and 5.b. "Assure water is available in case of drought." are needed in the plan in both places. Berns turned this item over to Chair Greg Michaud.

Michaud, Chair asks for any discussion. Mr. Steve Sturm spoke about how the objectives were about two separate water sources. Michaud, Chair noted the distinction between the two sources and asks if the task force was comfortable in adding the word "potable" to 3.b. after Assure. Michaud, Chair asks for an approval of the item. The approval was unanimous.

Berns said by thinking outside of the box and including Goal 5.a. in the community's individual plan and participating in the new county-wide task force. The community would already be using this as a planning mechanism and could also count toward its floodplan as well.

Next steps:

Berns stated the reason for the mandatory deadlines is FEMA said it would take approximately 45 days to review it, which will be about May 15th. Ron Davis mentioned in December there may be a grant available in June or July. So one week from today, March 10, 2015 by 4:30 p.m. the following items need to be submitted to RPC:

- Critical facilities list verified, sent to RPC

- Major employers list verified, sent to RPC
- Mitigation items within parameters described above sent to RPC.

On March 23-25, 2015 the Final (draft) plan remitted to Task Force members for review. Any comments, corrections, etc. submitted to RPC by March 27, 2015.

Next Meetings:

The next meeting is March 31, 2014 at 5:30 pm in the County Board Chambers and will be the final meeting of the Task Force to approve plan.

Public Comment:

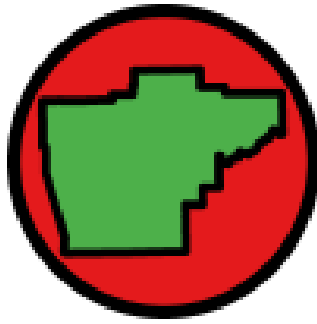
There was no public comment.

Adjournment:

Michaud, Chair entertained a motion to adjourn. Frank Squires made the motion and John Brennan seconded it. The vote was unanimous.

Respectfully Submitted,

Gail Weiskopf



**Sangamon County Multi-jurisdictional
Natural Hazards Mitigation Plan Update
Task Force
Meeting**

Tuesday
May 5, 2015
5:30 pm

Sangamon County Board Chamber

AGENDA

1. Call to order
2. Approval of minutes
3. Presentation of Draft Plan
Molly Berns, Senior Planner-Land Use, Springfield-Sangamon County Regional
Planning Commission
4. Discussion of Draft Plan
5. Public comment
6. Adoption of Draft Plan
7. Final Steps in Planning Process
8. Adjournment

Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force
Meeting Minutes
May 5, 2015

TASK FORCE MEMBERS	Aug.	Sept.	Oct.	Nov.	Dec.	Mar.	May
Citizen Member – Greg Michaud, Chair	X		X	X	X	X	X
Auburn – Rick Marx		X	X	X	X	X	X
Buffalo – Daniel Miller			X	X	X	X	X
Cantrall – Phil Holler	X	X	X	X	X	X	X
Chatham – Patrick McCarthy	X		X	X		X	X
Curran – Tim Luckey	X		X				
Dawson – Robin Ashton-Hale	X		X				
Divernon – Jim Copelin	X		X	X	X	X	
Illiopropolis – Jonathan Horsley				X			
Jerome – Dale Lael	X		X	X	X	X	X
Leland Grove – Paul LaMantia		X	X	X	X	X	
Mechanicsburg – Kenneth Metcalf, Sr., Lee Ann Burgener	X		X	X	X	X	X
New Berlin – Terry Nydegger		X	X	X	X	X	X
Pawnee – Dave Skinner	X	X		X	X	X	X
Riverton – Louie Rogers	X						
Rochester – Gael Kent / Joe Hill	X	X		X	X	X	X
Sangamon County – Brian McFadden		X					X
Sherman – Mike Moos		X	X	X	X		
Southern View – Judy Gordon	X		X	X	X	X	X
Spaulding – Mike Foster	X		X	X			
Springfield – Ken Fustin, Jeph Basset, Kenny Scarlette, Nate Bottom		X	X	X		X	
Williamsville – John Brennan		X	X	X	X	X	X
Abraham Lincoln Cap. Airport – Tim Franke		X	X	X			
Ameren – Gretchen Jarrett / Robert Swafford	X	X	X		X		
American Red Cross – Glen Fisher	X	X					
CWLP – Rick Meadows	X		X				
Central Management Services – Diane Hoots	X		X	X	X		
Rural Electric Convenience Coop. – Lou Delaby	X		X		X		
Sang. Co. Dept. of Public Health – Diana Wade	X		X		X	X	X
Sang. Co. Dept. of Zoning. – Trustin Harrison, Vice-chair		X					X
Sang. Co. GIS. – Tracy Garrison		X	X			X	
Sang. Co. Farm Bureau – Paul Rice		X	X				
Sang. Co. Highway Dept. – Brian Wright	X	X	X		X		
Sang. Co. Office of Emergency Mgmt. – Bill Russell	X	X	X	X	X	X	X
Springfield Homebuilders Assoc. – Steve Sturm	X		X	X	X	X	X
Springfield Park District – Marcus Miller	X	X	X	X	X		X
Springfield School District #186 – Darrell Schaver	X		X				
Springfield Mass Transit District – Frank Squires					X	X	X
Springfield Metro Sanitary Dist. – G Humphrey / M Ashenfelter	X	X		X	X	X	X
University of Illinois at Springfield – Dave Barrows							
STAFF:							
Abby Bybee	X	X	X				
Molly Berns			X	X	X	X	X
Steve Keenan					X	X	X
Gail Weiskopf	X	X	X	X	X	X	X
General Public:							
Ron Davis (IEMA)					X		

Call to order:

Greg Michaud, Chair called to order the seventh meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan Task Force.

Approval of Minutes:

Michaud, Chair asked if there were any additions or corrections to the minutes of the March 3, 2015. Steve Sturm made a motion to approve the minutes as submitted. Joe Hill seconded the motion. The vote to approve was unanimous.

Presentation of Draft Plan:

Molly Berns, project manager for the Multi-jurisdictional Natural Hazards Mitigation Plan, explained the contents of the packet that was handed out to all task force members. The items consisted of 1) Agenda, 2) Minutes from March 3rd, 3) Handout of the PowerPoint Presentation for this meeting, 4) Changes to the 2008 Hazard Mitigation Plan list, 5) List of Figures, 6) Section VI Appendices, 7) Each community individual Mitigation Plan, 8) A map of critical facilities, and 9) A list of critical facilities for each community. Berns stressed the importance of not posting the critical facilities list and map to the web because of the sensitive information with Homeland Security. Berns instructed the task force to review the information and if there were any additions or corrections to please send them to her through email as soon as possible.

Berns briefly highlighted the attached power point presentation of the Plan. Berns explained there are still some decision points. Berns spoke how each jurisdiction had to come up with a Planning Process and how there are 6 different task to accomplish before submitting the Final Plan. Berns explained the process of the Plan from the beginning to the point of being able to submit the Plan to FEMA and described in detail each of the six tasks: 1) Organization of Task Force, 2) Public Involvement, 3) Risk Assessment, 4) Goal Setting, 5) Mitigation Actions and Strategies, and 6) Draft Plan.

Berns gave an overview on what is new for FEMA, what is new for updating a plan and the issues that need to be resolved. FEMA has including a discussion of the opportunity provided to neighboring communities, governmental agencies, businesses, academia and other relevant private and non-profit interests to be involved in the NHMP planning process. Berns reported this has been completed and is included in the Plan.

FEMA has changed the guidelines for updating plans. Berns listed each of the critical items incorporated in the updated Plan. Berns specified each item and clarified how each task was completed. Berns identified the National Flood Insurance Program's Community Rating System which is a voluntary incentive program for communities who reduce flooding risk and whereby communities receive discounts on their flood insurance premium rates. Berns noted once the FEMA review has reported on the Plan if the CRS needs to be added and updated for more credit it will be implemented.

Berns explained the task force would need to evaluate the language used in the 2008 Plan regarding the addition of non-participating communities. Three different options were given by FEMA. The task force discussed each option. Patrick McCarthy made a motion to recommend approval of the current

language used in the 2008 Plan. Brian McFadden seconded the motion. The vote to recommend approval was unanimous.

Berns explained language must be in the Plan regarding Plan Maintenance Workgroup. FEMA states a workgroup must meet at least annually. Representatives from each participating jurisdiction have been listed and representatives from Sangamon County OEM and Springfield Homebuilders Association. Berns asks if there were any other participating entities that would like to volunteer. Berns asks Michaud, Chair for suggestions on how to incorporate an annual meeting. Michaud, Chair said one way to facilitate this process is by sending an one page questionnaire with the following three questions: 1) What severe weather damages has your municipality experienced during the past year, 2) Of the mitigation projects, you have submitted to this Plan, what is the status of each project, 3) Are there any new projects you would like to add to the Plan. Berns encouraged the task force to hold an annual meeting in the fall of 2016. Berns asks for volunteers to help chair the annual meetings. Michaud, Chair reiterated by maintaining the Plan annually the process is less likely to fall apart and easier to compile an updated Plan in five years. The task force was asks about their preference to meetings to either communicate only by electronics, by holding a meeting or by combination of both. After discussion the task force agreed to do communicate electronically and if need be than a meeting could be called. The option was also given for the Regional Planning Commission to meet with the Regional Leadership Council to introduce critical information about updating the Plan.

Berns also discussed the deadlines to participate in the Plan. Berns asks that all comments and changes to draft be submitted by email to RPC by close of business Friday, May 8, 2015. The RPC will incorporate changes into the Plan. Berns ask all task force members to send an email stating they had reviewed and read everything and my community approves the draft. The email will provide an electronic record if an audit should happen. RPC will complete paperwork and submit to IEMA and FEMA. FEMA will review and provide comments. Upon FEMA approval, RPC will forward final Plan to participating jurisdictions. At least one participating jurisdiction must formally adopt the Plan within one calendar year of FEMA's designation of the Plan as "approvable pending adoption" or "meets requirements." RPC will forward a draft resolution to participating communities with the final Plan. Berns stressed the importance of not adopting the Plan now; each community needs to wait until FEMA has approved the Plan. Berns announced she was missing time sheets from the task force members these are important for the in-kind match.

Berns noted the comments that had been received so far.

Berns thanked Steve Keenan for his support in working the data and statistics. By using his knowledge of extrapolating data, he was able to come up with methodology to take values the historic data from the 2008 and calculate for the critical facilities mapping. Berns thanked Gail Weiskopf and Greg Michaud our Chairman. And Berns thanked Mary Jane Niemann, who is also in the RPC office and helped with the Grant.

Public Comment:

There was no public comment.

Discussion of Draft Plan:

Michaud, Chair asks if the task force members had any questions or comments. There were no questions. The task force did comment that Molly Berns did a very good job of explaining the information.

Adoption of Draft Plan:

Michaud, Chair emphasized the importance of communities waiting for FEMA to send notification of approval of the Plan and then the communities can adopt the Final Plan through resolution.

Berns stated there are two reasons to adopt your plan: 1) attach to your plan to show that your community participated in the plan, 2) when applying for any Federal Grant Funding; they will ask if you have participating in the Natural Hazard Mitigation Plan.

Final Steps in Planning Process:**Adjournment:**

Michaud, Chair entertained a motion to adjourn. Mike Ashenfelter made the motion and Marcus Miller seconded it. The vote was unanimous.

Respectfully Submitted,

Gail Weiskopf

TO ACCEPT PUBLIC COMMENT

On the draft update to the
Sangamon County Multi-Jurisdictional
Natural Hazards Mitigation Plan

Tuesday, March 3, 2015
5:30 p.m.
Sangamon County Board Chamber
200 S. 9th Street, Springfield

This is an update to the plan adopted in 2008. The plan assesses the risks to the County and its municipalities from natural hazard events and includes projects that will lessen the impact of natural hazard events on the communities participating in the planning process. The communities involved in this Plan update are: Auburn, Buffalo, Cantrall, Chatham, Curran, Dawson, Divernon, Illiopolis, Jerome, Leland Grove, Mechanicsburg, New Berlin, Pawnee, Riverton, Rochester, Sherman, Southern View, Spaulding, Springfield, Williamsville and Sangamon County.

The draft update to the plan will be available on March 2, 2015 on the Natural Hazards Mitigation Plan website <http://co.sangamon.il.us/NHMP> and can also be reviewed at the office of the Springfield-Sangamon County Regional Planning Commission in the County Building, 200 S. 9th Street, Rm 212 from 8:00 – 4:30, Monday through Friday. Written comments may be submitted to the Regional Planning Commission, 200 S. 9th Street, Rm 212, Springfield, IL 62701 or by email at mollybe@co.sangamon.il.us until March 13th. Each community will also have a copy of the draft plan. Please contact the Planning Commission at 535-3110 or visit our website at <http://co.sangamon.il.us/NHMP> for more information.

**NOTICE OF PUBLIC MEETING
TO ACCEPT PUBLIC COMMENT**

On the draft update to the

Sangamon County Multi-Jurisdictional
Natural Hazards Mitigation Plan

Tuesday, May 5, 2015

5:30 p.m.

Sangamon County Board Chamber
200 S. 9th Street, Springfield

This is an update to the plan adopted in 2008. The plan assesses the risks to the County and its municipalities from natural hazard events and includes projects that will lessen the impact of natural hazard events on the communities participating in the planning process. The communities involved in this Plan update are: Auburn, Buffalo, Cantrall, Chatham, Divernon, Jerome, Leland Grove, Mechanicsburg, New Berlin, Pawnee, Rochester, Sherman, Southern View, Springfield, Williamsville and Sangamon County.

The draft update to the plan will be available on May 1, 2015 on the Natural Hazards Mitigation Plan website <http://co.sangamon.il.us/NHMP> and can also be reviewed at the office of the Springfield-Sangamon County Regional Planning Commission in the County Building, 200 S. 9th Street, Rm 212 from 8:00 – 4:30, Monday through Friday. Written comments may be submitted to the Regional Planning Commission, 200 S. 9th Street, Rm 212, Springfield, IL 62701 or by email at mollybe@co.sangamon.il.us until May 11th. Each community will also have a copy of the draft plan. Please contact the Planning Commission at 535-3110 or visit our website at <http://co.sangamon.il.us/NHMP> for more information.

Contact: Abby Bybee

Phone: 217.535.3110

Email: abbyb@co.sangamon.il.us

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Press Release

Springfield-Sangamon County Regional Planning Commission Receives Funding to Begin Work on Natural Hazards Mitigation Plan

IEMA Grant Award Allows Update of Multi-jurisdictional Natural Hazards Mitigation Plan

Springfield, IL, May 6, 2014: The Springfield-Sangamon County Regional Planning Commission (SSCRPC) has been awarded a Natural Hazard Mitigation Planning Grant in the amount of \$46,211 from the Illinois Emergency Management Agency (IEMA). This grant will be used to update a plan developed by the SSCRPC in 2008 which made participating local communities eligible for Federal Emergency Management Agency (FEMA) funding through 2013. The purpose of this plan is to reduce the loss of life and property due to natural disasters by identifying mitigation measures that can be implemented prior to a disaster.

The advantages of having a hazard mitigation plan include protecting citizens and property from the effects of such natural hazards as tornadoes, flooding and winter storms. Any community that has a hazard mitigation plan that is compliant with the Disaster Mitigation Act of 2000 is eligible for hazard mitigation grant funding from FEMA to conduct projects intended to reduce the impact of such events. FEMA regulations require that a plan be updated every five years in order to be eligible for funding through the Hazard Mitigation Grant Program.

"The update and maintenance of the existing Hazard Mitigation Plan is important to the welfare of all of us in Sangamon County," said Springfield-Sangamon County Regional Planning Commission Executive Director Norm Sims. "Any one of us could be affected by a future natural disaster, and this plan will help the Commission and participating communities identify these hazards and find ways to mitigate their effects on our communities and families. We hope that all of the communities in the area take part in this effort."

The grant will fund 75% of the cost of plan preparation, with the remaining 25% funded through a local in-kind cost share with participating communities.

The Regional Planning Commission will facilitate development of the plan in conjunction with a working group made up of representatives from each community in Sangamon County that chooses to participate, as well as technical partners and other stakeholders.

The first meeting time is to be determined. Meetings will be held monthly and public participation is strongly encouraged. Citizens of Sangamon County are welcome to attend every meeting of the task force.

Specific opportunities for public input will be available. For further information on participation opportunities visit <http://co.sangamon.il.us/departments/regionalplanning/HazardPlan.asp>

For more information call Abby Bybee at (217) 535-3110 or email abbyb@co.sangamon.il.us

-- END --

Contact: Abby Bybee

Phone: 217.535.3110

Email: abbyb@co.sangamon.il.us

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www.SSCRPC.com



Press Release

Springfield-Sangamon County Regional Planning Commission Receives Funding to Begin Work on Natural Hazards Mitigation Plan

IEMA Grant Award Allows Update of Multi-jurisdictional Natural Hazards Mitigation Plan

Springfield, IL, July 30, 2014: The Springfield-Sangamon County Regional Planning Commission (SSCRPC) has been awarded a Natural Hazard Mitigation Planning Grant in the amount of \$46,211 from the Illinois Emergency Management Agency (IEMA). This grant will be used to update a plan developed by the SSCRPC in 2008 which made participating local communities eligible for Federal Emergency Management Agency (FEMA) funding through 2013. The purpose of this plan is to reduce the loss of life and property due to natural disasters by identifying mitigation measures that can be implemented prior to a disaster.

The advantages of having a hazard mitigation plan include protecting citizens and property from the effects of such natural hazards as tornadoes, flooding and winter storms. Any community that has a hazard mitigation plan that is compliant with the Disaster Mitigation Act of 2000 is eligible for hazard mitigation grant funding from FEMA to conduct projects intended to reduce the impact of such events. FEMA regulations require that a plan be updated every five years in order to be eligible for funding through the Hazard Mitigation Grant Program.

"The update and maintenance of the existing Hazard Mitigation Plan is important to the welfare of all of us in Sangamon County," said Springfield-Sangamon County Regional Planning Commission Executive Director Norm Sims. "Any one of us could be affected by a future natural disaster, and this plan will help the Commission and participating communities identify these hazards and find ways to mitigate their effects on our communities and families. We hope that all of the communities in the area take part in this effort."

The grant will fund 75% of the cost of plan preparation, with the remaining 25% funded through a local in-kind cost share with participating communities.

The Regional Planning Commission will facilitate development of the plan in conjunction with a working group made up of representatives from each community in Sangamon County that chooses to participate, as well as technical partners and other stakeholders.

The first meeting will be held Tuesday, August 5th at 5:30 pm in the County Board Chamber at the Sangamon County Complex. Meetings will be held monthly and public participation is strongly encouraged. Citizens of Sangamon County are welcome to attend every meeting of the task force.

Specific opportunities for public input will be available. For further information on participation opportunities visit <http://co.sangamon.il.us/departments/regionalplanning/HazardPlan.asp>

For more information call Abby Bybee at (217) 535-3110 or email abbyb@co.sangamon.il.us

-- END --

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Phone: 217.535.3110

Email: abbyb@co.sangamon.il.us

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Press Release

Natural Hazard Mitigation Plan Task Force is Underway

Public Participation is Strongly Encouraged through Citizen Survey

Springfield, IL, September 5, 2014: A task force has been created and plans are in the works since the kick-off meeting of the Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan. Representatives from Auburn, Buffalo, Cantrall, Chatham, Curran, Clear Lake, Dawson, Divernon, Grandview, Illiopolis, Jerome, Leland Grove, New Berlin, Pawnee, Riverton, Rochester, Sherman, Southern View, Spaulding, Springfield, Williamsville and Sangamon County all appointed representatives to lead their respective community in this effort. Community representatives and other task force members that include representatives from the Sangamon County Department of Public Health, the Springfield Homebuilders Association, The American Red Cross, and the Sangamon County Highway Department, to name a few, all attended the first and second meetings held at the Sangamon County Complex.

Public participation through a citizen survey is now available on the Hazard Mitigation website which can be found here:

<http://co.sangamon.il.us/departments/regionalplanning/HazardPlan.asp> the third meeting of the Task Force will be held on October 7, 2014 at 5:30pm. Meetings will be held monthly and public participation is strongly encouraged. Citizens of Sangamon County are welcome to attend every meeting of the task force.

The advantages of having a hazard mitigation plan include protecting citizens and property from the effects of such natural hazards as tornadoes, flooding and winter storms. Any community that has a hazard mitigation plan that is compliant with the Disaster Mitigation Act of 2000 is eligible for hazard mitigation grant funding from FEMA to conduct projects intended to reduce the impact of such events. FEMA regulations require that a plan be updated every five years in order to be eligible for funding through the Hazard Mitigation Grant Program.

"The update and maintenance of the existing Hazard Mitigation Plan is important to the welfare of all of us in Sangamon County," said Springfield-Sangamon County Regional Planning Commission Executive Director Norm Sims. "Any one of us could be affected by a future natural disaster, and this plan will help the Commission and participating communities identify these hazards and find

ways to mitigate their effects on our communities and families. We hope that all of the communities in the area take part in this effort."

The grant will fund 75% of the cost of plan preparation, with the remaining 25% funded through a local in-kind cost share with participating communities.

For more information call Abby Bybee at (217) 535-3110 or email abbyb@co.sangamon.il.us

-- END --

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Press Release

Natural Hazard Mitigation Task Force Public Hearing to Approve 2015 Plan Update

Springfield, IL, May 1, 2015: Determining how to reduce the loss of life and property due to natural hazards was the responsibility of the 2015 Natural Hazards Mitigation Task Force. The group has completed its work updating a plan developed in 2008 which made participating local communities eligible for Federal Emergency Management Agency (FEMA) funding through 2013.

The Task Force encourages input from the public at its final meeting and public hearing which will be held on Tuesday, May 5, 2015, 5:30 p.m. in the Sangamon County Board Chamber, 200 S. 9th Street, 2nd Floor, Springfield, IL. The Task Force will take action to approve the draft plan for submission to FEMA. The draft plan can be viewed at: <http://co.sangamon.il.us/nhmp>.

Severe storms, tornados, winter storms and floods are the four most likely natural hazards to strike the area according to the draft 2015 Sangamon County Multi-jurisdictional Natural Hazards Mitigation Plan. Due to the efforts of the 2015 planning Task Force, participating communities will be better prepared to lessen the impact of natural hazard events.

Representatives from Auburn, Buffalo, Cantrall, Chatham, Divernon, Jerome, Leland Grove, Mechanicsburg, New Berlin, Pawnee, Rochester, Sherman, Southern View, Springfield, Williamsville and Sangamon County participated in the 2015 update process. Community officials were assisted by other Task Force members including representatives from the Springfield Homebuilders Association, Rural Electric Convenience Cooperative, Springfield Park District, Sangamon County Farm Bureau, Ameren, Abraham Lincoln Capital Airport, Illinois Department of Central Management Services, Springfield Metro Sanitary District, and several county departments including the Office of Emergency Management, Public Health and the Highway Department.

The Springfield-Sangamon County Regional Planning Commission was awarded a grant in the amount of \$46,211 from the Illinois Emergency Management Agency (IEMA) to facilitate the efforts of the planning Task Force. The grant will fund 75% of

the cost of the plan update with the remaining 25% funded through a local in-kind cost share with participating communities.

Any community that has a hazard mitigation plan that is compliant with the Disaster Mitigation Act of 2000 is eligible for hazard mitigation grant funding from FEMA to conduct projects intended to reduce the impact of such events. FEMA regulations require that a plan be updated every five years in order to be eligible for funding through the Hazard Mitigation Grant Program. Communities are able to prepare a plan jointly to assist with planning efforts.

“Sangamon County is vulnerable to natural hazards including severe storms, tornados, winter storms and some flooding,” said Springfield-Sangamon County Regional Planning Commission Executive Director Norm Sims. “Updating the Hazard Mitigation Plan every five years is a critical component to being well prepared to protect our citizens and infrastructure from the negative effects of natural hazards.”

For more information call Molly Berns at (217) 535-3110 or email mollybe@co.sangamon.il.us

-- END --

COMMUNITY SURVEY (ONLINE)

Natural Hazards Mitigation Plan Community Survey

1. Please indicate your age.

- ☐ 18-30
- ☐ 31-40
- ☐ 41-50
- ☐ 51-60
- ☐ 60 or over

2. Gender?

- ☐ Male
- ☐ Female

3. Please indicate what area of Sangamon County you live in:

- ☐ Auburn
- ☐ Berlin
- ☐ Buffalo
- ☐ Cantrall
- ☐ Chatham
- ☐ Clear Lake
- ☐ Curran
- ☐ Dawson
- ☐ Divernon
- ☐ Grandview
- ☐ Illiopolis
- ☐ Jerome
- ☐ Leland Grove
- ☐ Loami
- ☐ Mechanicsburg
- ☐ New Berlin
- ☐ Pawnee
- ☐ Pleasant Plains
- ☐ Riverton
- ☐ Rochester
- ☐ Sherman
- ☐ Southern View
- ☐ Spaulding
- ☐ Springfield
- ☐ Thayer
- ☐ Williamsville
- ☐ Unincorporated Sangamon County

4. If you answered Unincorporated Sangamon County for Question 3, what township do you live in?

- ☐ Auburn
- ☐ Ball
- ☐ Buffalo Hart
- ☐ Capital
- ☐ Cartwright
- ☐ Chatham
- ☐ Clear Lake
- ☐ Cooper
- ☐ Cotton Hill
- ☐ Curran
- ☐ Divernon
- ☐ Fancy Creek
- ☐ Gardner
- ☐ Illiopolis
- ☐ Island Grove
- ☐ Lanesville
- ☐ Loami
- ☐ Maxwell
- ☐ Mechanicsburg
- ☐ New Berlin
- ☐ Pawnee
- ☐ Rochester
- ☐ Springfield
- ☐ Talkington
- ☐ Williams
- ☐ Woodside

5. How long have you lived in Sangamon County?

- ☐ Less than 1 year
- ☐ 1 to 5 years
- ☐ 6 to 9 years
- ☐ 10 to 19 years
- ☐ 20 years or more

6. In the past 5 years, which of the following types of natural hazard events have you or someone in your household experienced within Sangamon County and how concerned are you about the following natural hazards impacting the County?

	Have Experienced	Not Concerned	Somewhat Concerned	Very Concerned	Extremely Concerned
Dam Failure	☐	☐	☐	☐	☐
Drought	☐	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐	☐
Extreme Heat	☐	☐	☐	☐	☐
Flood	☐	☐	☐	☐	☐
Mine Subsidence	☐	☐	☐	☐	☐
Severe Storm (thunderstorm, lightning, hail)	☐	☐	☐	☐	☐
Tornado	☐	☐	☐	☐	☐
Winter Storm	☐	☐	☐	☐	☐

7. Have you been impacted by a natural hazard in the last 5 years while living or working in Sangamon County? For example: Flooding of your home, severe winter storm damage or utility disruption? If your answer is "yes", please describe your experience. If your answer is "no", please leave the answer blank.

8. Please rank how prepared you feel you and your household are for the probable impacts of natural hazard events. Rank on a scale of 1 to 5, with 5 representing the most prepared.

- ☐ 1 (not prepared)
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5 (most prepared)

9. Why do you think you are prepared for the probable impacts from natural hazard events? Please check all that apply.

- ☐ Emergency preparedness information from a government source (FEMA, IEMA, Sangamon County, City or Village information center)
- ☐ Locally provided news, public service announcements, advertisements or other media outlet (Facebook, Twitter or other social media)
- ☐ School and other academic institutions.
- ☐ Attended meetings that have dealt with disaster preparedness.

10. Information on the impacts of and how to prepare for a natural disaster can be disseminated to the public in various ways. Of the methods described below, please identify the top 3 ways which would be most effective in helping you make your home safer and better able to withstand the impacts of natural hazard events.

- ☐ Newspaper
- ☐ Television
- ☐ Radio
- ☐ Social Media (Facebook, Twitter, Etc.)
- ☐ Weather Radio
- ☐ City/Village
- ☐ Utility Company
- ☐ Sangamon County
- ☐ Non-profit organizations
- ☐ Electronic Alerting System

11. Do you currently have any of the following disaster and emergency plans and procedures in place?

- ☐ I don't have any disaster or emergency plans in place.
- ☐ My home/family has an emergency plan prepared.
- ☐ My home/family has a disaster supply kit.
- ☐ My home/family has a shelter-in-place in our home if needed.
- ☐ My home/family has an evacuation route/routes to safety.
- ☐ My workplace has an emergency plan prepared.
- ☐ My workplace has a disaster supply kit.
- ☐ My workplace has a shelter-in-place if needed.
- ☐ My workplace has an evacuation route/routes to safety.

12. To the best of your knowledge, is your property located in the designated floodplain?

- ☐ Yes
- ☐ No
- ☐ Not sure

13. Do you have flood insurance?

- ☐ Yes
- ☐ No

14. If you do not have flood insurance, what is the primary reason?

- ☐ I don't need it / my property has never flooded.
- ☐ Don't need it / my house is not in the floodplain.
- ☐ Insurance company will not provide.
- ☐ My homeowners insurance will cover me.
- ☐ It is too expensive.
- ☐ It is not worth it.
- ☐ Not familiar with it / don't know about it.

15. Did you consider the impact a natural disaster could have on your home before you purchased / moved into your home?

- ☐ Yes
- ☐ No

16. Would the disclosure of this type of information influence your decision to purchase / move into a home?

- ☐ Yes
- ☐ No
- ☐ Not sure

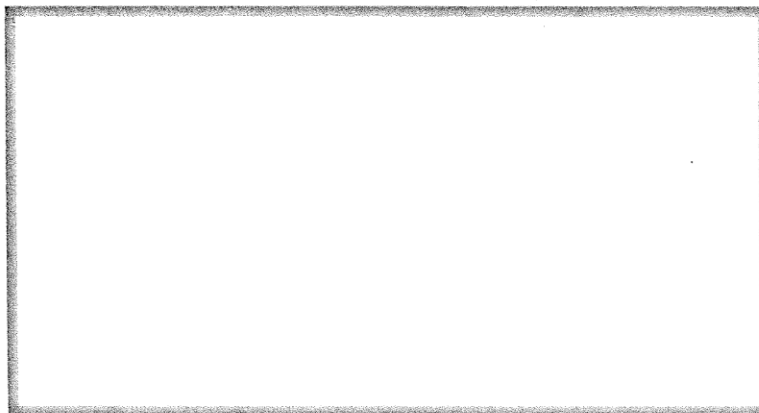
17. If your property were located in a designated "high hazard" area, or had received repeated damage from a natural hazard event, would you consider a "buy out", elevation of the structure, or relocation offered by a public agency?

- ☐ Yes
- ☐ No
- ☐ Not sure

18. If you would like to be kept inform of the process or receive additional information concerning natural hazard mitigation in Sangamon County, please provide your contact information below. Providing this information is optional and all contact information will be kept confidential.

19. Additional comments are welcome.

NATURAL HAZARD MEDIA STORIES



Wednesday,
July 30 2014,
5:21 PM
CDT

Sangamon County To Update Natural Disaster Plan

Thousands of dollars are coming to the Springfield-Sangamon County Regional Planning Commission.

The almost \$50,000 grant from FEMA will be used to update their natural disaster plan.

It was created in 2008 to keep people and property safe from disasters like tornadoes, flooding, and winter storms.

The grant will fund 75% of the cost of plan preparation.

"Natural disasters can threaten public health and safety so efforts we do now to protect lives and property in the future is essential," said Abby Bybee of the Springfield-Sangamon County Regional Planning Commission.

The remaining 25% of plan preparation will be funded through a local in-kind cost shared by participating communities.

The first meeting in the planning process will be held Tuesday, August 5th at 5:30 p.m. in the County Board Chamber at the Sangamon County Complex.

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Illinois, country sees below-average number of tornadoes

By Chris Dettro (chris.dettro@sj-r.com)

The State Journal-Register

Posted Oct 09, 2013 @ 10:00 PM

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Although their number and destructive power fluctuates wildly, 2013 is looking to be a good year for Illinois and much of the nation as far as tornadoes are concerned.

Through Oct. 7, the National Weather Service had received only 20 reports of tornadoes in Illinois, when the average number is three times that, said Jim Angel, Illinois state climatologist. And the months in which tornadoes are most prevalent already are behind us.

"The rough average is 50 to 60 tornadoes a year, although it varies quite a bit," he said. "It's been fairly quiet across the whole United States."

Of the 20 Illinois tornadoes, two have been in central Illinois: a May 9 tornado in Christian County and the May 29 tornado that tore through downtown Mount Olive in Macoupin County.

Other than three in the Metro East area and two in southern Illinois, the rest were in the northern part of the state.

Angel said the central part of the state typically has about 20 tornadoes annually.

"It's a fairly busy section, and the storms tend to travel along that Interstate 55 axis between St. Louis and Chicago," he said.

Angel said 2005 was a year roughly equivalent to 2013 regarding tornado activity in the state, and both were drought years.

"Weather in the Midwest this year has been two extremes," Angel said. "It was very wet in the spring with slow-moving storms that dropped a lot of rain but had very little severe weather. Since then, it has been very quiet with no severe weather because of the drought."

There were 39 tornadoes in Illinois in 2012, but eight deaths resulted from the Feb. 29, 2012, tornado in Harrisburg. Other years have had many more tornadoes but fewer, if any, deaths.

"All it takes is one really bad one," Angel said.

Nationally, this year has the lowest total tornado reports of any year since 2005, when 725 tornadoes were reported.

April, May and June are the busiest months in Illinois for tornadoes, followed by March, July and August. The last tornado reported in Illinois this year was on Sept. 1 in LaSalle County.

Although 2013 apparently will be relatively tornado-free, storm frequency can vary wildly, Angel said.

The year 2005, when only 19 tornadoes were reported? The following year, 2006, there were 124 tornadoes, a state record.

Chris Dettro can be reached at 788-1510. Follow him at twitter.com/chrisdettrosjr.

Illinois tornado numbers

Year	Tornadoes	Deaths	Injuries
2013	20	0	0
2012	39	8	111
2011	76	0	8
2010	52	1	40
2009	59	0	57
2008	47	0	11
2007	23	0	3
2006	124	1	49
2005	19	0	0
2004	80	9	23

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David Fishburn still has a lot of work to finish on his Williams Street home, thanks to a lapse in receiving insurance money and wet weather after a tornado tore through the village two months ago today.

 Recommend 0

By Rhys Saunders

Posted Oct. 19, 2009 at 12:01 AM
Updated Oct 19, 2009 at 6:18 PM

WILLIAMSVILLE

David Fishburn still has a lot of work to finish on his Williams Street home, thanks to a lapse in receiving insurance money and wet weather after a tornado tore through the village two months ago today.

Fishburn said he hopes all reconstruction work will be finished by Christmas, but he counts his blessings that his family hasn't been forced to relocate while work is under way.

"It took seven or eight weeks before we got the money," he said. "A lot of people around us are a lot farther along because they got money more quickly. For about six weeks after the tornado, it was perfect weather, no rain or nothing."

"Then we got our money and it starts raining, so it's going to slow us down a bit."

Still, the memories of the tornado that ravaged the village are vivid for Fishburn.

"I think it's still pretty fresh for a lot of people," he said.

Most of the damage happened directly off the interstate, on the way into the village. Although many homes are being rebuilt or remodeled and repaired, the tornado's aftermath visually looms over the village.

"Every day when they come into town, this is the first stuff they see," Fishburn said. "They're probably reminded that their antique mall is just a slab of concrete."

A time to rebuild

Williamsville's village president, Thomas Yokley, said the residents have rebounded tremendously in the face of adversity.

"Everything is moving along very quickly for 60 days, so I think we're in remarkably good shape," Yokley said. "The infrastructure is there, and it's all functioning very well to my knowledge."

Casey's General Store is scheduled to reopen Thursday, and Williamsville Christian Church has moved its services to the local elementary school, he said.

The church's pastor, David Beals, could not be reached for comment regarding the church's plans to rebuild.

Williamsville Fire Chief Keith Hamrick, who lives on the heavily damaged Lester Street, said church officials are discussing the possibility of building a new church.

"There's a building committee in the church that's looking into possibilities," he said. "They're meeting with contractors to see where to proceed."

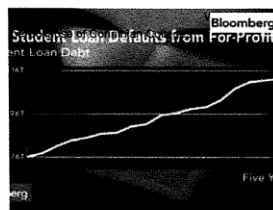


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Williamsville still mops up

David Fishburn still has a lot of work to finish on his Williams Street home, thanks to a lapse in receiving insurance money and wet weather after a tornado tore through the village two months ago today.



Recommend 0

Page 2 of 2 - Many citizens say they are trying to complete reconstruction and repairs before the winter holidays.

Fishburn said he put on a new roof and has all the house's damaged siding stripped. Some windows have been replaced, but Fishburn estimates he has six to eight more to go, as well as a hole in his garage.

"We're just in the middle of a lot of things," he said. "We're doing a lot of it ourselves so it just takes longer. It's still a lot of work."

Hamrick's family is renting near his home while it is being repaired. The house's outside work should be completed next week, and the family should be back inside their home by Thanksgiving.

"Everything is starting to jell and come together," Hamrick said.

Rhys Saunders can be reached at 788-1521.

State compiles total damages

Illinois Office of Emergency Management staff examined 57 sites in Williamsville and parts of unincorporated Williams Township.

Six sites are nonresidential (a church, antique mall, convenience store, farm chemical business and storage buildings). Total loss for these properties is estimated at \$3.815 million.

Of the affected residences, 10 houses were deemed destroyed, a cost of \$944,100, using information from the county assessor's office.

Another 35 houses within the village of Williamsville were damaged by the tornado, at an estimated loss totaling \$1.309 million

The total for loss to residential structures within Williamsville was placed at \$2.253 million while the loss across all properties there is estimated at \$6.068 million

The damage assessment also identified six residential properties — two houses that were destroyed and four that were damaged — in unincorporated parts of Williams Township. Damage to these sites is estimated at \$337,200.

The total structural damage assessment for the area is \$6.406 million.

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By David Mercer

The Associated Press

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areas Monday.

As law enforcement officers continued to search for victims and sized up the cleanup and rebuilding job ahead, they kept everyone but residents and emergency workers out. With power off and lines down in many areas, natural gas lines leaking and trees and other debris blocking many streets, an overnight curfew kept all but emergency vehicles off pitch-black roads. The only lights visible across most of Washington on Sunday night were red and blue flashes from police and fire truck lights.

Pierce said there were reports of looting around town.

About 75 friends and neighbors helped Zehr to salvage his family's belongings. He said he'd been at church when the tornado hit but that his wife, Sue, and son were at home.

A friend, Keith Noe, said the Zehr family still felt fortunate.

"They both walked out of the basement and that's what counts," Noe said.

Across Washington, an auto parts store with several people inside was reduced to a pile of bricks, metal and rebar; a battered car, its windshield impaled by a piece of lumber, was flung alongside it.

WASHINGTON -- As a powerful tornado bore down on their Illinois farmhouse, Curt Zehr's wife and adult son didn't have time to do anything but scramble down the stairs into their basement.

Uninjured, the pair looked out moments later to find the house gone and the sun out "right on top" of them, Zehr said. Their home, on the outskirts of Washington was swept up and scattered over hundreds of yards by one of the dozens of tornadoes and intense thunderstorms that swept across the Midwest on Sunday, leaving at least six people dead and unleashing powerful winds that flattened entire neighborhoods, flipped over cars and uprooted trees.

"They saw (the tornado) right there and got in the basement," said a stunned Zehr, pointing to the farm field near the rubble that had been his home.

Early Monday, Washington Mayor Gary Manier estimated that from 250 to 500 homes were either damaged or destroyed in the storm and that it wasn't clear when residents would be allowed to return.

"Everybody's without power, but some people are without everything," Manier told reporters in the parking lot of a destroyed auto parts store and near a row of flattened homes.

"How people survived is beyond me," he said.

The unusually powerful late-season wave of thunderstorms brought damaging winds and tornadoes to 12 states: Michigan, Wisconsin, Iowa, Illinois, Missouri, Indiana, Ohio, Kentucky, Tennessee, West Virginia, Pennsylvania and western New York.

Bill Bunting, forecast operations chief of the National Weather Service's Storm Prediction Center in Norman, Okla., said the storms all belonged to the same system and would be "moving rapidly to the east and continue east overnight and into the morning."

Illinois was the hardest struck with at least six people killed and dozens more injured.

An elderly man and his sister were killed when a tornado hit their home in the rural southern Illinois community of New Minden, coroner Mark Styninger said. A third person died in Washington, while three others perished in Massac County in the far southern part of the state, said Patti Thompson of the Illinois Emergency Management Agency. She did not provide details.

Communications remained difficult and with many roads impassable it was not clear if the injury and death tolls would rise on Monday. Ill. Gov. Pat Quinn declared seven counties disaster areas.

Washington, a town of 16,000 about 140 miles southwest of Chicago, appeared to have suffered the most severe damage. The tornado cut a path about an eighth of a mile wide from one side of town to the other, State Trooper Dustin Pierce said.

Across farm fields a little more than a mile from where Zehr's home was swept up, several blocks of homes were destroyed.

"The whole neighborhood's gone. The wall of my fireplace is all that is left of my house," said Michael Perdun, speaking by cellphone.

The Illinois National Guard assisted with search and recovery operations in Washington. The White House issued a statement saying President Barack Obama had been briefed about the damage and was in touch with federal, state and local officials. Gov. Quinn was scheduled to survey affected

"The employees were climbing out of this," Pierce said, gesturing to the rubble behind him. None of them was seriously injured, he said.

At OSF Saint Francis Medical Center in nearby Peoria, spokeswoman Amy Paul said 37 storm victims had been treated, including eight with injuries ranging from broken bones to head injuries. Another hospital, Methodist Medical Center in Peoria, treated more than a dozen, but officials there said none of them were seriously injured.

About 90 minutes after the tornado destroyed homes in Washington, the stormy weather darkened downtown Chicago. As the rain and high winds slammed into the area, officials at Soldier Field evacuated the stands and ordered the Bears and Baltimore Ravens off the field. Fans were allowed back to their seats shortly after 2 p.m., and the game resumed after about a two-hour delay.

Earlier, the Office of Emergency Management and Communications had issued a warning to fans, urging them "to take extra precautions and ... appropriate measures to ensure their personal safety."

Just how many tornadoes hit was unclear. Although about 80 reports of tornadoes had come in as of Sunday night, the National Weather Service's Bunting said the actual number will likely be in the 30 to 40 range. He said that's because the same tornado often gets reported multiple times.

Weather service meteorologist Matt Friedlein said such weather is rare this late in the year, but that strong winds coupled with temperatures in the 60s and 70s spawned Sunday's storms.

Babin reported from Chicago. Associated Press writers Sophia Tareen and Andale Gross in Chicago, Ken Kusmer and Tom LoBianco in Indianapolis, Ed White in Detroit and Amy Forliti in Minneapolis contributed to this report.

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Brunt of storm misses Springfield area

By Lauren Leone-Cross

The State Journal-Register

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What's this?

The Springfield area dodged a dangerous bullet Sunday, experiencing little damage compared to the destruction found in the town of Washington, where a tornado killed at least one person, flattened several homes and reduced buildings to mere rubble.

As of Sunday evening, at least five people had been killed in storms that **ravaged communities in central and southern Illinois**.

No serious damage was reported in the Springfield area, although several tornado warnings were issued during the late-morning hours as a series of intense storms pushed across the Midwest.

In Sangamon County, high winds damaged crops and a handful of power lines just north of Abraham Lincoln Capital Airport and near New Berlin, Sangamon County Undersheriff Jack Campbell said. No injuries or damaged buildings had been reported as of Sunday afternoon.

"I think we were just very lucky out here that nothing more significant happened," Campbell said. "I saw pictures of Washington. It's pretty bad."

National Weather Service officials in Lincoln could not confirm whether damage in Greenview, a small village in northwestern Menard County, was caused by straight-line winds or a tornado that may have touched down in the area.

That won't be confirmed until weather service teams can be sent out to survey reported damage, said Ernie Goetsch, a meteorologist with weather service in Lincoln.

"I believe there may have been a touchdown there, but we're not sure yet," Goetsch said. "We're still gathering data on that."

The storm struck the area just before noon, minutes after a tornado warning was issued for Menard County.

Several homes in Tallula, Petersburg and Greenview suffered structural damage, while high winds knocked down trees, Menard County Sheriff Charles Jones said. Golf-ball sized hail was also reported in the area, Jones said. The bulk of downed utility poles were along Illinois 29 in Greenview.

In Christian County, more than two dozen power lines were reported down along a two-mile stretch of County Highway 1 between Taylorville and Nokomis, Sheriff Bruce Kettlecamp said.

A roof from a Pana home was spotted along the railroad tracks following reports of a tornado touching down nearby, Kettlecamp said.

Power outages and minor storm damage appeared to be the biggest concern in Logan, Montgomery, Cass and Mason counties. About 8,600 Ameren customers in the four counties, about 22 percent of all customers, were without power as of 8:30 p.m.

The bulk of the outages were in Mason County, although residents experienced next to nothing in storm damage, according to the county sheriff's department. The outages were likely due to the county's close proximity to Pekin and Greenview, both of which were in direct paths of reported tornadoes.

Springfield's City Water, Light and Power responded to several power outages scattered throughout the city, according to the utility's Facebook page. As of 5:30 p.m., CWLP reported that fewer than 100 customers were still without power.

Goetsch said Sunday's storm systems were the result of unusually warm November weather ahead of a strong cold front, coupled with strong winds. The potential for severe weather this late in the year always seems to surprise people even though it's not that unusual, he said.

"In central Illinois, we frequently have these kinds of warm-to-cool patterns around this time of year that produce severe weather," he said. "It's real minor, but around November to mid-December, we have a secondary severe season."

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Sponsored content **What's this?**

WASHINGTON -- When a cluster of violent thunderstorms began marching across the Midwest, forecasters were able to draw a bright line across a map showing where the worst of the weather would go.

Their uncannily accurate predictions, combined with television and radio warnings, text-message alerts and storm sirens, almost certainly saved lives when rare late-season tornadoes dropped out of a dark autumn sky. Although the storms howled across 12 states and flattened entire neighborhoods within a matter of minutes, the death toll stood at just eight.

By Monday, another more prosaic reason for the relatively low death toll came to light: In the hardest-hit town, most families were in church.

"I don't think we had one church damaged," said Gary Manier, mayor of Washington, a town of 16,000 near Peoria.

The tornado cut a path about an eighth of a mile wide from one side of Washington to the other and damaged or destroyed as many as 500 homes.

Daniel Bennett was officiating Sunday service before 600 to 700 people when he heard a warning. Then another. And another.

"I'd say probably two dozen phones started going off in the service, and everybody started looking down," he said.

What they saw was a text message that a twister was in the area.

Bennett stopped the service and ushered everyone to a safe place until the threat passed.

A day later, many in the community believed that the messages helped minimize the number of dead and injured.

"That's got to be connected," Bennett said. "The ability to get instant information."

Another factor was forecasting, which has steadily improved with the arrival of faster, more powerful computers. Scientists are now better able to replicate atmospheric processes into mathematical equations.

In the last decade alone, forecasters have doubled the number of days in advance that weather experts can anticipate major storms, said Bill Bunting of the National Weather Service.

But Bunting, the forecast operations chief of the service's Storm Prediction Center in Norman, Okla., said it was not until Saturday that the atmospheric instability that turns smaller storm system into larger, more menacing ones came into focus.

Enter another key piece of the weather predicting equations: Observation.

Information coming from weather stations, weather balloons, satellite imagery and radar told scientists that there was more than enough moisture - fuel for storms - making its way northeast from the Gulf of Mexico.

Despite Sunday's destruction and at least eight deaths, 2013 has been a relatively mild year for twisters in the U.S., with the number of twisters running at or near record lows.

So far this year, there have been 886 preliminary reports of tornadoes, compared with about 1,400 preliminary reports usually received by the weather service office by mid-November.

Similar slow years were 1987 and 1989.

An outbreak like the one that developed Sunday usually happens about once every seven to 10 years, according to tornado experts at the National Weather Service's Storm Prediction Center and National Severe Storm Lab in Norman, Okla.

There were similar November outbreaks in 1992 and 2002, with the 1992 one being even bigger than this year's, said top tornado researcher Harold Brooks at the storm lab.

The outbreak occurred because of unusually warm moist air from Louisiana to Michigan that was then hit by an upper-level cold front. That crash of hot and cold, dry and wet, is what triggers tornadoes.

Like most November storms, this one was high in wind shear and lower in moist energy. Wind shear is the difference between winds at high altitude and wind near the surface.

Because it was high in wind shear, the storm system moved fast, like a speeding car, Brooks said. That meant the storm hit more places before it petered out, affecting more people, but it might have been slightly less damaging where it hit because it was moving so fast, he said.

About 90 minutes after the tornado hit Washington, rain and high winds slammed into downtown Chicago, prompting officials at Soldier Field to evacuate the stands and order the Bears and Baltimore Ravens off the field. Fans were allowed back to their

seats shortly after 2 p.m., and the game resumed after about a two-hour delay.

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