

CHAPTER 3. Hazard Mitigation goals

Chapter Two of this plan documents the diversity and likelihood of the natural hazards that has affected Jersey County, and estimates the economic and human cost of such events. Successful and widely supported planning must have citizen input and involvement. Citizens should have input on the goals, objectives and strategies of any mitigation efforts. This chapter documents the original and continuing efforts of Jersey County to solicit and respond to its citizens and their concerns.

The goals for this plan were established by the Jersey County Hazard Mitigation Planning Team. They are consistent with state natural hazard mitigation goals and reflect the input of citizens of Jersey County and municipalities participating in this multijurisdictional plan. This chapter documents the process utilized by the committee to review the original goals set by the previous planning efforts and review current community priorities for the revised Plan. During the update process it became apparent that some of the goals were still relevant and did not need to be changed. The current list of goals and objectives is located at the end of this chapter.

3.1 Original Goals and Objectives

Goal 1 Minimize Loss of Life

Objectives:

- Develop improved systems of delivering warnings about natural hazards to county residents, particularly those in rural areas.
- Develop improved communication systems for emergency responders that will allow them to respond to incidents occasioned by the occurrence of various natural hazards.
- Develop public education campaigns designed to educate residents about steps they can take to minimize the impact of various natural hazards.
- Conduct periodic tests of the county's emergency operation plan.
- Adopt uniform countywide building codes that promote the development of commercial and residential structures capable of withstanding acceptable levels of natural hazard impact.

Goal 2 Protect Public Health

Objectives:

- Develop public education efforts designed to educate the public about measures individual citizens can take to reduce the health risks associated with various natural hazards before, during and after the occurrence of such hazards.
- Improve the following programs with eye to the health risks occasioned by hazards determined most likely to affect the county: sanitation, disease surveillance, vector control, vaccination.

Goal 3 Protect and Develop Infrastructure

Objectives:

- Adopt uniform countywide building codes that promote the development of commercial and residential structures capable of withstanding acceptable levels of natural hazard impact.
- Perform regular maintenance on transportation infrastructure including roads and bridges.
- Review building inspection procedures to ensure appropriate attention to hazard mitigation related features.
- Improve sewage and wastewater treatment infrastructure.
- Review building evacuation procedures posted in all county-owned buildings.
- Review evacuation routes on a regular basis to ensure appropriate access in the event of their use.
- Improve communication systems through the use of federal and state grants and private initiatives.

Goal 4 Protect Public Property and Critical Facilities

Objectives:

- Review building inspection procedures to ensure appropriate attention to hazard mitigation related features.
- Adopt uniform countywide building codes that promote the development of public buildings capable of withstanding acceptable levels of natural hazard impact.
- Retrofit any existing critical facility deemed unreasonably susceptible to natural hazards.
- Ensure that all public buildings are appropriately insured.
- Review security of critical facilities.

Goal 5 Protect Private Property

Objectives:

- Adopt uniform countywide building codes that promote the development of public buildings capable of withstanding acceptable levels of natural hazard impact.
- Adopt zoning ordinances that minimize the risk of exposure to the most prevalent natural hazards.
- Conduct public information campaigns designed to educate citizens about the potential benefits of the following activities: retrofitting, floodproofing, insuring property.

3.2 Goals and Guidelines

Having completed hazard profiles and loss estimates for the hazards identified as posing the greatest risk to the county, the Hazard Mitigation Planning Team devised a process to present the findings from this phase of the mitigation planning process to the public and solicit public input on mitigation goals and objectives. In preparation for routine and special reports to the County Board and Committee, staff and consultants periodically conducted studies and surveys of citizens and stakeholders, and met with various organizations, including all of the municipal governing bodies.

July 9, 2008 Organization of a Hazard Mitigation Planning Team: The Team is responsible for monitoring and evaluating the implementation of the Plan and updating the Plan participants.

- The Jersey County Board designated individuals to serve on a sub-committee Planning Team as a liaison between the Hazard Mitigation Planning Team and the Board (see Appendix);
- Formed a sub-committee for a Stormwater Management Ordinance to monitor new construction when ten thousand square feet or more of ground is being disturbed. The ordinance would have provisions on drainage ponds, silt fences and requirements for subdivision developments. The ordinance was adopted in September of 2009.(see Appendix)
- The city of Grafton already has a Plan in force as of July 1994. In March of 2009 the city of Grafton adopted the Illinois Energy Conservation Code.

February 11, 2009 First Responders and Government Officials debriefing of 2008 Flood: Since the original Plans expiration, Jersey County was declared a Federal Disaster after the area experienced major flooding in the spring and summer of 2008. Part of the ongoing effort to save lives and limit property damage in the wake of such a disaster, the JCHMP team held a flood mitigation review meeting on Wednesday, February 11, 2009 at Principia College. The purpose of the meeting was to review responses by all key individuals and organizations involved in responding to this disaster, identifying both successes and areas in need of improvement. Information obtained from this meeting would be used to strengthen both emergency operation procedures and mitigation actions identified in the county's' Multi-Jurisdictional Natural Hazard Plan. Invitation and participants list are located at the end of this chapter.

Participants identified the following "successes":

- ✓ Grafton, Elsay and the County used elevation maps to manage evacuations and sand-bagging efforts;
- ✓ Flood stage information provided by the Corps of Engineers was timely and useful;
- ✓ Mayors were pleased with overall inter-agency cooperation;
- ✓ County floodplain management policies and practices reduced damage;
- ✓ There was sufficient law enforcement, including full complement of IDNR Conservation Police on the rivers.

Participants identified several issues or problems:

- ✓ Coordination of road closings and openings with IDOT;

- ✓ Enforcement of road closings;
- ✓ Delivery of electricity for levee pumps, quarries for preparing rock and sand, and normal summer usage.

2009 Consultation on FEMA Community Rating System (CRS) 330 Series (Outreach Projects): In 2009, Jersey County served as one of the national pilot communities to field test a proposed six-part approach for activities and credit under Activity 330. FEMA was in the process of evaluating and revising its approach to the 300 Series of Public Information activities and how activities under this series were credited. An initial assessment of the credited activities conducted in 2007 provided recommendations for areas of revision and additional attention. The pilot program was managed under contract to the consulting firm of Ogilvy Public Relations Worldwide.¹ The pilot program research involved a number of telephone conferences, coupled with site visits by the consulting team. The consulting team from Ogilvy worked with Mike Prough and Cindy Cregmiles of Jersey County and Brian Roberts and John Williams of Principia College.

The pilot project consisted of an extensive workbook to be completed by the local natural hazards mitigation team. The workbook covered community objectives and project scope, preliminary self-assessment, pilot refinement of objectives and scope, check-ins and log, and a “six-element approach”: outreach self-assessment, basic communications and outreach tools and channels, stakeholder engagement, outreach strategy and integrated plan, target audiences and special opportunities, and evaluation and program refinement. The primary purpose of the consultation was to evaluate the Ogilvy six-element proposal. The secondary purpose was to benefit Jersey County through participation in the six-element process.

The Jersey County team completed the workbook review by December 2009. The Jersey County report is included in Chapter 9 on Public Information. The Ogilvy team reported back: “Mike & Cindy—Bringing Jersey County from the brink of expulsion from the NFIP to a community in good standing using creative and effective approaches to flood plain management is a true success story. Clearly your energetic and committed leadership is making a difference.” The team also reported: “John & Brian—your partnership with the County is a model for ways other communities can collaborate and a great way to combine classroom teaching with practical experience.” The Ogilvy team provided no further feedback to the substantive Jersey County self-report.

3.3 Periodic Studies, Surveys and Involvement of the Public

Introduction: Periodic Reporting to Jersey County Board and Committee on County Service Offices and Public Safety, All Meetings Open to Public, Administration of Mitigation Plan: The relevance of the original natural hazards mitigation goals and objectives has been in the forefront of the minds of those charged with managing and implementing the Jersey County Natural Hazards Mitigation Plan. The primary responsibility for implementation and oversight of the Plan rests with the Jersey County Board, which has delegated specific responsibility to the Committee on County Service Offices and Public Safety (herein referred to as the Committee) of the Board. Following the recommendation of the Plan, the Committee puts plan implementation,

¹ www.ogilvypr.com

oversight and review on its agenda at least twice each year. Every routine meeting of the Committee, as well as any special sessions or workshops, is announced to the public, which is invited to attend and (as appropriate) participate, under the requirements of the Illinois Open Meetings Act and other relevant statutes. Electronic minutes are kept of every meeting.

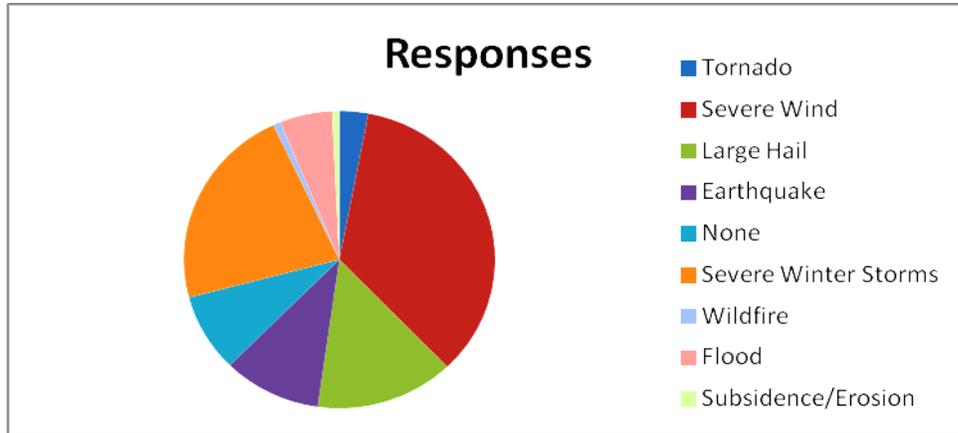
Specific implementation of the plan has been delegated to the County Code Administrator, and advised by faculty from the Political Science Department at Principia College. The Code Administrator, and advisors, meets at periodic intervals to review the plan's implementation and prepare presentations for the Committee and the entire Jersey County Board. Reports to the latter body have been at least annual. Presentations to the Board have been more frequent in response to specific activities, issues or requests. In addition, county offices, other government agencies and relevant stakeholders reported on their progress semi-annually.

Phase 2: May 16, 2009 Public Survey: On May 16, 2009, a city wide survey was sponsored by the Jersey County Board's Special Projects Committee. The purpose of the survey was to help the county design a more effective public education campaign about steps citizens and businesses can take to prepare for and respond to natural disasters. Survey results would aid in the evaluation process of JCNHMP to improve coordination and risk reduction activities throughout the county. With the support of the NHM team, a team of students from Principia College's Political Science Department, a twenty question survey was designed. Volunteers from the Jersey Community High School National Honor Society students, Principia College students, and three major businesses assisted in handing out surveys to the public. In addition, the county distributed surveys to county and local government offices. In all, 213 surveys were collected. A key question asked, "*In the past five years, which of the following natural disasters has your household experienced? (Check ALL that apply)*". The questions offered an array of natural disasters for selection.

This question provides a detailed analysis of what natural hazards Jersey County residents have experienced (or remember experiencing) in the past five years of living in the county and its municipalities. Understanding the types of disasters that people recall experiencing helps to emphasize what people feel are the biggest threats to the county, which assist the county in understanding what type of information to distribute. It seems that county residents have almost no recollection of the earthquake in mid 2008 (only 41 out of the 213 respondents recalled this event). Severe winter storms from the winter of 2008 was more memorable than the earthquake that same year (89 out of 213), but still low for how severe the storms were. This lack of attention to natural disaster points to the low public salience of the issue.

Question: In the past five years, which of the following natural disasters has your household experienced?

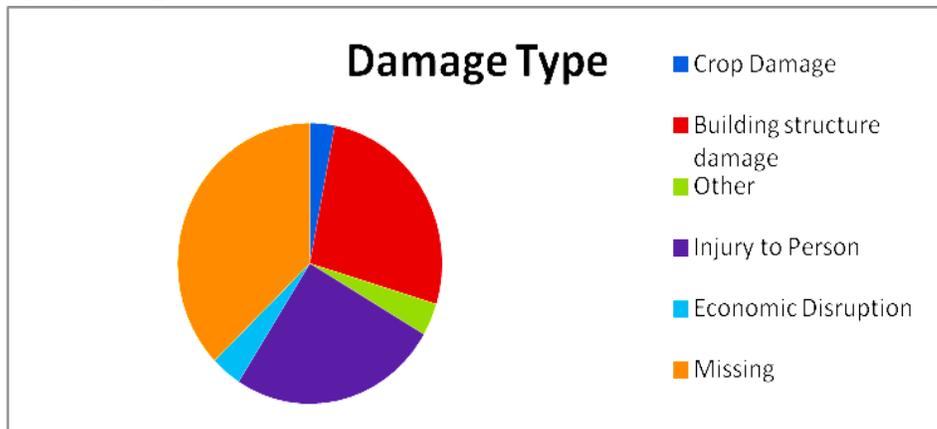
Table 3.3.1



Question: What kind of damage from natural disasters are you most concerned about?

Beyond demographical questions, the survey provided information regard Jersey County residents understanding of natural disasters, priorities in natural disaster preparedness, and the best methods to convey information to county residents. This question aimed to understand citizens priorities in hazard mitigation; it also sought to understand what levels of knowledge county residents had of natural disaster damage. According to the data (listed in Table 3.3.2) collected, Jersey County residents are most concerned with damage to building and structure damage (33.3%). A close secondary priority (31.9%) was injury to person. These two answers were reversed from the 2004 study signaling a slight change in priority. Unfortunately 21.6% of the data is missing due to participants either leaving the question blank or checking multiple options (directions state “check only one”). According to the survey, these two topics should be the main focus of information being delivered to the citizens regarding hazard mitigation.

Table 3.3.2



Executive Summary of May 2009 Mitigation Survey of Phase 2: One of the action items of the Plan involves developing and implementing a public education program regarding natural hazard mitigation. In August of 2009 a team of upper-division Principia students enrolled in a Public Policy Analysis course, reviewed the county's current efforts to implement, monitor and evaluate activities associated with four Action items. In addition to descriptive accounts of these ongoing projects, the students developed recommendations designed to improve these activities. The findings were delivered by formal presentations to the public, stakeholders and the County Board. Based on the reports and subsequent conversations, the Special Projects Committee made seven recommendations to the County Board. Some recommendations require formal actions by the County Board; including allocations for staffing and financial resources and in other instances, these recommendations propose actions that can be taken directly by specific county government offices. The Executive Summary and Recommendations are at the end of the chapter.

August 18, 2009, Executive Summary of May 2009 Public Survey:

- Acknowledgment that few respondents have great knowledge of hazards;
- Jersey County residents for the most part are unaware of the efforts to educate them on safety to home and health;
- A majority of respondents would like to have more information on safety;
- Discovered how the residents receive most of the news media via local newspapers, however they would prefer to receive hazard information by mail;
- Over 80% did have computer access
- Only 77 of 213 thought the Internet was an effective method of communication and less than 17% were aware of the county's web site.
- If the county were to depend on the Internet for information, they would need to develop a large advertisement campaign of the sites.

September 2, 2009 Open to the Public Committee Meeting:

- Jersey County selected one out of four counties in the US to participate in the CRS outreach activities revision project. Their output will be used for rewrite of the current point system in the new manual;
- Illinois of Public Health and Jersey County agree that septic systems that were inundated by flood water are deemed to be failed. The County Health Department Sewage Code is more stringent than the States'. Letters were mailed to all residents in the floodplain;
- Discussed the roll the Soil and Water Conservation Office plays in inspections and a fee schedule for storm water management.

January 13, 2010 Open Bi-Annual Meeting: Committee members met to discuss the items to present to the public and Board:

- Overview of the ten action items;
- Questioned why City of Jerseyville has not adopted a Stormwater Management Ordinance;
- Discussion of a future public questionnaire;
- Representative of Great Rivers Preservation reported the watershed covers approximately 78 thousand acres with 60% being located in Jersey County;

- New addition to the county jail will be considered a critical facility
- Utility companies are currently taking steps to remove tree limbs from utility lines;

January 24, 2010 Open Special Projects Committee Accomplishments of the 10 Action Items and Plan Update: A public meeting was scheduled sponsored by the Special Projects Committee in August to discuss the Accomplishments of the 10 Action Items:

- Sept. 8, 2009 the Board passed the Stormwater Management Ordinance Action #5;
- County and Grafton adopted the 2006 ICC codes and 2009 IECC code Action #1 & 3'
- Annual educational brochures to land owners in the county at a cost of \$577.00 to the Code Administrator Office, Action #4 & 9
- Reported that the 5 year leases were renewed on preservation of open space areas Act. #5
- City of Jerseyville purchased acreage located in a floodplain and created a recreational lake, which in turn allows water to drain it the lake. Act. #5 & 10
- City of Jerseyville purchased warning sirens to minimize loss of life.

Updates to the Plan were also provided by the County Engineer, Tom Klasner as to the ongoing culvert and bridge maintenance (Action #2), Jersey Co. Health Department, Dale Bainter also gave update as to the mosquito prevention classes and certification for administering mosquito pellets in stagnant water, Jersey County Code Administrator discussed the mitigation of USAC E cabins following the 2008 flood, the grant obtained to replace private septic systems that were deemed failed from flood waters and the remaining repetitive loss properties. Jeff Blackorby with the Soil and Water Conservation Office gave update on the new NPDS permits issued since 2010 and the cost of the service. Per the passing of the Stormwater Management Ordinance, the State issued permits are required. Public was invited to ask questions, no response.

August 3, 2010 Public Bi-Annual Multi-Hazard Mitigation Meeting:

- Requested the Board appoint County Code Administrator as the Plan's administrator;
- Update of county web-site, design is finished however still looking for funding;
- County Administrator explained informational requirements and asked for help from individuals;
- Reports from stakeholders regarding their accomplishments
- Also held a joint meeting on the Stormwater Management

November 23, 2010: several stakeholders were asked for their summaries as to what type of mitigation projects or outreach programs have been implemented. Larry Mead, the Jersey County ESDA Coordinator, has held public information meetings at the Quarry-Elsah-Mississippi Fire Department. Mr. Mead is a trained Family Protection Plan speaker. Members of the public, county officials, community leaders, hospital representatives, engineers, and officers of the Sheriff Department attend the meetings. Jeff Blackorby of the USDA Service Center, Betty Duggan, Mayor of Fieldon, Lynn Schreiber, President of the Village of Elsah, Jeff Soer, Building and Zoning Department of Jerseyville, and Tom Thompson, Mayor of Grafton.

December 14, 2010 Multi-Hazard Mitigation Meeting:

- Discussion of time line for the work to be prior to expiration date

February 7, 2011 Public Meeting by Special Projects Committee:

- Discussion of action item of web site, no response from request of grant money
- Chairman made motion to use money for update of Plan toward the web site
- HAZUS classes offered at Emmetsburg
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February 8, 2011 Open Grafton City Hall Meeting: The Council announced that the city is making preparations for spring flooding due to the heavy ice and snow storm that blanketed the area.

June 8, 2011 Public Meeting by Special Projects Committee:

- Discussion of how the public would view the web site to be user-friendly, the Chairman of the committee would be meeting with the company that will be doing the web design.
- The Chairman also suggested that placing a public survey in a local “shopper newspaper” that we might have a better response from the public; it was also discussed that the web site would also be an excellent tool.
- City of Jerseyville is still working on a storm water management ordinance, and three creek restorations have been completed.
- City of Jerseyville is still using the 2006 ICC codes and is not sure they want to move to the 2009.
- Jeff Blackorby of the Soil and Water Conservation reported that the water disaster issues have lessened but the wind disasters have increased due to less rainfall and less construction. There are 700 more acres being placed in the CREP, with another 400 acres in Nutwood, but these acres are still under water and the warm season grasses cannot be planted.
- There were 47 water control basins placed in 2010 and another 70 will completed in the county.

November 3, 2011 “Frontline Responders Workshop,” Review of Natural Hazards by First Responders: In review of the county’s response to natural disasters, a “frontline workshop” was held on the campus of Principia College. The workshop was sponsored and organized by the college’s Political Science Department. The frontline workshop involve two specific groups of people—both at the front line of any response to natural hazards—first responders (such as police, fire, and public health), and local government officials (mayors, county department directors, and other relevant administrators). Participants included the following first responders, government officials, and other parties:

- Lorna Hagen, Jersey County Health Department
- Dale Bainter, Jersey County Health Department
- Larry Mead, Jersey County ESDA Coordinator
- Larry Bear, Jersey Community Hospital Administrator
- Gary Hayes, Vice Chair, Jersey County Board
- Larry Keller, member, Jersey County Board
- Sonny Renken, Jersey Community Hospital EMT/ambulance service
- Cy Bunting, Mayor Village of Elsay
- Tom Klasner, Jersey County Highway Engineer
- Mark Kallal, Jersey County Sheriff
- Kevin Klaas, Jersey County Sheriff Department
- Chris Sullivan, Grafton Police
- Mike Prough, County Floodplain Manager
- Cindy Cregmiles, Code Administrator Office
- Linda Davidson, staff, Code Administrator Office

- Roger Kirby, Major, Jerseyville Police Department
- John W. Williams, chair, Political Science Department
- Bryan White, Director, Campus Security Office, Principia College
- Mark Mackintosh, QEM Fire Department
- Matt Donatelli, student recorder, Principia College
- Cameron Douglas, student recorder, Principia College
- Mariana Leite, student recorder, Principia College
- Mark Wagner, IDNR Conservation Police

The first step was to review the hazards that Jersey County had experienced since the adoption of the natural hazards mitigation plan in February of 2008. The workshop identified the following:

- “Grafton flood” of 2008
- Earthquake of 2008 (Wabash fault)
- Tornado at The Glades
- Severe summer storm of (causing extensive damage to trees throughout Jerseyville)
- Hail storm
- Several severe ice storms
- Assorted straight line winds
- Mud slide in Grafton
- Lightning strikes
- Flash flooding
- Gas explosion
- Snow storm
- Drought

The second step was to engage in separate discussions among the first responders and local government officials. The local government officials and department directors identified the following concerns, issues or potential problems:

- Develop a comprehensive list of contacts to disseminate information
- Identify services available to the county from regional and state agencies; comprehensive contact lists and list of resources
- Coordinate communication with the County Code Administrator for tracking disasters using GIS
- Extend certification training, such as CERT
- Expand inter-departmental training
- Develop procedure for notification of public health department as food services can be contaminated due to disasters, natural or man-made
- Develop procedure to handle radio traffic which is exceptionally heavy during disaster and communication is confusing; communications frequencies get overwhelmed when everybody tries to use one channel
- Provide correct information for news media to relay to the public
- Respond to storm water and flash flooding effects on Elsayh village

- Develop response for deterioration, terrorism or vandalizing the ammonia pipe line that runs through the county
- Implement Reverse 911 – expensive, but would be helpful
- Develop plan for air support from neighboring jurisdictions such as St. Louis County and Illinois state police; both can be contacted by local police
- Documentation of potential problem areas
- Cell service has improved in Elsah; inactive AT&T tower in Grafton
- Improvements have been made on repetitive loss; still working on the floodplain
- Generally prepared for flooding – loss of water has been an issue in past; In '93 Alton's water went out, and Principia College's swimming pool was used to hold spring water; Anheuser-Busch brought water from across the river
- Need to make clear to the public the difference between aquifer and raw (river) water
- Communications getting better – change from disaster to all-hazard approach
- More partnerships developing; for example, Principia College has been brought up fairly regularly in discussions as a place to take injured/displaced people, and as emergency water supplier
- Jersey County is generally able to respond well for isolated events, but doesn't document it as well as they could
- Need to recognize that there are more inline winds than circular (tornados) winds
- Risk of planes crashing in fields and forests
- Communication between departments – not just between the County and (e.g.) Grafton; contacting the Sheriff's Dept. is not the same as contacting the County

The first responders identified the following concerns, issues or potential problems:

- Windstorms: Straight line winds seem to be the most dangerous
 - How can we respond?
 - We can make people aware to watch the news/weather
 - Problems that stop us from making a public announcement
 - Windstorms come so fast that it is difficult to warn a community
 - Communities are at a higher risk for windstorms
- Earthquakes:
 - Seems to be the biggest risk/concern at this moment.
 - It's important to know what to do with an earthquake; children in grade schools are becoming educated; kids are doing drills at schools regularly; kids seem to be a very important asset to building a safer community
 - 5 year program to regulate drills
- Flooding:
 - In 2008, half of Grafton was cut off; food had to be given to people by boat; people who were sick had to be taken to hospitals by boat
 - In 2008 more men were out in the river to patrol to make sure that the people were okay

- People are getting lost within the flood; transportation is being cut off by the big floods
- 1993 big flood, The levy system was not the best
- Manpower seems to be the biggest problem when it comes to flood compared to transportation; not enough manpower to control the situations
- Field fires:
 - Communication is a big problem when it comes to field fires; it is a technical issue; need an alternative use of communication when it comes to making police departments/fire departments aware of what is going on
- Ice Storms:
 - Do we have shelters for ice storms? Yes, but they haven't had to be used in a major way since 1993
 - What about the issue with heat? People are losing power, therefore they don't have any heat that keeps them warm; when that happens, shelters are used
 - Electricity seems to go off the most when winter storms start up
- Heat waves:
 - Jerseyville has set up cooling centers in the past
- Additional comments:
 - Red Cross: they have a short list of what they to do when natural disasters occur
 - Cross training with EMS, and other departments so that they can work together and become more prepared; departments should know how to do certain things with other departments
 - A county website for alerts; the Jerseyville police department has a website to inform citizens; if the websites begin have crossed links with other departments then people become more aware
 - Digital warning signs along highways.

January 24, 2012 Public Bi-Annual Meeting: Discussion of the dollar amount citizens may be saving on their homeowner insurance premiums due to the county being in the CRS. Question from the public as to how the mitigation plan helps the county, wasn't this government interference. The Mayor of Elsau responded by asking if the fire department responds to a house fire would this be considered government interference. Mr. John Williams explained that with having a Plan in place is proving to big government that "this is us, doing for ourselves."

2012 Survey of Jersey County Voters: In March 2012, two hundred and seven Jersey County residents were surveyed about their recent experience with nine types of natural disasters, extent of concerns with eight major types of natural hazards, knowledge about disaster planning and steps toward mitigation of the impact of natural disasters, and use of media to learn about local government. The surveys were conducted of voters at four voting precincts on the day of the March 2012 Illinois primary election. These citizens cared enough about the civic health of their community to participate in primary election voting. The four precincts, two in the county seat and two in rural counties, have a pattern of voting "with" the county; that is, these precincts

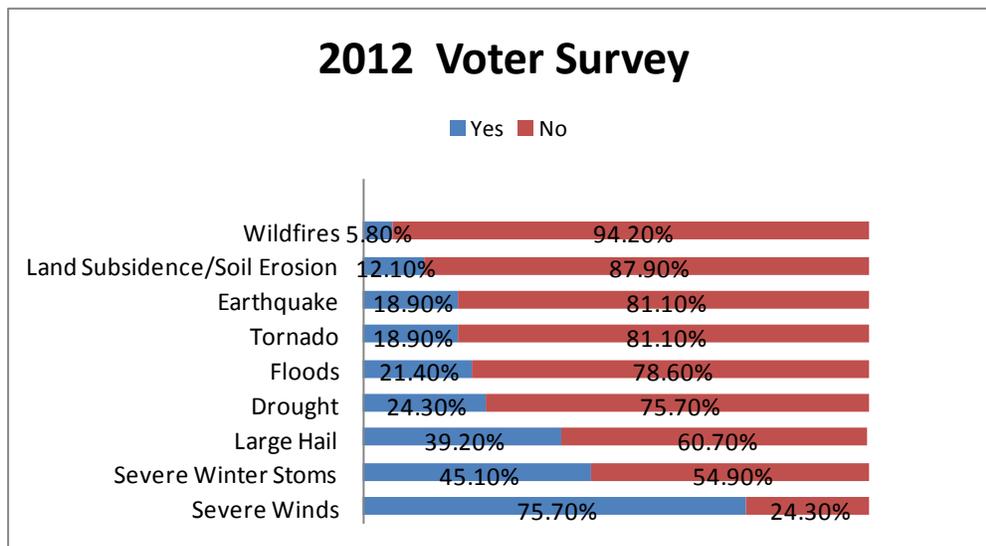
reflect the pattern of voting of the county as a whole and, as a result, may be a useful reflection of the county. The survey was conducted by the Political Science Department of Principia College, Elsau, and Jersey County, Illinois.

One hundred, twenty three respondents (59.4%) live in or near Jerseyville, the county seat and only metropolitan area of the county. The remaining 84 respondents (40.6%) live in the rural areas in the center and southeast of the county. There were slightly more men than women (109, 52.9% to 97, 47.1%). Almost 40% had high school education, with another 37% having college education and 16% have post-graduate education. Over 70% of the respondents have lived in Jersey County for at least 20 years. The average as well as median age is 61. The respondents reflect an older, stable population. The education level may be skewed somewhat due to the presence of a private liberal arts college in one of the two rural voting precincts.

The survey was undertaken prior to the Midwest drought of the summer of 2012, so the respondents might give a higher response to experience with drought if the survey had been conducted in the fall.

Over the past five years, respondents have experienced the following natural hazards:

Table 3.3.4



By the nature of the selection of the precincts that were surveyed, the parts of the county traditionally struck by river flooding (as in Grafton and Elsau in 2008) were not studied, so the responses to experience with flooding may be underreported. Less than 7% of the respondents acknowledged that they lived in a flood plain.

Like river flooding, land subsidence or soil erosion and wildfires can be geographically isolated to certain parts of the county. By nature of the precincts selected, the part of the county that experienced a wildfire (in and about the state park near Grafton) in 2012 was not studied. Rural residents reported significantly greater experience with flooding and earthquakes than Jerseyville residents.

Respondents were asked about their level of concern about future natural hazards:

	Extremely Concerned	Very concerned	Concerned	Somewhat concerned	Not concerned
Tornados	23.2%	32.0%	25.8%	10.8%	8.2%
Straight-line winds	18.0	24.9	30.2	15.3	11.6
Severe winter storms	13.2	14.3	28.0	30.7	13.8
Land subsidence	10.4	15.4	27.5	22.5	24.2
Large hail	9.6	16.6	28.5	24.1	11.2
Wildfires	6.6	9.4	23.2	29.3	31.5
Earthquakes	5.8	5.8	23.8	37.0	27.5
Floods	5.3	16.0	24.6	23.0	31.0

The relatively low level of concern over wildfires and flooding may be a result of the survey process, though hazards that tend to be geographically limited (including soil subsidence, wildfires, and flooding) appear to stir less concern than the hazards that can have a county-wide impact, particularly storms.

Rural respondents expressed a greater concern about earthquakes, severe winter storms, straight line winds, and tornados than did Jerseyville residents.

Reflecting the rural and conservative nature of the region, with its strong commitment to property rights and smaller government, respondents felt that disaster planning should occur at the state and local levels rather than the federal level. Nevertheless, they acknowledge the role of state and local government over individual planning.

Question: Disaster planning should occur at the...

	Yes	No
Federal level	45.2%	54.8%
State level	60.9	29.1
Local level	69.0	31.0
Individual level	40.6	59.6

Most respondents are aware that Jersey County has building codes (91.8%). Most respondents agree (or agree strongly) that uniform building codes result in better construction (62.9%); only 13.9% disagreed or disagreed strongly. Most respondents would support hazard mitigation if it reduced insurance rates (very supportive at 20.3%, supportive at 44%, and somewhat supportive at 30.8%). There was a clear distinction between rural and urban respondents with regard to both knowledge and understanding of building codes. Jerseyville residents were more knowledgeable about the existence of the codes and the impact of building codes on the quality of building construction. Jerseyville has had building codes and building code enforcement for a substantial period of time. The county adopted building codes and established code enforcement in the last decade.

September 27, 2012 Bi-Annual Open Special Projects Meeting: An update of the Plan status was reported. The ten action items were discussed as to which items had been accomplished and

some will be on-going such as maintaining current building codes. Also the committee discussed requests for grant money through IKE. Refer to Appendix for minutes of meeting.

March 26, 2013 Open Special Projects Meeting: Presentation of the web site providers and the needs of the offices.

June 27, 2013 Open Special Projects Meeting: Update on the Hazard Mitigation Plan. The county had previously applied for a HMPG for the update. The grant had been approved and was put into place in May of 2013.

July 17, 2013 Open Special Projects Meeting: Discussion of the offices and fees for the county web site (action item)

August 5, 2013 Open Public Meeting: Updating the new county board members about the purpose and requirements of a Multi-Hazard Mitigation Plan. He stressed that was essential that a Plan should be in place and without a Plan there may not be any federal assistance if a disaster should happen.

October 30, 2013 Special Projects Meeting: The committee met to go over past discussion on the web site. There was more detail discussion of information to be placed on such as links for the public to use.

April 29, 2015 Open Meeting to the Public: Committee met to discuss and recommend the 2015 updated Multi-Hazard Mitigation Plan be placed on the agenda at the May 12th County Board meeting. The Plan has been on the county web-site for display and once approved by the Board it will be on display for 30 days in the Jersey County Board Office.

3.4. Review and Reaffirmation of Hazard Mitigation Goals

In preparation for the review and resubmission of the Jersey County Natural Hazards Mitigation Plan, the Hazard Mitigation Team designed and implemented a process of education and involvement of the public and local officials. The first step was the design of the process and approval by the Special Projects Committee. The next step was a briefing of the entire Jersey County Board, followed by public briefings:

City of Grafton	John Williams, Professor, Principia College
City of Jerseyville	Brian Roberts, Professor, Principia College
	Jeff Soer, City Building Inspector
	John Williams, Professor, Principia College
Village of Elsay	Linda Davidson, County Code Administrator's Office
	Brian Roberts, Professor, Principia College
Village of Fieldon	Linda Davidson, County Code Administrator's Office
	Brian Roberts, Professor, Principia College
	John Williams, Professor, Principia College

Next, the Team began the process of identifying, reviewing, researching, revising, and expanding Chapter 2 on Hazard Profiles and Loss Estimation that the county and municipalities are subject to. The Team decided to include Excessive Heat in the updated Plan risk assessment based on research of the crop loss and deaths that occurred over the past years. The review process was already well underway and the Team had engaged the Political Science Department at Principia College, primarily through the Public Policy Analysis class, to undertake biennial evaluation of the progress of the Plan's implementation (see discussion in Chapter 2). In addition, Dr. Brian Roberts of the Principia Political Science Department undertook or supervised extensive additional research into the various hazards through the beginning of 2013. Using research conducted through the summer of 2012, Dr. Roberts revised and compiled a new Summary of Risk Assessment Research, derived from the original prepared in June 2004. The revised information is in Table 3.4.1.

Instead of breaking into smaller groups, however, the workshop functioned as a committee of the whole. First, the participants reviewed the original set of goals and objectives. Second, the participants received and reviewed the Summary of Risk Assessment (Table 3.4.1). Third, the facilitator guided a discussion of the current goals and objectives, specifically seeking amendments—by addition or subtraction of items—to the original list. In summary, the participants decided not to add or subtract any items from the original list. The discussion, rather, focused on shifting ranking of hazards (with new hazards such as drought and wildfires appearing on the master list) and mitigation strategies, their feasibility, and priority. Finally, using the “dot system” from the first workshop, participants were asked to vote on their priority for the five goals. The participants, representing county and local governments and agencies, and private citizens and organizations, agreed to re-affirm the original set of five goals and objectives. It should be noted that a number of the original objectives have been accomplished. The last section lists the five goals and objectives, with notation of which have been accomplished under the original plan.

Table 3.4.1 Updated Summary of Risk Assessment

Hazard	Probability of Occurrence	Area of Hazard	Level of Safety Hazard	Level of Property Damage	Vulnerable Critical Facilities
Earthquake	5-9% of quake 7.5 M or higher within next 15 years; County located in PGA zone of 6g (on scale of 0-180)	Felt county-wide, but the major impact would be in urban areas	Low	Minor; primarily confined to masonry structures; household items not secured	Masonry structures most vulnerable, therefore all critical facilities vulnerable to differing levels of damage.
Drought	Moderate to extreme experienced in 2012; above average probabilities forecast through May 2013	County-wide	Low	Moderate to major for agricultural property; minor to moderate hydrological impact also possible	None
Floods (overbank)	50 yr. = 2% yr. 100 yr. = 1% yr.	Floodplain (direct)	Medium	Moderate - Major	Emergency response; municipal bldgs; schools in floodplain
Land subsidence	Low	Impact varies according to soil conditions and slope of land	Low	Minor	N/A
Severe Thunderstorm	Several each year containing various degrees of wind, hail, lightning	Every part of county is vulnerable	Med - High	Minor	Communications vulnerable to disruption; possible loss of power
Severe Winter Storm	One severe snowstorm on avg. every other year	Every part of county is vulnerable	High	Minor	Communication vulnerable to disruption; loss of power
Tornado	20% chance per year (all recorded have been F1 or F2)	Every part of county is vulnerable	Medium	Med - High	Schools and other large span buildings
Excessive Heat	Greater than 1% chance	County-wide	Medium	Low	Schools, utilities
Wildfire	Extremely low (county located in light fuel region)	More densely wooded areas	Low	Low	None

In September 2012, the Team invited representatives of the various constituencies and stakeholders to a workshop to review and update the goals and objectives of the County’s plan. The invitation list included original members of the Natural Hazards Mitigation Team, replacement members, county and municipal officials, and representatives of various government agencies and private organizations. The workshop was structured as an abbreviated form of the original workshop, thoroughly described in section 3.1.

3.5 Re-Affirmed Goals

Goal 1 Minimize Loss of Life

Objectives:

- Develop improved systems of delivering warnings about natural hazards to county residents, particularly those in rural areas. ACCOMPLISHED IN JERSEYVILLE; NEEDS TO BE ACCOMPLISHED THROUGHOUT COUNTY
- Develop improved communication systems for emergency responders that will allow them to respond to incidents occasioned by the occurrence of various natural hazards. UNDERWAY
- Develop public education campaigns designed to educate residents about steps they can take to minimize the impact of various natural hazards. INITIAL STEPS TAKEN; WEBSITE ESTABLISHED
- Conduct periodic tests of the county's emergency operation plan. ON-GOING
- Adopt uniform countywide building codes that promote the development of commercial and residential structures capable of withstanding acceptable levels of natural hazard impact. ACCOMPLISHED

Goal 2 Protect Public Health

Objectives:

- Develop public education efforts designed to educate the public about measures individual citizens can take to reduce the health risks associated with various natural hazards before, during and after the occurrence of such hazards.
- Improve the following programs with eye to the health risks occasioned by hazards determined most likely to affect the county: sanitation, disease surveillance, vector control, vaccination.

Goal 3 Protect and Develop Infrastructure

Objectives:

- Adopt uniform countywide building codes that promote the development of commercial and residential structures capable of withstanding acceptable levels of natural hazard impact. ACCOMPLISHED
- Perform regular maintenance on transportation infrastructure including roads and bridges. ON-GOING
- Review building inspection procedures to ensure appropriate attention to hazard mitigation related features. ACCOMPLISHED
- Improve sewage and wastewater treatment infrastructure. UNDERWAY IN JERSEYVILLE
- Review building evacuation procedures posted in all county-owned buildings. ON-GOING
- Review evacuation routes on a regular basis to ensure appropriate access in the event of their use. ON-GOING
- Improve communication systems through the use of federal and state grants and private initiatives.

Goal 4 Protect Public Property and Critical Facilities

Objectives:

- Review building inspection procedures to ensure appropriate attention to hazard mitigation related features. ACCOMPLISHED
- Adopt uniform countywide building codes that promote the development of public buildings capable of withstanding acceptable levels of natural hazard impact. ACCOMPLISHED
- Retrofit any existing critical facility deemed unreasonably susceptible to natural hazards.
- Ensure that all public buildings are appropriately insured.
- Review security of critical facilities.

Goal 5 Protect Private Property

Objectives:

- Adopt uniform countywide building codes that promote the development of public buildings capable of withstanding acceptable levels of natural hazard impact. ACCOMPLISHED
- Adopt zoning ordinances that minimize the risk of exposure to the most prevalent natural hazards.
- Conduct public information campaigns designed to educate citizens about the potential benefits of the following activities: retrofitting, flood proofing, and insuring property.

3.6 Conclusion

2003-2008—the year the initial Jersey County multi-jurisdictional natural hazards mitigation plan was implemented, Jersey County experienced an example of each of the expected natural hazards:

- The “Grafton flood” of 2008, one of the top three floods in county history;
- In winter of 2011 the county was blanketed with a massive ice and snow storm;
- The flood of 2013, cresting higher than the 2008 flood;
- Two more floods in 2015, the first in June and the surprise flood in December with flood waters once again cresting higher than 2008.
- Earthquake of 2008, with epicenter across the state on the Wabash fault;
- A confirmed tornado (one of the first) at The Glades, along the Illinois River floodplain;
- Severe summer storm, with wind causing extensive damage to trees particularly in Jerseyville and a confirmed tornado in Carrollton in 2015;
- Drought which cost the agriculture industry millions in 2012
- Hail storm;
- Several severe ice storms as well as a major snow storm;
- Assorted straight line winds;
- Soil subsidence in the form of a mud slide in Grafton (caused by man-made conditions);
- Lightning strikes; and
- Flash flooding.

These goals are consistent with the goals in the other County's plans, Jersey County Stormwater Management Plan and the Ordinance for Development in the Floodplain, the City of Jerseyville Economic Plan and Grafton's Stormwater Management Plans.

3.6 References

www.ogilvypr.com

Building Inspector of Grafton, Grafton City Hall

Jersey County Board Minutes