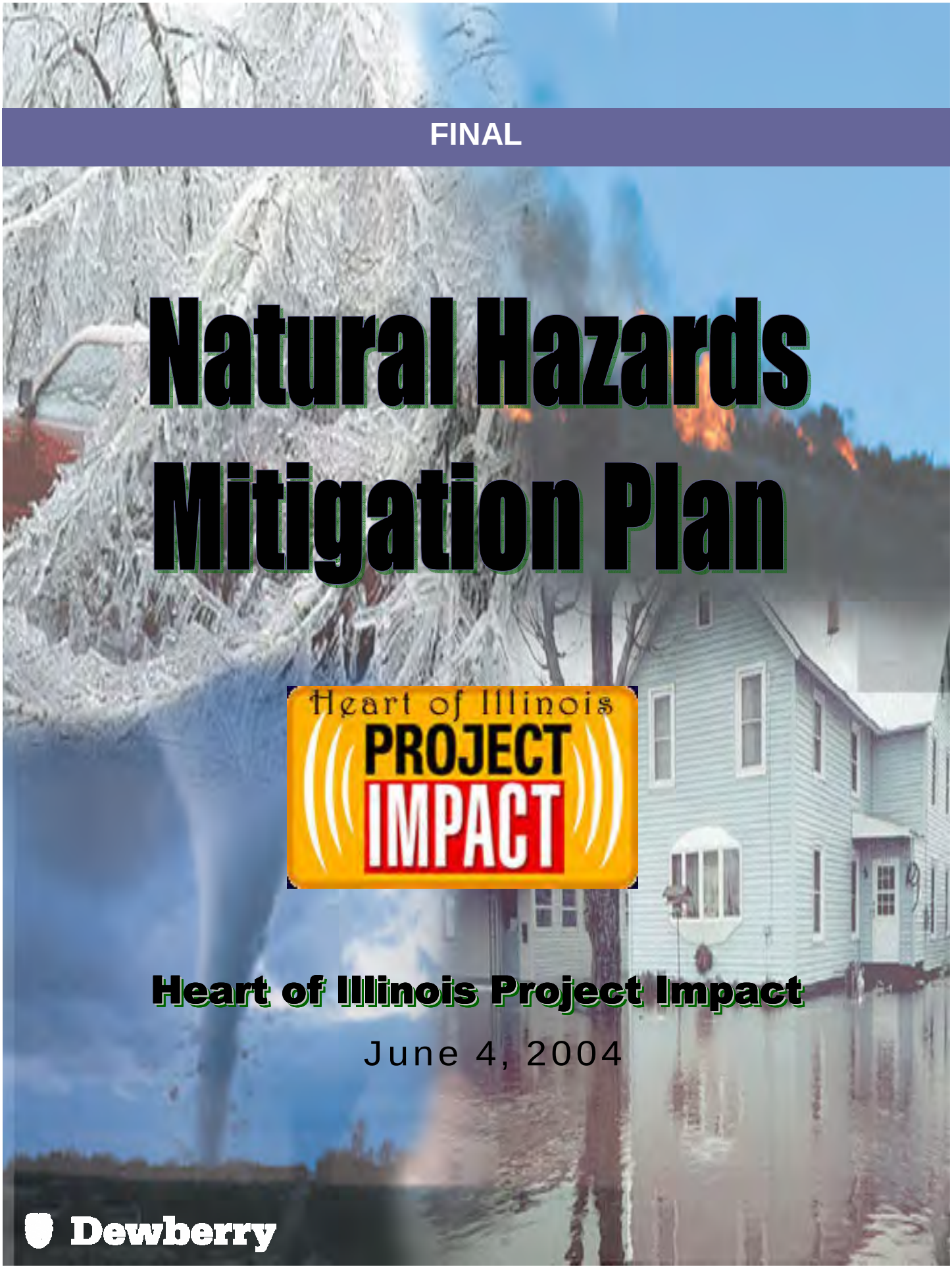

FINAL

Natural Hazards Mitigation Plan

Heart of Illinois PROJECT IMPACT

Heart of Illinois Project Impact

June 4, 2004

Dewberry

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SECTION I — EXECUTIVE SUMMARY

Background

For the purposes of this Hazard Mitigation Plan, the Heart of Illinois Project Impact area is comprised of the cities of Peoria and Pekin and the unincorporated areas within the counties of Peoria, Tazewell and Woodford. Hereinafter and throughout the document, the area will be referred to as the Tri-County area. The area is vulnerable to many types of natural hazards — including floods, tornadoes, winter storms, earthquakes and severe thunderstorms — and has experienced the effects of each of these at some point in its history.

The last few decades of growth within the Tri-County area have placed more development than ever in harm's way, increasing the potential for severe economic and social consequences if a major disaster or other catastrophic event were to occur today. Such an event could have the potential to cost the local governments, residents, and businesses millions of dollars in damages to public buildings and infrastructure, lost tax revenues, unemployment, homelessness, and emotional and physical suffering for many years to come.

A multi-hazard mitigation plan has been prepared for the Tri-County area in accordance with the requirements of the Disaster Mitigation Act of 2000. Having the mitigation plan in place will help the area to:

- Better understand local hazards and risks;
- Build support for mitigation activities;
- Develop more effective community hazard-reduction policies and integrate mitigation concepts into other community processes;
- Incorporate mitigation into post-disaster recovery activities; and
- Obtain disaster-related grants in the aftermath of a disaster.

As a not-for-profit corporation serving the Tri-county area of Peoria, Woodford, and Tazewell counties, Heart of Illinois Project Impact recognized the economic effect disasters have on the region as a whole. Proactively, the Heart of Illinois Project Impact established a public-private partnership involving government entities and private business cooperating to build disaster resistance in their communities.

Over the course of its operation Heart of Illinois Project Impact has funded or helped fund a number of projects highlighted by those specified below:

- Installed wind-resistant windows for the CityLink Transit Center
- Built a reinforced "safe room" in a multiple-loss South Pekin structure
- Educated residents on actions they can take to improve disaster resistance when building or remodeling

- Informed residents of considerations they can discuss when building, remodeling, or maintaining their properties the improve disaster resistance
- Hired a consultant to identify hazards and assess the risks for natural disasters in the Tri-county region
- Provided a conduit for communication between private enterprise and public entities

Hazard Identification and Risk Assessment

Recognizing similarities in potential hazards in the Tri-county area, Heart of Illinois Project responded to this need for its public partners. The organization hired an expert consultant, Dewberry, to develop a regional plan. A starting point for this regional mitigation plan included goals and capabilities developed from information included in the Hazard Identification and Risk Assessment (HIRA). The HIRA provided an analysis of and information on natural hazards for the region. The HIRA remains a proprietary document of Heart of Illinois Project Impact and its partners.

Prioritizing the potential hazards that can impact the Tri-County area was based on the probability that a potential hazard will affect the area and the potential impacts on the area - given a disaster event. Values were assigned to each natural hazard type to define each hazard's potential (hazard level). The hazards were then categorized to represent the likelihood of a event which could significantly affect the Tri-County area. These categories are ***High, Medium-High, Medium,*** and ***Low***. In order to focus on the most significant hazards, only those assigned a level of ***High*** or ***Medium-High*** have been included for analysis in the risk assessment. Table I-1 summarizes the results of the hazard vulnerability analysis, which is explained fully in Section IV of this plan.

Table I-1 – Hazard Identification Results

HAZARD TYPE	HAZARD LEVEL
FLOOD - RIVERINE	High
TORNADO F0	High
TORNADO F1	High
WIND EVENT – MICROBURST/STRAIGHTLINE	High
FLOOD - FLASH	Medium-High
LAND SUBSIDENCE/MINE SUBSIDENCE	Medium High

Table I-1 – Hazard Identification Results	
HAZARD TYPE	HAZARD LEVEL
SEVERE THUNDERSTORM	Medium-High
TORNADO F2	Medium-High
TORNADO – ALL OTHER CATEGORIES	Medium-High
WINTER STORMS	Medium-High

The Mitigation Strategy

After defining the area's vulnerability to natural hazards, Heart of Illinois Project Impact relied on the experience of a Mitigation Advisory Committee (MAC) to develop a mitigation strategy to address the hazards. This MAC included the directors of the Emergency Services and Disaster Agencies (ESDA) from the respective jurisdictions and Matt Wahl, CFM, from Peoria County Planning and Zoning. Wahl's credentials and expertise on plan development proved vital to fine-tuning an effective plan. This committee spoke with constituents, staff, and professionals in their respective jurisdictions for the specific information needed for the plan.

The MAC attended a workshop on February 4, 2004, to discuss the results of the hazard identification and risk assessments, review mitigation goals and objectives based on the priority areas and hazard types, discuss community strengths and weaknesses, and begin developing the mitigation strategy.

The development of a ***Mitigation Strategy*** involves a process of:

1. **Setting mitigation goals,**
2. **Considering mitigation alternatives,**
3. **Developing objectives and implementation approaches, and**
4. **Deriving a mitigation action plan**

The following overarching goal and six specific goals were developed by the MAC to guide the area's future hazard mitigation activities.

OVERARCHING COMMUNITY GOAL: "To develop and maintain disaster-resistant communities that are less vulnerable to the economic and physical devastation associated with natural hazard events."

GOAL 1: Enhance the safety of residents and businesses by protecting new and existing development from the effects of hazards.

GOAL 2: Protect new and existing public and private infrastructure and facilities from the effects of hazards.

GOAL 3: Increase the area's floodplain management activities and participation in the National Flood Insurance Program.

GOAL 4: Ensure hazard awareness and risk reduction principles are institutionalized into each local jurisdiction's daily activities, processes, and functions by incorporating them into policy documents and initiatives.

GOAL 5: Enhance community-wide understanding and awareness of Tri-County area hazards.

GOAL 6: Publicize mitigation activities to reduce the area's vulnerability to the identified hazards.

The ***Mitigation Strategy*** contained within the Plan also serves a second purpose for Peoria County, which is a participant in the National Flood Insurance Program's (NFIP) Community Rating System (CRS). The county has 138 NFIP-insured properties, which are on the Federal Emergency Management Agency's (FEMA) Repetitive Loss list. As a result, Peoria County is required to prepare a CRS Plan, which addresses these repetitive loss structures.

As this Hazard Mitigation Plan was being prepared, it was "crosswalked" with CRS Plan requirements and structured to meet those requirements. At the end of Section VI, a draft Repetitive Loss Plan is presented in order to fulfill CRS planning requirements.

Conclusion

Since Heart of Illinois Project Impact includes the unincorporated areas of the counties of Peoria, Tazewell and Woodford, as well as the cities of Peoria and Pekin, this document and plan is limited to these jurisdictions. While the information may apply to incorporated areas in the counties of Peoria, Tazewell, and Woodford, the plan does not cover the federal mandates of DMA 2000 for these incorporated areas.

This plan symbolizes the Tri-County's continued commitment and dedication to enhance the safety of its residents and businesses by taking actions before a disaster strikes. While each jurisdiction cannot necessarily prevent natural hazard events from occurring, it can minimize the disruption and devastation that so often accompanies these disasters.

SECTION II — INTRODUCTION

Mitigation

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Hazard mitigation focuses attention and resources on community policies and actions that will produce successive benefits over time. A mitigation plan states the aspirations and specific courses of action that a community intends to follow to reduce vulnerability and exposure to future hazard events. These plans are formulated through a systematic process centered on the participation of citizens, businesses, public officials, and other community stakeholders.

A local mitigation plan is the physical representation of a jurisdiction's commitment to reduce risks from natural hazards. Local officials can refer to the plan in their day-to-day activities and decisions regarding regulations and ordinances, granting permits, and in funding capital improvements and other community initiatives. Additionally, these local plans will serve as the basis for states to prioritize future grant funding as it becomes available.

It is hoped that the Tri-County area's hazard mitigation plan will be a tool for all community stakeholders to use by increasing public awareness about local hazards and risks, while at the same time providing information about options and resources available to reduce those risks. Teaching the public about potential hazards will help each of the area's jurisdictions protect themselves against the effects of the hazards, and will enable informed decision making on where to live, purchase property, or locate businesses.

It should be noted that the jurisdictions covered by this plan are limited to the unincorporated areas of Peoria, Tazewell, and Woodford counties, and the cities of Peoria and Pekin. Incorporated areas within Peoria, Tazewell, and Woodford counties, other than the cities of Peoria and Pekin, will need to develop and receive approval for their own mitigation plan to be considered compliant with the Disaster Mitigation Act of 2000. A list of these jurisdictions can be found in Appendix #

During the remainder of the document the reference to Tri-County area shall be considered to relate only to the unincorporated areas of Peoria, Tazewell, and Woodford counties, and the cities of Peoria and Pekin.

The Local Mitigation Planning Impetus

On October 30, 2000, the President signed into law the DMA 2000, which established a national disaster hazard mitigation grant program that would help to reduce loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters.

DMA 2000 amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act and has added a new section, §322 Mitigation Planning. Section 322 requires local governments to prepare and adopt jurisdiction-wide hazard mitigation plans for disasters declared after November 1, 2003, (subsequently revised to November 1, 2004) as a condition of receiving Hazard Mitigation Grant Program (HMGP) project grants and other forms of non-emergency disaster assistance. Local governments must review and if necessary, update the mitigation plan every five years from the original date of the plan to continue program eligibility.

Interim Final Rule Planning Criteria

As part of the process of implementing DMA 2000, FEMA prepared an Interim Final Rule to define the mitigation planning criteria for States and communities. Published in the Federal Register on February 26, 2002, at 44 CFR Part 201, the Rule serves as the governing document for DMA 2000 planning implementation.

Organization of the Plan

The remaining sections of this document follow the process enumerated in DMA 2000.

Section III – Planning Process describes the Tri-County area's stakeholder involvement and defines the processes followed throughout the creation of this plan.

Section IV – Community Profile provides a physical and demographic profile of the city, looking at things such as geography, hydrography, development, people, and land uses within the city.

Section V – Capability Assessment analyzes each of the five local jurisdictions' policies, programs, plans, resources, and capability to reduce exposure to hazards in the community.

Section VI – Mitigation Strategy addresses the Tri-County area's issues and concerns for hazards by establishing a framework for loss-reduction activities and policies. The strategy includes a future vision statement, goals, objectives, and a range of actions to achieve the goals.

Section VII – Plan Maintenance Procedures specifies how the plan will be monitored, evaluated, and updated, including a process for continuing stakeholder involvement once the plan is completed.

Section VIII – References include a list of reports and data used to develop this plan.

Section IX – Appendices are included in the last section of the plan, and contain supplemental reference materials and more detailed calculations and methodologies used in the planning process. The Appendices also provide a list of commonly used mitigation terms and acronyms.

SECTION III — PLANNING PROCESS

Heart of Illinois Project Impact is an Illinois not-for-profit Corporation established as a means to answer how best to utilize disaster mitigation grant funds from the Federal Emergency Management Agency for Central Illinois. Heart of Illinois Project Impact brings together the resources and expertise of private business, non-profit organizations, government agencies, academia, utilities, agriculture, media, and the general public to heighten the awareness of the need for mitigation. (A listing of HOIPI partners is provided in the Appendix O). It is a public -private partnership involving government entities and private business cooperating to build disaster resistance in their communities. Heart of Illinois Project Impact was created to build sustainability, first, in order to make the long-term commitment of disaster resistance to the Tri-County area. This non-profit organization reaches out to the counties of Peoria, Tazewell, and Woodford. That outreach includes the entire citizenry and business base within those borders.

In addition to the Heart of Illinois Project Impact, the **Tri-County Regional Planning Commission** provided guidance to all parties concerned throughout the planning and plan development process. The Tri-County Regional Planning Commission exists to serve the residents of Peoria, Tazewell and Woodford Counties through the creation of a forum for leaders of local government to cooperatively develop a vision for the future, define regional issues, set goals and implement plans. Established in 1958, the Commission is dedicated today to continuing comprehensive planning as well as promoting intergovernmental cooperation. The Commission's capabilities include: 1) environmental planning, 2) community planning, 3) transportation planning (including greenways and trails), 4) GIS/GPS, and 5) regional data compilation. Natural hazard mitigation is primarily achieved through the Commission's participation in watershed planning initiatives. Current watershed planning initiatives include Tenmile Creek, Farm Creek, Mossville Bluffs, Ackerman Creek and Partridge Creek. These watersheds are tributary to the Illinois River. Also, the **Council of Governments** has played a role in the development of this hazard mitigation plan by dispersing information and promoting public meetings. It has functioned as a communications conduit during the plan development process. The Council of Governments is an organization comprised of leaders from the governments of the counties and incorporated communities within the counties of Woodford, Peoria, and Tazewell. Members from the organization meet to discuss issues that impact the citizens of that live within the jurisdictions represented.

In order to look at the risks from natural disasters, all parties involved need to be able to step past the human risks involved in any relationship, business or otherwise. Heart of Illinois Project Impact proposed to be the facilitator of this kind of atmosphere where any member of the community can be a part of the disaster resistance effort. Then our

community will be able to set aside their differences to look at the common hazards they face from nature. Building on the hazard identification and risk analysis, the partners who have identified their risks can now apply this knowledge to the community structures. They will now have the knowledge and relationships to empower them in this phase.

To this end, Heart of Illinois Project Impact chose to use their grant funding to secure a Hazard Identification and Risk Analysis followed by Mitigation Plans for the Tri-County area. The Emergency Management Agency Directors of the five entities, from each of the three counties and two cities, were asked to serve as the Advisory Committee for this process by the Corporation's Board of Directors.

The Heart of Illinois Project Impact goals were based on the principles of hazard awareness and disaster loss prevention. These goals included:

- Ensure that the Tri-County area has sustainable communities and businesses resistant to the human and economic costs of disasters,
- Maintain and enhance the economic stability, public health, and safety to the communities of the area,
- Ensure that the Tri-County area's cultural richness and environmental quality are not jeopardized by the occurrence of a disaster, and
- Recognize the potential impact of natural or manmade hazards on public and private buildings and facilities, and the utility and transportation systems that serve them.

From 2000 to 2002, the Project Impact Steering Committee held regular monthly meetings and continually worked on the area's HIRA. The public-private partners, including the Advisory Committee, coordinated and consulted with other entities and stakeholders to identify and delineate natural and manmade hazards within the five local jurisdictions and to assess the risks and vulnerability of public and private buildings, facilities, utilities, communications, transportation systems, and other vulnerable infrastructure.

Much of the communication in developing the HIRA and the subsequent Mitigation Plan occurred through telephone calls and emails. The HOIPI and consultant chose this avenue to best accommodate budgets and schedules.

Heart of Illinois Project Impact

Table III-1 — Mitigation Advisory Committee	
Heart of Illinois Project Impact Steering Committee Participation	
Meeting Dates	Summary of Discussions
02/03	The partnership agreed that developing a Mitigation Plan would be appropriate and benefit the public.
02/03	Deb Craig (City of Peoria), Vicky Turner (Peoria County), Bob Hix (Woodford County), and James Unsicker (Tazewell County) made up the work group members.
02/10/03	Dewberry Team presented public meeting to address development of Mitigation Plan.
02/10-05/31/03	Advisory Committee (MAC) established relationships with information sources, including the Peoria Park District, to provide detailed information on history, hazards, and current policies.
08/24/03	The MAC agreed on the natural disasters most likely to affect the Tri-county Area and their potential risk rankings.
09/03	Matt Wahl (Peoria County) was invited to lead the HOIPI work group.
11/03	Kent Tomblin replaced Craig for the workgroup in City of Peoria.
11/03	Met with the Council of Governments to introduce the Mitigation Planning parameters and timeline and requested their cooperation and participation.
12/03	Requested review of potential natural disasters' risk and mitigation plans for region from the Council of Governments.
01/04	Updated the HOIPI board on Mitigation Plan.
02/01/04	Conducted news interview to announce a public meeting and invited public involvement.
02/02/04	Held another news interview to review Mitigation Plan purpose, invite public involvement and/or comment, and announce a public meeting.
02/04/04	Conducted a news interview to review Mitigation Plan purpose, invite public involvement and/or comment, and announce a public meeting.
02/04/04	A public meeting was held and recorded by local station reaching Tri-County area.
02/06/04	Updated partnership on public meeting
02/13-15/04	Presented the Disaster Survey to the partnership and the general public through Home Show distribution in Tazewell County. Public attended from throughout Tri-County area.
02/27-29/04	Presented the Disaster Survey to the partnership and the general public through Home Show distribution in Peoria County. Public attended from throughout Tri-County area.
03/01/04	Submitted and distributed results from Disaster Survey to Dewberry and work group.
03/05/04	Updated HOI PI board on the mitigation plan.
03/09/04	Final information on capabilities was submitted to Dewberry.
03/13/04	Public notice was published in local newspapers and news releases were submitted to news media promoting an upcoming public meeting.
03/15/04	Final Draft of Plan submitted to the Advisory Committee for review and changes.
03/22/04	Cursory changes made in the Final Draft Mitigation Plan.
03/24/04	A public meeting was held.

Table III-1 — Mitigation Advisory Committee	
3/31/04	Public input incorporated into the final plan.
4/16/04	Final plan submitted to FEMA/IEMA for review and to the legal departments of each jurisdiction.
7/17/04	Final plan approved by all jurisdictions and filed with IEMA/FEMA.

In February 2003, HOIPI contracted with Dewberry to build upon their completed HIRA and Project Impact efforts and work with the community to develop a hazard mitigation plan. HOIPI worked with the consultants throughout the planning process to ensure that potential stakeholders participated in the process and would have opportunities for input in the draft and final phases of the plan.

The Mitigation Advisory Committee

A MAC made up of ESDA directors (or their designees) was brought together to work with the Dewberry team and provide input at key stages of the process. Efforts to involve city departments and community organizations that might have a role in the implementation of the mitigation actions or policies included invitations to attend meetings and serve on the MAC, e-mails of minutes and updates, strategy development workshops, and teleconferences, and opportunities for input and comment on all draft deliverables.

Heart of Illinois Project Impact would like to thank and acknowledge the following persons who served on the MAC for their representative departments and organizations throughout the planning process:

Table III-2 — Heart of Illinois Project Impact Tri-County Regional Mitigation Advisory Committee Planning Team Members and Contributors	
Matt Wahl	Peoria County Planning and Zoning
Vicky Turner	Peoria County ESDA
Bob Hix	Woodford County ESDA
James Unsicker	Tazewell County Board Chair and ESDA director
Debra Craig	City of Peoria ESDA and Heart of Illinois Project Impact Executive Director
Kent Tomblin	City of Peoria ESDA director
Greg Walters	City of Peoria Fire Department
Steve Thompson	City of Pekin Emergency Services director
Neal Johnson	AmerenCILCO
Chuck Orton	Illinois American Water Company
Gene Veginski	City of Peoria Park District
Greg Ranney	City of Pekin
Kay Harmon	Retired City of Peoria ESDA Director
Lynn Linder	Heart of Illinois Project Impact
Staff	From Peoria, Tazewell, Woodford Counties and Cities of Pekin and Peoria

Public Participation and Citizen Input

As shown in Table III-1 above, several opportunities were provided to the public for input and participation throughout the planning process. One open public meeting was held on February 4, 2004, another February 10, 2003, and a third March 24, 2004 to allow the general public an opportunity to meet with the planning consultants and MAC members, ask questions, and provide comments and input on the draft mitigation plan (See Appendix A). Information was distributed through the news media in each of the five jurisdictions to access the web site and review the Mitigation Plan.

During the development phase, the Advisory Committee and Development Coordinator contacted public offices and private business leaders to access the hazard identification information and mitigation plan. On three occasions the committee leader attended meetings with the Congress of Governments (a consortium of leaders representing the governments and citizens of the Tri-County region). These meetings provided an update on the plan development as well as an invitation for specific input into the plan.

Additionally, the HOIPI developed a survey to invite the input of over 25,000 members attending two home shows. One home show held in Tazewell County and the other held

in Peoria County. News interviews prior to the pubic meeting identified an overview of the mitigation plan and encouraged the public to review the plan at the specific web site, as well as attending the public forums.

A copy of the survey is included in Appendix B. A summary of the results indicated that a majority of the homeowners within the Tri-County area agreed that the area had reasons to plan and mitigate against natural disasters. Survey respondents indicated that wind, flood, and winter events posed the greatest economic and personal concerns in the Tri-County area. A statistically notable number of the respondents supported more laws or ordinances to encourage actions that would resist the economic effects of natural disaster. A majority of respondents to the survey did not agree that taxpayers should participate in mitigation efforts if it required greater tax payments. Another concurrence was the need for educating the public on available technologies for mitigation.

Representatives from the HOIPI had the opportunity to discuss natural disasters and personal commitment to mitigation strategies during the home shows held in Tazewell County February 13-15, 2004 and in Peoria County February 27-29, 2004. During the Tazewell County event visitors had an opportunity to view the State Farm “Safety House” that features mitigation construction techniques and disaster resistant choices homeowners can make. With nearly 6500 visitors attending this exhibit the most consistent question was, “Why don’t communities require this type of construction?” Other common inquiries focused on where to buy hail-resistant shingles, arc-suppressing circuit breakers, and hurricane clips.

Over the course of the two years, the HOIPI has aired educational features and representatives have fielded 225 requests for further information. Shelters for trailer parks, roofing materials, and reinforced garage doors have outranked other material requests. One parent asked for plans to build a disaster resistant playhouse.

In response to these requests, the HOIPI provided its partners and citizens in the Tri-County area with newsletters, brochures, and calendars featuring mitigation techniques.

The training academy for union carpenters teaches single load construction techniques. This training center is located in Tazewell County.

Anecdotal evidence from citizens, Heart of Illinois Partners, and casual observers points to an increase in disaster resistant construction techniques within Tazewell County and wind-prone areas of Peoria County.

The common obstacle when discussing mitigation, especially wind mitigation, among builders and consumers is the cost. Including financial incentives in the discussion helps make the concept more acceptable. Whether that incentive includes energy savings with insulated concrete form homes, noise reduction of reinforced garage doors, or replacement life on hail-resistant shingles, the consumer better understands the advantages of mitigation.

A sample resolution for adopting the Natural Hazard Mitigation Plan is included in Appendix C.

SECTION IV – COMMUNITY PROFILE

Introduction

The Tri-County area is located midway between Chicago and St. Louis in Central Illinois, and includes Peoria, Tazewell, and Woodford Counties, as well as the Cities of Pekin and Peoria. This area encompasses approximately 1,797 square miles and is bordered by Fulton and Knox Counties to the west, LaSalle, Marshall and Stark Counties to the north, Livingston and McLean Counties to the east, and Logan and Mason Counties to the south. The location of the Tri-County area within the State of Illinois is depicted on Figure IV-1.

Climate

The Tri-County area is located in the Midwest region of the United States and enjoys a seasonal climate, with an average high temperature of 60 degrees Fahrenheit and an average low temperature of 41 degrees Fahrenheit. Moisture sources include the Gulf of Mexico, the Pacific Ocean, and, to a small degree, Lake Michigan. Frontal systems are quite active in Illinois as warm humid air masses from the Gulf of Mexico are displaced by continental polar air from Canada or maritime polar air from the North Pacific Ocean. Average annual rainfall is 36.3 inches. Table IV-1 summarizes climate data for the Tri-County area (Economic Development Council for Central Illinois, 2003).

Table IV-1: Tri-County Area Climate Data												
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Avg. High	29°F	34°F	48°F	62°F	72°F	82°F	85°F	83°F	76°F	64°F	49°F	34°F
Avg. Low	13°F	17°F	29°F	40°F	50°F	60°F	65°F	63°F	55°F	43°F	32°F	19°F
Mean	22°F	26°F	39°F	51°F	62°F	72°F	76°F	73°F	66°F	54°F	41°F	27°F
Record High	70°F 1989	72°F 1976	86°F 1986	92°F 1986	93°F 1987	105°F 1988	102°F 1988	103°F 1988	100°F 1953	90°F 1963	81°F 1950	71°F 1982
Record Low	-25°F 1977	-19°F 1996	-10°F 1960	14°F 1982	25°F 1966	39°F 1993	47°F 1972	41°F 1986	29°F 1995	19°F 1972	-2°F 1977	-23°F 1989
Avg. Precip.	1.50 in	1.40 in	2.90 in	3.80 in	3.70 in	4.00 in	4.20 in	3.10 in	3.90 in	2.70 in	2.70 in	2.40 in
Avg. Snow	7.8	5.8	4.2	1.3	0	0	0	0	0	Trace	2.5	7.1

Population

The 2000 U.S. Census estimates the Tri-County area's total population to be 347,387 persons. Over half of the population is female (178,679) at 51.4%, and 48.6% are males (168,708). The median age is 37 years old, with 60.5% of the population between 18 and 65 years of age. Children under the age of 18 represent 25% of the population, while persons 65 and older comprise 14.5% of the total population.

The U.S. Census Bureau predicts that the Tri-County area's population will grow approximately 3% to 358,000 by the year 2020. This follows the 2.4% population growth that the area experienced between 1990 and 2000.

The majority of the Tri-County area's population claims to be a single race, at 98.8% (343,222). Of the total population claiming one race, 88.0% (305,672) are White, and 8.9% (30,752) are Black or African American.

Most of the area's population speaks English as their only language, averaging 95.5% (331,905) of the total population. Approximately 4.5% (15,482) of the population speak a language other than English. These populations tend to be more difficult to target when performing community outreach, and should be given special consideration when developing hazard reduction strategies for the community.

The median household income is as follows for the Tri-County area: Peoria County ($39,978), Tazewell County ($45,250) and Woodford County ($51,394). The average per capita personal income for the area is $27,908. Approximately 13.7%, 6.3%, and 4.3% of the individuals live below the poverty level in Peoria, Tazewell and Woodford Counties, respectively.

Land Cover

The primary land use in the Tri-County area is agriculture. A majority of the non-agricultural areas are located within the incorporated areas, including the City of Peoria and the City of Pekin, and focused around the Illinois River.

Table IV-2 summarizes land cover data in the Tri-County area (Illinois Department of Agriculture, 2000).

Table IV-2: Tri-County Area Land Cover

	CATEGORY				
COUNTY	Agricultural	Forest	Urban	Wetland	Other
Peoria	65%	19.5%	8.9%	3.8%	2.8%
Tazewell	80.1%	6.4%	9.2%	2.5%	1.8%
Woodford	84.4%	6.9%	3.6%	2.2%	2.9%

Housing

Peoria County

According to the 2000 U.S. Census, Peoria County has 78,204 housing units within its jurisdictional boundaries. Of those units, 93% (72,733) are occupied and 7% (5,471) are vacant. Peoria County has almost twice the number of owner-occupied units (44,003) versus renter-occupied units (23,285). However, almost 30% of Peoria's occupied housing units are rented; which suggests that efforts should be made to target both homeowner and renter demographics in future educational and outreach efforts about hazards and disasters.

The average persons per household in Peoria County is 2.43 persons.

Tazewell County

According to the 2000 Census, Tazewell County has 52,973 housing units within its jurisdictional boundaries. Of those units, 95% (50,327) are occupied and 5% (2,646) are vacant. Tazewell County has nearly three times the number of owner-occupied units (35,057) versus renter-occupied units (11,898). As approximately 24% of Tazewell's occupied housing units are rented, efforts should be made to target both homeowner and renter demographics in future educational and outreach efforts about hazards and disasters.

The average persons per household in Tazewell County is 2.49 persons.

Woodford County

According to the 2000 Census, Woodford County has 13,487 housing units within its jurisdictional boundaries. Of those units, 95% (12,797) are occupied and 5% (690) are vacant. Woodford County has over four times the number of owner-occupied units (8,805) versus renter-occupied units (2,078). Even though only 16% of Woodford's occupied housing units are rented, efforts should still be made to target both homeowner and renter demographics in future educational and outreach efforts about hazards and disasters.

The average persons per household in Woodford County is 2.69 persons.

Schools

The Tri-County area has 26 school districts for primary and secondary education, as well as 4 colleges and 1 university. These educational facilities should be considered when developing public education and outreach activities and evacuation issues. These facilities may need to be evaluated in terms of their overall resistance to natural hazards as well.

Parks

The Peoria Park District's boundaries encompass approximately 57 square miles in Peoria County. Park and open space holdings in the City of Peoria, Peoria Heights and outlying townships approach nearly 9,000 acres. Based on its ratio of open-space holdings to population, the Peoria Park District ranks first in Illinois, and is one of the top public park systems in the country (Peoria Park District, 2003).

Transportation

There are four interstates, I-39, I-74, I-474, and I-155, and four interstate linkages to I-55, I-57, I-80, and I-88 serving the Tri-County area. There are an additional twelve state highways in the area.

Infrastructure

Working Waterfronts

The Illinois River creates a portion of the boundary for all three counties. The Peoria Barge Terminal, located in Peoria, is a major multi-modal terminal for the state of Illinois. It handles products such as stone, coal, steel, dry or liquid bulk, provides warehouse service, has a railroad spur on site, and is easily accessed from I-474. Barge activity through the Peoria Lock and Dam was approximately 31 million tons in 1998. The main barge lines are American Commercial Barge Lines and ARTCO Fleeting Services.

Aviation Facilities

The Greater Peoria Regional Airport serves the Tri-County area and is located approximately 10 minutes from downtown Peoria. The airport is served by 5 airlines and its longest runway is 10,000 feet. In addition, five air cargo companies operate out of the Greater Peoria Regional Airport. In 1998, they combined to handle nearly 50 million pounds of freight.

Rail

The Tri-County area has a strong railroad network. Amtrak provides passenger rail service from its station near the airport. Freight service in the Tri-County area is provided by four of the six Class I railroads in the country, as well as two regional carriers, two local railroads and one terminal carrier.

Table IV-3: Freight Railroads Serving the Tri-County Area	
Class I Railroads	Burlington Northern Santa Fe; Canadian National – Illinois Central; Norfolk Southern; Union Pacific
Regional Railroads	Iowa Interstate Railroad; Toledo, Peoria & Western
Local Railroads	Illinois Midland; Shortline
Switching/Terminal Carrier	Peoria & Pekin Union Railroad

Critical Infrastructure

The Tri-County area is served by three electricity providers: CILCO, Commonwealth Edison and Illinois Power. Natural gas is provided by CILCO, NICOR, and Panhandle Eastern Pipeline Company. Local telecommunications service is provided by SBC Americtech, AT&T, Gallatin River Communications, MTCO, McLeod USA, MCI, Sprint and Verizon. The area's water is treated by Dunlap Water Works, Illinois-American Water Company, North Tazewell Public Water Dist., Pleasant Valley Public Water Dist., and T-L Rural Water District (Economic Development Council, 2003).

Land Use and Development Trends

The Heart of Illinois Project Impact planning area (tri-County) is shown in Figure IV-1. For the purposes of the hazard mitigation planning initiative, it includes the City of Peoria, Peoria County, Tazewell County, the City of Pekin and Woodford County. Development within Peoria and Peoria County is urban and suburban in nature and is, for the most part, densely populated. Development in Pekin is also urban and suburban in nature but less densely populated than the City of Peoria. Tazewell and Woodford Counties development tends to be rural in nature although residential development is an important component in each county's long-range comprehensive plans. Both counties are moderately populated as compared to Peoria County.

Peoria County has a Local Hazard Mitigation Plan which was updated in September 2001. According to the plan, the county contains floodplain areas which have flooded thirteen (13) times in the past twenty (20) years. As a result, disinvestment in properties is occurring along with an increase in vacancy rates and an increase in income property.

Peoria County also has a comprehensive plan which contains three (3) goals to reduce flood damages, as follows:

Goal #1 – Identify appropriate measures that can be pursued by individual property owners to reduce the impact from flooding and disseminate all relevant data on a property by property basis.

Goal #2 – Identify collective mitigation alternatives on an area basis and potential funding sources to provide financial assistance for implementation.

Goal #3 – Identify appropriate areas for public use as open space as the means for assembling land and resources to improve and maintain the property.

The last goal emphasizes open space in the community and should influence future development trends in the community as implementation occurs.

Peoria County has an additional mitigation plan entitled "Kickapoo Valley Hazard Mitigation Plan" dated 1997, which was prepared as an amendment to the Peoria County Hazard Mitigation Plan of 1985. The plan focuses on areas adjacent to Kickapoo and Dry Run Creeks in the Kickapoo Valley Planning Area. A building survey has been conducted as part of the study and contains finished floor elevations and base flood elevations for 65 of 91 structures which are located in the 100-year floodplains of Kickapoo and Dry Run Creeks. Many of these properties have been targeted for acquisition in the plan. The use of acquisition as a mitigation tool will cause a development trend of more open space uses in the county's floodplain areas.

The Peoria County Land Resources Management Plan was adopted in September 1992. In terms of future development trends, the plan emphasizes 1) the protection of the existing natural resource base and important agricultural lands by establishing a network of environmental corridors, 2) preserving important farmland, and 3) focusing new development around exiting communities and the periphery of the City of Peoria.

The City of Peoria has a Comprehensive Plan, Local Hazard Mitigation Plan, Public Works Plan and Capital Improvement Plan, all of which will influence future development trends in the city when plan(s) and/or recommendations are implemented. Highlights include:

- Revitalization of the downtown area;
- Encouragement of in-fill in existing subdivisions and neighborhoods;
- Support of the Economic Development Council for the Peoria area's overall economic development plan;
- Expansion of existing business districts; and
- Attraction of new businesses.

Tazewell and Woodford Counties each have Land Use Plans which will influence future development trends. Tazewell County policies will influence development trends with the implementation of the following plan recommendations:

- Implement strict variance, special use and zoning criteria;
- Support the Economic Development Council for the Peoria area's overall economic development plan;
- Develop and implement a three-tiered zoning district;
- Create an agricultural preservation district; and
- Amend the commercial portion of the county's zoning ordinance to include a new zoning district with "intensity" uses and the concept of a general business district.

Woodford County policies will influence development trends with the implementation of the following plan recommendations:

- Work with the Economic Development Council to continue supporting development of agricultural and related businesses;
- Retain and expand existing business and attract new businesses to diversify the local economy;
- Coordinate with environmental agencies to preserve prime agricultural land;
- Work with municipalities in the county to develop guidelines for residential development at "municipal fringes;"
- Continue to support infrastructure development;
- Reflect the goals and objectives of economic development on the county's future land use plan/maps;
- Encourage the location of new commercial areas near established municipalities; and
- Discourage strip development less than 1.5 miles from municipalities.

Heart of Illinois Project Impact Counties

Map created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: ref_cnty_st.mxd

Figure IV-1

SECTION V — RISK ASSESSMENT

Introduction

As stated previously, the planning area for this study includes the unincorporated areas of Peoria, Tazewell, and Woodford counties as well as the Cities of Peoria and Pekin. Although some anecdotal information may be included regarding the villages and towns located within these three counties, these areas will not be fully included in this study. For simplicity purposes, the study area will be referred to as the Tri-County Area throughout the remainder of this study.

The MAC made up of public representatives, private citizens, businesses, and organizations was brought together to provide input at key stages of the process. Efforts to involve city and county departments and community organizations that might have a role in the implementation of the mitigation actions or policies included invitations to attend meetings and serve on the MAC, e-mails of minutes and updates, and opportunities for input and comment on all draft deliverables.

The purpose of this section of the plan is to:

1) Identify all the natural hazards that could affect the Tri-County Area;
2) Assess the extent to which the area is vulnerable to the effects of these hazards; and
3) Prioritize the potential risks to the community.

As stated previously, the planning area for this study includes the unincorporated areas of Peoria, Tazewell, and Woodford counties as well as the Cities of Peoria and Pekin. Although some anecdotal information may be included regarding the villages and towns located within these three counties, these areas will not be fully included in this study. For simplicity purposes, the study area will be referred to as the Tri-County Area throughout the remainder of this study.

The MAC made up of public representatives, private citizens, businesses, and organizations was brought together to provide input at key stages of the process. Efforts to involve city and county departments and community organizations that might have a role in the implementation of the mitigation actions or policies included invitations to attend meetings and serve on the MAC, e-mails of minutes and updates, and opportunities for input and comment on all draft deliverables.

The first step, identifying hazards, will assess and rank all the potential natural hazards, in terms of probability of occurrence and potential impacts. It will also identify those hazards with the highest likelihood of significantly impacting the community. This section will be completed based on a detailed review of the Tri-County Area's hazard history.

The hazards determined to be of the highest risk will be analyzed further to determine the magnitude of potential events, and to characterize the location, type, and extent of potential impacts. This will include an assessment of what types of development are at risk, including critical facilities and community infrastructure. Finally a prioritization of the risk to the Tri-County Area will be compiled, to serve as an overall guide for the communities when planning development, implementing policy, and identifying potential mitigation measures.

Data Limitations

This study includes data collected from a variety of resources including local, state, and national resources. Whenever possible, data has been incorporated into a Geographic Information System (GIS) to aid in analysis and to develop area-wide maps for the depicting historical hazard events, hazard areas, and vulnerable infrastructure. Critical facility data has been collected from the Federal Emergency Management Agency's (FEMA) loss estimating module, Hazards U.S. (HAZUS), and has been supplemented, to the extent possible, by local data.

In accordance with FEMA mitigation planning guidance, the results of this study are based on the best available data. In most cases, detailed data regarding the location of structures, characteristics of facilities, and other community related data does not exist in a usable format. The City of Peoria, Peoria County, Tazewell County, Woodford County and the City of Pekin do not, for the most part, have **detailed** building inventories for their communities. Building types, elevation data and values of structures either **don't exist** or **are not available** in a usable format.

None of the jurisdictions in the Tri-county area currently have any digital or Geographical Information System (GIS) based data which catalogues information regarding building assets described above. In addition, tax assessor's records in this area have not been converted to a digital format which would aid in compiling a jurisdiction wide vulnerability assessment, based on specific asset locations, characteristics, and values. This fact illustrates the difficult nature of quantitatively assessing vulnerability and risk in any of the communities. Therefore, this assessment has been compiled using the **best available data**.

Recognizing this deficiency in detailed local data, the strategy developed as part of the full mitigation plan will address these needs by recommending specific measures to increase the quality and detail of data to prepare usable and effective hazard assessments. The primary mitigation goal for the Tri-County area is to develop a **detailed** building inventory for all structures located in each of the five (5) communities including critical facilities and infrastructure. When detailed building inventory information becomes available, a greater level of vulnerability analysis, and consequently risk assessment, will be possible. This goal will be included as a short-term goal, two to three years, and will allow the Mitigation Action Committee (MAC) to

revise the risk assessment portion of the multi-jurisdictional plan during the next scheduled update in five (5) years, if not sooner. The Tri-County jurisdictions should actively pursue funding for this goal.

While there are many different natural hazards that could potentially affect the Tri-County area, some hazards are more likely to cause significant impacts and damages than others. This analysis will attempt to quantify these potential impacts and identify the hazards which pose the greatest possible risk. A hazard analysis also involves the creation of a profile for the most threatening or likely hazards. This profile evaluates the location, extent, magnitude, probabilities, and likelihood of occurrence of the hazards.

Once these hazards have been identified, further analysis will be conducted to quantify the Tri-County area's vulnerability. A risk assessment is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from hazards (FEMA, 2001). The natural hazard risk assessment for the Tri-County area was performed in two main steps — a hazard analysis and a vulnerability assessment.

Hazard Identification

The potential hazards that could affect the Tri-County area include: flooding, high winds, tornadoes, land subsidence, winter storms, severe thunderstorms, earthquakes, wildfires, landslides, droughts, heat waves, and erosion. Depending on the severity, location, and timing of the specific events, each of these hazards could have devastating effects on homes, business, agricultural lands, infrastructure and ultimately citizens. In order to gain a full understanding of the history of these hazards in the Tri-County area, detailed data related to the hazard history was compiled. This information was collected from meeting with local community officials, existing reports and studies, state and national data sets, and local newspaper clippings among others sources. Although a full list of resources is contained at the conclusion of this document, a few of the more comprehensive resources used in this study include the Hazard Vulnerability Assessment: City of Peoria, 1983; Peoria County Hazard Mitigation Plan, 1985 (updated 2001); Kickapoo Creek Hazard Mitigation Plan, 1997; National Flood Insurance Program (NFIP) repetitive loss data from the State of Illinois Department of Natural Resources; and the National Climatic Data Center (NCDC): Storm Event Database (2003 version). A full catalogue of recorded hazard events is included in Appendix D.

The historical data collected includes accounts of all the hazard types listed above. However, some have occurred much more frequently than others with a wide range of impacts. By analyzing the historical frequency of each hazard, along with the associated impacts, the hazards that pose the most significant risks to the Tri-County area can be identified. This analysis will allow the jurisdictions included in this study to focus their hazard mitigation plans on those hazards that are most likely to cause significant impacts to their community.

Prioritizing the potential hazards that can threaten the Tri-County area will be based on two separate factors; the probability that a potential hazard will affect the community, and the potential impacts on the community should a hazard event occur. The probability for each hazard was based on the history of events in the Tri-County area, as well as any other relevant available data related to the probability for the Central Illinois area. The hazard's total impact is made up of three separate factors: the extent of the potentially affected geographic area, the primary impacts of the hazard event, and any related secondary impacts. While primary impacts are a direct result of the hazard, secondary impacts can only arise subsequent to a primary impact. For example, a primary impact of a flood event may be road closures due to submerged pavement. A possible secondary impact in these circumstances would be restricted access of emergency vehicles to citizens in a portion of the community due to the road closure.

In order to quantify these hazard factors, a formula was developed to assign a value for probability and impact for each of the hazards considered. A Hazard Identification worksheet is included as Appendix E of this document and contains all the calculations and formulas utilized. As a result of this analysis, the hazards were broken down into four distinct categories which represent the likelihood of a hazard event of that type significantly impacting the Tri-County area. These categories are High, Medium-High, Medium, and Low. In order to focus on the most significant hazards, only those assigned a level of high or medium-high will be included in this study. Table V-1 summarizes the results of the hazard level analysis. In addition, a section has been included discussing the history of the hazards most likely to impact the Tri-County area, as well as its ranking on the hazard identification worksheet. For more detailed information regarding the Hazard Identification formula and process, refer to Appendix E.

Table V-1: Hazard Identification Results	
Hazard Type	**Hazard Level**
Flooding – Riverine	High
Tornado – Category F0	High
Tornado – Category F1	High
Wind – Microburst/Straight Line	High
Flooding – Flash	Medium-High
Land Subsidence/Mine Subsidence	Medium-High
Severe Thunderstorm	Medium-High
Tornado – All Categories	Medium-High
Tornado – Category F2	Medium-High
Winter Storm	Medium-High

The following hazards are classified in the high category regarding the likelihood of significantly impacting the Tri-County area.

Flooding

According to historical records for the Tri-County area, there have been a number of significant flooding disasters since 1933, and the frequency of damaging floods has increased over the last 30 years. Riverine flooding the Tri-County area has resulted in Federal Disaster declarations in the following years: 1973, 1979, 1982, 1985, and 1993. A number of flash floods have also caused significant damage in the Tri-County area. A detailed flood history will be included later in this study. The impacts of flooding clearly pose a significant risk to the Tri-County area.

High Wind Events

The Tri-County area has a significant history of high wind events, including both straight line winds and tornadoes. Based on tornado data from 1950 to 1994, the State of Illinois ranked 7th nationally in highest number of tornadoes, 8th in total dollar damages, and 9th in the number of injuries (High Plains Regional Climatic Center). Historic records and documents compiled as part of this study indicate over 85 specific high wind events have occurred in the Tri-County area since 1933, including reports of 57 tornadoes.

The following hazards are classified in the medium-high category regarding the likelihood of significantly impacting the Tri-County area:

Land Subsidence

Land subsidence in Illinois is typically attributed to mine subsidence due to the large coal mining industry. While Illinois has historically been one of the largest coal producing states, there are currently only 30 active coal mines. Community officials acknowledged that mine subsidence has been a recurring problem for many years. While they specifically mentioned subsidence issues for Tazewell County in the Broadway Parkway and Arrow Street area during the late 1990's, subsidence is an issue in all jurisdictions of the Tri-County area. Currently, there is no way to predict when or how often land subsidence will occur.

Winter Storms

Snow and ice storms have the potential to impact the entire Tri-County area and generally occur between December and March. These storms are often responsible for numerous traffic accidents, road closures, downed trees and power lines, as well as dangerous wind chills. A late season snow storm occurred on April 10 and 11, 1997 when areas around Peoria received 10 to 13 inches of snow. The weight of this heavy, wet snow not only brought down power lines, but also damaged vehicles and buildings that could not support the weight.

Severe Thunderstorms

Severe thunderstorms are distinguished by stronger winds and heavier rain than the normal thunderstorm. These severe storms have the potential to produce damaging hail, spawn tornadoes, and initiate flash flooding. One of the most common hazards, severe thunderstorms can occur throughout the year although historical records indicate that the majority occur between April and October. These records also indicate that Tri-County area has endured damaging hail storms on a regular basis since 1957, with several storms producing hailstones up to 2.75 inches in diameter. In 2002 alone, 7 separate hail storms were recorded. However, although frequent in occurrence the risk due to hail is relatively low compared to the other effects associated with severe thunderstorms. Therefore, the impacts of severe thunderstorms are primarily flood and wind related and these impacts will be included with the separate flood and wind sections later in this study.

The following hazards are classified in the medium category regarding the likelihood of significantly impacting the Tri-County area:

Earthquakes

Earthquakes are a possibility in the Tri-County area due to its proximity to the New Madrid Fault Zone. While these hazards can affect an entire county, the majority of structural damage typically occurs in the downtown areas. The last two recorded earthquakes in this area occurred on March 1, 1942 in Kewanee, Illinois, and on November 9, 1968 in Southern Illinois. The 1968 earthquake registered a magnitude of 5.3 on the Richter Scale, while the 1942 earthquake's magnitude is unknown. Shockwaves were felt in the area after both earthquakes, but no damage was reported. Earthquakes have not occurred with any frequency in the Tri-County area, nor have they produced significant damage.

A typical way of measuring earthquake risk is in peak ground acceleration. The higher the acceleration of the ground during an earthquake, the greater the potential for damages. Appendix F includes a map of the Tri-County area and the associated peak acceleration according to the U. S. Geologic Survey (USGS). Areas with peak acceleration less than 3% are considered to be at low risk to earthquakes. Only a very small portion of the southern Tazewell County, primarily an agricultural area, has a risk higher than two percent. For this reason, earthquakes are not a significant hazard to the Tri-County area.

Landslides

While the topography of the Tri-County area is generally flat, there are several steep slopes that are susceptible to landslides. Recorded instances of landslides have been uncommon in the Tri-County area, according to the National Climate and Data Center (NCDC) and USGS maps. Nine have been recorded in Peoria County, two in the City of Peoria, and one in Woodford County. There have not been any recorded landslides in Tazewell County or the City of Pekin. In addition to the two landslides reported in the City of Peoria on the NCDC and USGS maps, another event occurred in 1982 across the street from 4433 Grandview Drive, according to the Peoria Park District. Even though there has been a low occurrence of landslides in the Tri-County area, the NCDC and USGS landslide susceptibility maps indicate three primary areas of landslide susceptibility in Peoria County, and one in Woodford County. These areas are displayed on Figure V-1 and Figure V-2.

Wildfires

Based on historical data, wildfires have not been prevalent in the Tri-County area. The few events on record were sparked by lightning and mainly affected structures rather than vast expanses of forest or farmland.

RISK ASSESSMENT

The hazard analysis competed in the previous section identified the types of hazards to which the Tri-County area is most vulnerable. The next step in the process is to conduct a risk assessment specific to the Tri-County area for these hazards. A risk assessment is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from hazards (FEMA, 2001). The primary components of the risk assessment include: 1) cataloguing the hazard history; 2) profiling the type, magnitude, and probability of the hazard; 3) identifying specific geographic areas most likely to be affected; 4) assessing the potential vulnerability to the hazard; and 5) estimating potential losses should an event occur.

The vulnerability assessment also examines the impact of hazards on the Tri-County area's existing and future land uses and development trends, within the identified hazard areas. Current conditions were evaluated in terms of what is already developed, and in terms of people and property types. The five local jurisdictions within the Tri-County area have comprehensive plans, zoning ordinances, capital improvement plans, and other plans which were used as indicators of potential future risks to undeveloped properties, services, and infrastructure. New development and areas targeted for redevelopment often present the best opportunities for incorporating new methods of development or retrofitting development so that it will be able to withstand the effects of hazards.

FLOOD

One of the most frequent and significant hazards facing the Tri-County area is flooding, particularly along the Illinois River. Because the Illinois River forms a partial boundary of Peoria County, Tazewell County, and Woodford County, as well as the Cities of Peoria and Pekin, significant floods along the Illinois River affect all jurisdictions included in this study. In addition to the Illinois River, there are numerous small creeks and streams throughout the Tri-County area. Significant flooding can also occur along some of these smaller streams and creeks, most notably the Mackinaw River in Woodford and Tazewell County and Kickapoo Creek in Peoria County.

Hazard History

Flood producing storms can occur throughout the year; however, the months of March, April and May are historically considered the most flood prone months due to the spring thaw and its effects on the Illinois River and its tributaries. Flood stage for the Illinois River is 18 feet, or 446.4 NGVD. There have been approximately 16 floods on record since 1933 that have crested above 23 feet (451.1 NGVD), which according to a study by titled “River Stages in Illinois: Flood and Damage Data, Local Assistance Series 5A” is the flood level at which damage to structures begin. The highest flood on record occurred in May 1943 when the Illinois River crested at 28.8 feet (457.2 NGVD) in Peoria. This flood was almost equaled in March 1979 when the Illinois River crested at 28.7 (457.1 NGVD) feet prompting a Federal Disaster Area declaration. Both floods caused extensive damage to residential and commercial buildings, as well as roads and agricultural lands throughout the Tri-County area. These two floods are estimated to have a return frequency of once every 25 years. Therefore, the Tri-County area has still not experienced a 100-year flood in modern times. A 100-year flood is expected to reach 32.6 (470 NGVD) feet, which is roughly 4 feet above the highest flood on record. (City of Peoria HVA 83)

Table V-2 includes ten major flooding events and the associated crest levels in Peoria.

Table V-2: Illinois River Flood Crest Levels in Peoria

Date	Crest Level	Crest Level (NGVD)
May 1943	28.8 feet	457.2
March 1979	28.7 feet	457.1
March 1984	28.4 feet	456.8
December 1982	27.4 feet	455.8
March 1982	27.1 feet	455.5
March 1970	25.9 feet	454.3
April 1973	25.9 feet	454.3
April 1983	25.7 feet	454.1
May 1933	25.3 feet	453.7
April 1950	25.0 feet	453.4

*Source: City of Peoria HVA, 1983 and NCDC Storm Event Database

Flash floods are another hazard that can impact the Tri-County area. These floods are generally initiated by severe thunderstorms in which intense rains fall in a short amount of time. Flash floods typically result in road and bridge closings, but they also have the

potential to inflict significant damage upon structures and crops. One of the most damaging flash floods on record occurred on June 2, 1980, when a hailstorm initiated a flash flood that inundated 1,500 acres of farmland and caused considerable damage to roads, particularly in Tazewell County. In 2001, flash floods occurred in May, June and July that flooded roads in areas of all three counties. A full catalogue of recorded flood events is included in Appendix D.

Hazard Profile

The majority of the flooding in the Tri-County area is riverine flooding that occurs along the Illinois River and associated tributaries. These floods are most common in the late winter and spring when heavy rains coupled with melting snow from the upper reaches of the watershed combine to exceed the capacity of the basin. The extensive stream gage network along the Illinois River aids in forecasting flood heights in advance; however, due to the large tributary area of the Illinois River, these riverine floodwaters can rise for days and the river can remain above flood stage for weeks at a time. Flash floods can also occur following periods of intense rain, generally associated with a severe thunderstorm, and generally occur along the smaller streams and brooks throughout the Tri-County area. Flash floods quickly exceed the capacity of a small stream or brook, and can damage adjacent structures, or wash out a roadway or bridge.

The Illinois River is classified as an aggrading river, meaning the river bed is being filled by the deposition of sediment, reducing the depths and decreasing the ability for storage. The average depth of the river is only approximately 18 inches. The United States Army Corps of Engineers (USACE), in conjunction with the Illinois Department of Natural Resources (IDNR), have been investigating the affects of this process. The exact impacts of this sedimentation of flood levels in the Tri-County area cannot be calculated. However, a comparison of similar flood events was completed in the Peoria County Hazard Mitigation Plan, completed in 1995 and updated in 2001. The plan compared the Illinois River flood of 1844 to that of 1979. According to this plan the peak flow of the flood of 1844 was 126,000 cubic feet per second with an associated crest at Beardstown, Illinois at 22.3 feet above flood stage. The 1979 flood had a significantly lower flow, of only 95,000 cubic feet per second yet the crest at Beardstown of 28.3 feet, 5.8 feet higher than the flood of 1844.

Hazard Areas

As stated previously, the sections of the Tri-County area most susceptible to flooding are those directly adjacent to the Illinois River and its associated tributaries. FEMA, through the NFIP, has developed Flood Insurance Rate Maps (FIRM) for Peoria, Tazewell, and Woodford Counties as well as the City of Peoria and the City of Pekin. These maps identify Special Flood Hazard Areas (SFHA), or flood zones through detailed hydraulic study. These flood zones represent the areas susceptible to the 1%

annual chance flood, or 100-year flood, and the 0.2% annual chance flood, or 500-year flood. When possible, FEMA will also determine a Base Flood Elevation (BFE) for the 100-year floodplain, which is the estimated elevation of flooding during this event. The BFE is commonly used as a standard level for determining flood risk, and managing potential floodplain development. Although each specific flood event is different, these SFHAs provide a more definitive representation of the highest flood risks in the community. The specific flood zones in each of the jurisdictions are described in the following sections.

Peoria County

Peoria County has a significant amount of floodplain both along the Illinois River and along a number of smaller tributaries throughout the County. The floodplain along the Illinois River is separated naturally by the City of Peoria, and BFEs range from 460 (NGVD 29) in the northern portion of the County to 455 (NGVD 29) in the southern portions of the County. The width of the floodplain along the river varies depending on the topography of the riverfront area. Major tributaries in Peoria County include Kickapoo Creek and Dry Run Creek primarily in the central portion of the County and Spoon River in the northwest portion of the County. In addition to these major tributaries, there are numerous smaller tributaries throughout the County. Q3 flood data is available for the City of Peoria and is displayed in Figure V-3.

Tazewell County

Most of the floodplain contained in Tazewell County is located along the Illinois River both north and south of the City of Pekin, although a majority of the area south of the City of Pekin is protected by a levee. The BFEs along the Illinois River in Tazewell County range from 458 (NGVD 29) in the northern part of the county to 455 (NGVD 29) in the southern part of the County. In addition to the Illinois River, there are numerous smaller tributaries in Tazewell County including the Mackinaw River, Farm Creek, and the Spring Lake Canal. Q3 flood data is not available for Tazewell County. However, the FIRM containing the portion of the floodplain directly adjacent to the Illinois River and along the Mackinaw River was digitized for use in this analysis and is included in Figure V-4.

Woodford County

In relation to the size of Woodford County, the amount of floodplain contained in the county is small. The largest portion of the floodplain in the county is along the Illinois River, particularly in Spring Bay Township and Partridge Township. The BFE for the entire area along the Illinois River in Woodford County is 460 (NGVD 29). In Spring Bay Township, this area primarily encompasses the section along Spring Beach Road. In Partridge Township, this area is directly adjacent to the Illinois River and along Snag Creek, Dry Creek, Richmond Creek, and Partridge Creek. There is also additional floodplain along other small rivers and creeks in the western portion of the

County, including the Mackinaw River and Panther Creek. Q3 flood data is not available for Woodford County. However, the portion of the floodplain directly adjacent to the Illinois River was digitized for use in this analysis and is included in Figure V-5.

City of Peoria

A majority of the floodplain in the City of Peoria is along the Illinois River, with BFEs ranging from 460 (NGVD 29) at the northern edge of the City to 459 (NGVD 29) at the southern edge. In general, the landward edge of the floodplain along the Illinois River lies approximately at the edge of the Chicago Rock Island and Pacific Railroad, with all areas of the City east of the railroad included in the 100-year floodplain. The City's FIRMs also identify floodplain locations along Dry Run Creek, the Eastern Branch of Dry Run Creek, Big Hollow Creek, and along the small portion of Kickapoo Creek that passes through the southeastern corner of the City. The floodplain area along these creeks is generally narrow and the BFEs for these areas vary depending on local elevation. Q3 flood data is available for the City of Peoria and is displayed in Figure V-6.

City of Pekin

Virtually all of the floodplain in the City of Pekin is located along the Illinois River. BFE elevations for this portion of the City range from 459 (NGVD 29) to 458 (NGVD 29). In general, the City of Pekin is located atop a bluff and at a significantly higher elevation than that of the Illinois River, reducing the risk of riverine flooding in the City. There is also a minimum amount of floodplain located along Lick Creek in the northwestern portion of the City. Q3 flood data is available for the City of Pekin and is displayed in Figure V-7.

Flood Data Sources

As noted in the hazard history section, there is no record of a 100-year flood occurring in the Tri-County area. Even though some of the areas identified as a SFHA may not have received flooding in the past, flooding during a 100-year event may still be possible in these areas. In addition, the dates of adoption for the FIRM for each jurisdiction range from 1980 to 1984. Watershed changes that have taken place since that date, including the effects of the sedimentation of the Illinois, will not be included in this analysis.

Typically FIRM maps have only been available in hard copy maps and not in digital format. In recent years however, FEMA has developed Q3 flood maps which are digital versions of the FIRMs and can be incorporated into a GIS. Q3 flood data is available for Peoria County, City of Peoria, and the City of Pekin. Q3 data is not available for Tazewell and Woodford County. In these cases selected portions of the

existing FIRMs were digitized to be incorporated into this study. Due to amount of effort required, the entire set of FIRMs for these counties was not digitized.

It should be noted that Q3 flood maps, are graphical images, that represent the digitized boundaries of the floodplain. Due to limitations of the accuracy of this technology, the flood plain boundaries represented by Q3 flood data is not always precise, and may only be accurate to plus or minus 250 feet. Because the extent of the flood plain is actually determined by the elevation of a structure, the only accurate to method to assess if a structure, or area of a community, is located within a floodplain is by comparing the surface elevation with the floodplain elevation from the FEMA FIS. This is typical completed using a FEMA approved elevation certificate. Therefore, the assessments included in this study have been completed for planning purposes only.

Vulnerability Analysis

In the previous section of this analysis, specific areas susceptible to flooding in the Tri-County area were identified. The next step in a Hazard Identification and Risk Assessment is to identify what is vulnerable to the affects of potential flooding. Flooding only impacts a community to the degree it affects the lives of its citizens and the community functions overall. Therefore, the most vulnerable areas of a community will be those most affected by floodwaters in terms of potential loss of life, damages to homes and businesses, and disruption of community services and utilities. For example, an area with a highly developed floodplain is significantly more vulnerable to the impacts of flooding then a rural or undeveloped floodplain where potential floodwaters would have little impact on the community.

The impacts of a flood on a community can be magnified to the degree floodwaters affect special needs populations and critical facilities. Special need populations are those that require additional attention during a flood event, are not as able to protect themselves prior to an event, or are not able to understand potential risks. These can include non-English populations, elderly populations, or those in a lower socioeconomic group. Special need populations in the Tri-County area are primarily lower income individuals, living in a flood prone area, without the resources to take actions to protect themselves.

The impacts of floodwaters on critical facilities, such as police and fire stations, hospitals, and water or wastewater treatment facilities, can greatly increase the overall effect of a flood event on a community. In general, relatively few of these facilities are located in areas with a high risk to flooding. Discussions of critical facilities in each individual jurisdiction will be included later in this section.

A Repetitive Loss Property is a property that is insured under the NFIP and has filed two or more claims in excess of $1,000 each, within a 10-year period. Nationwide, repetitive loss properties constitute 2% of all NFIP insured properties, but are responsible for 40%

of all NFIP claims. Mitigation for repetitive loss properties is a high priority for FEMA, and the areas in which these properties are located typically represent the most flood prone areas of a community. Table V-3 presents the number of repetitive loss properties located in each jurisdiction of the Tri-County area, according to the Illinois Department of Natural Resources. These repetitive loss properties will be discussed in further detail in the specific jurisdictional sections below.

Table V-3: Repetitive Loss Properties by Community

Community	Number of Repetitive Loss Properties
Peoria County	138
City of Peoria	17
Tazewell County	28
City of Pekin	6
Woodford County	47

A number of factors contribute to the relative vulnerabilities of certain areas in the floodplain. Development, or the presence of people and property in the hazardous areas, is a critical factor in determining vulnerability to flooding. Additional factors that contribute to flood vulnerability range from specific characteristics of the floodplain to characteristics of the structures located within the floodplain.

The following is a brief discussion of some of these factors and how they may relate to Tri-County area.

- **Flood depth:** The greater the depth of flooding, the higher the potential for significant damages.
- **Flood duration:** The longer duration of time that floodwaters are in contact with building components such as structural members, interior finishes, and mechanical equipment, the greater the potential for damage.
- **Velocity:** Flowing water exerts forces on the structural members of a building, increasing the likelihood of significant damage.
- **Elevation:** The lowest possible point where floodwaters may enter a structure is the most significant factor contributing to its vulnerability to damage due to flooding.
- **Construction Type:** Certain types of construction are more resistant to the effects of floodwaters than others. Typically masonry buildings, constructed of brick or concrete blocks, are the most resistant to damages simply because masonry materials can be in contact with limited depths of flooding without

sustaining significant damage. Wood frame structures are more susceptible to damage because the construction materials used are easily damaged when inundated with water.

The following sections will describe the vulnerability to flood damages in each jurisdiction. It is important to note that detailed information regarding structure type, value or depth of flooding for critical facilities was not available from any of the Tri-County jurisdictions. Consequently, the locations of critical facilities were simply depicted on Figure V-3.

Peoria County

Peoria County has an extremely proactive history in regards to floodplain management as well as identifying and prioritizing potential vulnerable areas. In 1985, the County completed a Hazard Mitigation Plan which addressed historic flooding and recommended potential measures to address these vulnerabilities. This plan, which was updated in 2001, focused on the area along the Illinois River beginning at the City of Peoria corporate limits on the south, and stretching to the southern border of Chillicothe on the north, and did not address flooding in other areas of the County. This area included 579 properties, with 309 structures with first floor elevations below the BFE. Virtually all of the structures in this area are residential. Most are wood-framed without a basement, and built prior to the adoption of the floodplain ordinance. During the completion of this plan, actual building surveys were conducted on all of these properties to identify the first floor elevation in regards to the BFE in order to estimate a potential flood depth in the case of a 100-year event. Based on this information, specific mitigation measures were recommended, and subsequently approximately 81 structures in this area have been acquired and destroyed. The full building survey from this plan as well as the list of acquired structures is included in Appendix K. However, due to the density of the development, and the number of structures below the BFE, a significant risk of flooding still exists in this area. According to Peoria County records, approximately 190 structures still remain in this area with a first floor elevation average of over 3 feet below the 100-year floodplain.

The Kickapoo Creek watershed is a particularly flood prone area of Peoria County. A Hazard Mitigation Plan was also developed for this area of the county in 1997. This area is primarily a commercial and industrial area, with approximately 60 structures in the floodplain. According to the Kickapoo Hazard Mitigation Plan, nearly 44% of these structures are actually located in the regulatory floodway. This area has experienced at least 13 significant flooding events, although a 100-year flood has not been recorded. Potential mitigation measures were also identified for this area as part of the mitigation planning effort. Some properties have been acquired in this area, but structures still remain in the regulatory floodway, as well as the 100-year floodplain. The building survey completed in conjunction with the Kickapoo Creek Mitigation plan is also included in Appendix L at the conclusion of this document.

A third area of Peoria County that is significantly vulnerable to flooding damage is also along the Illinois River, between the southern limit of the City of Peoria, and the southern border of Peoria County. This section is primarily an industrial area, with some commercial and residential uses as well. Flood damages in this area have historically been less than those in other parts of the County, but considering that at 100-year flood event has not occurred, significant damages are possible in the higher flood events. Portions of this area are protected by a uncertified levee, although not to the 100-year flood level.

There are 138 repetitive loss properties in Peoria County. A majority of these properties are located in the northern portion of the County along the Illinois River, and in the Kickapoo Valley. However, other repetitive loss properties are located throughout the County. The specific location of these properties is shown on Figure V-3. It should be noted that although some of these properties may appear to be located outside the floodplain; this is due to limitations in the accuracy and completeness of the digital floodplain data. In addition, Peoria County does have a GIS based database showing the locations of all structures located within the County, although no detailed information such as type or elevation of these structures is available. However, we can calculate that 1,323 structures are located in the floodplain in Peoria County; although 291 of those are located within the City of Peoria.

A majority of the critical facilities located in Peoria County are not located in the floodplain. However, there are a number of industrial facilities and manufacturing plants located in the floodplain, particularly in the southern portion of the County along the Illinois River. If these facilities were to be affected by a significant flood event, the impacts to the community could be extensive in terms of secondary and economic impacts. The locations of the known critical facilities in the County are also included in Figure V-3.

Tazewell County

A majority of the floodplain in Tazewell County is located along the Illinois River, with most of the development inside the incorporated areas. The portions along the Illinois River in the unincorporated areas of Tazewell County, are primarily of agricultural or conservation land use, with small areas of industrial use as well. Currently there is no data available regarding the number of these structures, or the first floor elevations in relation to the BFE. Tazewell County has 28 repetitive loss properties. The locations of these properties are displayed in Figure V-3. It should be noted that although some of these properties may appear to be located outside the floodplain; this is due to limitations in the accuracy and completeness of the digital floodplain data. While none of these properties are located along the Illinois River, it does not mean that flood damages have not occurred in this area, or that the properties are not vulnerable to flooding. The fact that there has not been a 100-year flood on the

Illinois River, and that a significant portion of the southern part of the County is protected by levee that has not been tested under a significant flood event, increases the vulnerability in this area to high flood events.

An area of Tazewell County that has received significant flooding is located along Route 29, south of the City of Pekin, along the south bank of the Mackinaw River. This residential area, near the Green Valley community, is where all 28 of the County's repetitive loss properties are located. These developments, as well as other communities along the banks of the Mackinaw River, are highly vulnerable to flood damages.

A majority of the critical facilities in the unincorporated portions Tazewell County are not located in the 100-year floodplain. However, as previously discussed there are two industrial areas, both north and south of the City of Pekin, in the 100-year floodplain along the Illinois River. These areas contain facilities where secondary impacts, such as chemical spills, could be significant if they were to be impacted by floodwaters. The locations of the known critical facilities in the County are also included in Figure V-4.

Woodford County

Virtually all of Woodford County's developed floodplain is located along the Illinois River; which is either of residential or agricultural land use. The highest concentration of development in this area is located along Spring Beach Road in Spring Bay Township. This residential area is comprised primarily of single family residences, with some mobile home parks as well. Historically, these properties have received frequent flooding, and virtually all of the county's 47 repetitive loss properties are located in this neighborhood. Although not as densely populated, there are vulnerable residential structures along the Illinois River between the Village of Spring Bay and the northern border of Woodford County. The relative vulnerability of these structures depends on site specific factors such as first floor elevation and construction type. Specific locations for the County's repetitive loss properties are shown in Figure V-3.

In addition to this area along the Illinois River, there is a significant amount of floodplain along the Mackinaw River. However, this area is primarily agricultural, and residential development is sparse. There may be isolated structures in this area that are vulnerable to flooding in a significant event. Along the Mackinaw River, as well as other smaller tributaries throughout the County, there is a potential for damages to bridges and roadways due to either significant riverine floods, or flash floods that locally exceed the capacity of the channel.

Virtually all of the critical facilities located in Woodford County are located outside the 100-year floodplain. The floodplain area in Woodford County is almost entirely

residential, with only a few commercial structures. The locations of the known critical facilities in the county are also included in Figure V-5.

City of Peoria

The City of Peoria has a significantly higher density of development then the three counties already discussed. As stated above, there are 291 structures located in the floodplain in the City of Peoria. A majority of these structures are located along the Illinois River, but many are along Dry Run Creek and Kickapoo Creek. The same location pattern holds true for the City's 27 repetitive loss properties. The exact locations of these properties are shown in Figure V-6. The area along the riverfront in the City of Peoria is a combination of commercial, industrial, and residential use. Many of these structures were built prior to the adoption of the floodplain ordinance, and thus there were no provisions for these structures to be built above the BFE. However, the City is focusing a large portion of its redevelopment on the riverfront area. In accordance with the adopted floodplain ordinance, any new structures, or those which improvements are made totaling more then 50% of the buildings assessed value, must be elevated above the 100-year floodplain. These provisions will decrease the vulnerability of these structures to flooding impacts. However, any development in a hazard prone area increases the area's vulnerability overall.

The areas along Dry Run Creek, and other streams throughout the City, are mainly residential areas, with some commercial development and conservation land as well. The structures in these areas are primarily wood framed, single family dwellings, although some multi-family structures are present as well.

The majority of critical facilities located in the City of Peoria are located outside the 100-year floodplain. However, as in Peoria County, there are a number of industrial facilities and manufacturing plants located in the floodplain. There has also been significant commercial development within the floodplain in recent years. The locations of the known critical facilities in the County are also included in Figure V-6.

In addition to the critical facilities provided by HAZUS, a list of all the city-owned facilities located in the floodplain has been compiled. It should be noted that these have been located by geocoded address and compared with digital Q3 flood data. These methods are not accurate to definitively determine if a structure is indeed located in the 100-year floodplain, therefore the list provided is for planning purposes only. The following table includes all the city-owned facilities that have been identified as in the floodplain using the methods described above. All of these structures are located along the Illinois River and in the southeastern portion of the City, with a majority located on Water Street. For some structures, the date built, square footage, and responsible City department are included where available. The location of these structures is also depicted on Figure V-6. The relative vulnerability of these structures will depend on the factors described above, such as elevation, construction type, and use.

Table V-4: City-Owned Facilities in the 100-Year Floodplain*				
Facility	**Address**	**City Dept.**	**Sq. Feet**	**Yr. Built**
River Station	212 SW Water St		19,793	
Fire Marine Station - RFP	102 SW WATER	Fire Department	1,800	2002
Parking Lot - RF Village	100 SW WATER	Public Works		
Parking Lot - Cat/City of Peoria	HAMILTON @ WATER ST			2002
Parking Lot - River Station	212 SW WATER	Public Works		2002
Liberty Park – RFP	300 SW Water St	Public Works	260,000	
Old Town North	301 SW WATER			
Riverfront Landing	100 NE Water St	Public Works		
Riverfront Marina (South)	112 SW Water St	Public Works		1998
Riverfront Festival Park (phase I	200 NE Water St (A)	Public Works		
Riverfront (Future Restaurant)	210 NE Water St			
Edgewater Building & Lot	420 SW Water St		87,500	
Michel Bridge Monument Park	432 SW Water St	Public Works		
Parking Lot - Riverfront East Lot	500 SW Water St	Public Works		
Parking Lot - Riverfront West Lot	501 SW Water St	Public Works		
Riverfront Village	100 SW Water St	Public Works	100,000	2000
Riverfront - Future Restaurant	202 SW Water St			
Riverfront Marina (North)	116 NE Water St	Public Works		1999
Riverfront Visitor's Center	100 NE Water St	Public Works		1998
(Powell Press Building)	100 NE Water St			
Riverfront Gateway Bldg (Phase II)	200 NE Water St (B)	Public Works	8,260	1997

*According to Q3 data. Actual location may be outside floodplain.

City of Pekin

Because a majority of the City of Pekin is at a higher elevation than the surrounding area, it is generally less vulnerable to riverine flooding then the other jurisdictions

included in this study. However, the City does have a mix of industrial and residential uses along the Illinois River that are susceptible to flooding, and have received some damages in the past. The City has 6 repetitive loss properties that are somewhat scattered, but generally north of the downtown area along the Illinois River. The exact locations of these properties can be seen on Figure V-7. It should be noted that although some of these properties may appear to be located outside the floodplain; this is due to limitations in the accuracy and completeness of the digital floodplain data. In addition, the City's Wastewater Treatment Plant is located along the Illinois River, and has sustained flood damages in the past. Flood damages to this facility could cause a disruption of the treatment process, which could cause significant impacts to the water quality of the Illinois River.

Other than riverine flooding, the City of Pekin has experienced damages due to flooding following heavy rain events. In general, this flooding occurs because the runoff generated from an intense rainfall exceeds the capacity of the drainage infrastructure. This problem is exaggerated because the flat topography throughout the City allows for only a minimal slope for outlets and drainpipes, and by the fact that the City of Pekin is served by a combined sewer system.

A majority of the critical facilities in the City of Pekin are located outside the floodplain. The locations of all the critical facilities in the City of Pekin are also shown in Figure V-7.

Estimating Losses

An additional way to analyze an area's potential vulnerability to flooding is to estimate the potential losses should an event occur. However, in order to perform a community-wide estimate, information regarding the number, type, elevation, value and use of the at-risk structures must be known. This data has not been compiled for any of the jurisdictions included in this study. Therefore, it is not possible to determine an accurate estimate of potential flood losses for the entire Tri-County area. However, using the data contained in the Peoria County Mitigation Plan, a representative estimate can be compiled. Because the Peoria area has not experienced a 100 year flood, according to historical records, the losses to this area from a potential 100-year flood were estimated. The following sections include a description of the methodology and the results.

According to the Peoria County Mitigation Plan, there are 579 structures contained in the area along the Illinois River, between the northern boundary of the City of Peoria and the southern boundary of Chillicothe. However, not all of these structures have first floor elevations below the BFE. Of these structures, 271 were included after they were determined to be at or below the BFE, and associated flood depths. Although the hazard mitigation plan estimated 309 structures below the BFE, 271 were included in this estimate because potential flood depths were available for these structures. Since the date of this plan, a number of properties have been acquired in this area, and

therefore should not be included in this estimate. From the data included in the 2001 update of the plan, it was estimated that approximately 81 structures in this area of the County had been removed, and therefore a total of 190 structures were included in this estimate.

The average flood depth for these structures was calculated to be 3.8 feet in a 100-year flood event. Using the potential depth of flooding, an estimate has been completed utilizing the Flood Insurance Administration's (FIA) previously determined depth-damage functions. This function has been designed to anticipate damage to buildings and contents based on a percentage of the structure's value. Additionally, an estimate of the displacement costs for a typical structure has been calculated using a 45-day displacement time, which had been estimated for a 100-year flood. The FIA depth damage functions are also based on the type of building being affected. For the purpose of this estimate, and based on community input, the typical structure type has been estimated to be a one-story structure without a basement, with an estimated value of $60,000. Some of the residential structures in this area may have basements; however, because the damage levels are higher for these structures, they were not included in an attempt to be conservative. Using these assumptions, a total damage per structure was estimated to be $30,920, or 52% of the buildings value. When applied to the 190 structures included the total damage for this area in a 100-year flood is estimated to be $5,874,748. This estimate only includes potential damages to this select area.

It should be noted that this estimate only includes approximations of structure and contents damage, as well as displacement costs. Costs associated with recovery operations such as emergency response, evacuations, and sandbagging have not been included. In addition, the potential damages to any commercial or industrial structures in this area would increase the estimate. Also, this estimate was only completed for a particular portion of Peoria County. However, given a similar depth of flooding, the percent damage could be assumed to be similar in other areas of the Tri-County flooding. If the anticipated depth was higher or lower, the percent damage would be adjusted accordingly.

The detailed calculations for this estimate are included in Appendix G.

WIND EVENTS

Wind can be one of the most destructive forces of nature. Strong winds can erode mountains and shorelines, and topple trees and buildings. Damaging wind events in the Tri-County area typically occur in the form of tornadoes, straight line wind events, and severe thunderstorms. Depending on the type of wind event, the damage sustained can range from extremely localized to widespread, and from moderate to devastating. The potential impacts of a severe wind event in the Tri-County area depend on the specific characteristics but can include broken tree branches and uprooted trees; snapped power, cable, and telephone lines; damaged radio, television, and communication towers; damaged and torn off roofs; blown out walls and garage doors;

overturned vehicles; totally destroyed homes and businesses; and serious injury and loss of life. Downed trees and power lines can fall across roadways and block key access routes, as well as cause extended power outages to portions of the Tri-County area.

Hazard History

High straight line winds can occur at any time throughout the year, and can be accompanied by a variety of weather conditions. These events have often been accompanied by strong thunderstorms, but not always. Based on Tri-County area historic records, it is not uncommon to have sustained winds between 30 and 50 mph during these events with gusts between 50 and 70 mph. On July 5, 1953, an afternoon storm produced wind gusts to 96 mph and sustained 65 mph winds for five minutes resulting in major damage around the area. Typically, damage for the Tri-County area associated with these hazards includes: broken branches, uprooted trees, roofs blown off, walls blown down, small structures leveled, and in extreme cases, boats and planes being flipped over.

The majority of tornadoes that hit the Tri-County area are F0, F1, or F2, and historical records indicate that 25 of these tornadoes have touched down since 1990. There have also been several recorded F3 tornadoes, and one F4 tornado since 1956. The estimated damage values are not directly proportional to the strength of the tornado; instead, they vary greatly depending on where the tornado touches down, and how long it stays on the ground. For example, the F3 tornado that hit Tazewell County on August 13, 1956, only caused an estimated $25,000 of damage, while the May 14, 1961 F3 tornado in Peoria and Woodford Counties caused an estimated $2,500,000 of damage. An F1 tornado that struck Tazewell County on June 19, 1990 also caused an estimated $2,500,000 of damage. On September 14th, 1966 a F3 tornado moved through the City of Peoria. This event was unique because of its high intensity and its location in a highly developed area. This tornado completely destroyed a number of buildings including a school and a manufacturing plant, affected 144 homes, and injured 28 people.

The Central Illinois tornado outbreak of May 4-10, 2003 was one of the worst on record. In Tazewell County, over 80 homes were destroyed and 30 to 40 more were damaged. A long tornado track was found in Tazewell County. This tornado was on the ground for 19 miles and reached a maximum intensity on the Fujita Scale of F3 (200 mph) with a maximum width of ¼ mile in the City of South Pekin. A second tornado then developed 3 miles north of Morton around 10:16 pm. It was on the ground for 1 mile and lifted and dissipated 4 miles north northeast of Morton (in Tazewell County). Nine people were killed in South Pekin and two more lost their lives in Morton.

As for Woodford County, authorities reported much of the tornado damage around the Town of Eureka. 8,000 persons in Tazewell and Woodford Counties were without power. FEMA approved more than $4.5 million for disaster assistance for Illinois residents for damage incurred during the May 4-10, 2003 time period. The Individual

Assistance and Households Program approved 31 applications in Tazewell County for a total of $291,128.18 and in Woodford County for a total of $5,074.96.

The Small Business Administration (SBA) also provided financial assistance in the form of low-interest loans to residents who suffered property damage and economic injury in Tazewell and Woodford Counties. The tables, below, summarize the amount of funding provided by SBA as of September 10, 2003.

Small Business Administration (SBA) Summary - Tazewell County
As of 09-10-03

LOAN APPLICATIONS	HOME	BUSINESS	ECONOMIC INJURY (EIDL)	TOTAL
Number Issued	145	21	--	166
Number Accepted	77	10	10	97
Number Declined	13	0	0	13
Number Withdrawn	12	3	7	22
Number Approved	52	7	3	62
Dollars Approved (2003 dollars)	$2,667,300	$1,002,700	$108,100	$3,778,100
Number Pending	0	0	0	0

Small Business Administration (SBA) Summary - Woodford County
As of 09-10-03

LOAN APPLICATIONS	HOME	BUSINESS	ECONOMIC INJURY (EIDL)	TOTAL
Number Issued	12	4	--	16
Number Accepted	5	1	1	7
Number Declined	1	0	1	2
Number Withdrawn	0	0	0	0
Number Approved	4	1	0	5
Dollars Approved (2003 dollars)	$296,500	$32,800	0	$329,300
Number Pending	0	0	0	0

Table V-5 contains the number of reported tornadoes by jurisdiction taken from the hazard history compiled in Appendix D. A number of these tornadoes have affected the more than one jurisdiction, and are therefore counted for all jurisdictions affected.

Table V-5: Tornado Occurrence by Jurisdiction*				
	Peoria County	Tazewell County	Woodford County	City of Peoria
Tornadoes	17	26	23	5

*No record of specific tornadoes in the City of Pekin could be found

A full table of all reported high wind events in the Tri-County is included in Appendix D. In addition, the locations of historic wind events for all jurisdictions are included in Figures V-8 – V-10.

Hazard Profile

The extent and degree of damages from a high wind event are primarily related to the intensity of the event, measured in terms of wind speed. Sustained high winds can be the most damaging, although a concentrated gust can also cause significant damage. As wind speeds increase, the extent of damage varies depending on a number of site-specific characteristics that will be discussed later in this section. The strength of a tornado, measured by the Fujita Scale, along with the type and number of facilities and resources impacted, will have the most effect on the level of damages sustained. Table V-6 includes the corresponding wind speeds for the Fujita Scale, and typical damage descriptions for each level.

Table V-6: The Fujita Scale		
Scale Value	**Wind Speed (mph)**	**Description of Typical Damage**
F0	40-72	Light damage. Tree branches snapped; antennas and signs damaged.
F1	73-112	Moderate damage. Roofs off; trees snapped; trailers moved and/or overturned.
F2	113-157	Considerable damage. Weak structures and trailers demolished; cars moved.
F3	158-206	Severe damage. Roofs and some walls torn off well-constructed buildings; trains overturned; trees uprooted; cars lifted up and thrown.

Table V-6: The Fujita Scale		
Scale Value	**Wind Speed (mph)**	**Description of Typical Damage**
F4	207-260	Devastating damage. Well-constructed houses leveled; structures blown off weak foundations; cars thrown; large missiles generated.
F5	261-318	Incredible damage. Houses lifted off foundations and carried some distance; large missiles thrown over 100 yards; trees debarked.

Recurrence Intervals for Wind

A tornado or high wind event could occur in the Tri-County area at any time of the year, but wind events are most likely to occur from March through July, with a peak probability of an event occurring in May, as can be seen in the Tornado Annual Cycle for Central Illinois shown in Figure V-11 below.

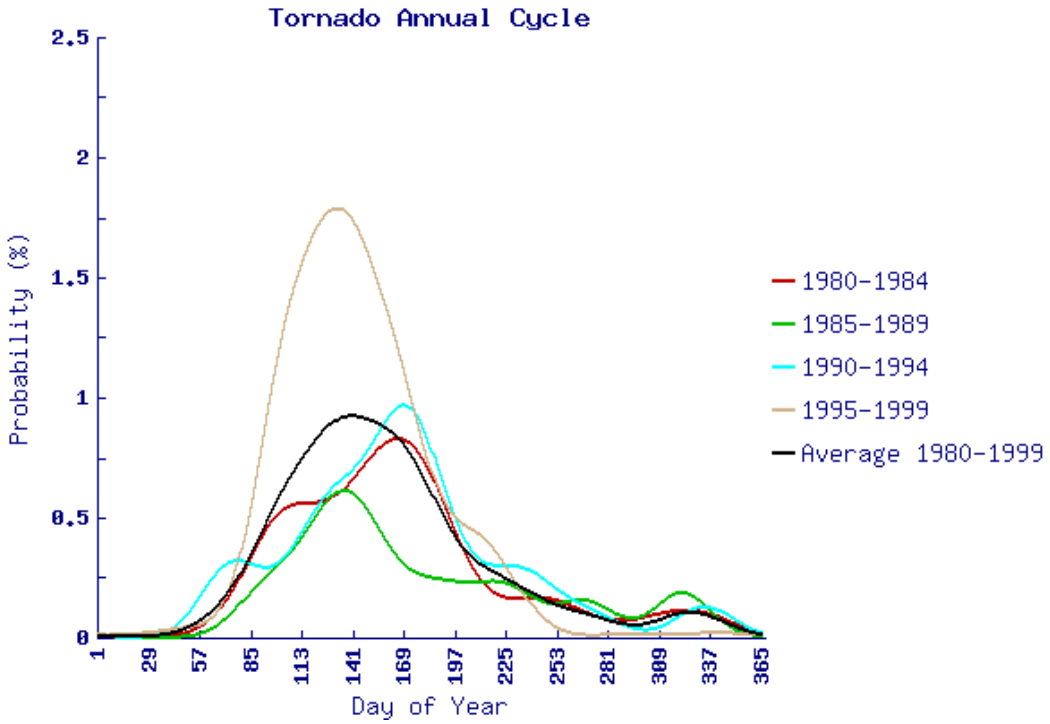


Figure V-11: Tornado Annual Cycle for Central Illinois

Wind Zones

Even though Central Illinois does have a higher than average number of tornadoes, it is not classified as an area with a higher than average base wind speed nationally. According to the American Society of Civil Engineers ***Minimum Design Loads for Buildings and other Structures*** (ASCE 7-98), the design wind speed for the Tri-County area is 90 mph. This threshold is based on the 50-year recurrence interval wind event, and is intended to represent the potential base wind event, not winds associated with a tornado. However, according to FEMA Publication 320 regarding the construction of residential tornado shelters, the Central Illinois area is located in a High Risk area. The Tri-County area is located in Wind Zone III, which requires a 200 mph design thresholds for tornado shelters. The difference in these thresholds is due to the relatively high occurrence of tornadoes and other localized high wind events in the Tri-County area, along with a lower probability of wide-spread high speed winds.

Hazard Areas

Tornadoes and other high wind events such as severe thunderstorms and straight line events have occurred in every portion of the Tri-County area. There are no proven indicators to predict where a Tornado may occur, and straight line winds and those associated with severe thunderstorms can be expansive enough to affect the entire area. Therefore, specific sections of the Tri-County area where high wind events are more likely to occur cannot be identified. However, very specific and localized geography can contribute to potential damages caused by these events. A more detailed discussion of these characteristics will be included in the vulnerability analysis section below. Therefore, the entire Tri- County area is considered to have an equal risk of being impacted by a high wind event.

Vulnerability Analysis

Although no specific areas of the Tri-County area can be designated as having a higher risk of being affected by a severe wind event, there are a number of factors that contribute to a particular area's vulnerability to damages if a high wind event should occur. Certain characteristics of an area or of a structure increase its resistance to damages due to high wind events then others. Many of these factors are extremely specific to the particular location or the particular structure in question. However, each factor's affects on vulnerability can be discussed in general. The following is a list of these factors and a description of how they relate to vulnerability, particularly in the Tri-County area.

Population Density

Population density is an important factor when analyzing vulnerability to high wind events. Because tornadoes can affect a very localized area, the highest potential for

damages, injuries, and loss of life, will be where the highest concentration of development exists. The population density in the Tri-County area varies greatly. Portions of the unincorporated areas, mostly agricultural areas, are extremely sparsely developed and populated. However, areas of significantly higher density are present, particularly, the Cities of Peoria and Pekin, the other cities and villages throughout the Tri-County area, and the portions of the unincorporated county directly adjacent to the cities and villages. Therefore, these do have a higher potential vulnerability to damage and loss of life in a high wind event.

Design Wind Pressures

Buildings must be designed to withstand both external and internal wind pressures on the structural framing and exterior elements. The level to which these structures are designed, as expected, directly correlates with its ability to resist damages due to high winds. The community's building code dictates to what design wind speed a structure must be designed to. Currently, Peoria County, Tazewell County, and Woodford County do not have an adopted building code. Therefore there are no current standards for the wind resistant design in these areas. The Cities of Peoria and Pekin do have an adopted building code, as well as many of the other incorporated areas throughout the Tri-County area. For some building types, those structures constructed in these areas subsequent to the adoption of the building code are the most likely to be the most resistant to damages from wind. However, no comprehensive data on the date built for these structures exists for the Tri-County area.

Building Type

The type of building construction will have a significant impact on potential damages from high wind events. A summary of basic building types – listed in order of decreasing vulnerability (from most to least vulnerable) – is provided below.

- **Manufactured:** This building type includes manufactured buildings that are produced in large numbers of identical or smaller units. These structures typically include light metal structures or mobile homes.
- **Non–Engineered Wood:** Wood buildings that have not been specifically engineered during design. These structures may include single and multi-family residences, some one or two story apartment units, and small commercial buildings.
- **Non-Engineered Masonry:** Masonry buildings that have not been specifically engineered during design. These structures may include single and multi-family residences, some one or two story apartment units, and some small commercial buildings.
- **Lightly Engineered:** Structures of this type may combine masonry, light steel framing, open-web steel joists, wood framing, and wood rafters. Some portions of these buildings have been engineered attention while others have not.

Examples of these structures include motels, commercial, and light industrial buildings.

- **Fully Engineered:** These buildings typically have been designed for a specific location, and have been fully engineered during design. Examples include high-rise office buildings, hotels, hospitals, and most public buildings.

The Tri-County area includes a variety of building types. Primarily residential construction is wood framed, varying from single story to multiple story, although some masonry residential properties are present as well. As mentioned in the list above, manufactured and non-engineered wood framed structures are the most susceptible to potential damage. With these type of construction being the most prevalent for residential properties in the Tri-County area, a majority of residential structures in the area could be classified to have a high level of vulnerability to wind events.

Other types of structures that are vulnerable to damages during high wind events, and are found throughout the Tri-County area, are metal framed buildings usually associated with light industrial building uses as well as agricultural buildings. Because these structures are unoccupied for a majority of the day, the potential losses for these structures may be lower than those of residential buildings. However, the high numbers of employees present in some industrial buildings during working hours can increase the potential for losses during a tornado or high wind event. Agricultural buildings, such as barns and silos, are not typically designed to be resistant to the forces of high winds. Although the potential for human losses in these structures may be lower, the potential for high amounts of damages are significant.

Other building related factors include height, shape, and the integrity of the building envelope. Taller buildings and those with complex shapes and complicated roofs are subject to higher wind pressures than those with simple configurations. The building envelope is composed of exterior building components and cladding elements including doors and windows, exterior siding, roof coverings, and roof sheathing. Any failure or breach of the building envelope can lead to increased pressures on the interior of the structure, further damage to contents and framing, and possible collapse.

Warning Systems and Shelters

The amount of warning time citizens have to an approaching high wind event, and the availability of shelters or safe rooms, is the most crucial factor regarding potential injury or loss of life. The Tri-County area does have extensive warning systems with tornado sirens covering virtually the entire area. When possible, this system of sirens can allow the residents of the area the maximum potential warning time of an approaching high wind event.

Most structures utilized as shelters throughout the Tri-County area are churches, schools, other community buildings. These shelters are not designed to, nor are they capable of providing shelter from a tornado or severe wind event. Instead, they have primarily been utilized in a post-disaster environment, following a flood, fire, or severe storm. A small portion of homes do have basements, which can be effective in providing some protection during a tornado. However, a majority of structures do not have basements, leaving residents with limited options for where to seek shelter, regardless of the amount of warning time available.

Critical Facilities

The vulnerability of critical facilities such as police and fire stations, hospitals, shelters, and utility services varies greatly depending on the factors described in the sections above. In order to accurately assess the relative vulnerability of these structures, data regarding the vulnerability factors would be required. Generalizations based on the vulnerability factors can be made in certain instances. Due to the high level of importance to the community, the ability of these structures to resist the forces of high wind events greatly affects the community's overall vulnerability to these hazards.

Estimating Losses

Due to the varying characteristics of the potential wind events that can affect the Tri-County area, preparing a loss estimation for a particular event is not a simple task. Severe thunderstorms or straight line wind events could bring severe winds to the entire Tri-county area, while a tornado can contain winds of a much greater intensity and affect a much smaller geographic area. Even within a particularly type of event, for example a tornado, the number of structures and assets affected can vary greatly depending on the area in which the event occurs. Therefore, the most accurate estimate may be obtained by evaluating the damages from past events in the area.

Considering the variables described above, The May 10, 2004, tornado that struck Pekin, Morton, and other areas of Tazewell and Woodford County, may be used as a guide for quantifying potential damages should a tornado strike in a populated portion of the Tri-County area. Because this tornado occurred in one of the more densely populated portions of the area, and caused significant damages and loss of life, this case provides a good example of the types of impacts that can be expected should an event like this occur again. However, it should be noted that the specific characteristics can cause the amounts of damages, as well as injuries and loss of life, to vary significantly. The time at which the tornado occurs along, the specific path of the storm, and the amount of warning available to residents will all play a major role in determining the storm's impacts.

Table V-7 includes a summary of the damages from the May 10, 2003 tornado. The damages are broken down by county, and estimates have been made to reflect potential damages amounts should a similar type of event occur in Peoria County. These estimates are made strictly based on extrapolations of population and number of housing units. The actual characteristics of a potential tornado, as described above, could greatly increase or decrease these estimates.

Table V-7: Tornado Loss Estimate based on May 10, 2003, Event

Information (Source)	Item Description	Tazewell County	Woodford County	Peoria County	Subtotal
General (2000 Census)	No. of Housing Units	52,973	12,762	***78,204***	143,939
	Median Value of Housing Unit	$89,200	$102,900	***$85,900***	-
	$ Value of Housing Units	$4,725,191,600	$1,313,209,800	***$6,717,723,600***	$12,756,125,000
	Total Population	128,485	35,469	***183,433***	347,387
	% Population Distribution	37.0%	10.2%	***52.8%***	100.0%
Damages from May 4-10, 2003 Tornadoes	No. of Houses Destroyed	80	***19***	***118***	198
	No. of Houses Damaged	40	***10***	***59***	99
	No. of Deaths	11	0	***16***	27
	No. of Homes Without Power	6,447	1,553	***9,517***	17,517
FEMA IA for May 4-10, 2003 Tornadoes	No. of Applications Approved	31	7	***46***	84
	Total $ for Assistance	$291,128	$5,075	***$429,792***	$725,995
	Average $ Assistance/Application	$9,391	$680	***$13,864***	$23,935
SBA Summary for May 4-10, 2003 Tornadoes	Home Loan Applications Approved	52	4	***77***	133
	Total $ for Home Assistance	$2,667,300	$296,500	***$3,937,733***	$6,901,533
	Average $ Assistance/Application	$51,294	$74,125	***$51,294***	$176,713
	Business Loan Applications Approved	7	1	***10***	18
	Total $ for Business Assistance	$1,002,700	$32,800	***$1,431,516***	$2,467,016

Table V-7: Tornado Loss Estimate based on May 10, 2003, Event					
Information (Source)	**Item Description**	**Tazewell County**	**Woodford County**	**Peoria County**	**Subtotal**
SBA Summary for May 4-10, 2003 Tornadoes (continued)	Average $ Assistance/Application	$143,243	$32,800	***$143,243***	$319,286
	EIDL Loan Applications Approved	3	0	***4***	7
	Total $ for EIDL Assistance	$108,100	$0	***$154,330***	$262,430
	Average $ Assistance/Application	$36,033	$0	***$36,033***	$72,067
	Total Loan Applications Approved	62	5	***91***	158
	Total $ for Assistance	$3,778,100	$329,300	***$5,523,579***	$9,630,979
	Average $ Assistance/Application	$60,937	$65,860	***$60,669***	$187,466

The numbers in italics have been extrapolated from existing data from Tazewell and/or Woodford Counties, including actual damage amounts, existing number of housing units, and total population.

In addition to estimating potential losses for a particular event, potential damages due to a wind event can also be estimated based on specific characteristics of a structure and a potential wind speed. The FEMA Benefit Cost module, used for estimating the benefits of potential wind mitigation projects, contains a wind damage function based on building type, and potential wind speed. This wind damage function expresses the potential damage to a building as a percentage of the buildings replacement value, and potential damages to a building's contents as a percentage of the value of its contents. For use in this module, FEMA separates structures according to the building types described in the Vulnerability Analysis.

Using these building types, and the potential wind speeds for the Tri-County area, potential damages can be expressed in terms of a percentage of the building and content values. ASCE 7 categorizes the Central Illinois area as a 90-mph wind zone, based on a 50-year recurrence interval. Based on ASCE 7, the potential wind speed for an event with a 100-year recurrence interval was estimated to be 107% of the 50-year wind speed, or 96.3 mph. Table V-8 includes estimates of potential damage of the specific building types in the Tri-County area for the 50 and 100 year interval wind event. It should be noted that the 100-year wind speed assumed corresponds with an F1 category tornado on the Fujita scale. Damages from the impact of a tornado stronger than an F1 could greatly exceed these estimates.

Table V-8: Potential Wind Damage by Building Type				
	50-Year Event (90 mph)		100-Year Event (96.3 mph)	
Building Type	Building Damage	Contents Damage	Building Damage	Contents Damage
Light Engineered	5%	2.5%	15%	15%
Non-engineered wood	7.5%	5%	20%	20%
Non-engineered masonry	5%	2.5%	15%	15%
Fully Engineered	2.5%	2.5%	5%	15%
Manufactured	25%	40%	50%	100%

LAND SUBSIDENCE

Land subsidence is the loss of surface elevation due to a lack or loss of subsurface support. Land subsidence can include a gradual lowering of the ground surface elevation over a vast area, and sudden, localized collapses of the ground surface. Land subsidence can be caused by natural and man-made sources. In areas of karst topography, groundwater can erode limestone, dolomite and other soluble minerals to cause sinkhole formation. Land subsidence can also be generated by a controlled lowering of the groundwater table, which results in settlement. Underground mining and petroleum withdrawal can induce a lack of ground support, resulting in subsidence.

Hazard History

Historically, Illinois has been one of the largest coal-producing states in the nation (Illinois Department of Natural Resources, 2003). More than 800,000 acres of land in Illinois have been undermined by some 2,660 coal mines and 356 minerals/metals mines; currently, all but 30 coal and 10 mineral mines have been abandoned (Treworgy and Hindman, 1991). A study completed by the Illinois State Geological Survey (ISGS) in 1991 estimated that 178,000 undermined acres in the state are in residential and other built-up areas. Another 878,000 acres of undermined land are located within one mile of built-up areas.

Hazard Profile

The results of land subsidence vary. Gradual lowering of the ground surface can result in increased potential for flooding along coasts, riverbanks, and lakeshores. The sudden formation of sinkholes from either natural or man-made causes can damage or destroy homes, businesses, roads, other transportation infrastructure, and utilities. The National Research Council estimates that approximately $125 million in structural damages,

personal property losses, and depreciation of land values result each year from land subsidence. Lowering of the groundwater table accounts for over half of these losses, but mine subsidence accounts for $30 million in damages per year.

Land subsidence that has occurred in Illinois is primarily a result of mine subsidence. Two types of mine subsidence have occurred statewide – pit subsidence and sag subsidence. Pits are steep-sided holes that form over mines that are less than 180 feet deep; they range from 2 to 40 feet in diameter and 2 to 25 feet deep (Illinois Department of Natural Resources, 2003). Pits generally do not cause structural damage to houses, and other damages can be minimized or avoided if the pit is backfilled promptly. Sags are large, relatively shallow depressions that form at the ground surface as the result of failures within underground room and pillar mines. They can range from 350 to 450 feet in diameter and about 3 feet deep at the center. Sags can take 3 to 5 years to fully develop.

The susceptibility of land to mine subsidence depends in a large part on the type of mining that was practiced in an area. In longwall mining, all of the coal was removed from sections of a mine, so that ground subsidence occurred almost immediately after mining. Room and pillar mining left columns or pillars of coal in place to support the overburden. Over time, these pillars can weaken and fail, causing ground subsidence, generally of the sag type.

Predictability

The exact time that land subsidence will occur cannot be predicted; it can occur suddenly without warning or over an extended period of several years. However, some factors that can cause a decrease in strength are wet conditions, vibrations, and increased surface loading. Land subsidence that occurs as a result of a drawdown of the groundwater table is likely to take place over a number of years. Procedures for predicting the occurrence of land subsidence have not yet been developed.

Frequency

The frequency of land subsidence cannot be predicted; it can occur at any time. Procedures for determining frequency of land subsidence have not yet been developed.

Hazard Areas

In 1991, the ISGS completed a study, “The Proximity of Underground Mines to Residential and Other Built-up Areas in Illinois.” This study calculated the acreage of residential, urban (commercial, industrial, and mixed), urban buffer, and nonurban land undermined in Illinois. The study also estimated the number of housing units close to underground mines. The four areas were defined according to USGS data sets – “residential” is a residential area of 10 or more acres; “urban” is industrial, commercial,

industrial and commercial, mixed urban, transportation, and other urban; "urban buffer" is a one-mile wide zone surrounding residential and urban lands; and "nonurban" is all other land, including farmland, forests, and pastures.

The study established two zones. Zone 1 was based on the mapped locations and extents of underground mines, and included the land that was directly over or adjacent to these mines. Zone 1 boundaries extend 500 feet beyond the mine boundaries to account for lateral propagation of subsidence. Zone 2 represents additional land that could be undermined but where the exact extents of the mine boundaries were unknown. Zone 2 generally extends 1,000 feet beyond Zone 1 for coal mines, but the exact extent of Zone 2 varies based on the type of mine and available information about the mine boundary locations.

Because the study was published in 1991, 1980 census tract data was used. The data should be adjusted to reflect growth and population trends that have occurred during the past 23 years. While the boundaries of the residential, urban, urban buffer, and nonurban areas may have shifted somewhat, the total number of acres represented in the study remains accurate, and the study provides a reasonable estimate of undermined land areas and their uses.

Peoria County

The results of the 1991 ISGS study indicate that Peoria County ranked 13th in the State in total number of acres located in Zone 1 undermined areas and 10th in the State in number of housing units located in Zone 1 undermined areas. The study calculated that 2,084 residential acres, 1,283 urban acres, 17,975 urban buffer acres, and 27,824 nonurban acres containing approximately 5,896 housing units are located in Zone 1 and are susceptible to mine subsidence. These numbers represent 8 percent of the land in Peoria County, with 12% of urban buffer land being located in Zone 1. This suggests that as the urban and residential areas in Peoria County expand, there could be an increased risk of exposure to damage from mine subsidence (Treworgy and Hindman, 1991). An additional 1,064 residential acres, 856 urban acres, 11,875 urban buffer acres, and 22,651 nonurban acres containing 3,601 housing units are located in Zone 2 and could be susceptible to mine subsidence.

Of approximately 234 mines located in Peoria County, only one practiced longwall mining, the rest of the mines were room and pillar. Consequently, it is unknown if the majority of mines that existed in Peoria County have already subsided or if future subsidence could occur. Areas of abandoned mines, which are therefore subject to subsidence, are shown on Figure V-1.

City of Peoria

The study completed by ISGS primarily evaluated data by County. However, the study does state that less than one percent of the City of Peoria is located in Zone 1. Three townships located immediately west and south of the City (West Peoria, Limestone, and Hollis) have 32 percent of urban buffer land in Zone 1. Areas of abandoned mines, which are therefore subject to subsidence, are shown on Figure V-1.

City of Pekin

The ISGS study concentrated on defining data according to counties, and so the City of Pekin was not specifically analyzed. HAZUS maps of Tazewell County show that the eastern portion of the City is undermined by the Grant, Schaefer, and Pekin mines, which were shaft mines in operation between 1915 and 1953. The southeastern portion of the City is undermined by the Grant and Ubben mines (shaft mines, 1891-1938); the Alexander, Hope and Grant mines (shaft mines, 1869-1892); and Chapman and Petrie, Champion, Johnston City-Big Muddy, Pekin, and Regal mines (shaft, 1905-1925). As the City expands, eastward expansion could result in additional residential and urban construction over undermined lands. Areas of abandoned mines, which are therefore subject to subsidence, are shown on Figure V-12.

Tazewell County

The results of the 1991 ISGS study indicate that Tazewell County was ranked 12th in the State in the number of housing units located in Zone 1. At the time the study was completed, it had 1,795 residential acres, 598 urban acres, 3,696 urban buffer acres, and 6,182 nonurban acres containing approximately 5,125 housing units in Zone 1 that are susceptible to mine subsidence. These numbers represent approximately 1.5 percent of the land in Tazewell County. Almost 12 percent of the residential acres in the County are located in Zone 1. Only about 2.5 percent of urban buffer land is located in Zone 1, so urban expansion is not likely to dramatically increase susceptibility to risk from mine subsidence. An additional 934 residential acres, 461 urban acres, 2,001 urban buffer acres, and 2,137 nonurban acres containing 2,905 housing units are located in Zone 2 and could be susceptible to mine subsidence.

A directory of mines for Tazewell County lists 47 mines at 16 different ISGS index locations. Thirteen of the 47 mines were slope mines, the rest were shaft mines. The records indicate that all of the mines in the County were rock and pillar mines. Therefore, it is unknown if the land overlying these mines has already undergone subsidence or if subsidence could occur at any of these locations in the future. Areas of abandoned mines, which are therefore subject to subsidence, are shown on Figure V-12.

Woodford County

The results of the 1991 ISGS study indicate that Woodford County had 190 residential acres, 287 urban acres, 1,988 urban buffer acres, and 2,055 nonurban acres containing approximately 617 housing units in Zone 1 that are susceptible to mine subsidence. These numbers represent approximately 0.7 percent of the land in Woodford County. Almost 11 percent of the urban acres in the County are located in Zone 1. Only about 2.2 percent of urban buffer land is located in Zone 1, so urban expansion is not likely to dramatically increase susceptibility to risk from mine subsidence. An additional 84 residential acres, 83 urban acres, 1,069 urban buffer acres, and 1,306 nonurban acres containing 226 housing units are located in Zone 2 and could be susceptible to mine subsidence.

Woodford County has five mines, only two of which are significant. One of these significant mines is located in Minonk Township, and the other in Roanoke Township. The longwall method was used in the Minonk mine, so it is expected that subsidence at this location has already occurred and that future subsidence should not be of concern (Woodford County Regional Planning Commission, 1996). Both longwall and room and pillar methods were used in the Roanoke mine. Mine maps do not indicate which method was used at exact locations. Therefore, the potential for mine subsidence still exists at the Roanoke mine location. Areas of abandoned mines, which are therefore subject to subsidence, are shown on Figure V-2.

Vulnerability Analysis

According to a National Research Council study completed in 1991, the State of Illinois had experienced cumulative subsidence damages totaling between $1 million and $10 million. The State also had $1 million to $10 million of damages due to drainage or organic soils. The State had an additional $0 to $1 million in damages resulting from sinkhole formations. No damages have been attributed to underground fluid withdrawal or hydrocompaction.

The potential impacts of land subsidence depend on the type of subsidence that occurs (regional or localized, gradual or sudden) and the location that the subsidence occurs. The impacts of subsidence occurring in nonurban areas are likely to be less damaging than subsidence that occurs in heavily populated locations. The amount of structural damage depends on the type of construction, the structure location and orientation with respect to the subsidence location, and the characteristics of the subsidence event (sag or pit).

Illinois State laws require insurance companies to provide mine subsidence insurance to property owners (Illinois Department of Natural Resources, 2003). The Illinois Mine Subsidence Fund (IMSF) provides reinsurance to insurance companies who offer mine subsidence coverage on permanent structures.

Potential impacts from land subsidence could include damage to residential, commercial, and industrial structures; damage to underground and above-ground utilities; damage to transportation infrastructure, including roads, bridges, and railroad tracks; as well as damage or loss of crops. The extent and value of the potential damage cannot be assessed because the nature of the damage is site- and event-specific.

Secondary effects of mine subsidence include inaccessible areas due to damaged/impassable roads; disruption in utility service; potential for explosion from ruptured gas lines; potential for localized flooding from decreases in elevation and ruptured water lines; and loss of revenue from closed businesses and delayed freight trains.

A list of critical facilities excluding road bridges that are located in or near undermined areas and landslide areas in the Tri-County area is included in Appendix H. Maps of the undermined areas, as well as facility locations, are included in Figures V-1, V-2 and V-12.

Peoria County

Based on the results of the 1991 ISGS mine subsidence study, the County of Peoria has approximately 15.3 percent of residential acres, 13.5 percent of urban acres, 20.0 percent of buffer acres, and 14.1 percent of nonurban acres in Zones 1 and 2. This data suggests that as urban areas in the County expand into the buffer zones, additional residential and urban developments will be located over undermined lands. This expansion will increase the susceptibility to damages from a mine subsidence event.

City of Peoria

As discussed previously, approximately one percent of the land in the City is located in Zone 1, but approximately 32 percent of urban buffer land in townships immediately west and south of the City are in Zone 1. As the City grows, westward and southward expansion toward these townships could increase the amount of undermined land that the City occupies. These newly developed areas would be at increased risk to damage from mine subsidence.

City of Pekin

Specific data was not available for the amount of undermined land that is located within City limits. However, mine maps indicate that expansion of the City eastward could result in newly developed areas being located on undermined land. These areas would have increased risk to mine subsidence.

Tazewell County

Based on the results of the 1991 ISGS mine subsidence study, the County of Tazewell has approximately 17.8 percent of residential acres, 10.9 percent of urban acres, 3.8 percent of buffer acres, and 1.5 percent of nonurban acres in Zones 1 and 2. While a relatively large proportion of residential and urban areas are susceptible to damage from mine subsidence, the data for buffer areas suggests that urban expansion will not greatly increase the susceptibility of newly developed areas.

Woodford County

The area in Woodford County that is most susceptible to damage from mine subsidence is the Township of Roanoke. This area has a significant mine that was mined using both longwall and room and pillar methods. Because available mine maps do not distinguish between where the longwall or room and pillar methods were used, the whole undermine area should be considered to have a potential to undergo mine subsidence.

Based on the results of the 1991 ISGS mine subsidence study, the County of Woodford has approximately 6.7 percent of acres, 13.8 percent of urban acres, 3.5 percent of buffer acres, and 1.0 percent of nonurban acres in Zones 1 and 2. The data for buffer areas suggests that urban expansion will not greatly increase the susceptibility of newly developed areas.

Estimated Losses

Loss estimates could not be calculated for land subsidence events due to a lack of detailed and accurate information regarding structures and assets located in the previously determined hazard areas. In addition, due to the extremely localized and site specific nature of typical subsidence events, any inventory of potential at risk structures may grossly over-estimate potential losses.

WINTER STORMS

Severe winter storms and blizzards are extratropical cyclones that originate as mid-latitude depressions (FEMA, 1997). Snowstorms, blizzards, and ice storms are the most common examples. These storms can bring heavy snowfall, typically six inches or more, high winds, ice, and extreme cold with them. In the Midwest, winter storms are caused by cold fronts from Canada and the Arctic pushing ice and snow down into the region. The cold, arctic air meets with warm, tropical air; the greater the temperature gradient, the greater the chance of a winter storm occurring.

Hazard History

During the 20th Century, Illinois did not have a year without at least one severe winter storm (Illinois Emergency Management Agency, 2002). Three of the most severe

winters in Illinois during the 20th Century occurred after 1976 (Hilberg and Angel, 1999). The worst winter of the Century occurred in 1977-78, followed in severity by the winters of 1981-82 and 1978-79. These three winters combined saw 53 severe winter storms.

An ice storm that hit the state on March 24, 1978 coated a 90-mile-wide belt of central Illinois with ½ to 2 inches of ice. Over one million people were without power for at least 24 hours. Over 1,000 auto accidents occurred. Tree losses were estimated at over $20 Million. Twenty-four counties in Illinois were declared disaster areas. The Tri-County area was hit by one inch of freezing rain during this storm.

The most damaging storm of the winter of 1981-82 occurred on January 29-31, 1982. On these dates, between 10 and 20 inches of snow fell from the southwestern portion to the east-central portion of the state. The storm resulted in 10 deaths. Just 10 days after this storm, these same areas were hit by another snowstorm that brought an additional 5 to 15 inches of snow, causing the Governor of Illinois to declare 15 counties in Illinois a disaster area. The Tri-County area was not as heavily impacted by these storms as the southern portion of the state: only 1 to 4 inches of snow fell in the Tri-County area.

The National Weather Service station at the Greater Peoria Regional Airport serves the Tri-County area. Table V-9 summarizes monthly snowfall data for the Tri-County area based on weather data collected since 1884.

Table V-9: Monthly Snowfall Reported at Greater Peoria Regional Airport

	Average Total Snowfall	Monthly Snowfall Record	
Month	**(in.)**	**(in.)**	**(year)**
January	7.8	24.7	1979
February	5.8	26.5	1900
March	4.2	18.2	1926
April	1.3	13.4	1982
May	0	0.1	1923, 1966
June	0	0	
July	0	0	
August	0	0	
September	0	1.0	1942
October	Trace	3.3	1929
November	2.5	10.7	1926
December	7.1	21.7	1889, 1890
Total	**28.7**		

Since 1926, the Tri-County region has experienced 10 years when the amount of snowfall exceeded 32 inches during the winter months.

The greatest single storm snowfalls recorded at the Peoria weather station are summarized in the following table.

Table V-10: Single Storm Snowfall Totals

Date	Snowfall (in.)
February 28-29, 1900	18.0
January 16, 1911	9.9
January 6, 1918	8.5
January 12-13, 1927	14.4
February 7, 1933	8.4
March 8, 1946	9.0
January 26, 1967	9.8
December 18, 1973	10.2
December 31, 1978	9.0
January 13, 1979	12.2

In January 1979, 490 miles of streets in the City of Peoria were closed after a severe winter storm. During this time, Interstate 74 was closed for the first time on record. Schools were closed for days due to blowing and drifting snow (City of Peoria, 1983). Four-hundred people in the City of Peoria were housed in storm shelters. The City was declared a disaster area on January 17, 1979.

The winter of 2000-2001 was a cold one for the Tri-County area. The temperatures combined with skyrocketing natural gas costs to affect residents' pocketbooks. The average household experienced a 240 percent increase in heating costs during this winter (Peoria Journal Star, 2001).

At the end of January and beginning of February 2002, 9,500 residents of the City of Pekin and 36,178 Tazewell County power customers were without electricity after a winter storm (Edwards, 2001). As a result, the Salvation Army opened a shelter where residents without heat could go until their power was restored. The weekend of February 17, 2003, Tazewell County citizens were hit by severe winter weather. This storm resulted in many cars having to be pulled out of snowbanks, 15 automobile accidents, and road crews working overtime to plow and sand streets and highways.

A full table of all reported winter storm events in the Tri-County is included in Appendix D.

Hazard Profile

Winter storms in Illinois produce more total damage than any other form of short-term severe weather, including tornadoes, lighting and hail (Hilberg and Angel, 1999). On average, Illinois experiences five winter storms each year, primarily between the months of November and April. Winter storms most often hit Illinois during the month of January, although December, February and March are also common months for snowstorms. Most of the snowstorms that hit Illinois develop east of the Rocky Mountains in Colorado. Two other common places of winter storm origin for Illinois are Alberta, Canada and the Texas Gulf Coast. The storms usually cross the state from the southwest to the northeast, with the majority of precipitation on the leading eastern edge of the storm.

People's health can also be adversely affected by severe winter weather. People who lose heat in their homes and do not seek alternate shelter, people who get stuck in snowdrifts while driving, and people working and playing outdoors can suffer from hypothermia and frostbite.

Hazard Areas

Due to the random nature of severe winter storms it is not possible to characterize identifiable hazard areas. However, given the location of the Tri-County area in the continental United States, and its relatively small size when considering regional weather patterns, the entire planning area is at equal risk of being impacted by a winter storm.

Vulnerability Analysis

Winter storms can disrupt lives for periods of hours to days, depending on the severity of the storm. Transportation systems are usually one of the first and hardest hit sectors of a community. Snow and ice can block primary and secondary roads, causing them to be closed. Treacherous conditions make driving difficult; some motorists may be stranded during a storm. Buses can be delayed due to road conditions, airline flights can be delayed or canceled, and airports may close, and trains may also be delayed or canceled if tracks are not able to be cleared. In addition, rivers may begin to freeze, rendering commercial waterways impassable.

Utilities infrastructure can also be adversely affected by winter storms. Heavy snow and ice can cause power lines to snap, leaving citizens without power and, in some cases, heat for hours or even days. Likewise, telephone lines can also snap, disabling one form of communication within portions of a community. Frozen water pipes can rupture in people's homes, and water and sewer mains can also freeze and leak or rupture if not properly maintained. These ruptures can lead to flooding and property damage.

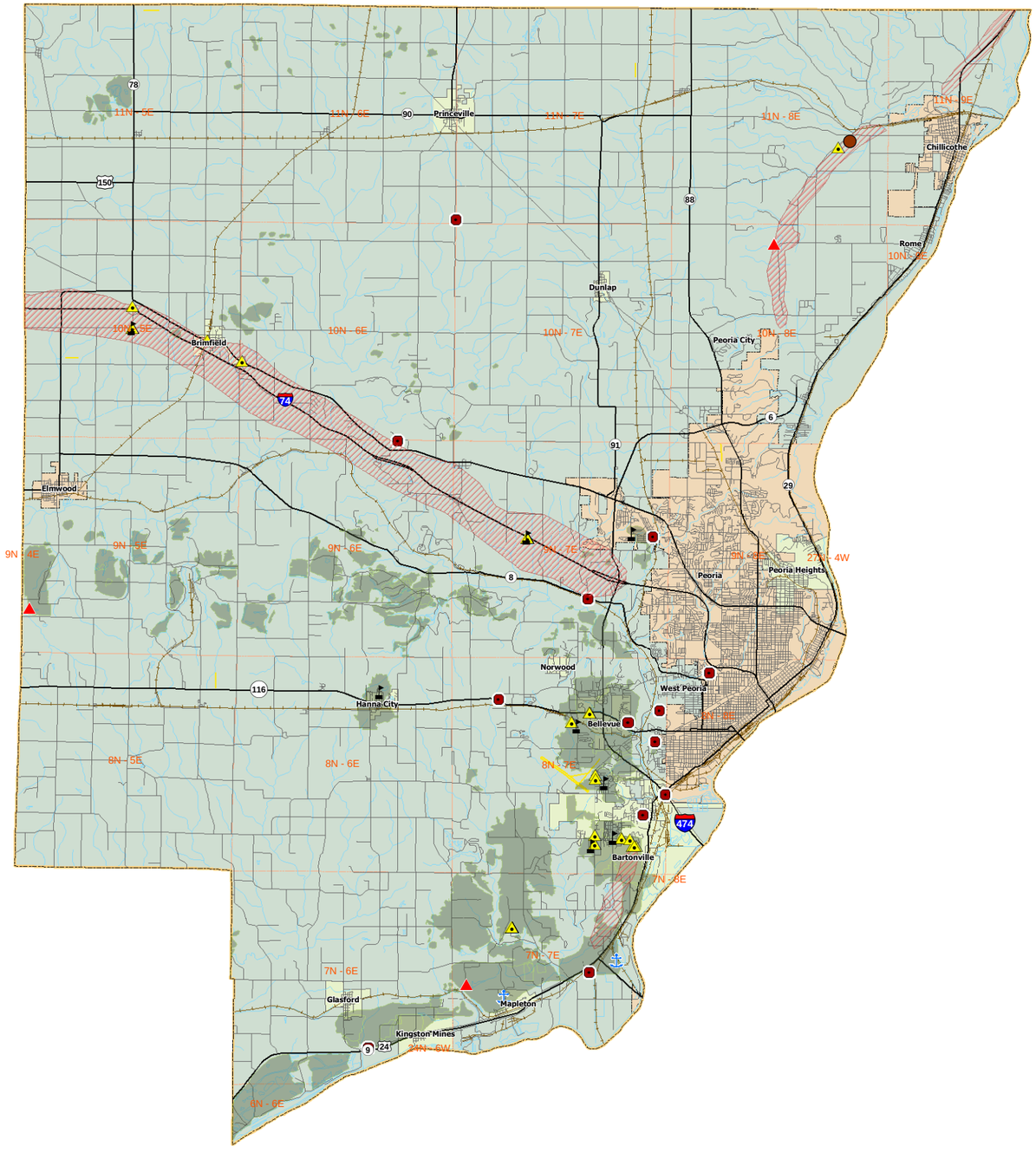
The thaw that occurs after a severe winter storm can result in flooding in some communities located along waterways and communities with low base floodplain elevations. The spring thaw, and its effects on the Illinois River and tributaries, is also a primary concern for the Tri-County area (City of Peoria, 1983).

Secondary effects of winter storms are broad. Treacherous driving conditions can result in automobile accidents in which passengers may be injured and property damage occurs. Emergency responders such as police and fire departments and ambulances may be delayed responding to emergencies because of poor road conditions. Deliveries of heating fuel can be delayed by impassible roads. Business airline travelers may be stranded at airports, resulting in increased costs for accommodations and missed meetings. Impassable roads can also result in schools being closed because buses are not able to access their routes and bring children to school. The costs of salting and sanding roads and runways and of snow removal can be staggering to communities both large and small. The costs to repair roads after spring thaws can also be high.

Estimated Losses

Relative to other hazards discussed, winter storms typically do not cause the same type of quantifiable damages. Economic impacts from a winter storm can affect all sectors of the economy. Because of the diverse types of damages associated with a winter storm, a quantifiable loss estimate is beyond the scope of this analysis.

Peoria County, IL - Land Subsidence and Landslides



N
W E
S

Legend

- Schools
- Port - Docking
- HAZMAT Sites
- Dams
- Airports
- Landslide Location
- Landslide Areas

Coal Mining Area Status

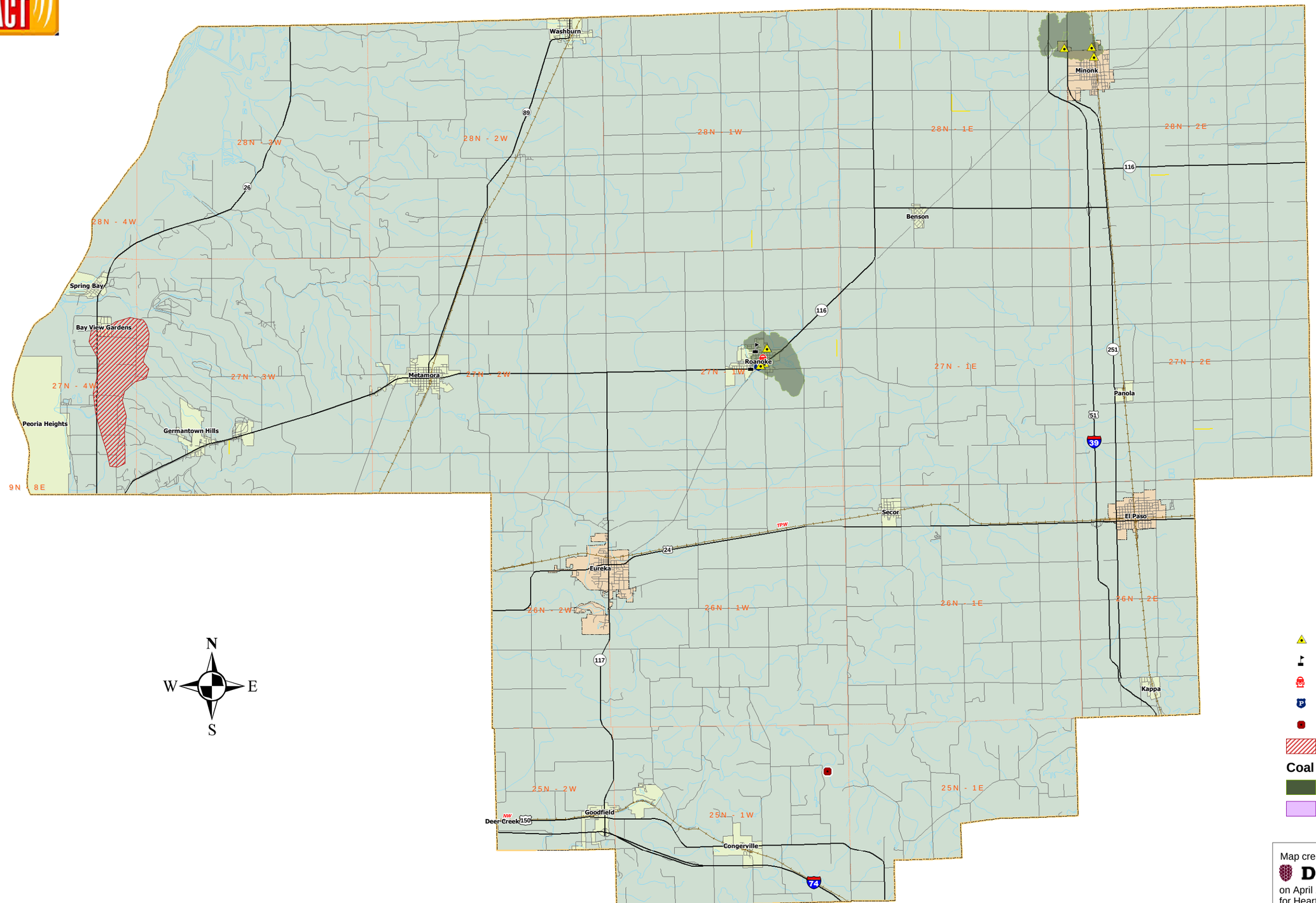
- Inactive Mines
- Active Mines

Map created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: movement_peoria.mxd

Figure V-1

Woodford County, IL Land Subsidence and Landslides

Heart of Illinois PROJECT IMPACT



Legend

- Hazmat Sites
- Schools
- Fire
- Police
- Landslide Location
- Landslide Areas

Coal Mining Area Status

- Inactive Mines
- Active Mines

Map created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: movement_woodford.mxd

Figure V-2

Q3 Flood Data & HAZUS Critical Facilities Peoria County, IL

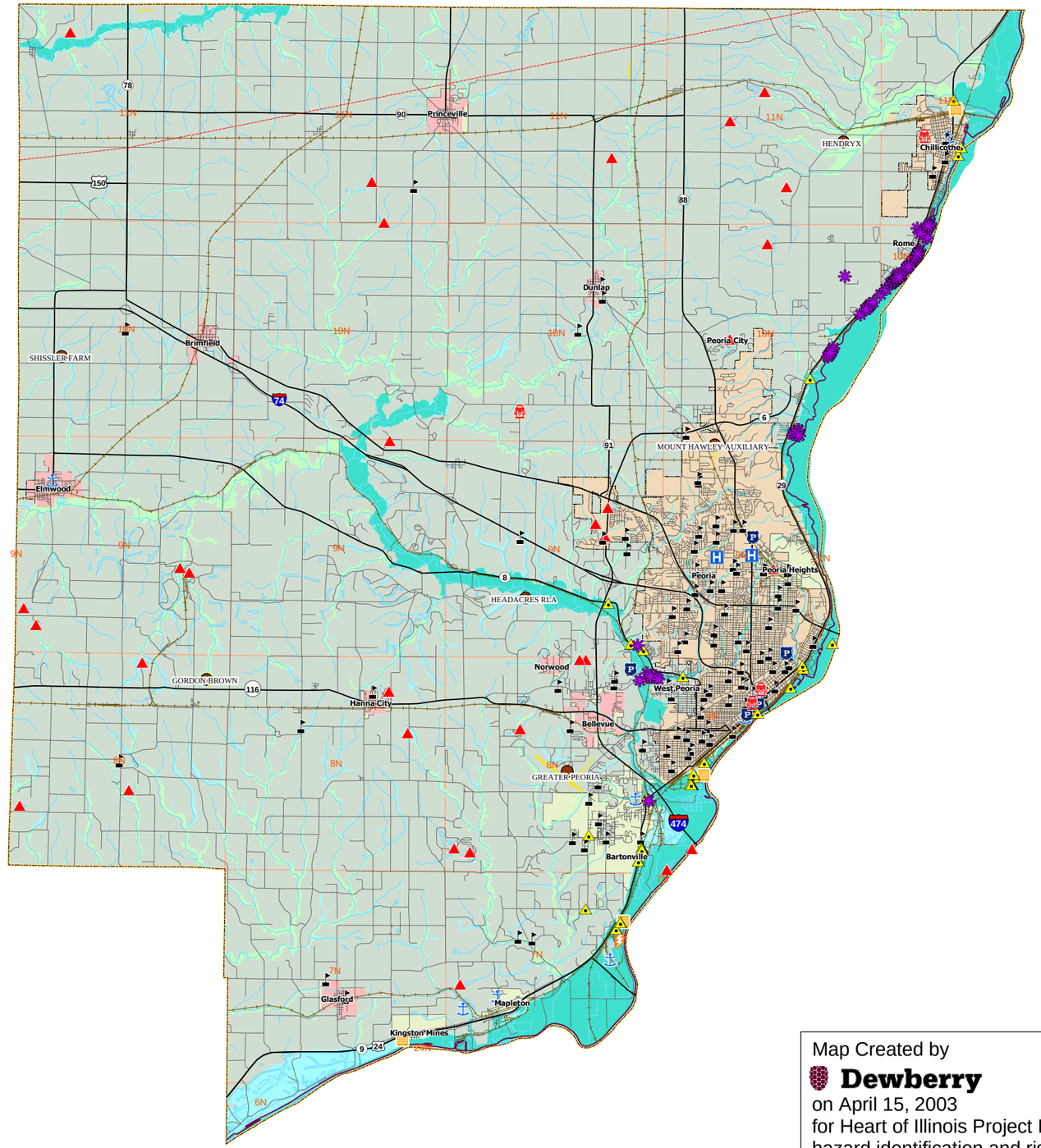
Legend

- HAZMAT Site In 100-Year Floodplain
- Repetitive Loss Properties
- Fire
- Police
- Schools
- Water and Sewage
- Oil Facilities - Tank Farm
- Port - Docking
- Hospitals
- Electric Facilities
- Dams
- Airports
- Electric High Voltage Line
- Railroads
- Airports
- Major Roads
- Minor Roads
- Stream
- Shoreline
- Township Boundary
- City Boundary
- Village Boundary

Q3 Flood Data

- Floodway
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Area Not Included
- Zone X500

N W E S



Heart of Illinois PROJECT IMPACT

Map Created by
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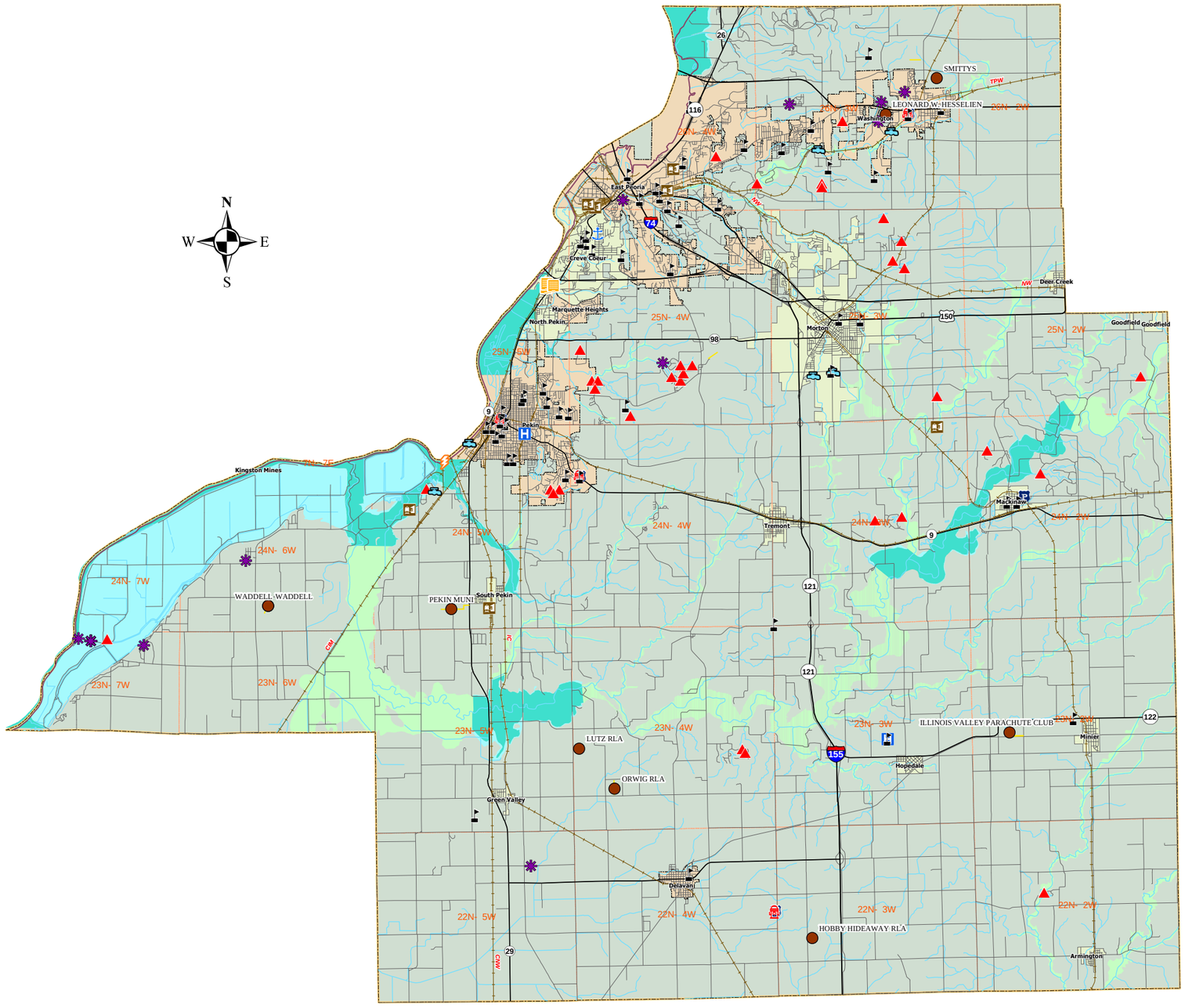
on April 15, 2003
for Heart of Illinois Project Impact hazard identification and risk analysis
filename: flood_hazus_peoria_co.mxd

Figure V-3

FIRM Flood Data & HAZUS Critical Facilities Tazewell County, IL



Legend

- Repetitive Loss Properties
- Schools
- Port - Docking
- Oil Facilities - Tank Farm
- Water and Sewage
- Electric Facilities
- Fire
- Police
- Dams
- Airports
- Rail Stations
- Hospitals
- Railroads
- Airports
- Major Roads
- Roads
- Streams
- Shoreline

FIRM Flooding

- Floodway
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Area Not Included
- Zone X500
- Township Boundary
- City Boundary
- Village Boundary

Map Created by

Dewberry

on April 15, 2003
for Heart of Illinois Project Impact hazard identification and risk analysis
filename: flood_hazus_tazewell.mxd

Figure V-4

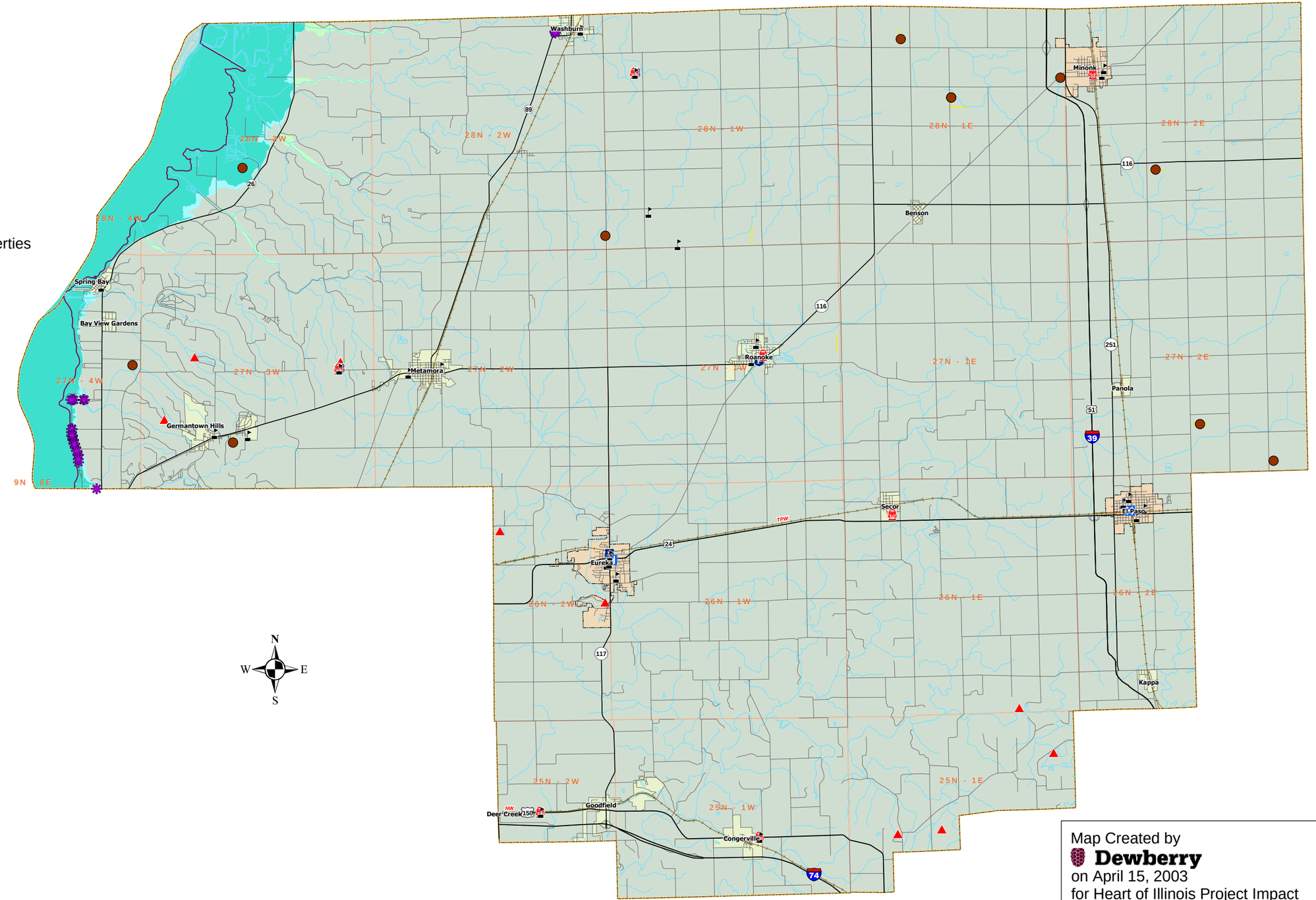
FIRM Flood Data & HAZUS Critical Facilities Woodford County, IL

Legend

- Repetitive Loss Properties
- Airports
- Schools
- Hospitals
- Fire
- Police
- Dams
- Railroads
- Airports
- Major Roads
- Minor Roads
- Stream
- Shoreline
- Township Boundary
- City Boundary
- Village Boundary

FIRM Flood Data

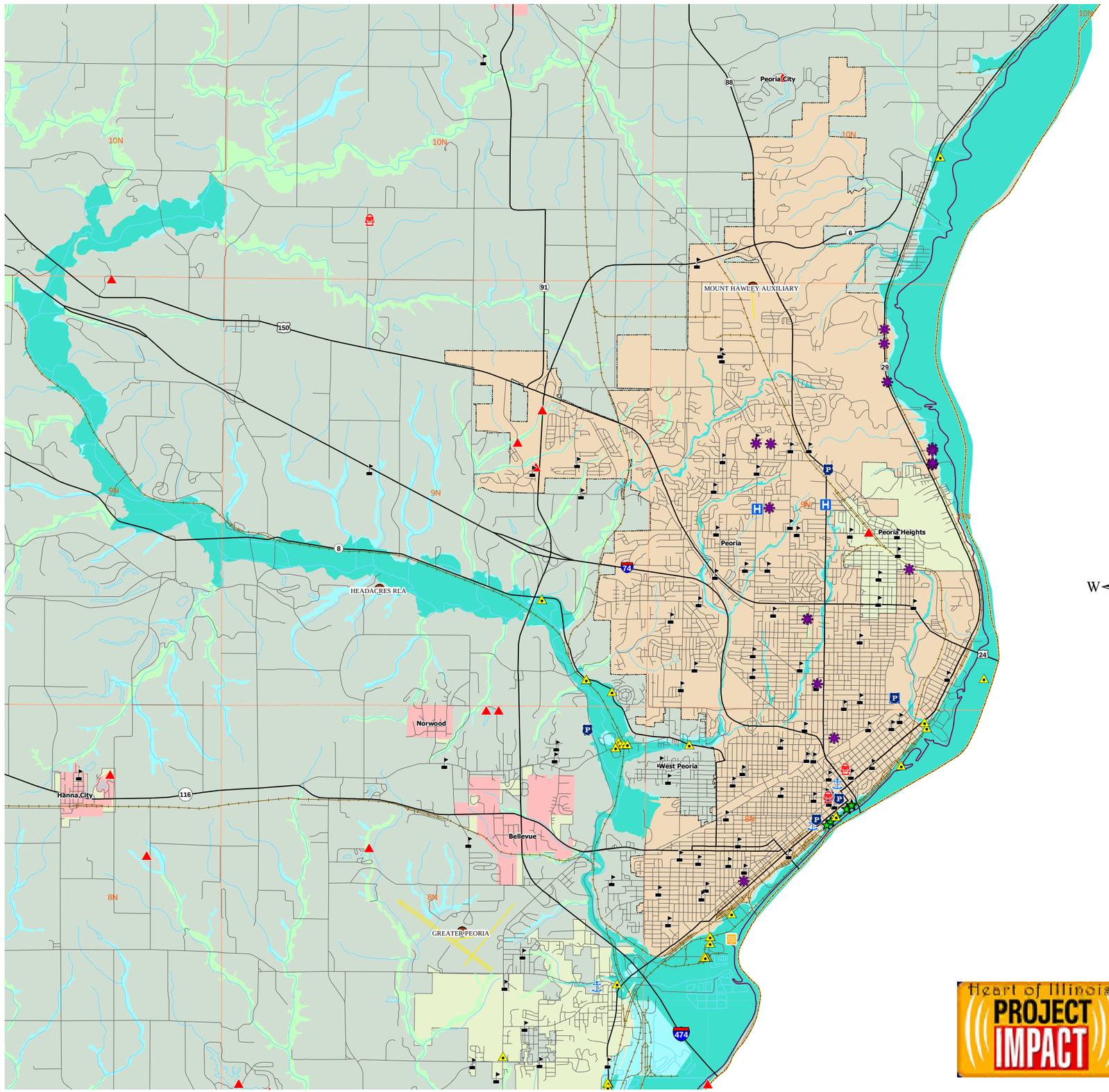
- Floodway
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Area Not Included
- Zone X500



Heart of Illinois PROJECT IMPACT

Map Created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: flood_hazus_woodford.mxd
Figure V-5

Q3 Flood Data & HAZUS Critical Facilities City of Peoria Peoria County, IL



N
W E
S

Legend

- Hazmat Sites in 100-Year Floodplain
- Repetitive Loss Properties
- City Owned Facilities
- Fire
- Police
- Schools
- Oil Facilities - Tank Farm
- Port - Docking
- Hospitals
- Electric Facilities
- Dams
- Airports
- Electric High Voltage Line
- Railroads
- Airports
- Major Roads
- Minor Roads
- Stream
- Shoreline
- Township Boundary
- City Boundary
- Village Boundary

Q3 Flood Data

- Floodway
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Area Not Included
- Zone X500

Heart of Illinois PROJECT IMPACT

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for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: flood_hazus_peoria_city.mxd

Figure V-6

FIRM Flood Data & HAZUS Critical Facilities City of Pekin Tazewell County, IL

Legend

- HAZMAT Sites In 100-Year Floodplain
- Repetitive Loss Properties
- Schools
- Port - Docking
- Oil Facilities - Tank Farm
- Water and Sewage
- Electric Facilities
- Fire
- Police
- Dams
- Rail Stations
- Hospitals
- Railroads
- Airports
- Major Roads
- Minor Roads
- Stream
- Shoreline
- Township Boundary
- City Boundary
- Village Boundary

FIRM Flood Data

- Floodway
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Area Not Included
- Zone X500

N W E S

Pekin

25N- 5W
25N- 4W
24N- 5W
24N- 4W
24N- 6W

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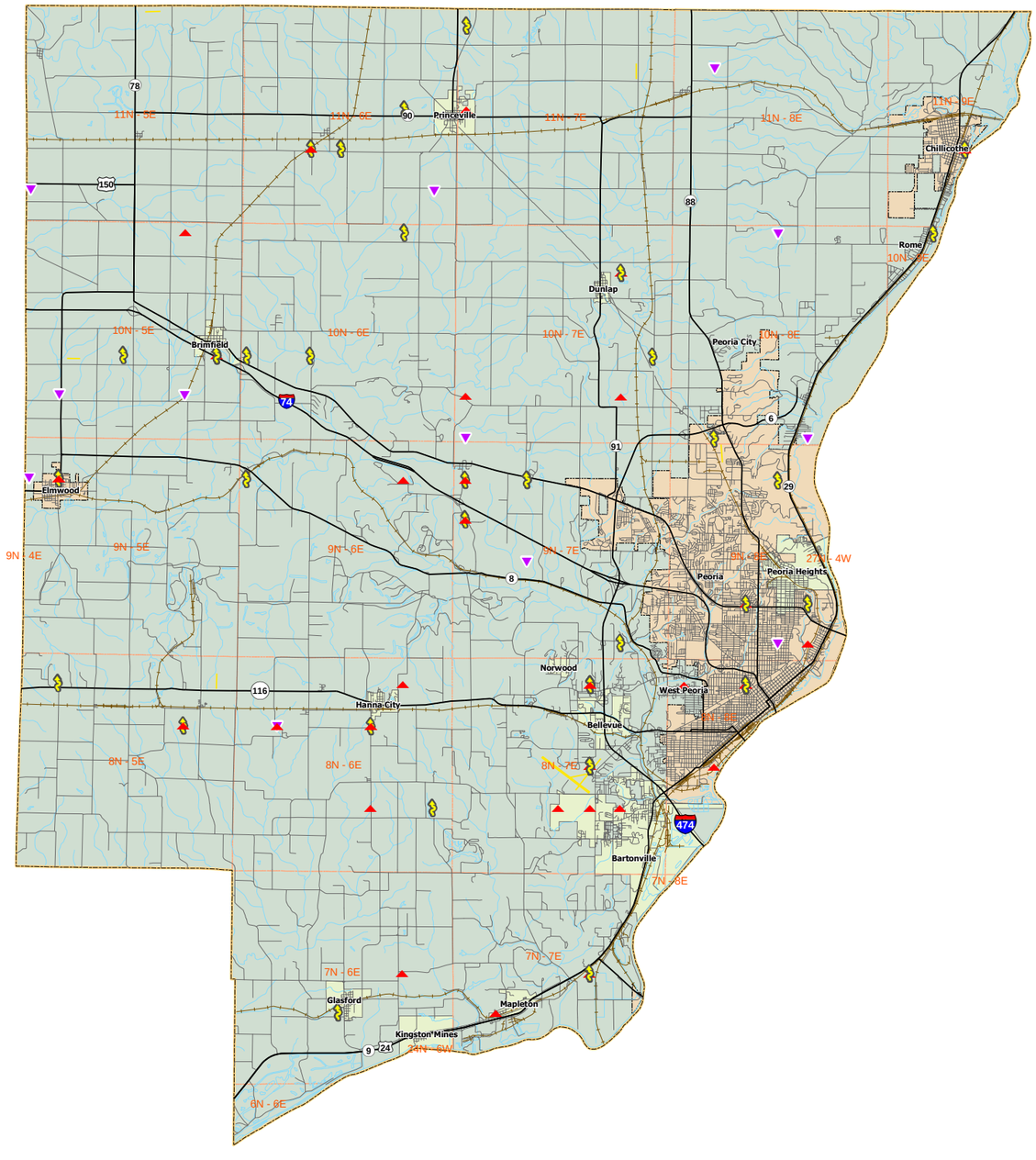
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: flood_hazus_pekin.mxd
Figure V-7

Peoria County, IL Historic Wind Events



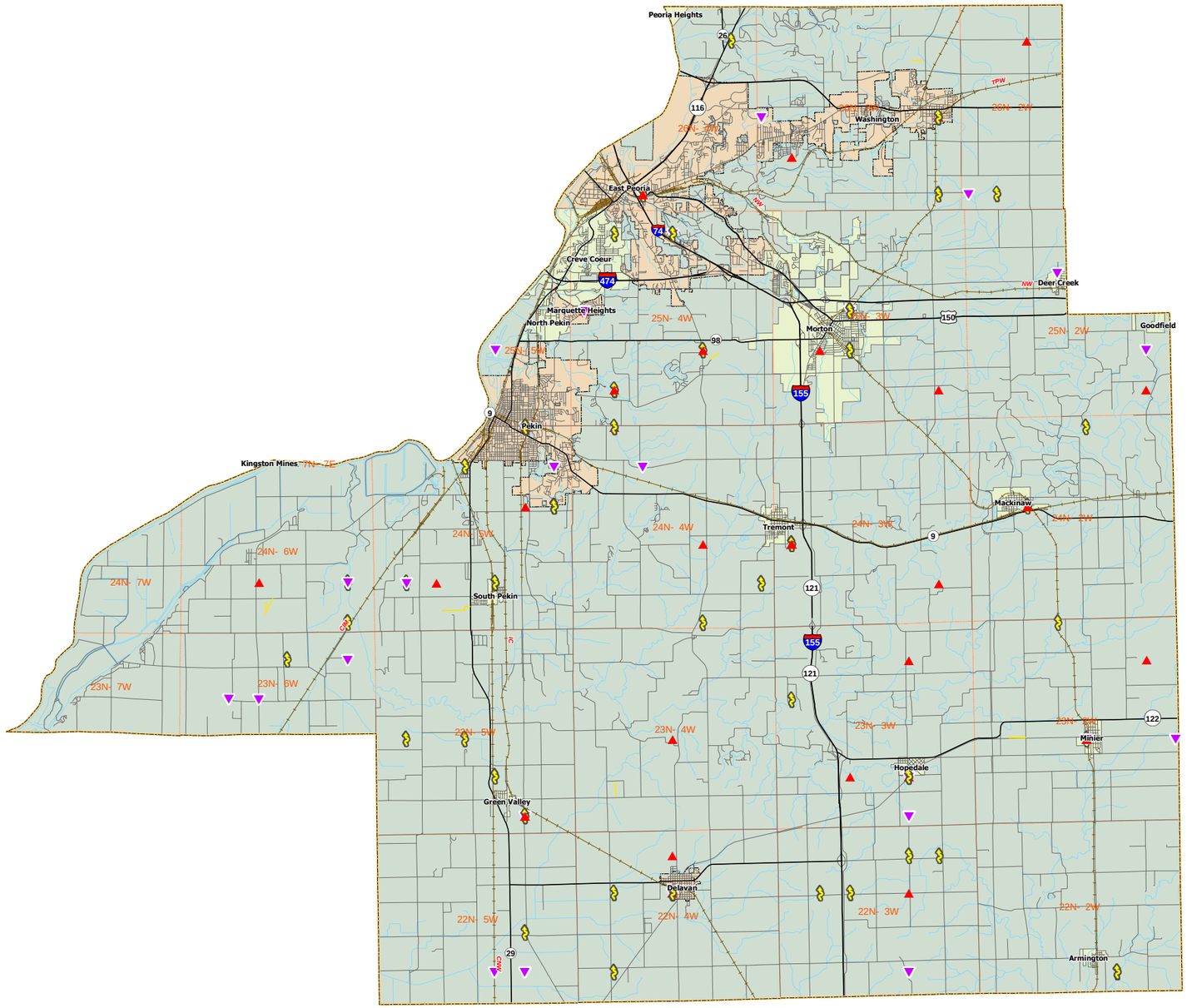
Legend

- HAIL
- TORNADO
- TSTM WIND

Map created by **Dewberry**
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: ncdc_peoria.mxd

Figure V-8

Tazewell County, IL Historic Wind Events



Legend

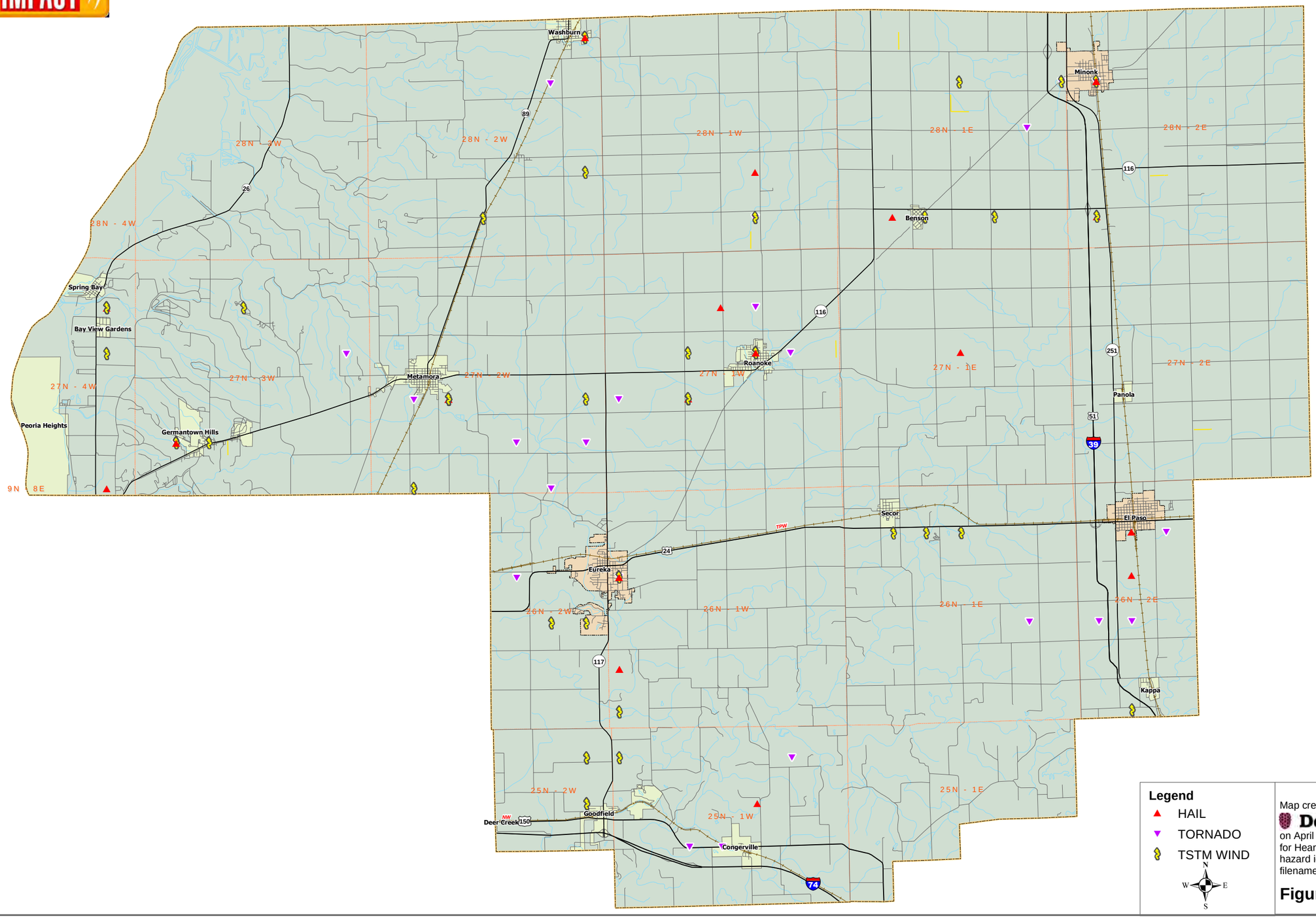
- HAIL
- TORNADO
- TSTM WIND

Map created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: ncdc_tazewell.mxd

Figure V-9

Heart of Illinois PROJECT IMPACT

Woodford County, IL Historic Wind Events



Legend

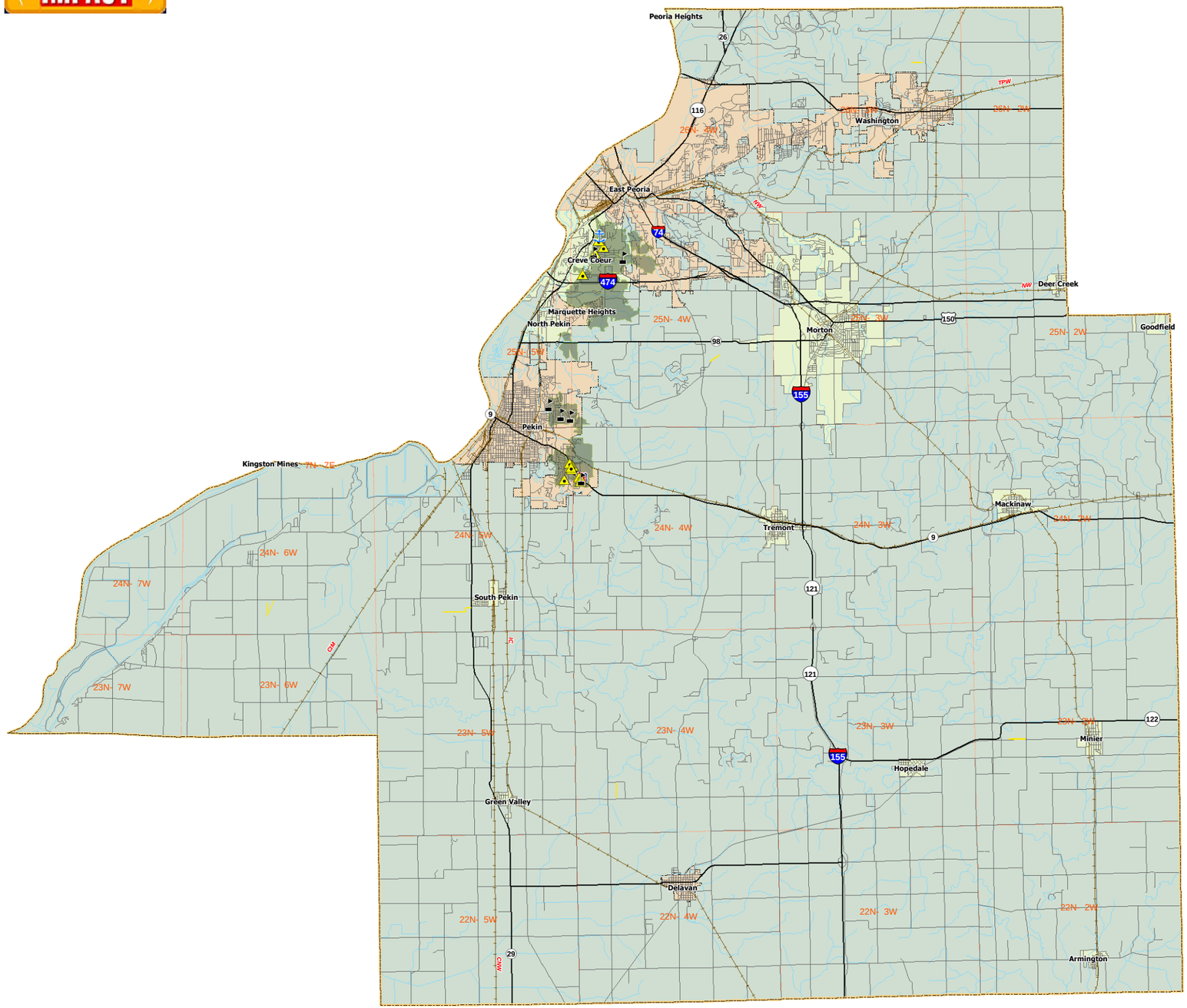
- HAIL
- TORNADO
- TSTM WIND

N W E S

Map created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: ncdc_woodford.mxd

Figure V-10

Tazewell County, IL Land Subsidence



N
W E
S

Legend

- Schools
- Port - Docking
- HAZMAT Sites
- Fire
- Police
- Landslide Areas
- Landslide Location

Coal Mining Area Status

- Inactive Mines
- Active Mines

Map created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: movement_tazewell.mxd

Figure V-12

SECTION VI — CAPABILITY ASSESSMENT

Introduction

This portion of the Plan assesses the Tri-County area's current capacity to mitigate the effects of the natural hazards identified in Section IV, the Hazard Identification and Risk Assessment. This assessment includes a comprehensive examination of the following local government capabilities:

1. ***Staff and Organizational Capability,***
2. ***Technical Capability,***
3. ***Fiscal Capability,***
4. ***Policy and Program Capability.***
5. ***Legal Authority. and***
6. ***Political Willpower.***

The capabilities assessment was conducted to identify potential hazard mitigation opportunities available to the Tri-County area local governments including the cities of Peoria and Pekin and the counties of Peoria, Tazewell and Woodford. Careful analysis should detect any existing gaps, shortfalls, or weaknesses within existing governmental activities that could exacerbate a community's vulnerability. The assessment will also highlight the positive measures already in place or being done at the city or county level, which should continue to be supported and enhanced, if possible, through future mitigation efforts.

The capabilities assessment serves as the foundation for designing an effective hazard mitigation strategy. It not only helps establish the goals and objectives for the Tri-County area to pursue under this Plan, but assures that those goals and objectives are realistically achievable under given local conditions.

Local Government Capabilities

1. Staff and Organizational Capability**:** This section includes information about the Boards of County Commissioners, City Councils, County Managers, City Managers, Departments, Elected Boards, Appointed Boards, and Committees.

2. Technical Capability
    a. Technical Expertise
    b. Geographic Information Systems (GIS)
    c. Internet Access
3. Fiscal Capability: Annual community budgets and to what they are primarily dedicated
4. Policies and Program Capability
    a. Recent Hazard Mitigation Efforts
    b. CRS Activities
    c. Emergency Operations Plans
    d. Floodplain Management Plans
    e. Stormwater Management Plans
    f. Comprehensive Plans
    g. Ordinances
    h. Open Space Plans
    i. Watershed Protection Plans
5. Legal Authority
    a. Regulations
        1) General Police Powers
        2) Building Codes and Building Inspection
    b. Land Use
        1) Planning
        2) Zoning
        3) Subdivision Regulations
        4) Stormwater Management Regulations
        5) Floodplain Regulations

c. Acquisition

d. Taxation

e. Spending

6. Political Willpower

Table VI-1 - CAPABILITY MATRIX – Plans and Ordinances

Plan or Ordinance	City of Pekin	City of Peoria	Peoria County	Tazewell County	Woodford County
Comprehensive Land Use Plan	**X**	**X**	**X**	**X**	
Local Hazard Mitigation Plan		**X**	**X**		
Emergency Operations Plan	**X**	**X**	**X**	**X**	**X**
Floodplain Management Plan					
Stormwater Management Plan					
Open Space Plan					
Watershed Protection Plan					
Flood Damage Prevention Ordinance	**X**	**X**	**X**	**X**	**X**
Subdivision Ordinance	**X**	**X**	**X**	**X**	**X**

Table VI-1 - CAPABILITY MATRIX – Plans and Ordinances					
Building Code	**X**	**X**			
Land Use Regulation		**X**	**X***	**X**	
Zoning Ordinance	**X**	**X**	**X**	**X**	**X**
Stormwater Ordinance					

*Governed by zoning ordinance

The following sections review each of the five entities analyzed in the Tri-County area, and summarize the capabilities of each entity.

City of Pekin

1. Staff and Organizational Capability

The City of Pekin has a very limited staff and organizational capability to implement hazard mitigation strategies. The City is administered by a council-manager form of government with a five-person City Council. The Council consists of a Mayor and four members elected at large to staggered four-year terms. An appointed professional City Manager oversees the day-to-day operations of city government.

The City Manager manages the various city departments. More specifically, the City Manager directs and supervises the administration of all city offices, boards, commissions and agencies under the general direction and control of the Board. Responsibilities include:

- Development of the annual budget,
- Coordination of public relations programs,
- Provision of administrative services to the city,
- Administration of equal employment opportunity and affirmative action policies and programs,
- Human resource management and payroll,
- Risk management,
- Facilities management, and

- A number of delegated programs.

The city has a number of professional staff departments to serve the residents of the community and to carry out day-to-day administrative activities. These include the following:

- Administration
- Economic development
- Building/inspection
- Fire Department
- Police Department

There are also 17 Boards and Committees that provide administrative support to the city departments and the City Council.

The Administrative Department is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events. The department is also responsible for addressing land use planning as well as developing mitigation strategies.

The Building/Inspection Department enforces the NFIP requirements and other applicable local codes.

The Administrative and Building/Inspection Departments have been involved in the development of this mitigation plan to identify gaps, weaknesses or opportunities for enhancement with existing mitigation programs. For the most part, it was determined that the departments are adequately staffed, trained and funded to accomplish their missions.

2. Technical Capability

The City of Pekin has very limited technical capability to implement hazard mitigation strategies.

a. Technical Expertise

The City of Pekin does not have a full-time planner on staff to administer its hazard mitigation programs. The city has two licensed engineers. In the past, it has also relied on outside contractors/consultants to perform any required technical work where the city does not have the expertise. The city does have a building department.

The city does have a person responsible for Information Technology (IT), which can enhance local government operations and the community's ability to develop and maintain a state-of-the art hazard mitigation program.

b. Geographic Information Systems

GIS systems can best be described as a set of tools (hardware, software, and trained staff) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. The city currently has GIS capability to further hazard mitigation goals.

c. Internet Access

The City of Pekin provides its employees with high-speed broadband Internet service. This provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for city officials and residents - far less important than in the past. Internet access will help further the city's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

3. Fiscal Capability

The City of Pekin has limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2004, the city has budgeted expenditures of $100,000. The majority of these funds are obligated to the improvement of the stormwater runoff and floodwater mitigation at the riverfront. The city receives most of its revenues through State and local sales tax and other local services and through restricted intergovernmental contributions (Federal and State pass through dollars). Considering the current budget deficits at both the State and local government level in Illinois combined with the apparent increased reliance on local accountability by the Federal government, this is a significant and growing concern for the community.

Under the DMA 2000, FEMA has made special accommodations for "small and impoverished communities," who will be eligible for a 90% Federal share, 10% non-Federal cost share for projects funded through the Pre-Disaster Mitigation (PDM) grant program. Unfortunately, according to the current Interim Final Rule for Section 322 of the Act, the City of Pekin will not qualify as a small and impoverished community. The definition is restricted to "communities of 3,000 or fewer individuals that is identified by the State as a rural community."

4. Policy and Program Capability

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or

decrease the community's vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within Mitigation Strategy for the City of Pekin.

a. Recent Hazard Mitigation Efforts

The City has undertaken a planning initiative for the riverfront. They are using open space for a park-like development at the river's front. They have also worked with the Tri-County Regional Planning Commission on a stormwater project that controls run-off. These projects began in 2000.

b. CRS Activities

Communities that regulate development in floodplains are able participate in the NFIP. In return, the NFIP makes Federally backed flood insurance policies available for properties in the community. The CRS was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction.

The City of Pekin does not participate in the CRS.

c. Emergency Operations Plans

The City of Pekin has developed and adopted an Emergency Operations Plan which predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. The Plan describes the city's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the city to protect lives and property immediately before, during and immediately following an emergency. There are no foreseeable conflicts between this Hazard Mitigation Plan and the City of Pekin's Emergency Operations Plan, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the City Council as having the lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the Emergency Operations Plan.

d. Floodplain Management Plan

The City of Pekin does not currently have a separate floodplain management plan for NFIP purposes. This Hazard Mitigation Plan is intended to fulfill the CRS planning requirement should the community decide to enter the program.

e. Stormwater Management Plan

The City of Pekin does not currently have an adopted stormwater management plan, but does apply stormwater management provisions through their subdivision regulations. According to the City's Subdivision Ordinance, lands subject to flooding, irregular drainage conditions, excessive erosion, and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval.

f. Comprehensive Plan

The city developed and adopted a Comprehensive Plan in 1996. The plan provides the future vision for the community regarding growth and development. Hazard mitigation planning is not specifically addressed in the plan. Additionally, open space is not specifically addressed in the plan.

The city has developed and adopted a riverfront plan (The Tincher Plan, 2000), which specifies how development along the Illinois River will occur. Mitigation techniques are not included in the plan.

g. Ordinances

The City of Pekin has adopted several ordinances that are relevant to hazard mitigation, as described in more detail below.

Flood Damage Prevention Ordinance (FIMA 1981)

The Flood Damage Prevention Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit to be submitted to the City prior to any construction or substantial improvement activities. Permits will only be approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices and uses. Most importantly, the ordinance establishes the requirements for elevation and floodproofing (non-residential) to the base flood elevation.

This ordinance requires the minimum standards of the NFIP. The city's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping

Program. It is possible those floodplain areas will be redelineated with updated topography, and that base flood elevations will be recalculated. The mitigation effectiveness of this ordinance is high.

Subdivision Ordinance (Amended 2003)

The Subdivision Ordinance regulates all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or a change in existing streets/roads. All proposed subdivisions must go through an approval process involving multiple individuals/agencies. Subdivision plats are required for review and must include the location of areas subject to flooding. Lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons considered unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and the necessary stormwater drainage improvements must be completed before final plat approval. Plats are also reviewed by the local permit officer to determine whether the property lies within a designated Area of Environmental Concern (AEC), and specifies what permits are required. Furthermore, all waterfront development must meet setback and impervious surface requirements. The Public Works Director, City Engineer and Code Enforcement Officer also review plats to identify matters of topography and drainage concern.

Although not designed specifically for hazard mitigation purposes, this ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events. The mitigation effectiveness of this ordinance is moderate.

City of Pekin State of Emergency Ordinance (2003)

The purpose of this ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a State of Emergency. It establishes the authority and procedures for the City Council to proclaim a State of Emergency, and to impose the following restrictions as described in the ordinance: curfew; evacuation; possession/transportation/transfer of intoxicating liquors, dangerous weapons an substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during a State of Emergency.

The ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event. The mitigation effectiveness of this ordinance is low.

h. Open Space Plans

The City of Pekin does not currently have a separate open space plan.

i. Watershed Protection Plan

The City of Pekin does not currently have a separate watershed protection plan.

5. Legal Authority

Local governments in Illinois have a wide range of tools available to them for implementing mitigation programs, policies, and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Illinois, which are (a) regulation, (b) acquisition, (c) taxation, and (d) spending. The scope of this local authority is subject to constraints, however, as Illinois' political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Illinois' enabling legislation that grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

a. Regulation

(1) General Police Power

Illinois' local governments have been granted broad regulatory powers in their jurisdictions. Illinois State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances that define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. The City of Pekin has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

(2) Building Codes and Building Inspection

Many structural mitigation measures involve constructing and retrofitting homes, businesses, and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes, as is the case in the City of Pekin. Municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the State code.

Local governments in Illinois are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates its duties and responsibilities which include enforcing State and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. The City of Pekin has adopted a building code and established a Building/ Inspections Department to carry out its building inspections.

b. Land Use

Regulatory powers granted by the State to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All of these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, and enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. The City of Pekin has not adopted a land use regulation.

(1) Planning

According to State statutes, local governments in Illinois may create or designate a planning agency. The planning agency may perform a number of duties including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan," the existence of a separate planning document ensures that the government is developing

regulations and ordinances that are consistent with the overall goals of the community. The City of Pekin has established a Planning Office.

(2) Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Illinois to engage in zoning. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use such as lot size, building height and set backs, density of population, etc. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. The City of Pekin enforces a city wide zoning ordinance.

(3) Subdivision Regulations

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require that sub-dividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division or sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. The definition of subdivision does not include the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved. The City of Pekin has adopted a subdivision ordinance.

(4) Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small-scale development of less than five acres. A reduction in damage from small-scale development is achieved through requirements such as on-site retention/detention ponds, etc. The State of Illinois encourages local governments to adopt stormwater regulations under land use authorities. The City of Pekin has not adopted stormwater regulations.

(5) Floodplain Regulation

Illinois State statutes provide cities and counties the land use authority. In particular, issues such as floodwater control are empowered through 70 ILCS 405/25. The community adopted its most current version of floodplain regulations in 1981.

c. Acquisition

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Illinois legislation empowers cities, towns, and counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease, or eminent domain. The City of Pekin proposes to use acquisition as a local mitigation tool.

d. Taxation

The power to levy taxes and special assessments is an important tool delegated to local governments by Illinois law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. The City of Pekin does levy property taxes. The City also uses the 1) Two Tax Increment Funding District, 2) Enterprise Zones, and 3) Build Illinois Program for purposes of guiding growth and development.

e. Spending

The fourth major power that has been delegated from the Illinois General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a Capital Improvement Plan (CIP). A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. The City of Pekin has a Five-Year Capital Improvement Plan and that plan undergoes an annual review.

6. Political Willpower

Most city residents are knowledgeable about the potential hazards that their community faces, and in recent years, they have become more familiar with the practices and principles of mitigation. Many flood prone structures have been acquired thereby removing residents from harm's way. Such tangible and visual changes within the community have created a greater sense of awareness among local residents, and hazard mitigation is a concept that they are beginning to readily accept and support. Because of this fact, coupled with the City of Pekin's history with natural disasters, it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

City of Peoria

1. Staff and Organizational Capability

The City of Peoria has limited staff and organizational capability to implement hazard mitigation strategies. The City of Peoria is governed by a ten member City Council. Five members represent the five districts into which the city is divided. There are an additional five members who serve "at large." There is also a Mayor. The Council bears the responsibility of serving the people and improving the quality of life in the city. The business of the city is conducted through the department and board system. There are 17 city departments and boards as follows:

- Board of Election Commissioners,
- Economic Development Department,
- Emergency Services & Disaster Agency,
- Equal Opportunity Office,
- Finance Department,
- Human Resources,
- Information Systems,
- Inspections,
- Legal Department,
- Peoria Animal Welfare Shelter,
- Peoria City Employees Credit Union,
- Peoria Fire Department,
- Planning and Growth Management,
- Police Department,
- Public Works Department,
- Riverfront Development, and
- Workforce Development.

The Emergency Services & Disaster Agency (ESDA) is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events.

The Planning and Growth Management maintains a full-time planner that is also responsible for addressing land use planning as well as developing mitigation strategies. The department also enforces the NFIP requirements and other applicable local codes.

The Public Works Department oversees the maintenance of city infrastructure including roadways, sewer and stormwater facilities, and the community's water treatment facilities.

The Planning and Zoning Department, ESDA, and Public Works Department have been assigned specifically delegated responsibilities to carry out mitigation activities or hazard control tasks. They have been involved in the development of **this** mitigation plan in order to identify gaps, weaknesses, or opportunities for enhancement with existing mitigation programs. For the most part, it was determined that the departments are adequately staffed, trained, and funded to accomplish their missions.

2. Technical Capability

The City of Peoria has limited technical capability to implement hazard mitigation strategies.

a. Technical Expertise

The city does have a full-time planner on staff to administer the community's hazard mitigation programs. The City Engineer provides expertise in the area of water resources and associated technical work. The city does have an inspections office that enforces a building code.

The city also has a person responsible for IT which can enhance local government operations and the community's ability to develop and maintain a state-of-the art hazard mitigation program.

b. Geographic Information Systems

GIS systems can best be described as a set of tools (hardware, software and people) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. The City of Peoria currently has GIS capability to further hazard mitigation goals.

c. Internet Access

The City of Peoria provides its employees with high-speed broadband Internet service. This provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for city officials and residents - far less important than in the past. Internet access will help further the city's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

3. Fiscal Capability

The City of Peoria has limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2004, the city has budgeted expenditures of $100,000. The majority of these funds are obligated to the improvement of the stormwater runoff and floodwater mitigation at the riverfront. The city receives most of its revenues through State and local sales tax and other local services and through restricted intergovernmental contributions (Federal and State pass through dollars). Considering the current budget deficits at both the State and local government level in Illinois combined with the apparent increased reliance on local accountability by the Federal government, this is a significant and growing concern for the community.

Under the DMA 2000, FEMA has made special accommodations for "small and impoverished communities," who will be eligible for a 90% Federal share, 10% non-Federal cost share for projects funded through the Pre-Disaster Mitigation (PDM) grant program. Unfortunately, according to the current Interim Final Rule for Section 322 of the Act, the City of Peoria will not qualify as a small and impoverished community. The definition is restricted to “communities of 3,000 or fewer individuals that is identified by the State as a rural community.”

4. Policy and Program Capability

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community’s vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within Mitigation Strategy for the City of Peoria.

a. Recent Hazard Mitigation Efforts

The City of Peoria acquired multiple-loss structures along the Illinois River in 2002.

The City of Peoria continues to participate in the STAR program that donates weather radios to various organizations throughout the Peoria area.

Within the City of Peoria, the CityLink transportation terminal installed wind resistant glass in 2003. The facility also provides certain reinforcements to internal areas for use as a storm shelter.

b. Community Rating System Activities

Communities that regulate development in floodplains are able participate in the NFIP. In return, the NFIP makes federally-backed flood insurance policies available for properties in the community. The CRS was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction.

The City of Peoria does not participate in the Community Rating System.

c. Emergency Operations Plans

The City of Peoria developed and adopted a Comprehensive Emergency Management Plan dated March 2000 that predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. The plan was adopted in March 2000. For the most part, the plan

describes the city's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the city to protect lives and property immediately before, during and immediately following an emergency. There are no foreseeable conflicts between this Hazard Mitigation Plan and the City of Peoria's Comprehensive Emergency Management Plan, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the City Council as having lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the Emergency Management Plan.

The City of Peoria developed and adopted a current Hazard Mitigation Plan. It was first developed and adopted in 1988. It was modeled after the Peoria County Hazard Mitigation Plan and designed to address hazard mitigation efforts relevant to flooding, hazardous materials, and earthquakes. However, the plan has never been formally approved by FEMA. The bulk of the document is structured to 1) provide a detailed analysis of the flooding problem, 2) recommend mitigation alternatives for individual property owners, 3) recommend mitigation alternatives, and 4) develop mitigation strategies.

The plan identifies and organizes the following mitigation activities that the community should address:

FLOOD CONTROL

- Levees/floodwalls,
- Reservoirs/Detention,
- Channel Improvements, and
- Control Gates/Back-Up Valves.

PROPERTY PROTECTION

- Building Relocation/Acquisition,
- Building Elevation,
- Floodproofing,
- Self-Help Advice/Assistance, and
- Flood Insurance.

EMERGENCY SERVICES

- Flood Warning,
- Sandbagging,
- Evacuation/Rescue, and
- Public Health/Safety Maintenance.

FLOODPLAIN MANAGEMENT

- Planning/Zoning,
- Floodplain Development Regulations,
- Open Space/Easements,
- Stormwater Management,
- Erosion/Sediment Control, and
- Stream Maintenance.

The focus of the plan is the "flood protection" category and its associated planning elements. In summary, the Plan targets three project areas in the community for flood hazard mitigation. It also provides guidance with regard to natural hazards and mitigation and develops specific recommendations, which when implemented, will reduce the threat of natural hazards in the City.

d. Floodplain Management Plan

The City of Peoria does not currently have a separate floodplain management plan for purposes of the NFIP's CRS. This plan is intended to fulfill the CRS planning requirement should the City decide to enter the CRS.

e. Stormwater Management Plan

The City of Peoria does not currently have an adopted stormwater management plan, but does apply stormwater management provisions through their subdivision regulations. Lands subject to flooding, irregular drainage conditions, excessive erosion, and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval.

f. Comprehensive Plan

The City of Peoria does have a Comprehensive Plan. However, open space considerations are minimal as part of the plan.

g. Ordinances

The City of Peoria has adopted several ordinances that are relevant to hazard mitigation, as described in more detail below.

Flood Damage Prevention and Control Ordinance (03/20/90)

This ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the city prior to any construction or substantial improvement activities. Permits will only be

approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices and uses. Most importantly, this ordinance establishes the requirements for elevation and floodproofing (non-residential) to base flood elevation.

The ordinance requires the minimum standards of the NFIP. The city's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. It is possible those floodplain areas will be re-delineated with updated topography, and that base flood elevations will be recalculated. The nitigation effectiveness of this ordinance is high.

Subdivision Ordinance (02/22/72)

This ordinance regulates all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or a change in existing streets/roads. All proposed subdivisions must go through an approval process involving multiple individuals/agencies. Subdivision plats are required for review and must include the location of areas subject to flooding. Lands subject to flooding, irregular drainage conditions, excessive erosion, and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval. Plats are also reviewed by the local permit officer to determine whether the property lies within a designated AEC, and what permits are required. Furthermore, all waterfront development must meet setback requirements and impervious surface requirements. Plats are also reviewed by the Planning and Growth Management to identify matters of topography and drainage.

Although not designed specifically for hazard mitigation purposes, this ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events. The mitigation effectiveness of this ordinance is moderate.

City of Peoria State of Emergency Ordinance (03/16/93)

The purpose of this ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a State of Emergency. It establishes the authority and procedures for the City Council to proclaim a State of Emergency, and to impose the following restrictions as described

in the ordinance: curfew; evacuation; possession/transportation/transfer of intoxicating liquors, dangerous weapons an substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during a State of Emergency.

The ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event. The mitigation effectiveness of this ordinance is low.

h. Open Space Plans

The City of Peoria does not currently have a separate Open Space Plan.

i. Watershed Protection Plan

The City of Peoria does not currently have a separate Watershed Protection Plan.

5. Legal Authority

Local governments in Illinois have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Illinois, which are (a) Regulation, (b) Acquisition, (c) Taxation, and (d) Spending. The scope of this local authority is subject to constraints, however, as all of Illinois' political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Illinois' enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

a. Regulation

(1) General Police Power

Illinois' local governments have been granted broad regulatory powers in their jurisdictions. Illinois State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances that define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or

condition making people or property more vulnerable to any hazard. The City of Peoria has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

(2) Building Codes and Building Inspection

Many structural mitigation measures involve constructing and retrofitting homes, businesses, and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes, as is the case in the City of Peoria. Municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the State code.

Local governments in Illinois are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates its duties and responsibilities which include enforcing State and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. The City of Peoria has adopted a building code and established a Building/ Inspections Department to carry out its building inspections.

b. Land Use

Regulatory powers granted by the State to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All of these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, and enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. The City of Peoria has adopted a land use regulation and includes it within its Zoning Plan.

(1) Planning

According to State Statutes, local governments in Illinois may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that

zoning is being conducted "in accordance with a plan," the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community. The City of Peoria has established a Planning Department.

(2) Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Illinois to engage in zoning. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use such as lot size, building height and set backs, density of population, etc. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. The City of Peoria enforces a city-wide zoning ordinance which was adopted in 1991.

(3) Subdivision Regulations

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require that sub-dividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division or sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. The definition of subdivision does not include the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved. The City of Peoria has adopted a subdivision ordinance.

(4) Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small-scale development of less than five acres. A reduction in damage from small-scale development is achieved through requirements such as on-site retention/detention ponds, etc. The State of Illinois

encourages local governments to adopt stormwater regulations under land use authorities. The City of Peoria has not adopted stormwater regulations.

(5) Floodplain Regulation

Illinois State statutes provide cities and counties the land use authority. In particular, issues such as floodwater control are empowered through 70 ILCS 405/25. The community adopted its most current version of floodplain regulations on March 20, 1990.

c. Acquisition

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Illinois legislation empowers cities, towns, and counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease, or eminent domain. The City of Peoria proposes to continue using acquisition as a local mitigation tool.

d. Taxation

The power to levy taxes and special assessments is an important tool delegated to local governments by Illinois law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. The City of Peoria does levy property taxes, and uses preferential tax districts or special assessments for purposes of guiding growth and development.

e. Spending

The fourth major power that has been delegated from the Illinois General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a Capital Improvement Plan (CIP). A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. The City of Peoria has adopted and implemented a five-year capital improvement program for the period 2002 to 2007.

(6) Political Willpower

Most city residents are quite knowledgeable about the potential hazards that their community faces, and in recent years, they have become more familiar with the practices and principles of mitigation. Many flood prone structures have been acquired thereby removing residents from harm's way. Such tangible and visual changes within the community have created a greater sense of awareness among local residents, and hazard mitigation is a concept that they are beginning to readily accept and support. Because of this fact, coupled with the City of Peoria's history with natural disasters, it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

Peoria County

1. Staff and Organizational Capability

Peoria County has limited staff and organizational capability to implement hazard mitigation strategies. Peoria County is governed by an 18-member County Board (one representative per district). The Board has a peer-elected Chairperson and delegates day-to-day duties to a hired County Administrator. The Board bears the responsibility of serving the people and improving the quality of life in the county. The business of the County Board is conducted through the committee system. Each of the 10 standing

committees is responsible for oversight and budgetary control of its assigned areas. The committees report their activities to the full Board every month. Every two years the Board reorganizes, selects a new Chairperson and updates its Rules of Order.

A County Administrator, who is hired by the County Board, acts on their behalf and manages the various County departments. More specifically, the County Administrator directs and supervises the administration of all county offices, boards, commissions and agencies under the general direction and control of the Board. Responsibilities include:

- Development of the annual budget,
- Coordination of public relations programs,
- Provision of administrative services to the county Board,
- Administration of equal employment opportunity and affirmative action policies and programs,
- Human resource Management and Payroll,
- Risk Management,
- Facilities Management, and
- A number of delegated programs.

The County has a number of professional staff departments to serve the residents of Peoria County and to carry out day-to-day administrative activities. These include the following:

Development and Infrastructure

- Planning and Zoning,
- Highway Department, and
- Recorder of Deeds.

Real Estate Tax Cycle Services

- County Clerk,
- Supervisor of Assessments,
- Board of Review, and
- Treasurer.

Administrative Services

- Administration,
- County Board,
- IT Services,
- County Auditor, and
- Facilities Management.

Health and Human Services

- Allied Agencies,
- Recycling Services,
- Bel-Wood Nursing Home, and
- Regional Office of Education.

Public Safety and Justice

- Sheriff's Office,
- Adult Probation,
- Court Administration/Jury,
- Juvenile Detention Center,
- Circuit Clerk,
- ESDA, and
- Juvenile Probation.

The Regional Office of Education is responsible for the operation of the county school system and is also elected at large by the people. County funds usually maintain the buildings and provide funds for other capital projects, with state funds paying salaries, purchasing textbooks and supplies.

The Circuit Clerk is custodian of the court system in Peoria County. The Recorder of Deeds and the Sheriff operate on a budget approved annually by the County Board.

The Planning and Zoning Department is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events. The department maintains a full time planner that is also responsible for addressing land use planning and economic development concerns, as well as, developing mitigation strategies. The department also enforces the National Flood Insurance Program requirements, the Community Rating System, and other applicable local codes.

The Administrative Department is responsible for the oversight and management of the County's budget and fiscal programs, including the administration of state and federal grants.

Of the above-listed County departments, the Planning and Zoning Department and the ESDA have been assigned specifically delegated responsibilities to carry out mitigation activities or hazard control tasks. These departments have been involved in the development of this mitigation plan in order to identify gaps, weaknesses or opportunities for enhancement with existing mitigation programs. For the most part, it was determined that these departments are adequately staffed, trained and funded to accomplish their missions.

2. Technical Capability

Peoria County has limited technical capability to implement hazard mitigation strategies.

a. Technical Expertise

Peoria County utilizes the Director of Planning and Zoning to administer the County's hazard mitigation programs. The County does not have a licensed engineer or related technical expert on staff, and has in the past relied upon outside contractors/consultants to perform a majority of any required technical work. The county does not currently have a building department, but is in the process of preparing to start implementation of the International Building Code effective In January of 2005.

Peoria County does have a person responsible for IT that can enhance local government operations and the County's ability to develop and maintain a state-of-the art hazard mitigation program.

b. Geographic Information Systems

GIS systems can best be described as a set of tools (hardware, software and people) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. Peoria County does currently have GIS capability to further hazard mitigation goals.

c. Internet Access

Peoria County provides its employees with high-speed broadband Internet service. This provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for Peoria County officials and residents - far less important than it used to be. Internet access will help further the County's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

3. Fiscal Capability

Peoria County has limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2003, Peoria County budgeted expenditures were $85,147,046. The majority of these funds are obligated to health and welfare ($21,917,092), although "public safety" did cost the County $17,603,071 for this period according to the most recent financial statements. The County receives most of its revenues through charges for services and through restricted intergovernmental contributions (federal and state pass through dollars. Considering the current budget deficits at both the State and local

government level, in Illinois, combined with the apparent increased reliance on local accountability by the Federal government, this is a significant and growing concern for Peoria County.

Under the Disaster Mitigation Act of 2000, FEMA has made special accommodations for "small and impoverished communities," who will be eligible for a 90% Federal share, 10% non-Federal cost share for projects funded through the Pre-Disaster Mitigation (PDM) grant program. Unfortunately, according to the current Interim Final Rule for Section 322 of the Act, Peoria County will not qualify as a small and impoverished community. The definition is restricted to “communities of 3,000 or fewer individuals that is identified by the State as a rural community.”

4. Policy and Program Capability

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community’s vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within Mitigation Strategy for Peoria County.

a. Recent Hazard Mitigation Efforts

Peoria County has undertaken specific hazard mitigation efforts in the past. These recent mitigation efforts are summarized as follows:

- O***ngoing Voluntary and/or Required Elevation of Structures*** – Elevation of 50 flood-prone homes to 2-feet above the determined base flood elevation for each site.
- ***Illinois River Acquisition Program*** – Acquisition and demolition of 120 flood-prone properties. Completed in (2003).

b. Community Rating System Activities

Communities that regulate development in floodplains are able participate in the NFIP. In return, the NFIP makes federally-backed flood insurance policies available for properties in the community. The CRS was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction.

Peoria County participates in the CRS as a “Class 8” community. This allows County residents to receive a 10% discount on their flood insurance premiums for policies

purchased under the NFIP. A total of 2,240 credit points have been verified for the County. The County does not have building codes therefore there is no Building Code Effectiveness Grading Schedule (BCEGS) Classification and the community does not meet the prerequisite for Class 6. The following is a summary of ISO findings with the total CRS credit points for each activity listed in parenthesis:

Activity 310 – Elevation Certificates: Elevation Certificates are maintained in the Peoria County Planning and Zoning Office. Photocopies will be made available upon request. The community also maintains a limited number of elevation certificates for post firm buildings. (101 points)

Activity 320 – Map Information: Credit is provided for furnishing inquirers with information from the community's latest Flood Insurance Rate Map (FIRM), publicizing the service and maintaining records. (140 points)

Activity 330 – Outreach Projects: The community mails out a newsletter annually to all owners of all structures in the floodplain. The mailing covers a multitude of topics on flooding issues. In addition, the community has a booth at the Heart of Illinois Fair and the Mall Event annually. (99 points)

Activity 340 – Hazard Disclosure: Credit is provided for Illinois laws requiring final subdivision plats to show if any part of the property is in the Special Flood Hazard Area (SFHA) and the Illinois "Sellers Disclosure Law" that requires property owners to identify if their property is in the SFHA. (10 points)

Activity 350 – Flood Protection Library: Documents relating to floodplain management are available in the reference section of the Peoria Public Library and made available to all libraries in the area. (21 points)

Activity 410 – Additional Flood Data: Credit is given for floodway delineation and State review of the flood studies done in the community. Credit is also provided for the Illinois law that requires a more restrictive floodway standard. (24 points)

Activity 420 – Open Space Preservation: Credit is provided for preserving open space in the SFHA. Credit is also provided for open space land that is deed restricted. (44 points)

Activity 430 – Higher Regulatory Standards: Peoria County is requiring a regulation that new development be provided more protection than the NFIP's minimum requirements. The county requires a higher freeboard on buildings and cumulative substantial improvement threshold. The county enforces state mandated regulatory standards. The county also has two Certified Floodplain Managers who regulate the SFHA. (296 points)

Activity 440 – Flood Data Maintenance: Credit is provided for utilizing additional map data during the permitting and enforcement procedures and for maintaining FIRM maps and studies that have been issued and allowing public access. (48 points)

Activity 510 – Floodplain Management Planning: Based on the corrections made to the NFIP Report of Repetitive Losses as of January 31, 2001, Peoria County has 224 repetitive loss properties and is a Category C community for CRS purposes. All requirements for the FY 2001 cycle have been met. Credit is provided for the adoption and implementation of the Floodplain Management Plan. Since Peoria County is a Category C community with an approved Floodplain Management Plan, a progress report must be submitted on an annual basis. (23 points)

Activity 520 – Acquisition and Relocation: Credit is provided for acquiring and relocating buildings from the community's flood hazard area. (996 points)

Activity 530 – Retrofitting: Credit is provided for buildings that have been elevated or otherwise modified to protect them from flood damage. (179 points)

Activity 540 – Drainage System Maintenance: Peoria County Highway Department maintains all drainage areas not only in the flood plains, but also through out the county. The county is credited for inspecting and removing debris. (200 points)

Activity 630 – Dam Safety: All of the Illinois communities receive credit for the State's dam safety program. (59 points)

c. Emergency Operations Plan

Peoria County has developed and adopted a Comprehensive Emergency Management Plan dated March 2000 which predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. The Plan was adopted in March 2000. For the most part, the Plan describes the County's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The Plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the County to protect lives and property immediately before, during, and immediately following an emergency. There are no foreseeable conflicts between this Hazard Mitigation Plan and Peoria County's Comprehensive Emergency Management Plan, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the County Administrator, the County Finance Officer and the County Planner as having lead roles in the long-term reconstruction phase following a disaster – which presents a unique window of

opportunity for implementing hazard mitigation strategies. However, none are specified within the Emergency Management Plan.

Peoria County has developed and adopted a current Hazard Mitigation Plan. It was first developed and adopted in 1985 and amended in 2001. However, the plan has never been formally approved by FEMA. It was designed to address hazard mitigation efforts relevant to flooding, tornadoes, and earthquakes. The bulk of the document is structured to 1) provide a detailed analysis of the flooding problem, 2) recommend mitigation alternatives for individual property owners, 3) recommend mitigation alternatives for the creation of aggregate open space, and 4) develop mitigation strategies.

The plan identifies and organizes the following mitigation activities which a community should address:

FLOOD CONTROL

- Levees/floodwalls,
- Reservoirs/Detention,
- Channel Improvements, and
- Control Gates/Back-Up valves.

PROPERTY PROTECTION

- Building Relocation/Acquisition,
- Building Elevation,
- Floodproofing,
- Self-Help Advice/Assistance, and
- Flood Insurance.

EMERGENCY SERVICES

- Flood Warning,
- Sandbagging,
- Evacuation/Rescue, and
- Public Health/Safety Maintenance.

FLOODPLAIN MANAGEMENT

- Planning/Zoning,
- Floodplain Development Regulations,
- Open Space/Easements,
- Stormwater Management,
- Erosion/Sediment Control, and
- Stream Maintenance.

The focus of the plan is the "flood protection" category and open space acquisition as well as the planning elements of the "floodplain management" category.

In summary, the plan provides guidance with regard to natural hazards and mitigation and develops specific recommendations, which when implemented, will reduce the threat of natural hazards in the County. It also includes a general summary of the various projects recommended in the plan by sub-area. The summary provides 1) a description of the project, 2) estimated project costs (2001 dollars), 3) probable funding sources, 4) areas for refinement with more detailed information, and 5) general project benefit(s).

Peoria County has also developed and adopted the Kickapoo Valley Hazard Mitigation Plan dated 1997. The plan describes 1) a community background, 2) a description of flooding, 3) current mitigation activities, 4) community hazard mitigation goals, 5) estimated project costs, 6) potential funding sources, 7) an open space plan, 8) mitigation recommendations, 9) project implementation, and 10) project benefits.

Emergency Services standard operating procedures (SOPs) are outlined in the plan. The County's two feet above Base Flood Elevation (BFE) requirement for new and substantially improved structures is noted under the ***Floodplain Regulations and Property Protection*** section of the Plan.

d. Floodplain Management Plan

Peoria County does not currently have a separate floodplain management plan for purposes of the NFIP's CRS. This Hazard Mitigation Plan is intended to revise the community's current hazard mitigation plan and fulfill the CRS planning requirement when it becomes adopted, and will be maintained as such.

e. Stormwater Management Plan

Peoria County does not currently have an adopted stormwater management plan, but does apply stormwater management provisions through their subdivision regulations. According to the Peoria County Subdivision Ordinance, lands subject to flooding, irregular drainage conditions, excessive erosion, and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval.

f. Comprehensive Plan

The county adopted a Comprehensive Land Use Plan dated 1992.

g. Ordinances

Peoria County has adopted several ordinances that are relevant to hazard mitigation.

Flood Damage Prevention Ordinance (1991)

The Flood Damage Prevention Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the County prior to any construction or substantial improvement activities. Permits will only be approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices and uses. Most importantly, establishes the requirements for elevation and floodproofing (non-residential) to the BFE.

The Ordinance requires the minimum standards of the NFIP. The County's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. It is possible those floodplain areas will be re-delineated with updated topography and that BFEs will be recalculated. The mitigation effectiveness of this ordinance is high.

Subdivision Ordinance (1969)

The Subdivision Ordinance is designed to regulate all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or a change in existing streets/roads. All proposed subdivisions must go through an approval process involving multiple individuals/agencies. Subdivision plats are required for review and must include the location of areas subject to flooding. Lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval. Furthermore, all waterfront development must meet setback requirements and impervious surface requirements. Plats are also reviewed to identify matters of topography and drainage.

Although not designed specifically for hazard mitigation purposes, this ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and

erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events. The mitigation effectiveness of this ordinance is moderate.

Peoria County State of Emergency Ordinance (2000)

The purpose of this ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a State of Emergency. Establishes the authority and procedures for the Chairperson of the County Board to proclaim a State of Emergency, and to impose the following restrictions as described in the ordinance: curfew; evacuation; possession, transportation, and transfer of intoxicating liquors, dangerous weapons an substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during the State of Emergency.

The ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event. Mitigation Effectiveness is Low.

h. Open Space Plans

Peoria County does not currently have a separate Open Space Plan.

i. Watershed Protection Plan

Peoria County does not currently have a separate Watershed Protection Plan.

5. Legal Authority

Local governments in Illinois have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Illinois, which are (a) Regulation, (b) Acquisition, (c) Taxation, and (d) Spending. The scope of this local authority is subject to constraints, however, as all of Illinois' political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Illinois' enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

a. Regulation

(1) General Police Power

Illinois' local governments have been granted broad regulatory powers in their jurisdictions. Illinois State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. Peoria County has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

(2) Building Codes and Inspection

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes. Peoria County does not have building codes. However, municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the State code.

Local governments in Illinois are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates their duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. Peoria County has not adopted a building code or established a Building Inspections Department to carry out its building inspections. However, the county completed a building code study in 2003 and will begin implementing a building code program under the IBC beginning in January 2005.

b. Land Use

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these

characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. Peoria County's land use regulations are governed by its zoning ordinance.

(1) Planning

According to State Statute, local governments in Illinois may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan", the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community. Peoria County has established a Planning and Zoning Department. The county has adopted a Comprehensive Land Use Plan dated 1992. Open space is addressed through the concept of ***environmental corridors*** in the plan.

(2) Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Illinois to engage in zoning. Counties may also regulate inside municipal jurisdiction at the request of a municipality. The statutory purpose for the grant of power is to promote health, safety, morals, or the general welfare of the community. Land use controlled by zoning includes the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use such as lot size, building height, set backs, density of population, etc. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. Peoria County enforces a countywide zoning ordinance adopted in 1996.

(3) Subdivision Regulations

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require that sub-dividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures. Broad subdivision control enabling authority for municipalities is granted for counties outside of municipalities. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. The definition of subdivision does not include the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved. Peoria County has adopted a Subdivision Ordinance.

(4) Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small-scale development of less than five acres. A reduction in damage from small-scale development is achieved through requirements such as on-site retention/detention ponds, etc. The State of Illinois encourages local governments to adopt stormwater regulations under land use authorities.

(5) Floodplain Regulation

Illinois State Statutes provide cities and counties the land use authority. In particular, issues such as floodwater control are empowered through 70 ILCS 405/25. The community adopted its most current version of floodplain regulations in 1991.

c. Acquisition

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Illinois legislation empowers cities, towns, and counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease, or eminent domain. Peoria County has used acquisition as a local mitigation tool. Through the implementation of the Illinois River Program, 120 properties have been acquired.

d. Taxation

The power to levy taxes and special assessments is an important tool delegated to local governments by Illinois law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. Peoria County does levy property taxes and uses preferential tax districts or special assessments for purposes of guiding growth and development.

e. Spending

The fourth major power that has been delegated from the Illinois General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a CIP. A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. Peoria County does have a Capital Improvement Plan.

(6) Political Willpower

Most Peoria County residents are quite knowledgable about the potential hazards that their community faces, and in recent years, they have become more familiar with the practices and principles of mitigation. Many flood prone structures have been acquired thereby removing residents from harm's way. It is strongly believed that such tangible and visual changes within the community have created a greater sense of awareness among local residents, and that hazard mitigation is a concept that they are beginning to readily accept and support. Because of this fact, coupled with Peoria County's history with natural disasters, it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

Tazewell County

1. Staff and Organizational Capability

Tazewell County has limited staff and organizational capability to implement hazard mitigation strategies. Tazewell County is governed by a 21-member County Board. The Board has an at-large-elected Chairperson and delegates day-to-day duties to County Department Administrators. The Board bears the responsibility of serving the people and improving the quality of life in the county. The business of the County Board is conducted through the department system. Each of the county departments is responsible for oversight and budgetary control of its assigned areas. The department heads report their activities to the full Board every month.

The County Board manages the various County departments. More specifically, the County Board directs and supervises the administration of all county offices, boards, commissions and agencies under the general direction and control of the Board. Responsibilities include:

- Development of the annual budget,
- Coordination of public relations programs,
- Provision of administrative services,
- Administration of equal employment opportunity and affirmative action policies and programs,
- Human resource Management and Payroll,
- Risk Management,
- Facilities Management, and
- A number of delegated programs.

Tazewell County has a number of professional staff departments to serve the residents of the County and to carry out day-to-day administrative activities. These include the following:

- Planning and Zoning Department,
- Sheriff's Department,
- Health Department,
- Highway Department, and
- Administration.

The Planning and Zoning Department is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events. The department maintains a full-time Administrator and Land Use Planner who are also responsible for addressing land use planning and economic development concerns as well as developing mitigation strategies. The department also enforces the NFIP requirements and other applicable local codes.

The Administrative Department is responsible for the oversight and management of the County's budget and fiscal programs, including the administration of State and Federal grants.

Of the above-listed County departments, only the Planning and Zoning Department has been assigned specifically delegated responsibilities to carry out mitigation activities or hazard control tasks. The department has been involved in the development of this mitigation plan in order to identify gaps, weaknesses, or opportunities for enhancement with existing mitigation programs. For the most part, it was determined that the department is adequately staffed, trained, and funded to accomplish their missions.

2. Technical Capability

Tazewell County has very limited technical capability to implement hazard mitigation strategies.

a. Technical Expertise

Tazewell County does have a full-time Administrator and uses the Tri-County Regional Planning Commission for Land Use Planning. The County does not have a licensed engineer or related technical expert on staff, and has in the past relied upon outside contractors/consultants to perform a majority of any required technical work. The county does not have a building department.

Tazewell County does have a person responsible for IT, which can enhance local government operations and the County's ability to develop and maintain a state-of-the-art hazard mitigation program.

b. Geographic Information Systems

GIS systems can best be described as a set of tools (hardware, software, and people) used to collect, manage, analyze, and display spatially-referenced data.

Many local governments are now incorporating GIS systems into their existing planning and management operations. Tazewell County does not currently have GIS capability to further hazard mitigation goals.

c. Internet Access

Tazewell County does provide its employees with high-speed broadband Internet service. Internet access provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for Tazewell County officials and residents - far less important than it used to be. It is believed that Internet access will help further the County's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

3. Fiscal Capability

Tazewell County has limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2003, Tazewell County has no budgeted projects. The County receives most of its revenues through fees, taxes, and through restricted intergovernmental contributions (Federal and State pass-through dollars). Considering the current budget deficits at both the State and local government level in Illinois combined with the apparent increased reliance on local accountability by the Federal government, this is a significant and growing concern for Tazewell County.

Under the Disaster Mitigation Act of 2000, FEMA has made special accommodations for "small and impoverished communities," who will be eligible for a 90% Federal share, 10% non-Federal cost share for projects funded through the Pre-Disaster Mitigation (PDM) grant program. Unfortunately, according to the current Interim Final Rule for Section 322 of the Act, Tazewell County will not qualify as a small and impoverished community. The definition is restricted to "communities of 3,000 or fewer individuals that is identified by the State as a rural community."

4. Policy and Program Capability

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community's vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within Mitigation Strategy for Tazewell County.

a. Recent Hazard Mitigation Efforts

Tazewell County has not undertaken specific hazard mitigation efforts in the past. However, the county is currently working with the Army Corps of Engineers on a project to update the floodplain evaluations of the county.

b. CRS Activities

Communities that regulate development in floodplains are able participate in the NFIP. In return, the NFIP makes federally-backed flood insurance policies available for properties in the community. The CRS was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction.

Tazewell County does not participate in the CRS.

c. Emergency Operations Plans

Tazewell County has developed and adopted a Local Emergency Operations Plan (LEOP) dated which predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. For the most part, the plan describes the County's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the County to protect lives and property immediately before, during and immediately following an emergency. There are no foreseeable conflicts between this Hazard Mitigation Plan and Tazewell's LEOP, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The plan does identify the County Board as having lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the LEOP.

d. Floodplain Management Plan

Tazewell County does not currently have a separate floodplain management plan for purposes of the NFIP's CRS. The county has a 1981 ordinance that does not allow residential development in floodplains. If a resident seeks to build or seeks a building permit and lives near the floodplain that resident must demonstrate that they will not build in the floodplain. This Hazard Mitigation Plan is intended to fulfill the CRS planning requirement should the community decide to enter the program.

e. Stormwater Management Plan

Tazewell County does not currently have an adopted stormwater management plan, but does apply stormwater management provisions through their subdivision regulations. According to the Tazewell County Subdivision Ordinance, lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval.

f. Comprehensive Plan

Tazewell County adopted a Comprehensive Land Use Plan in 1996. Since the county is primarily agricultural, open space is not addressed specifically in the plan.

g. Ordinances

Tazewell County has adopted several ordinances that are relevant to hazard mitigation.

Flood Damage Prevention Ordinance (1981)

The Flood Damage Prevention Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the County prior to any construction or substantial improvement activities. Permits will only be approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices, and uses. Most importantly, establishes the requirements for elevation and floodproofing (non-residential) to BFE.

The ordinance requires the minimum standards of the NFIP. The County's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. It is possible those floodplain areas will be redelineated with updated topography, and that base flood elevations will be recalculated. The mitigation effectiveness of this ordinance is high.

Subdivision Ordinance (July 1997)

The Subdivision Ordinance is designed to regulate all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or a change in existing streets/roads. All proposed subdivisions must go through an approval process involving multiple individuals/agencies. Subdivision plats are required for review and must include the

location of areas subject to flooding. Lands subject to flooding, irregular drainage conditions, excessive erosion, and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval. Plats are also reviewed by the local permit officer to determine if the property lies within a designated AEC, and specifies what permits are required. Furthermore, all waterfront development must meet setback requirements and impervious surface requirements. The Zoning Department also reviews plats to identify matters of topography and drainage. All subdivisions must include stormwater controls and are subject to the stormwater control ordinance passed in 1998.

Although not designed specifically for hazard mitigation purposes, this ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events. The mitigation effectiveness of this ordinance is moderate.

Tazewell County State of Emergency Ordinance (2002)

The purpose of this ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a declared State of Emergency. This ordinance also establishes the authority and procedures for the County Board to proclaim a State of Emergency, and to impose the following restrictions as described in the ordinance: curfew; evacuation; possession/transportation/transfer of intoxicating liquors, dangerous weapons an substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during the State of Emergency.

The ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event. The mitigation effectiveness of this ordinance is low.

h. Open Space Plans

Tazewell County does not currently have a separate Open Space Plan.

i. Watershed Protection Plan

Tazewell County does not currently have a separate Watershed Protection Plan.

5. Legal Authority

Local governments in Illinois have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Illinois, which are (a) Regulation. (b) Acquisition, (c) Taxation, and (d) Spending. The scope of this local authority is subject to constraints, however, as all of Illinois' political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Illinois' enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

a. Regulation

(1) General Police Power

Illinois' local governments have been granted broad regulatory powers in their jurisdictions. Illinois State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. Tazewell County has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

(2) Building Codes and Inspection

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes. Tazewell County does not have building codes. However, municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the state code.

Local governments in Illinois are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department,

and enumerates their duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. Tazewell County has not adopted a building code or established a Building Inspections Department to carry out its building inspections.

b. Land Use

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. Tazewell County has adopted and enforces a land use regulation.

(1) Planning

According to State Statute, local governments in Illinois may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted “in accordance with a plan”, the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community. Tazewell County has established a Planning and Zoning Department. The county adopted a Comprehensive Land Use Plan in 1996.

(2) Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Illinois to engage in zoning. Counties may also regulate inside municipal jurisdiction at the request of a municipality. The statutory purpose for the grant of power is to promote health, safety, morals, or the general welfare of the community. Land “uses” controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use

such as lot size, building height and set backs, density of population, etc. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. Tazewell County enforces a countywide zoning ordinance.

(3) Subdivision Regulations

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require that subdividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures. Broad subdivision control enabling authority for municipalities is granted for counties outside of municipalities. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. The definition of subdivision does not include the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved. Tazewell County adopted a Subdivision Ordinance in July 1997.

(4) Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small-scale development of less than five acres. A reduction in damage from small-scale development is achieved through requirements such as on-site retention/detention ponds, etc. The State of Illinois encourages local governments to adopt stormwater regulations under land use authorities. Tazewell County has not adopted stormwater regulations.

(5) Floodplain Regulation

Illinois State Statutes provide cities and counties the land use authority. In particular, issues such as floodwater control are empowered through 70 ILCS 405/25. The community's most current version of floodplain regulations were adopted in 1981.

c. Acquisition

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Illinois legislation empowers cities, towns, and counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain. Tazewell County proposes to use acquisition as a local mitigation tool.

d. Taxation

The power to levy taxes and special assessments is an important tool delegated to local governments by Illinois law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. Tazewell County does levy property taxes, but does not use any preferential tax districts or special assessments for purposes of guiding growth and development.

e. Spending

The fourth major power that has been delegated from the Illinois General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a CIP. A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control

growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. Tazewell County has not adopted a Capital Improvement Plan.

(6) Political Willpower

Some Tazewell County residents are knowledgeable about the potential hazards that their communities face, and in recent years, they have become more familiar with the practices and principles of mitigation. Some flood prone structures have been acquired thereby removing residents from harm's way. It is strongly believed that such tangible and visual changes within the community have created a greater sense of awareness among local residents, and that hazard mitigation is a concept that they are beginning to readily accept and support. Because of this fact, coupled with Tazewell County's history with natural disasters, it is expected that the current and future political climates may be favorable for supporting and advancing future hazard mitigation strategies.

Woodford County

1. Staff and Organizational Capability

Woodford County has very limited staff and organizational capability to implement hazard mitigation strategies. Woodford County is governed by a 15-member County Board. The Board has a peer-elected Chairperson and bears the responsibility of serving the people and improving the quality of life in the county. The County is divided into three (3) districts and each one has five Board members. The business of the County Board is conducted through the department system. Each of the county departments is responsible for oversight and budgetary control of its assigned areas. The department heads report their activities to the full Board every month.

The County Board manages the various County departments. More specifically, the County Board directs and supervises the administration of all county offices, boards, commissions and agencies under the general direction and control of the Board. Responsibilities include:

- Development of the annual budget,
- Coordination of public relations programs,
- Provision of administrative services,

- Administration of equal employment opportunity and affirmative action policies and programs,
- Human resource Management and Payroll,
- Risk Management,
- Facilities Management, and
- A number of delegated programs.

Woodford County has a number of professional staff departments to serve the residents of the County and to carry out day-to-day administrative activities. These include the following:

- Sheriff's Department,
- Health Department,
- Zoning Department,
- Administration, and
- Probation Department.

The County also has various Committees, Boards, Commissions and Offices which provide administrative support to the County Board including the Regional Office of Education, Veteran's Assistance Commission, Emergency Services and Disaster Agency (ESDA) and Board of Review.

The ESDA and the Zoning Department are responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events. The Zoning Department maintains a full-time Administrator who is also responsible for addressing land use planning, as well as, developing mitigation strategies. The department also enforces the NFIP requirements and other applicable local codes.

The Administrative Department is responsible for the oversight and management of the County's budget and fiscal programs, including the administration of State and Federal grants.

Of the above-listed County departments, the ESDA and the Zoning Department have been assigned specifically delegated responsibilities to carry out mitigation activities or hazard control tasks. The ESDA Office and the Zoning Department have been involved in the development of this mitigation plan in order to identify gaps, weaknesses or opportunities for enhancement with existing mitigation programs. It was determined that the departments need adequate staff, training and funding to accomplish their missions.

2. Technical Capability

Woodford County has very limited technical capability to implement hazard mitigation strategies.

a. Technical Expertise

Woodford County does have a full-time Zoning Administrator on staff to administer the County's hazard mitigation programs. The County does have a licensed engineer to provide related technical expertise. The county does not have a building department.

Woodford County currently does not have a person responsible for IT which can enhance local government operations and the County's ability to develop and maintain a state-of-the art hazard mitigation program.

b. Geographic Information Systems

GIS systems can best be described as a set of tools (hardware, software, and people) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. Woodford County does not currently have GIS capability to further hazard mitigation goals, but is in the process of instituting it at this time.

c. Internet Access

Woodford County does provide its employees with high-speed broadband Internet service. Internet access provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for Woodford County officials and residents - far less important than it used to be. It is believed that Internet access will help further the County's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

3. Fiscal Capability

Woodford County has very limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2003, Woodford County has not budgeted mitigation expenditures. The County receives most of its revenues through taxes and through restricted intergovernmental contributions (Federal and State pass-through dollars). Considering the current budget deficits at both the State and local government level, in Illinois, combined with the apparent increased reliance on local accountability by the Federal government, this is a significant and growing concern for Woodford County.

Under the Disaster Mitigation Act of 2000, FEMA has made special accommodations for "small and impoverished communities," who will be eligible for a 90% Federal share, 10% non-Federal cost share for projects funded through the Pre-Disaster Mitigation (PDM) grant program. Unfortunately, according to the current Interim Final Rule for Section 322 of the Act, Woodford County will not qualify as a small and impoverished community. The definition is restricted to “communities of 3,000 or fewer individuals that is identified by the State as a rural community.”

4. Policy and Program Capability

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community’s vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within Mitigation Strategy for Woodford County.

a. Recent Hazard Mitigation Efforts

Woodford County has not undertaken any specific hazard mitigation efforts in the past although numerous meetings and conversations about mitigation initiatives have transpired in the recent past.

b. Community Rating System Activities

Communities that regulate development in floodplains are able participate in the NFIP. In return, the NFIP makes federally-backed flood insurance policies available for properties in the community. The CRS was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction.

Woodford County does not participate in the Community Rating System.

c. Emergency Operations Plan

Woodford County has developed and adopted a LEOP dated 1992, with revisions, which predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. For the most part, the Plan describes the County’s capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The Plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the County to protect lives and property immediately before, during and immediately following an emergency. There

are no foreseeable conflicts between this Hazard Mitigation Plan and Woodford County's LEOP, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the County Board as having lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the LEOP.

d. Floodplain Management Plan

Woodford County does not currently have a separate floodplain management plan for purposes of the NFIP's CRS. This Hazard Mitigation Plan is intended to fulfill the CRS planning requirement should the community decide to enter the program.

e. Stormwater Management Plan

Woodford County does not currently have an adopted stormwater management plan, but does apply stormwater management provisions through their subdivision regulations. According to the County Subdivision Ordinance, lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval.

f. Comprehensive Plan

Woodford County does not have a Comprehensive Plan. Since the county is primarily agricultural, open space is not specifically addressed in the plan. It should also be noted that while Woodford County does not have a Comprehensive Plan, it does have ordinances that address specific hazards.

g. Ordinances

Woodford County has adopted several ordinances that are relevant to hazard mitigation.

Flood Damage Prevention Ordinance - December 1995

The Flood Damage Prevention Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the County prior to any construction or substantial improvement activities. Permits will only be approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices

and uses. Most importantly, establishes the requirements for elevation (2' above determined base flood elevations for each site) and floodproofing (non-residential) to BFE.

It should also be noted that Woodford County instituted some elevation and set-back requirements after the flood of February 1984.

The ordinance requires the minimum standards of the NFIP. The County's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. It is possible those floodplain areas will be re-delineated with updated topography, and that base flood elevations will be recalculated. The mitigation effectiveness of this ordinance is high.

Subdivision Ordinance - October 1997

The Subdivision Ordinance is designed to regulate all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or a change in existing streets/roads. All proposed subdivisions must go through an approval process involving multiple individuals/agencies. Subdivision plats are required for review and must include the location of areas subject to flooding. Lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval. Plats are also reviewed by the local permit officer to determine if the property lies within a designated AEC, and what permits are required. Furthermore, all waterfront development must meet setback requirements and impervious surface requirements. Plats are also reviewed by the Health Department, soil and water, townships, county engineers, zoning department, Tri-County Regional Planning Commission, and municipalities if within 1.5 miles of corporate limits to identify matters of topography and drainage.

Although not designed specifically for hazard mitigation purposes, this ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events. The mitigation effectiveness of this ordinance is moderate.

Woodford County State of Emergency Ordinance - 1992

The purpose of this Ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a State of

Emergency. This ordinance also establishes the authority and procedures for the County Board to proclaim a State of Emergency, and to impose the following restrictions as described in the ordinance: curfew; evacuation; possession/transportation/transfer of intoxicating liquors, dangerous weapons an substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during the State of Emergency.

The ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event. The mitigation effectiveness of this ordinance is low.

h. Open Space Plans

Woodford County does not currently have a separate Open Space Plan.

i. Watershed Protection Plan

Woodford County does not currently have a separate Watershed Protection Plan.

5. Legal Authority

Local governments in Illinois have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Illinois, which are (a) Regulation, (b) Acquisition, (c) Taxation, and (d) Spending. The scope of this local authority is subject to constraints, however, as all of Illinois' political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Illinois' enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

a. Regulation

(1) General Police Powers

Illinois' local governments have been granted broad regulatory powers in their jurisdictions. Illinois State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances that define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included

under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate “nuisances,” which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. Woodford County has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

(2) Building Codes and Building Inspection

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes. Woodford County does not have building codes. However, municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the state code.

Local governments in Illinois are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates their duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. Woodford County has not adopted a building code or established a Building Inspections Department to carry out its building inspections.

b. Land Use

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. Woodford County does have a comprehensive land use plan dated January 1997.

(1) Planning

According to State Statute, local governments in Illinois may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties (citation). The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan," the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals

of the community. Woodford County has a Zoning Department and relies on Tri-County Regional Planning Commission for guidelines and assistance in planning.

(2) Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Illinois to engage in zoning. Counties may also regulate inside municipal jurisdiction at the request of a municipality. The statutory purpose for the grant of power is to promote health, safety, morals, or the general welfare of the community. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use such as lot size, building height and set backs, density of population, etc. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. Woodford County enforces a countywide zoning ordinance adopted in October 2002.

(3) Subdivision Regulations

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require that sub-dividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures. Broad subdivision control enabling authority for municipalities is granted for counties outside of municipalities. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. The definition of subdivision does not include the division of land into parcels greater than 5 acres where no street right-of-way dedication is involved. Woodford County has adopted a Subdivision Ordinance.

(4) Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small-scale development of less than five acres. A reduction in damage from small-scale development is achieved through

requirements such as on-site retention/detention ponds, etc. The State of Illinois encourages local governments to adopt stormwater regulations under land use authorities. Woodford County has not adopted stormwater regulations.

(5) Floodplain Regulation

Illinois State Statutes provide cities and counties the land use authority. In particular, issues such as floodwater control are empowered through 70 ILCS 405/25. The community adopted its most current version of floodplain regulations in 1995.

c. Acquisition

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Illinois legislation empowers cities, towns, counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain. Woodford County proposes to use acquisition as a local mitigation tool.

d. Taxation

The power to levy taxes and special assessments is an important tool delegated to local governments by Illinois law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. Woodford County does levy property taxes, but does not use any preferential tax districts or special assessments for purposes of guiding growth and development.

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e. Spending

The fourth major power that has been delegated from the Illinois General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a CIP. A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. Woodford County has not adopted a CIP.

6. Political Willpower

Some Woodford County residents are somewhat knowledgeable about the potential hazards that their community faces, and in recent years, they have become more familiar with the practices and principles of mitigation. Some flood prone structures have been acquired thereby removing residents from harm's way. It is strongly believed that such tangible and visual changes within the community have created a greater sense of awareness among local residents, and that hazard mitigation is a concept that they are beginning to readily accept and support. Because of this fact, coupled with Woodford County's history with natural disasters, it is expected that the current and future political climates may be favorable for supporting and advancing future hazard mitigation strategies.

SECTION VII - MITIGATION STRATEGY

The Mitigation Advisory Committee attended a workshop on February 4, 2004, to discuss the results of the hazard identification and risk assessments, review mitigation goals and objectives based on the priority areas and hazard types, discuss community strengths and weaknesses, and begin developing the mitigation strategy.

This section of the Hazard Mitigation Plan describes the most challenging part of any such planning effort – the development of a Mitigation Strategy. It is a process of:

5. Setting mitigation goals,
6. Considering mitigation alternatives,
7. Developing objectives and implementation approaches, and
8. Deriving a mitigation action plan

This mitigation strategy was developed using this four-step process.

This Mitigation Strategy also serves a second purpose for Peoria County, which is a participant in the NFIP's CRS. The county has 138 NFIP-insured properties, which are on FEMA's Repetitive Loss list. As a result, Peoria County is required to prepare a CRS Plan, which addresses these repetitive loss structures.

This plan was structured to meet CRS Plan requirements. At the end of Section VII, a draft Repetitive Loss Plan is presented in order to fulfill CRS planning requirements.

1. Setting Mitigation Goals

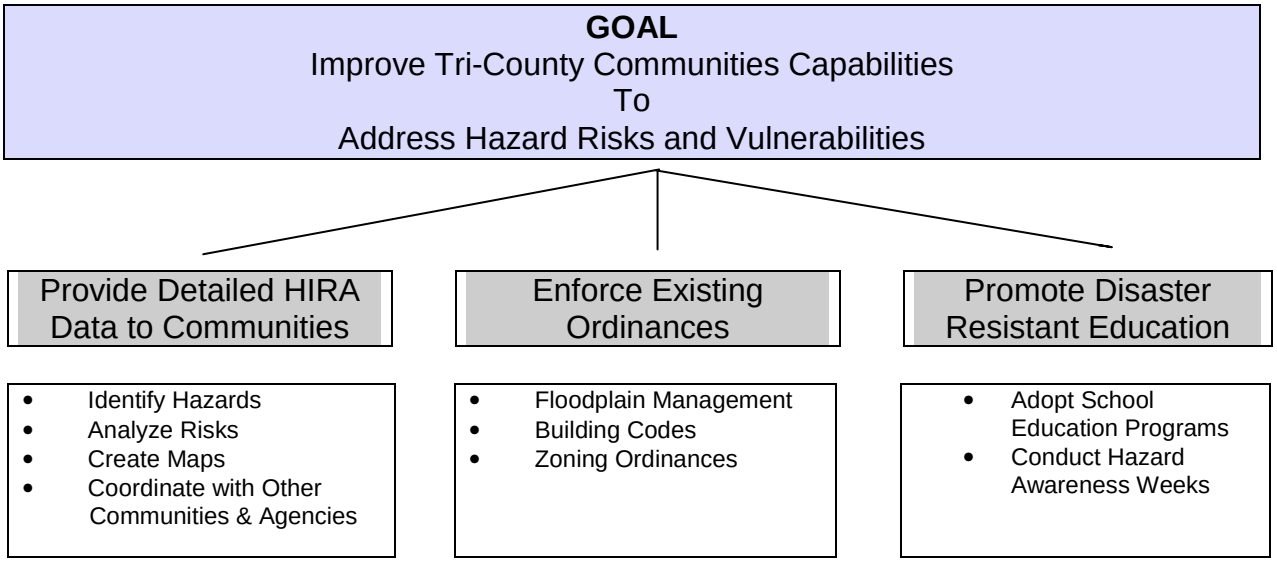
The Hazard Mitigation Planning process followed by the MAC is a typical problem-solving methodology:

- Describe the problem (Hazard Identification),
- Estimate the impacts the problem could cause (Vulnerability Assessment),
- Assess what safeguards already exist that could/should lessen those impacts (Capability Assessment), and
- Using this information, determine if action is required (Determine Acceptable Risk), and if so, what is the most appropriate action (Develop an Action Plan).

When a community decides that certain risks are unacceptable and that certain mitigation actions may be achievable, the development of Goals and Objectives takes place. Goals and Objectives help to describe what should occur, using increasingly narrow descriptors. Initially, broad-based Goals are developed, which are long-term and general statements. Goals are accomplished by meeting Objectives and are activities that are specific and achievable in a finite time period. In most cases there is

a third level, called Recommended Actions (or Implementation), which are very detailed and specific ways of meeting the Objectives.

When developing the Goals and Objectives for this plan, the MAC was provided with the model below as an example of this relationship.



The MAC discussed Goals and Objectives for this plan at two points in the planning process. First, early in the planning process, the MAC established general Goals and Objectives to set the initial tone and direction for the overall plan. Then, after the problem solving (described above) took place, the Goals and Objectives were revisited to confirm that the data collection process supported them. Lastly, Recommended Actions (or Implementation) were developed as a logical extension of the plan's objectives. Most of these actions are dynamic and can change. These actions have been utilized to develop a Mitigation Action Plan for the Tri-County Area and it is contained as a part of the overall all-hazards mitigation plan.

Each city and county in the Tri-County area used the results of the data collection efforts to develop goals and prioritize their actions. The priorities will differ from jurisdiction to jurisdiction. Overall, for the entire planning area, protecting new and existing development from the effects of hazards is the top priority because it can be achieved on an individual community-by-community basis but at the same time be integrated into an overarching plan goal. For each jurisdiction, additional priorities were developed based on past damages, existing exposure to risk, other community goals, and weaknesses identified by the local government capability assessments.

Following the final public meeting held on March 24, 2004, the following goals for the Tri-County area were accepted by the Mitigation Advisory Committee. The goals and their associated objectives form the basis for the development of a mitigation action plan and specific mitigation projects to be considered for the Tri-County area. The Mitigation Action Plan, located at the end of this section, contains the recommended mitigation projects.

Goal 1

Enhance the safety of residents and businesses by protecting new and existing development from the effects of hazards.

Goal 2

Protect new and existing public and private infrastructure and critical facilities from the effects of hazards.

Goal 3

Increase the local floodplain management activities and participation in the NFIP.

Goal 4

Ensure hazard awareness and risk reduction principles are institutionalized into the Tri-County communities' daily activities, processes, and functions by incorporating it into policy documents and initiatives.

Goal 5

Enhance community-wide understanding and awareness of community hazards.

Goal 6

Publicize mitigation activities to reduce vulnerability to hazards.

General Observations — Strengths

- The Tri-County area has several policies that have hazard mitigation elements or effects such as development and building code regulations, floodplain ordinances, zoning ordinances, stormwater management programs and local hazard mitigation plans in Peoria and Peoria County. Building code regulations, such as the freeboard and local enforcement, have helped to ensure that new development is built to accepted safety standards for development overall.

- Much of the language used for flood hazard mitigation is already present in some of the Tri-County area communities' existing comprehensive plans and local flood hazard mitigation plans. These concepts involve floodplain management and the preservation of open space and natural areas.

- Over the next few years, the Tri-County area communities will continue to have opportunities to experience new development within its jurisdictions as structures are built to newer codes and standards that help to reduce damage from natural hazards.

- The Tri-County area had a highly successful Project Impact program that was very active in promoting the concepts of disaster resistance and preparedness.

General Observations — Weaknesses

- While the Tri-County area jurisdictions enforce their floodplain ordinances, many current ordinances are out-of-date and need to be revised. The jurisdictions could offer an even greater degree of protection if they adopted cumulative substantial damage and substantial improvement determinations.

- Much of the older development lies in the most potentially hazardous areas along the major water bodies. Some of these areas are occupied by heavy industrial facilities that use potentially hazardous materials.

- Evacuation remains an issue, particularly as the cities and surrounding localities and counties continue to grow in population. The Tri-County area cities and counties must remain vigilant in coordinating with the State of Illinois, as well as regional and other local communities. During the presentation of findings for the hazard identification and risk assessment workshop, the Mitigation Advisory Committee was asked to provide their preliminary input and ideas. The MAC then considered ranges of alternatives based on their comments and suggestions.

The MAC reviewed the STAPLE/E criteria to rank the mitigation alternatives. The MAC utilized the STAPLE/E process, whenever possible, tempered by the preliminary comments below:

1. Top priorities for the area were public safety, public education, and reducing potential economic impacts of disasters.
2. Alternatives should consider the impacts on the jurisdictions as a whole.
3. Alternatives must not conflict with other community programs.
4. Community Rating System (CRS) and floodplain management policies and activities should be a priority.
5. Experiences from disasters should be built upon.

6. The success of past mitigation projects should be used as a base for alternatives.
7. Outreach and other efforts should be focused on FEMA's Repetitive Loss Properties.
8. The Project Impact program was an effective public outreach tool and should be built upon.

Prioritizing Alternatives

The MAC used the STAPLE/E Criteria (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) to select and prioritize the most appropriate mitigation alternatives for the Tri-County area communities. This process was used to help ensure that the most equitable and feasible actions would be undertaken based on jurisdiction's capabilities.

Table VII-1 below, provides information regarding the review and selection criteria for alternatives.

Table VII-1 — staple/ e REVIEW AND SELECTION CRITERIA FOR ALTERNATIVES

Social
• IS THE PROPOSED ACTION SOCIALLY ACCEPTABLE TO THE COMMUNITY(S)?
• ARE THERE EQUITY ISSUES INVOLVED THAT WOULD MEAN THAT ONE SEGMENT OF THE COMMUNITY ARE TREATED UNFAIRLY?
• WILL THE ACTION CAUSE SOCIAL DISRUPTION?
Technical
• WILL THE PROPOSED ACTION WORK?
• WILL IT CREATE MORE PROBLEMS THAN IT SOLVES?
• DOES IT SOLVE A PROBLEM OR ONLY A SYMPTOM?
• IS IT THE MOST USEFUL ACTION IN LIGHT OF OTHER COMMUNITY(S) GOALS?
Administrative
• CAN THE COMMUNITY(S) IMPLEMENT THE ACTION?
• IS THERE SOMEONE TO COORDINATE AND LEAD THE EFFORT?
• IS THERE SUFFICIENT FUNDING, STAFF, AND TECHNICAL SUPPORT AVAILABLE?
• ARE THERE ONGOING ADMINISTRATIVE REQUIREMENTS THAT NEED TO BE MET?
Political
• IS THE ACTION POLITICALLY ACCEPTABLE?
• IS THERE PUBLIC SUPPORT BOTH TO IMPLEMENT AND TO MAINTAIN THE PROJECT?

Table VII-1 — staple/ e REVIEW AND SELECTION CRITERIA FOR ALTERNATIVES

Legal

- IS THE COMMUNITY(S) AUTHORIZED TO IMPLEMENT THE PROPOSED ACTION? IS THERE A CLEAR LEGAL BASIS OR PRECEDENT FOR THIS ACTIVITY?
- ARE THERE LEGAL SIDE EFFECTS? COULD THE ACTIVITY BE CONSTRUED AS A TAKING?
- IS THE PROPOSED ACTION ALLOWED BY THE COMPREHENSIVE PLAN, OR MUST THE COMPREHENSIVE PLAN BE AMENDED TO ALLOW THE PROPOSED ACTION?
- WILL THE COMMUNITY(S) BE LIABLE FOR ACTION OR LACK OF ACTION?
- WILL THE ACTIVITY BE CHALLENGED?

Economic

- WHAT ARE THE COSTS AND BENEFITS OF THIS ACTION?
- DO THE BENEFITS EXCEED THE COSTS?
- ARE INITIAL, MAINTENANCE, AND ADMINISTRATIVE COSTS TAKEN INTO ACCOUNT?
- HAS FUNDING BEEN SECURED FOR THE PROPOSED ACTION? IF NOT, WHAT ARE THE POTENTIAL FUNDING SOURCES (PUBLIC, NON-PROFIT, AND PRIVATE)?
- HOW WILL THIS ACTION AFFECT THE FISCAL CAPABILITY OF THE COMMUNITY(S)?
- WHAT BURDEN WILL THIS ACTION PLACE ON THE TAX BASE OR LOCAL ECONOMY?
- WHAT ARE THE BUDGET AND REVENUE EFFECTS OF THIS ACTIVITY?
- DOES THE ACTION CONTRIBUTE TO OTHER COMMUNITY GOALS, SUCH AS CAPITAL IMPROVEMENTS OR ECONOMIC DEVELOPMENT?
- WHAT BENEFITS WILL THE ACTION PROVIDE?

Environmental

- HOW WILL THE ACTION AFFECT THE ENVIRONMENT?
- WILL THE ACTION NEED ENVIRONMENTAL REGULATORY APPROVALS?
- WILL IT MEET LOCAL AND STATE REGULATORY REQUIREMENTS?
- ARE ENDANGERED OR THREATENED SPECIES LIKELY TO BE AFFECTED?

During the presentation of findings meeting on February 4, 2004, the Mitigation Advisory Committee (MAC) reviewed and commented on the draft Plan's Hazard Identification and Risk Assessment (HIRA). Discussions held during the meeting resulted in the generation of a range of potential mitigation goals and actions to address the hazards (the master grouping of alternatives the MAC chose from is included in the next section). These actions were then compiled into a master list for the MAC to rank the goals on a scale of 1 to 6 and the actions on a scale of 1 to 10. Ranking was done in order of relative priority based on the STAPLE/ E criteria and the potential goal/ action's ability to reduce vulnerability to natural hazards.

2. Considering Mitigation Alternatives

a. General Multi-Hazard Mitigation Alternatives

The mitigation alternatives selected should be linked to the Tri-County area's goals and objectives, and must address each jurisdiction's hazard risks and vulnerability outlined in the plan's Hazard Identification and Risk Assessment. The following is a list of potential mitigation measures not specific to one hazard, which can benefit a community's overall hazard reduction efforts.

(1) Comprehensive Plans

Comprehensive plans address how and where a community should grow by guiding the rate, intensity, form, and quality of physical development. These plans address land use, economic development, transportation, recreation, environmental protection, the provision of infrastructure, and other municipal functions. Comprehensive plans help to guide other local measures such as capital improvement programs, zoning ordinances, subdivision ordinances and other community policies and programs. By integrating hazard considerations into the plan, mitigation would become integrated with community functions and could therefore be an institutionalized part of a jurisdiction's planning efforts.

Density and development patterns should reflect the Tri-County area communities' ability to protect their jurisdictions, the environment, and the ability to evacuate the area. Development management tools should be incorporated into the local policies that address the location, density, and use of land, with a particular emphasis on development within high-risk areas. Efforts should be made to keep people and property out of high-hazard areas whenever possible. Particularly hazardous areas could be used for recreational uses, open space, or wildlife refuges.

(2) Capital Budget Plans

Capital budget plans typically provide for the future and ongoing provision of public facilities and infrastructure. These plans can be vital tools in keeping new development out of high-hazard areas by limiting the availability of public infrastructure. Public facilities can often be relocated to less hazardous areas in the aftermath of a disaster. Public utilities can also be relocated, or they can be upgraded or floodproofed. Power and telephone lines can be buried underground. In order to maximize the gravity flow area of wastewater treatment plants, the facilities are often located at the lowest elevation in the community. If this point lies within a floodplain, consideration may be given to relocating or

floodproofing such facilities. New locations for critical facilities should not be in hazard-prone areas, or in areas where their function may be impaired by a given hazard event (i.e., where water can flood the access roads). Critical facilities should be designed and/or retrofitted in order to remain functional and safe before, during, and after a hazard event.

(3) Zoning

Zoning is by far the most common land-use control technique used by local governments. While a useful tool for regulating and restricting undesirable land uses, zoning has a somewhat more limited benefit when it comes to mitigation. Zoning is most effective on new development rather than existing development, which does little to address the pre-existing development in hazardous areas. Communities with a large amount of undeveloped land will benefit much more than older, more established communities. Even for new development, the issuance of variances, special use permits, rezoning, and the failure to enforce existing codes, however, will weaken zoning's ability to prevent certain types of building practices.

(4) Building Codes

Building codes regulate the design, construction, and maintenance of construction within most communities. These regulations prescribe standards and requirements for occupancy, maintenance, operation, construction, use, and appearance of buildings. Building codes are an effective way to ensure than new and extensive re-development projects are built to resist natural hazards. In Illinois, communities are required by law to adopt and enforce the Uniform Statewide Building Code, which has provisions for wind, water, and seismicity.

(5) Public Outreach and Education Programs

Educating the public about what actions they can take to protect themselves and their property from the effects of natural hazards can be an effective means for reducing losses. These types of programs could target public officials, citizens, businesses, or the local construction trade. The program could cover preparedness, recovery, mitigation, and general hazard awareness information. The information could be presented in a variety of ways, from workshops, brochures, advertisements, or local media. Potential outreach and education topics include:

- Code awareness training,
- Sheltering and evacuation,

- Flood insurance,
- School information (primary, secondary, colleges, and universities),
- New homeowner/resident information,
- Emergency preparedness for families, businesses, and tourists,
- Driver safety in disasters,
- Special needs outreach, and
- Hazard mitigation for homeowners (Including manufactured homes and trailers), renters, and businesses.

(6) Vegetative Maintenance

Vegetative maintenance is the pruning and maintenance of trees, bushes, and other vegetation that could increases threats to power lines during storms, or could act as fuels during wildfires. This could be applied in limited areas that have a significant vulnerability to these hazards, such as an easement or along the urban-wildland interface.

(7) Vegetative Planting and Treatment

Vegetative planting and treatments can help to capture and filter runoff and can reduce landslides. Perennial vegetation includes grass, trees, and shrubs, which cover the soil, reduce water pollution, slow the rate of runoff, increase filtration, and prevent erosion. This type of land treatment includes maintaining trees, shrubberies, and the vegetative cover, terracing (a raised bank of earth with vertical sloping sides and a flat top to reduce surface runoff), stabilizing slopes, grass filter strips, contour plowing, and strip farming (the growing of crops in rows along a contour). Other potential options include vegetated swales, infiltration ditches, and permeable paving blocks.

b. Hazard-Specific Alternatives

The following is a list of potential mitigation measures that tend to apply when applied to a specific hazard.

(1) Flood

Flood mitigation measures can be classified as structural or non-structural. In simple terms, structural mitigation attempts to eliminate the possibility of flooding at a particular location. Non-structural mitigation removes the potentially effected people or property from the potentially flooded area. The following is a list of potential flood mitigation measures.

(a) Floodplain Management Ordinances

Floodplain management ordinances are weakened by development pressures, a lack of suitable sites outside of the floodplain, community desires to be near the water, inability to effectively monitor floodplain management activities, or by land-use planning policies that are encouraging development into floodplain areas. Plans or policies that place more properties at risk are also reducing the storage capacity and functions of the natural floodplains. Degradation of the floodplain in this way increases flood depths and affects the reliability of Flood Insurance Rate Maps (FIRMs). Structures built in floodplains, particularly those that do not utilize a freeboard (that exceeds the minimum BFE), are consequently even more vulnerable to damage by floods.

(b) Acquisition

Acquisition involves the purchasing of a property that is cleared and permanently held as open space. Acquisition permanently moves people and property out of harm's way, increases floodplain capacities, recreation areas, and open space, and can help to preserve wetlands, forests, estuaries and other natural habitats. Participation in Federally funded grant programs requires voluntary participation by the owner. Acquisition programs can be expensive to undertake, and the property will no longer accrue taxes for the community and must be maintained, but it is by far the most effective and permanent mitigation technique. Acquisition is most effective when targeting repetitive loss structures, extremely vulnerable structures, or other high-hazard areas.

(c) Elevation

Elevation is the raising of a structure above the BFE. Elevation is often the best alternative for structures that must be built or remain in flood prone areas, and is less costly than acquisition or relocation. However, elevating a structure can increase its vulnerability to high winds and earthquakes. This technique can be cost-prohibitive or unsuitable for some types of buildings.

(d) Relocation

Relocation involves moving a building or facility to a less hazardous area, on either the same parcel or another parcel. This measure also moves people and property out of harm's way, and is a very effective measure overall. This technique can be cost-prohibitive or unsuitable for some types of buildings.

(e) Stormwater Management Plans

New development that increases the amount of impervious surfaces affects the land's ability to absorb the water and can intensify the volume of peak flow runoff. Without efficient stormwater management, runoff could cause flooding, erosion, and water quality problems. Stormwater management plans should incorporate both structural and nonstructural measures in order to be most effective. Structural measures include retention and detention facilities that minimize the increase of runoff due to impervious surfaces and new development. Retention facilities allow stormwater to seep into the groundwater. Detention systems accumulate water during peak runoff periods that will be released at off-peak times. Nonstructural measures include establishing impervious surface limit policies and maintenance programs for existing drainage systems.

(f) Dry Floodproofing

Dry floodproofing involves making all areas below the flood protection level watertight by strengthening walls, sealing openings, using waterproof compounds, or applying plastic sheeting on the walls. This method is not recommended for residential structures, but may work well for new construction, retrofitting, or repairing a non-residential structure. Due to pressure exerted on walls and floors by floodwater, dry floodproofing is effective on depths less than two to three feet. Floodproofing of basements is not recommended.

(g) Wet Floodproofing

Opposite of dry floodproofing, wet floodproofing lets the floodwater actually enter a structure. This technique is effective in areas with deeper flood depths, as it does not have the same potential to build up exterior pressure. This method may not be used for basements under new

construction, substantial improvements, or substantially damaged structures.

(h) Storm Drainage Systems

Mitigation efforts include the installation, re-routing, or increasing the capacity of storm drainage systems. Examples include the separation of storm and sanitary sewers, addition or increase in size of drainage or retention ponds, drainage easements, or creeks and streams.

(i) Drainage Easements

Easements can be granted enabling regulated public use of privately owned land for temporary water retention and drainage areas.

(j) Structural Flood Control Measures

Water can be channeled away from people and property with structural control measures such as levees, dams, or floodwalls. These measures may also increase drainage and absorption capacities. These structural control measures may also increase BFEs and could create a false sense of security.

(k) Basement Backflow Prevention

Tri-County area communities should encourage the use of check valves, sump pumps, and backflow prevention devices in homes and buildings if the infrastructure allows.

(2) Wind

Proper engineering and design of a structure can increase a structure's ability to withstand the lateral and uplift forces of wind. Building techniques that provide a continuous load path from the roof of the structure to the foundation are generally recommended.

(a) Windproofing

Windproofing is the modification of the design and construction of a building to resist damages from wind events, and can help to protect the

building's occupants from broken glass and debris. Windproofing involves the consideration of aerodynamics, materials, and the use of external features such as storm shutters. These modifications could be integrated into the design and construction of a new structure or applied to reinforce an existing structure. Anchoring the structures to their foundations can protect manufactured homes, which tend to be vulnerable to the effects of extreme wind events. Mobile homes could be tied down to their pads in order to prevent them from being destroyed. Public facilities, critical infrastructure, and public infrastructure (such as signage and traffic signals) should all be windproofed in vulnerable areas. However, windproofing is not a viable mitigation technique to protect against tornadoes.

(b) Community Shelters/Safe Rooms

Community shelters and concrete safe rooms can offer protection and reduce the risk to life. Locations for these shelters or safe rooms are usually in concrete buildings such as shopping malls or schools. Communities lacking basements and other protection nearby should consider developing tornado shelters.

(c) Burying Power Lines

Buried power lines can offer uninterrupted power during and after severe wind events and storms. Burying power lines can significantly enhance a community's ability to recover in the aftermath of a disaster. Buried power lines are typically more expensive to maintain and are more vulnerable to flooding. Encouraging back-up power resources in areas where burial is not feasible will enable the continuity of basic operations (e.g., security, refrigeration, heat, etc.) for businesses and facilities when there is a loss of power.

3. Developing Objectives and Implementation Approaches

GOALS, OBJECTIVES AND IMPLEMENTATION

Through a series of workshops, the following goals and objectives for the Tri-County area have been accepted, modified or rejected by the MAC (see Section III - Planning Process for workshop dates) . The goals and objectives form the basis for the development of a mitigation action plan and specific mitigation projects to be considered for the Tri-County area. The process of 1) setting goals, 2) developing objectives, and 3) deriving mitigation action items, and 4) implementing recommended mitigation

activities comprises a mitigation strategy. Therefore, the development of goals and objectives leads to the development of a mitigation action plan that has been ultimately finalized as the Tri-County area's Mitigation Strategy.

Overarching Tri-County Area Goal

"To develop and maintain a disaster resistant community that is less vulnerable to the economic and physical devastation associated with natural hazard events."

This overarching goal is intended to represent the vision of the Tri-County communities' future as it relates to natural hazards, safety, and economic prosperity. Community officials should consider the vision and goals that follow before making community policies, public investment programs, economic development programs, or community development decisions for their communities. Following each Goal Statement is a future oriented vision in italics of what the Tri-County communities will look like when these goals are accomplished.

Goal 1

Enhance the safety of residents and businesses by protecting new and existing development from the effects of hazards.

Future Vision: The Tri-County communities recognize that safe and economically sustainable communities must protect the life and property of citizens, businesses, and the day-to-day functions of the jurisdiction itself. As resources have allowed, repetitive loss properties have been targeted for mitigation studies and efforts, as they are also extremely vulnerable to the impacts of hazard events. Table VII-2 provides information on residential and commercial mitigation strategies, implementation of those strategies, and timeframes for implementation.

TABLE VII-2 — MITIGATION OBJECTIVES AND IMPLEMENTATION FOR RESIDENTS AND BUSINESSES				
OBJECTIVE	**IMPLEMENTATION**	**2004-2005**	**2005-2008**	**Post-Disaster**
1.1 Investigate all manufactured homes and trailers to evaluate their resistance to wind and flood hazards.	Local building departments work with the MAC to identify properties and obtain grant funds for a study. Included in this analysis will be an assessment of the most cost-beneficial mitigation alternatives for the at-risk properties.	X		
	In order to finance this initiative, the MAC submits a PDM program grant application to the Illinois Emergency Management Agency.	X		
1.2 Target FEMA's Repetitive Loss Properties throughout the Tri-County area for potential mitigation projects.	The MAC, planning departments, and local emergency management agencies will develop a potential mitigation project list for targeting FEMA's Repetitive Loss Properties.		X	X
	In order to finance this initiative, the MAC submits a PDM program grant application to the Illinois Emergency Management Agency.		X	
1.3 Distribute 100 NOAA weather radios to residents that are most vulnerable to wind events, at no charge.	Local emergency management agencies will identify funding sources, obtain radios and distribute them to residents.	X		

Goal 2

Protect new and existing public and private infrastructure and critical facilities from the effects of hazards.

Future Vision: The Tri-County communities have improved their ability to respond, recover, and provide continuity of services in the aftermath of a hazardous event. Public facilities and critical facilities continue to be evaluated for their ability to withstand a variety of hazards and are retrofitted as resources have become available. Additionally, signs, hydrants, and other forms of public property are retrofitted as resources allow. Table VII-3 provides information on infrastructure-related mitigation strategies, implementation of those strategies, and time frames for implementation.

TABLE VII-3 — INFRASTRUCTURE MITIGATION OBJECTIVES AND IMPLEMENTATION

OBJECTIVE	IMPLEMENTATION	2004-2005	2005-2008	Post-Disaster
2.1 Develop a detailed building inventory for all structures in the tri-County area, in a GIS-based format, which catalogues information regarding assets such as value of structure, contents, age, location (latitude and longitude), etc.	In order to finance this initiative, the MAC submits a Pre-Disaster Mitigation (PDM) program grant application for the next program cycle to the Illinois Emergency Management Agency and FEMA to develop a detailed building inventory for the Tri-County area.	X	X	X
2.2 Investigate all primary and secondary schools to evaluate their resistance to all natural hazards.	Local school boards in the Tri-County area work with the MAC to undertake this study.	X		
	In order to finance this initiative, the MAC submits a PDM program grant application to the Illinois Emergency Management Agency, and/or to the Illinois Department of Education to obtain School Preparedness Grants from the Department of Homeland Security.	X	X	
2.3 Replace glass in public safety buildings in the Tri-County area communities with impact resistant glass.	Local emergency management agencies and fire departments apply for PDM program funds to the Illinois Emergency Management Agency.	X	X	
2.4 Investigate all critical community facilities, including utility lines, to evaluate (audit) their resistance to wind, flood and severe winter storms (icing) hazards.	Local facilities management offices/agencies and local emergency management agencies work with the MAC to undertake a future study.	X		X
	In order to finance this initiative, the MAC submits a PDM program grant application to the Illinois Emergency Management Agency.	X		

TABLE VII-3 — INFRASTRUCTURE MITIGATION OBJECTIVES AND IMPLEMENTATION				
OBJECTIVE	**IMPLEMENTATION**	**2004-2005**	**2005-2008**	**Post-Disaster**
2.5 Label all public hydrants in the Tri-County area to assist in street identification in the event of wide spread destruction.	Local fire and public works departments/agencies identify funding opportunities. Seek funding for this initiative through Department of Homeland Security grants.	X		
2.6 Develop a sign retrofitting or new sign program to decrease their vulnerability to wind hazards.	To reduce costs, local public works departments/agencies within the Tri-County area begin to implement upgraded signs while performing periodic maintenance. In the post-disaster environment, all damaged or destroyed signs are replaced with the upgraded design.	X		X
2.7 Initiate discussions with private utility companies to discuss incorporating mitigation measures into new and pre-existing development and repairs for infrastructure.	Local public works departments/agencies and emergency management agencies work with the MAC and area Chambers of Commerce to begin dialogue with private utility companies about incorporating mitigation as infrastructure is laid, maintained, or repaired. Specific approaches to infrastructure protection will be developed by the MAC and may include windproofing, floodproofing, etc.	X	X	X
2.8 Strengthen and enforce inspection and maintenance programs for private infrastructure facilities.	The Tri-County jurisdictions form a task force to develop a set of “best practices” and evaluate potential “reward” programs for compliance.	X	X	X
2.9 Adjust the timing, location, and design of public infrastructure (e.g., water, sewer, roads) to limit damage from hazards.	Local public facilities offices/agencies and emergency management agencies work with the MAC to review best practices alternatives in vulnerable areas.	X	X	X

TABLE VII-3 — INFRASTRUCTURE MITIGATION OBJECTIVES AND IMPLEMENTATION				
OBJECTIVE	**IMPLEMENTATION**	**2004-2005**	**2005-2008**	**Post-Disaster**
2.10 Hazard-proof new community facilities to minimize damages.	Local facilities management offices/departments and emergency management agencies work with the MAC to discuss mitigation alternatives to incorporate into all new public facilities.	**X**	**X**	
	Additionally, the MAC works to develop a strategy to assure that mitigation measures will be incorporated into all public facilities and infrastructure that must be repaired or replaced following a disaster.		**X**	**X**
2.11 Support Tri-County area public works initiatives to improve storm water infrastructure as part of the required NPDES Phase III improvements.	The MAC, in conjunction with local public works offices/departments seeks alternative funds for Phase III implementation of infrastructure improvements where required in the Tri-County area.	**X**	**X**	
2.12 Undertake compilation of land and mine subsidence activity in the Tri-County area.	MAC works with Illinois Department of Transportation to develop a tracking list of potential land and mine subsidence areas to include: past events, locations and dimensions. List can be used as a planning tool for local governments (in conjunction with the state) when making decisions about citing future local infrastructure.	**X**		

Goal 3

Increase the Tri-County area communities' floodplain management activities and participation in the National Flood Insurance Program.

Future Vision: The Tri-County communities are incorporating a range of techniques to reduce exposure and increase awareness to protect their jurisdictions from flood hazards. Additionally, all NFIP-participating communities have updated and adopted

their amended floodplain ordinances. High-risk properties such as FEMA's Repetitive Loss Properties are routinely targeted for outreach and education opportunities and the property owners are aware of potential mitigation options that are available to reduce future damages from flooding. All Tri-County communities are participating in the Community Rating System, which provides discounts on annual insurance premiums to citizens and businesses throughout the community. To assist the cities and counties in their efforts and to assure local consistency with statewide goals and initiatives, the Illinois Department of Natural Resources and the Illinois Emergency Management Agency representatives have been working with the Tri-County communities to evaluate other opportunities and best practices for floodplain management, training, and mitigation funding opportunities. Table VII-4 provides information on floodplain management strategies, implementation of those strategies, and timeframes for implementation.

TABLE VII-4 — FLOODPLAIN MANAGEMENT OBJECTIVES AND IMPLEMENTATION

OBJECTIVE	IMPLEMENTATION	2004-2005	2005-2008	Post-Disaster
3.1 Revise the Tri-County communities' floodplain ordinances that are outdated.	The MAC, in conjunction with the Illinois Department of Natural Resources, evaluates and makes recommendations concerning outdated floodplain ordinances.	X		
3.2 Evaluate the floodplain manager's roles and responsibilities in each Tri-County jurisdiction.	The MAC evaluates and reaches consensus on the identification of responsibilities and duties of the person to be designated as the floodplain manager in each Tri-County community. The recommendations are forwarded to the appropriate community decision-makers.	X		
3.3 Target FEMA's Repetitive Loss Properties for educational outreach and mitigation activities.	The MAC and local government communications departments/offices work with the State NFIP Coordinator at the Illinois Department of Natural Resources and the Illinois Emergency Management Agency to conduct outreach activities that illustrate flood proofing options and describe available grant monies for acquisition and/or relocation.	X	X	X

TABLE VII-4 — FLOODPLAIN MANAGEMENT OBJECTIVES AND IMPLEMENTATION

OBJECTIVE	IMPLEMENTATION	2004-2005	2005-2008	Post-Disaster
	The MAC requests grant assistance to fund this initiative from both the Illinois Department of Natural Resources and the Illinois Emergency Management Agency.	X	X	
3.4 Increase education opportunities for the Tri-County communities' employees, MAC representatives, and public officials regarding natural hazard mitigation, floodplain management, floodplain regulations, and enforcement.	The MAC and local government communications departments/offices work with the State NFIP Coordinator at the Illinois Department of Natural Resources and the Illinois Emergency Management Agency to develop outreach activities.	X	X	
	The MAC obtains and makes available annual schedules of "free" classes for community employees and public officials at the Illinois Emergency Management Agency, the Illinois Department of Natural Resources and FEMA's Emergency Management Institute (EMI) related to natural hazard mitigation and floodplain management. In addition, individual study courses and field-delivered courses available from FEMA will be promoted by the Tri-County jurisdictions. Employees who attend training will provide workshops for other city and county employees upon their return.	X	X	
3.5 Evaluate the potential costs versus benefits of implementing a freeboard requirement for all new and substantially improved or damaged structures in the 100-year floodplain.	Tri-County communities' engineering departments work with the State NFIP Coordinator at the Illinois Department of Natural Resources to evaluate costs and benefits of a freeboard ordinance.	X	X	

TABLE VII-4 — FLOODPLAIN MANAGEMENT OBJECTIVES AND IMPLEMENTATION				
OBJECTIVE	**IMPLEMENTATION**	**2004-2005**	**2005-2008**	**Post-Disaster**
3.6 Submit applications by non-participating Tri-County communities for participation in the NFIP's CRS program that can offer up to 45% flood insurance premium discounts to residents and businesses.	The MAC and local government planning departments work with the State NFIP Coordinator at the Illinois Department of Natural Resources to submit CRS applications.	X		
3.7 Coordinate with other hazard mitigation efforts of State Agencies (Illinois Department of Natural Resources, Illinois Emergency Management Agency and Illinois Environmental Protection Agency) and with other local governments.	The MAC meets annually with the Illinois State Agencies that have a role in mitigation to discuss, strategize, develop and implement statewide hazard mitigation initiatives.	X	X	X

Goal 4

Ensure hazard awareness and risk reduction principles are institutionalized into the Tri-County communities' daily activities, processes, and functions by incorporating it into policy documents and initiatives.

***Future Vision:** The Tri-County communities have demonstrated their commitment to this effort by recognizing the Mitigation Advisory Committee (MAC) as an official working group and requiring annual updates and periodic status reports from the committee. The concepts of the natural benefits of floodplains, watershed areas, and open spaces have been tied into existing statewide and local programs. Additionally, a special recovery task force has been created which works with city and county departments and agencies to ensure that mitigation principles will be considered in the aftermath of a disaster and to ensure that mitigation principles will be incorporated within their respective emergency management and recovery plans and policies. The Tri-County communities' numerous successes and ongoing efforts will be promoted and publicized at the state, regional, and local levels. Table VII-5 provides information on potential strategies to institutionalize mitigation in the Tri-County jurisdictions, implementation of those strategies, and timeframes for implementation.*

TABLE VII-5 —OBJECTIVES AND IMPLEMENTATION TO INSTITUTIONALIZE MITIGATION

OBJECTIVE	IMPLEMENTATION	2004-2005	2005-2008	Post-Disaster
4.1 Work with the local government public works departments to identify locations and identify potential mitigation measures to protect flood-prone structures.	Tri-County area public works departments and the MAC undertake a future study to evaluate flooding issues.		X	
	In order to finance this initiative, the MAC submits a PDM program grant application to the Illinois Emergency Management Agency.	X		
4.2 Develop a public education program or tie into pre-existing State programs that will help to reduce "environmentally unfriendly practices" that may adversely affect the watershed.	The MAC works with local environmental groups and the State NFIP Coordinator at the Illinois Department of Natural Resources to develop projects that incorporate and promote these concepts.	X	X	
4.3 Obtain official recognition of the MAC by the Tri-County communities in order to help institutionalize and develop an ongoing mitigation program.	City Councils and County Commissions appoint the MAC as an official working group. At a minimum, representatives from departments and agencies that have roles in emergency management, recovery, the environment and regulatory or development functions should be included.	X		
4.4 The MAC works with city and county departments and agencies to assure that mitigation principles will be incorporated within their respective emergency management and recovery plans.	Local emergency management agencies and the MAC request assistance from the Illinois Emergency Management Agency to evaluate capabilities and resources.	X		
	Local emergency management agencies work with the MAC and the Illinois Emergency Management Agency to discuss both pre- and post-disaster mitigation and recovery issues.	X	X	

TABLE VII-5 —OBJECTIVES AND IMPLEMENTATION TO INSTITUTIONALIZE MITIGATION

OBJECTIVE	IMPLEMENTATION	2004-2005	2005-2008	Post-Disaster
4.5 Develop recommendations for revenue sources for mitigation, planning, and projects.	The MAC submits recommendations annually to the Tri-County communities regarding the status of current mitigation projects and the plan, programmatic problems, and an inventory of new potential mitigation projects and unmet needs. As the economy begins to improve, the Tri-County communities begin evaluating internal funding resources.	X	X	
	The MAC aggressively pursues and seeks out public and private grants to support mitigation activities. These activities include multiple-objective initiatives, such as environmental grants, preparedness grants, sustainability grants, blight reduction grants, etc. The MAC is prepared to pursue special appropriations and grants that are available in the aftermath of a disaster.	X	X	X
4.6 Reduce hazard impacts using methods that also achieve the preservation of natural areas, water quality, and open space.	The Illinois Environmental Protection Agency and the Illinois Department of Natural Resources work with the MAC to discuss inter-linkages and outreach between agriculture and the natural resource community including the No Adverse Impact (NAI) initiative currently being promoted by the Association of State Floodplain Managers (ASFPM).	X	X	
4.7 Establish a program to publicize and celebrate successes that ties into the Tri-County communities' promotion of former Project Impact initiatives.	The MAC works with the local government communications departments and police departments to discuss ideas and develop publicity materials that include natural hazard considerations.	X		

TABLE VII-5 —OBJECTIVES AND IMPLEMENTATION TO INSTITUTIONALIZE MITIGATION				
OBJECTIVE	**IMPLEMENTATION**	**2004-2005**	**2005-2008**	**Post-Disaster**
	The MAC works with local/regional Councils of Government, the Illinois Department of Natural Resources, the Illinois Environmental Protection Agency, the Illinois Emergency Management Agency and others to distribute news releases summarizing recent successes and ongoing disaster-reduction activities .	**X**		

Goal 5

Enhance community-wide understanding and awareness of community hazards.

Future Vision: ***As a result of the Tri-County communities' consistent outreach efforts, citizens, businesses, visitors, local officials, and other stakeholders are more aware of potential community hazards and vulnerable locations. Stakeholders seeking information about hazards and hazard-reduction techniques are able to easily find resources to help them. Additionally, the Tri-County communities are collaborating with the Homebuilders Association of Illinois to develop a series of mitigation workshops and post-disaster media campaigns. Table VII-6 provides information on potential strategies to enhance a community's awareness and understanding of hazards, implementation of those strategies, and possible timeframes for implementation.***

TABLE VII-6 —OBJECTIVES AND IMPLEMENTATION TO ENHANCE THE HAZARD UNDERSTANDING AND AWARENESS				
OBJECTIVE	**IMPLEMENTATION**	**2004-2005**	**2005-2008**	**Post-Disaster**
5.1 Increase outreach and educational opportunities to residents, businesses, tourists, and community officials about hazards.	The MAC coordinates with the local government communications departments to develop awareness and prevention brochures for new residents as well as evacuation information. The MAC also works with local government communications departments to air seasonal weather awareness shorts on local television stations and for local hotel cable networks.	**X**	**X**	
5.2 Develop a series of seasonal mitigation workshops with the Homebuilders Association of Illinois, which focus on homeowners and contractors.	Local government inspection departments/offices and the MAC work with the Homebuilders Association of Illinois to develop and sponsor/assist with periodic workshops. Homeowners would be taught topics including relatively inexpensive or simple mitigation techniques, while contractors and tradesmen would be taught about the latest hazard resistant techniques, materials, and other more advanced concepts.	**X**	**X**	**X**
5.2 (Continued)	In a post-disaster environment, the Homebuilders Association of Illinois supports the Tri-County jurisdiction's rebuilding efforts by working with the media to discuss how to find legitimate contractors that can assist homeowners and businesses with their recovery efforts and recovery and reconstruction techniques.		**X**	**X**

TABLE VII-6 —OBJECTIVES AND IMPLEMENTATION TO ENHANCE THE HAZARD UNDERSTANDING AND AWARENESS				
OBJECTIVE	**IMPLEMENTATION**	**2004-2005**	**2005-2008**	**Post-Disaster**
5.3 Identify and target an outreach program to industrial facilities (particularly hazardous facilities) to discuss hazards and mitigation alternatives.	The MAC, local emergency planning committees (LEPC's) and local government communications departments/offices work with the State NFIP Coordinator at the Illinois Department of Natural Resources and Illinois Emergency Management Agency to develop outreach activities.		**X**	**X**
5.4 Partner with Parent Teacher Associations and local schools to develop an annual children's and teacher's educational program which focuses on teaching children and adults about hazard seasons, effects, and mitigation opportunities.	Local school boards work with the MAC to research and implement a local program.	**X**	**X**	
5.5 Coordinate with all Tri-County communities to develop and promote seasonal educational materials and programs regarding the risks of hazards and various methods of hazard mitigation (e.g., websites, pamphlets, lectures, radio and television ads, billboards, newspapers).	The MAC, local emergency management agencies and local government communications departments/offices work with the local emergency management coordinators to supplement the area's pre-existing outreach program.	**X**	**X**	**X**
5.6 Develop a severe weather (to include severe thunderstorm) public awareness campaign to be undertaken annually to increase understanding of the hazard and techniques to avert impacts.	MAC and local emergency management agencies and local government communications departments/offices work with the local emergency management coordinators to develop written materials, videos and power point presentations that can be used to supplement a ***severe weather awareness week*** outreach program.	**X**		

Goal 6

Publicize mitigation activities to reduce the Tri-County areas vulnerability to hazards.

Future Vision: ***As a result of consistent outreach efforts, citizens, businesses, visitors, local officials, and other stakeholders are more aware of potential community hazards and vulnerable locations. The Tri-County communities are effectively utilizing their hazard information centers as one of the many methods of public outreach. Additionally, the jurisdictions have successfully collaborated with the local government economic development departments to create and distribute outreach materials aimed specifically at the business community. Table VII-7 provides information on outreach and education strategies, implementation of those strategies, and timeframes for implementation.***

TABLE VII-7 — OUTREACH AND EDUCATION OBJECTIVES AND IMPLEMENTATION

OBJECTIVE	IMPLEMENTATION	2004-2005	2005-2008	Post-Disaster
6.1 Work with the Tri-County communities' economic development departments and MAC to develop materials for businesses on general preparedness and mitigation alternatives.	Local government economic development departments work with the MAC to develop outreach materials.	X	X	
6.2 Develop "hazard information centers" on the Tri-County communities websites and in public libraries where individuals can find hazard and mitigation information.	Tri-County communities local government communications departments/offices and the MAC work together to develop hazard information centers in both electronic and printed formats. In order to finance this initiative, the MAC submits a PDM program grant application to the Illinois Emergency Management Agency.	X		

Prioritized Project List

The above mitigation actions can be divided into two broad categories in order of priority. The first are projects that institutionalize mitigation principles and thinking within the Tri-County area jurisdiction's organization. Although these are not traditional "bricks and mortar"-type projects, these projects will help to establish the sound foundation for a mitigation program to be institutionalized within the area. The following priorities have been ranked in the order in which they are intended to be implemented.

It is important to note, however, that this list is flexible and will need to be periodically adjusted based on current conditions and funding availability.

1. Target FEMA's Repetitive Loss Properties for acquisition and educational outreach activities. Develop and distribute brochures and education material for FEMA's Repetitive Loss Properties on specific mitigation measures emphasizing acquisition. MAC will collaborate to develop the material. Funding will need to be identified for printing and distribution costs.

2. One of the primary mitigation goals for the Tri-County area is to develop a detailed building inventory for all structures located in each of the five communities including critical facilities and infrastructure. When a detailed building inventory becomes available, a greater level of vulnerability analysis, and consequently risk assessment, will be possible.

3. Formal recognition of the MAC.

4. Complete, update and adopt amended Floodplain Ordinances.

5. Discussion of individuals to be designated as the Floodplain Manager in each of the five Tri-County area jurisdictions. MAC will make recommendations to the appropriate decision-makers in each Tri-County jurisdiction.

6. Initiate discussions with public utility companies about incorporating mitigation as infrastructure is laid, maintained, or repaired. Will invite utilities to make a presentation to the MAC to begin dialogue.

7. Develop and distribute a brochure targeting Tri-County area community staff, which details mitigation principles and options. Can be distributed with payroll.

8. Development of "hazard information centers" on the jurisdiction's web sites that explain the various hazards and mitigation alternatives that are available to homeowners and businesses.

9. Complete Community Rating System Applications for non-participating jurisdictions.

The second category of projects is more traditional in nature. It is anticipated that the implementation and subsequent success of these projects will facilitate the goal of bringing mitigation principles to the forefront of community thinking. The following priorities have been ranked in the order in which they are intended to be implemented. It is important to note, however, that this list is flexible and will need to be periodically adjusted based on current conditions and funding availability.

1. Give away 100 National Oceanic Atmospheric Administration (NOAA) Weather Radios to residents that are most vulnerable to wind events. Mobile homes will be targeted in each Tri-County jurisdiction and each will be given a radio. Emergency Management will manage the program.

2. Label all public hydrants in the Tri-County area communities with identification numbers to better identify street locations in the event of a disaster. This project will be administered jointly by Public Works Departments and Fire Departments. As periodic maintenance is performed on hydrants, identification tags will be placed on the respective hydrants. Funding will be identified from Homeland Security grants.

3. Replace glass in the Public Safety Buildings. Public Safety Buildings in the Tri-County area jurisdictions, which house Emergency Operations Centers (EOC's), are clad in glass, making them very susceptible to damage from wind-related hazards. Replace glass in building with impact resistant glass. Tri-County area local Emergency Management Agencies and Facilities Management Agencies will jointly manage the project. Apply for funding available through competitive Pre-Disaster Mitigation grants.

4. Support Public Works initiatives to improve stormwater infrastructure throughout the area.

5. Investigate all critical facilities to evaluate their resistance to wind and flood hazards. This study will examine all critical facilities within the Tri-County area communities and make recommendations made as to ways in which the facilities can be strengthened or hardened. Local Facilities Management Agencies and Emergency Management Agencies will oversee the project. Apply for funding available through competitive Pre-Disaster Mitigation grants.

4. Deriving a Mitigation Action Plan

a. Mitigation Actions

In formulating a mitigation strategy, a wide range of activities were considered in order to help achieve the goals of five communities and to lessen the vulnerability of the Heart of Illinois Project Impact area (hereinafter referred to as the Tri-County area) to the effects of natural hazards. The Mitigation Action Plan is comprised of proactive mitigation actions designed to reduce or eliminate future losses from natural hazards in the participating jurisdictions.

b. Heart of Illinois Project Impact Mitigation Actions

The mitigation actions proposed for the Tri-County area to undertake are listed on the pages that follow. Each has been designed to achieve the goals and objectives identified in this multi-jurisdictional all-hazards mitigation plan. Each proposed action includes:

- The appropriate category for the mitigation technique,
- The hazard it is designed to mitigate,
- The objective(s) it is intended to help achieve,
- Some general background information,
- The priority level for its implementation (high, moderate or low),
- Potential funding sources, if applicable,
- The agency/person assigned responsibility for carrying out the strategy, and
- A target completion date.

Again, it is important to note that ten of the eleven mitigation actions are short-term, specific measures to be undertaken by the Tri-County area communities. It is expected that 1) this component of the Plan will be the most dynamic; 2) it will be used as the primary indicator to measure the Plan's progress over time, and 3) it will be routinely updated and/or revised through future planning efforts.

When formulating a Mitigation Action Plan a wide range of activities should be considered to help achieve the goals of communities and to lessen the vulnerability of the participating jurisdictions to the effects of natural hazards. In general, all of these activities fall into one of the following broad categories of mitigation techniques.

c. Available Mitigation Techniques

(1) Prevention

Preventative activities are intended to keep hazard problems from getting worse. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:

- Planning and Zoning
- Open space preservation
- Floodplain regulations
- Storm water management
- Drainage system maintenance
- Capital improvements programming
- Shoreline / riverine / fault zone setbacks

(2) Property Protection

Property protection measures protect existing structures by modifying the building to withstand hazardous events, or removing structures from hazardous locations. Examples include:

- Acquisition
- Relocation
- Building elevation
- Critical facilities protection
- Retrofitting (i.e., windproofing, floodproofing, seismic design standards, etc.)
- Insurance
- Safe rooms

(3) Natural Resource Protection

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their mitigation functions. Such areas include floodplains, wetlands and dunes. Parks, recreation or conservation agencies and organizations often implement these measures. Examples include:

- Floodplain protection
- Riparian buffers
- Fire resistant landscaping
- Fuel Breaks
- Erosion and sediment control
- Wetland preservation and restoration
- Habitat preservation
- Slope stabilization

(4) Structural Projects

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- Reservoirs
- Levees / dikes / floodwalls / seawalls
- Diversions / Detention / Retention
- Channel modification
- Storm sewers
- Wind retrofitting
- Utility protection/upgrades

(5) Emergency Services

Although not typically considered a "mitigation technique," emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- Warning systems
- Evacuation planning and management
- Sandbagging for flood protection
- Installing shutters for wind protection

(6) Public Information and Awareness

Public Information and awareness activities are used to advise residents, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- Outreach projects
- Speaker series / demonstration events
- Hazard map information
- Real estate disclosure
- Library materials
- School children education
- Hazard expositions
- Websites

The draft mitigation action items listed below have been developed specifically from the draft goals and objectives for the Heart of Illinois Project Impact ***All Hazards Mitigation Plan***. These action items are designed to foster the development of community derived mitigation actions and projects, which will be considered for inclusion in the final plan following a thorough review by the Tri-County Mitigation Advisory Committee (MAC) and other interested local officials and citizens. They will also serve as a catalyst for further public participation in the development of this local all hazards mitigation plan. Additional action items developed for the Tri-County area will need to tie directly back to specific goals and objectives which either 1) currently exist in the draft plan, or 2) have been subsequently added to the draft plan.

These action items have been derived specifically from the plan's draft goals and objectives, and as such, each one is referenced in Objective(s) Addressed (below). Specific mitigation projects will be finalized by the Mitigation Advisory Committee

following the ***public participation process*** that is a key element of the overall hazard mitigation planning process.

ACTION #1

Target FEMA's Repetitive Loss Properties throughout the Tri-County area for potential mitigation projects.

Category: Property Protection
Hazard: Flood
Objective(s) Addressed: 1.2, 3.3
Background: Currently, over 40,000 of the four million properties insured under the National Flood Insurance Program have been identified by FEMA as repetitive loss properties. The known repetitive loss properties are those that have sustained flood damage and received flood insurance claim payments on multiple occasions. The City of Peoria and Peoria County have the largest number of repetitive loss properties in the Tri-County area. Both jurisdictions have participated in acquisition programs in the past to remove these properties from vulnerable areas. However, funding for additional acquisition activities is not always available. There are currently 236 repetitive loss properties identified by FEMA in the Tri-County area.
Priority: High
Funding Sources: FEMA's Pre-Disaster Mitigation (PDM) program, Hazard Mitigation Grant Program (HMGP) and Flood Mitigation Assistance (FMA) program
Responsibility Assigned to: Mitigation Advisory Committee
Target Completion Date: June 1, 2008
Participating Jurisdictions: City of Peoria and Peoria County.

ACTION #2

Distribute 100 NOAA weather radios to residents that are most vulnerable to wind events, at no charge.

Category: Emergency Services
Hazard: Wind
Objective(s) Addressed: 1.3
Background: The Tri-County area is located in a geographic region of the United States which is very susceptible to tornado activity. During the May 2003 tornado outbreak, nine persons died and millions of dollars in property damage was sustained when three confirmed tornadoes touched down in the area. Early warning for residents can save lives in future events.
Priority: High
Funding Sources: FEMA, IEMA

Responsibility Assigned to: MAC and local emergency management agencies
Target Completion Date: January 5, 2005
Participating Jurisdictions: City of Peoria, Peoria County and Woodford County

ACTION #3

Label all public hydrants in the Tri-County area to assist in street identification in the event of widespread destruction.

Category: Emergency Services
Hazard: All
Objective(s) Addressed: 2.4
Background: Immediately following severe wind-related disaster events such as tornadoes, emergency services personnel are responding to critical needs in affected areas. Many times, street signs are blown away by high winds or home addresses are obliterated. Quick response coupled with accurate logistical information can be imperative when saving lives and performing recovery operations. Labeling hydrants may enable emergency responders the only ability to identify and administer to the needs of a given locale.
Priority: Medium
Funding Sources: Department of Homeland Security
Responsibility Assigned to: Local fire and public works departments
Target Completion Date: June 1, 2005
Participating Jurisdictions: Tazewell County and Woodford County

ACTION #4

Develop a sign retrofitting or new sign program to decrease their vulnerability to wind hazards.

Category: Emergency Services
Hazard: Wind
Objective(s) Addressed: 2.5
Background: Windstorms and tornadoes cause considerable damage to regulatory and warning signs within the Tri-County communities. Following disaster events, local emergency personnel may not be able to quickly direct volunteer personnel to locations where assistance is needed because signage has been destroyed. Also, local residents may be unaware of actions to take and places to avoid where warning signs have provided guidance in the past.
Priority: Moderate
Funding Sources: Local government capital improvement funds
Responsibility Assigned to: Local public works departments/agencies
Target Completion Date: Continuous

Participating Jurisdictions: None presently since the Illinois Department of Transportation controls sign standards

ACTION #5

Revise the Tri-County communities' floodplain ordinances that are outdated.

Category: Prevention
Hazard: Flood
Objective(s) Addressed: 3.1
Background: The two city and three county floodplain ordinances currently limit the definition of "substantial damage" and "substantial improvement" to one-time damage repairs or improvements. Communities can reduce flood damage by counting improvement and repair projects cumulatively, so that buildings will be brought into compliance with flood protection standards earlier in their life cycle. This will require the Tri-County jurisdictions to maintain a permit history so when cumulative repairs or improvements equal 50% of the building value, the building must be brought up to current codes for floodplain development.
Priority: Moderate
Funding Sources: N/A
Responsibility Assigned to: Tri-County communities' floodplain managers
Target Completion Date: June 1, 2005
Participating Jurisdictions: Woodford County

ACTION #6

Target FEMA's Repetitive Loss Properties for educational outreach and mitigation activities.

Category: Public Information and Awareness
Hazard: Flood
Objective(s) Addressed: 3.3
Background: FEMA is currently conducting a specific attitudinal study to determine why repetitive loss property owners accept or decline assistance offers. Information gained as a result of the study will help to more effectively implement existing mitigation programs. Tri-County owners of repetitive loss properties should be engaged by representatives from local governmental jurisdictions so they may better understand the advantages of removing themselves and their property from harm's way. FEMA, the Illinois Emergency Management Agency, the National Weather Service and other agencies provide informational brochures and pamphlets on property protection measures at no cost to local governments.
Priority: High

Funding Sources: FEMA, IEMA, IDNR
Responsibility Assigned to: Mitigation Advisory Committee and local government communications departments/offices
Target Completion Date: October 31, 2004
Participating Jurisdictions: Cities of Pekin and Peoria and Peoria, Tazewell, and Woodford Counties

ACTION #7

Obtain official recognition of the Mitigation Advisory Committee by the Tri-County communities in order to help institutionalize and develop an ongoing mitigation program.

Category: Public Information & Awareness
Hazard: All
Objective(s) Addressed: 4.3
Background: After the passage of the Disaster Mitigation Act of 2000 (DMA2K), local governments are required to develop and to adopt all hazards mitigation plans to be eligible for certain types of future disaster assistance including funds for mitigation activities. Nationwide, many communities have formed committees, councils or citizen groups to assist in developing and implementing plans. In the case of multi-jurisdictional plans, "mitigation advisory committees" are often formed and are comprised of local officials and residents from the participating jurisdictions. One way to assure the effectiveness of such committees is to bestow official status to them.
Priority: High
Funding Sources: N/A
Responsibility Assigned to: MAC
Target Completion Date: June 1, 2004
Participating Jurisdictions: Cities of Pekin and Peoria and Peoria, Tazewell, and Woodford Counties

ACTION #8

Develop recommendations for revenue sources for mitigation, planning, and projects.

Category: Prevention
Hazard: All
Objective(s) Addressed: 4.5
Background: Funding for mitigation projects and mitigation planning is becoming more and more competitive as communities across the United States continue to embrace the benefits of natural hazard mitigation. Each year, many states suffer the impacts of floods, tornadoes, winter storms, earthquakes and hurricanes. Those states which have

undertaken mitigation planning and projects for several years often seem to have a competitive advantage over communities that are just beginning to embark on mitigation activities. Many communities who have experienced the benefits (returns) of 1) lessened or eliminated damages, 2) decreases in emergency service calls, and 3) increased awareness by the general public as to the dangers of natural hazards have developed local funding sources to support mitigation. Nonetheless, they also continue to seek funding support from outside sources to supplement burgeoning local programs. In addition, not all hazard events will receive disaster declarations by the State or Federal government, limiting the amount of post-disaster assistance for local governments for certain events. Further, State and Federal disaster assistance programs could likely require local matching funds of up to 25%. A local reserve fund could assure that the Tri-County area is prepared to quickly recover/rebuild from disasters and maximize possible funding opportunities
Priority: High
Funding Sources: FEMA; IEMA. IDNR
Responsibility Assigned to: MAC
Target Completion Date: Continuous
Participating Jurisdictions: City of Pekin and City of Peoria

ACTION #9

Increase outreach and educational opportunities to residents, businesses, tourists, and community officials about hazards.

Category: Public Information and Awareness
Hazard: All
Objective(s) Addressed: 5.1
Background: Public Information and awareness activities are used to advise residents, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property.
Priority: Moderate
Funding Sources: FEMA, NWS, IEMA, IDNR
Responsibility Assigned to: MAC and local emergency management agencies
Target Completion Date: Continuous
Participating Jurisdictions: Cities of Pekin and Peoria and Peoria, Tazewell, and Woodford Counties

ACTION #10

Partner with Parent Teacher Associations and local schools to develop an annual children's and teacher's educational program which focuses on teaching children and adults about hazard seasons, effects, and mitigation opportunities.

Category: Public Information and Awareness
Hazard: All
Objective(s) Addressed: 5.4
Background: Most children have little experience with natural disasters given the frequency of such events. Nonetheless, children seem to be drawn to the power and grandeur of nature. Their innate curiosity provides a perfect opportunity to instill valuable lessons about natural hazards. Each year, schoolteachers prepare annual curriculums. Those months just prior to the start of a school year provide an opportunity to collaborate with teachers on curriculum development, thereby assuring that the values of learning and teaching about natural hazards are included in the classroom environment.
Priority: Moderate
Funding Sources: FEMA, IEMA, IDNR and Illinois Department of Education
Responsibility Assigned to: MAC, local school boards and PTA's
Target Completion Date: January 5, 2005
Participating Jurisdictions: Woodford County

ACTION #11

Develop "hazard information centers" on the Tri-County communities websites and in public libraries where individuals can find hazard and mitigation information.

Category: Public Information and Awareness
Hazard: All
Objective(s) Addressed: 6.2
Background: As the Internet continues to become "the information super highway", more local governments around the country are using it as a primary means of official communication with community residents through the development and administration of websites. Today, many residents pay their water and power bills online, register to vote and even obtain driver's licenses over the Internet. Use of local government websites to educate community residents about natural hazards and mitigation opportunities is growing nationwide.
Priority: Moderate
Funding Sources: Local government annual budgets for information technology
Responsibility Assigned to: Tri-County communities' offices of information technology

Target Completion Date: December 31, 2004
Participating Jurisdictions: Cities of Pekin and Peoria and Tazewell, and Woodford Counties

REPETITIVE LOSS PLAN

Background

A Repetitive Loss Property, as defined by the Federal Emergency Management Agency (FEMA), is a property insured under the National Flood Insurance Program (NFIP) that has filed two or more claims in excess of $1,000 each, within a ten (10) year period. Nationwide, repetitive loss properties constitute two percent (2%) of all NFIP insured properties. However, they are responsible for forty percent (40%) of all NFIP claims. Mitigation for repetitive loss properties is a high priority for FEMA. It is also a high priority for the Heart of Illinois Project Impact ***All Hazards Mitigation Plan***. It is the highest mitigation priority for Peoria County, where the majority of repetitive loss properties are located in the Tri-County area.

As described earlier in this plan, the participation in the Community Rating System is one way in which a community can work to lower it's vulnerability to flood damages, and can provide additional advantages to it's citizens, such as lower flood insurance premiums. One of the CRS criteria for communities with greater than 10 repetitive loss properties is to develop a Repetitive Loss Plan to outline a specific plan for reducing future losses to these properties. Although, multiple jurisdictions within the Tri-County area have more than 10 repetitive loss properties within their community, only Peoria County is participating in, or expressed interest in, the CRS program. The following sections include the Repetitive Loss Plan for Peoria County. Repetitive Loss properties located within other jurisdictions within the Tri-County area will be addressed through the priorities of this Hazard Mitigation Plan, and specifically Action #1 described above.

Peoria County

There are one hundred and thirty-eight (138) repetitive loss properties in Peoria County. A majority of these properties are located in the northern part of the county along the Illinois River and in the Kickapoo valley. However, other repetitive loss properties are located throughout Peoria County. The specific location of these properties is shown on Figure V-3 in the Hazard Identification and Risk Assessment (HIRA) portion of this plan. Although Peoria County **does have** a GIS-based database showing the locations of structures within the county, no detailed information such as type or elevation of the structures is available.

Prior to the recent economic downturn, nationwide, Peoria County had an institutionalized acquisition program in the Planning and Zoning Department for over 17 years. One full-time equivalent employee, at the Planner level, was designated and funded by the County to administer the program. Recent budget cuts have eliminated the Planner position, and as a result, the program is currently inactive.

Repetitive Loss Action Plan

Peoria County will make application for the next funding cycle of the Pre-Disaster Mitigation (PDM) Program through the Illinois Emergency Management Agency (IEMA) to obtain funds to purchase repetitive loss properties and re-establish its inactive acquisition program.

Working with FEMA Region V, Peoria County will obtain addresses, etc. from FEMA's Community Information System (CIS) database and incorporate the information into the County's GIS database, while observing the requirements of the Privacy Act.

Funding for a Planner position, to administer the repetitive loss acquisition program, will be necessary as part of the grant for the County's long-time program to be reactivated.

Then, Peoria County will institutionalize a repetitive loss acquisition program within the county's Planning and Zoning Department to include:

- Training of department personnel, by FEMA Region V, concerning, but not limited to, acquisition grant program rules, regulations, requirements, reporting and close-out procedures,
- Development and distribution of public information brochures about repetitive loss, acquisition, relocation, etc. which target the owners of repetitive loss structures,
- "Open Houses" to be conducted for repetitive loss owners which describe the county's acquisition program to be funded by PDM, and
- Informing owners of the movement in Congress to 1) deny future disaster assistance, and 2) implement actuarial rates for repetitive loss properties that have been offered a mitigation buy-out and refused.

Once the funding mechanism is in place, Peoria County will undertake the repetitive loss acquisition program until 1) all repetitive loss properties have been purchased, or 2) all owners of repetitive loss have been made acquisition offers and refused assistance which will be confirmed in written form.

SECTION VIII — PLAN MAINTENANCE PROCEDURES

The long-term success of the Tri-County area's mitigation plan depends in large part on routine monitoring, evaluating, and updating of the plan so that it will remain a valid tool for the communities to use. The first step in ensuring that the plan's activities will be implemented is to obtain official recognition of the Mitigation Advisory Committee (MAC) as proposed in Mitigation Objective 4.3 and assign the responsibility to the ESDA Directors or their designates in each of the regional areas (City of Pekin, City of Peoria, Woodford County, Tazewell County, and Peoria County).

1. Plan Adoption, Implementation and Maintenance

a. Formal Plan Adoption

(Note: this is written as if the adoptions have already occurred)

Five local governments in central Illinois have participated in this planning process and formally adopted this plan by resolution of their governing Board. Those local governments are the cities of Peoria and Pekin and the counties of Peoria, Tazewell, and Woodford (Tri-County area).

The adoption process itself took several months, as significant coordination (with assistance from the Mitigation Advisory Committee) was necessary in order to 1) get the plan review and adoption on the appropriate meeting agendas in each jurisdiction, 2) produce and provide copies in official meeting packets, 3) facilitate the actual adoption, 4) collect the adoption resolutions, and 5) incorporate the adopted resolutions into the final Hazard Mitigation Plan.

The Tri-County area appreciates the willingness that both Illinois Department of Emergency Management (IEMA) and Federal Emergency Management Agency (FEMA) Region V demonstrated by reviewing this plan concurrently and providing comments for revision prior to the adoption process. Not having done so would clearly have added more months to the adoption process.

b. Implementation

Upon adoption, the plan faces the biggest test: ***implementation***. Implementation implies two concepts: action and priority.

While this plan puts forth many worthwhile and "High" priority recommendations, the decision of which action to undertake first will be the primary issue that the Tri-County area communities face. Fortunately, there are two factors that will help make that decision workable. First, there are high priority items for each participating community, so each can pursue an action simultaneously and the Plan's (number)

recommendations will begin to be addressed. Second, funding is always an important and critical issue. Therefore, pursuing low or no-cost high-priority recommendations will be stressed.

An example of a low cost high priority recommendation would be to pursue the education efforts necessary for elected officials and the general public as they relate to participation in the National Flood Insurance Program (NFIP). Some communities need to strengthen their commitment to the NFIP by amending local floodplain ordinances.

Another example would be to pursue the regional goal of increasing education opportunities for the Tri-County communities' employees, MAC representatives, and public officials regarding natural hazard mitigation, floodplain management, floodplain regulations, and enforcement. These initial efforts will lead to long-standing changes in vulnerability and can be initiated at very little cost, while promoting public education through their relative "visibility" in the community.

Another important implementation approach that is highly effective, but low-cost, is to take steps to incorporate the recommendations, and equally important, the underlying principles of this Hazard Mitigation Plan into other community plans and mechanisms, such as:

- Comprehensive Planning
- Capital Improvement Budgeting
- Economic Development Goals and Incentives

Mitigation is most successful when it is incorporated within the day-to-day functions and priorities of government and development. This integration is accomplished by a constant effort to network and to identify and highlight the multi-objective, "win-win" benefits to each program, the communities and their constituents. This effort is achieved through the often, tedious actions of monitoring agendas, attending meetings, sending memos, and promoting safe, sustainable communities.

Simultaneous to these efforts, it will be important to constantly monitor funding opportunities that can be utilized to implement some of the higher cost recommended actions. This will include creating and maintaining a repository of ideas on how any required local match or participation requirement can be met. Then, when funding does become available, the Tri-County area communities will be in a position to take advantage of an opportunity. Funding opportunities that can be monitored include special pre- and post-disaster funds, special district budgeted funds, state or federal ear-marked funds, and grant programs, including those that can serve or support multi-objective applications.

With adoption of this plan, the Tri-County area communities commit to:

- Pursuing the implementation of the high priority, low/no-cost Recommended Actions.
- Keeping the concept of mitigation in the forefront of community decision-making by identifying and stressing the recommendations of the Hazard Mitigation Plan when other community goals, plans and activities are discussed and decided upon.
- Maintaining a constant monitoring of multi-objective, cost-share opportunities to assist the participating communities in implementing the recommended actions of this plan for which no current funding or support exists.

c. Maintenance

Plan maintenance requires an ongoing effort to monitor and evaluate the implementation of the plan, and to update the plan as progress, roadblocks, or changing circumstances are recognized.

This monitoring and updating will take place through:

1. An annual review by each Tri-County area community
2. An annual review through the Mitigation Advisory Committee
3. And, a 5-year written update to be submitted to the state and FEMA Region V, unless disaster or other circumstances (e.g., changing regulations) lead to a different time frame.

When each community convenes for a review, they will coordinate with each of the other jurisdictions that participated in the planning process – or that has joined the planning group since the inception of the planning process – to update and revise the plan. Public notice will be given and public participation will be invited, at a minimum, through available web-postings and press releases to the local media outlets, primarily newspapers and radio stations.

The evaluation of the progress can be achieved by monitoring changes in the vulnerability identified in the plan. Changes in vulnerability can be identified by noting:

- Lessened vulnerability as a result of implementing recommended actions
- Increased vulnerability as a result of failed or ineffective mitigation actions, and/or
- Increased vulnerability as a result of new development (and/or annexation).

The updating of the plan will be by written changes and submissions, as the Tri-County area communities and Mitigation Advisory Committee deem appropriate and necessary.

SECTION X — APPENDICES

APPENDIX A — CERTIFICATES OF PUBLICATION

APPENDIX B — HEART OF ILLINOIS PROJECT IMPACT RESIDENT OPINION SURVEY

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APPENDIX P — NON-PARTICIPATING COMMUNITIES

APPENDIX A

CERTIFICATES OF PUBLICATION

Certificate of Publication

STATE OF ILLINOIS,

ss

County of Peoria.

The Peoria Journal Star, Inc. (which is incorporated and doing business under and by virtue of the Laws of the State of Illinois) HEREBY CERTIFIES that it is the printer and publisher of the Journal Star, which is a public secular newspaper of general circulation printed and published daily in the City of Peoria, County of Peoria and State of Illinois, and that said newspaper has been regularly published in said City for at least one (1) year prior to the first publication of the notice hereto attached.

Said Corporation further certifies that the said notice entitled:

"**PUBLIC NOTICEHEART OF ILLINOIS PROJECT IMPACT DISASTER MITIGATIO**"
hereto attached has been published **1 time(s)** in the Peoria Journal Star, on the following respective dates:

The **18th** day of **January** A.D., **2004**

IN WITNESS WHEREOF, the said Corporation has caused this Certificate to be signed in its name on its behalf by **Judy Little** this **18th** day of **January** A.D., **2004**.

The Peoria Journal Star, Inc.

By: Judy Little

Legal Notice

PUBLIC NOTICE
HEART OF ILLINOIS
PROJECT IMPACT
DISASTER MITIGATION
PLANNING PROGRAM
PUBLIC INPUT FORUM

Notice is hereby given that Peoria County, Tazewell County, Woodford County, the City of Peoria, and the City of Pekin will be conducting a public meeting to receive public comments on preparation for a County/City Disaster Mitigation Plan. Representatives of the participating governments and consultants from Dewberry and Davis will be available to answer questions and discuss the merits of the subject project.

The public is strongly encouraged to attend and participate in this meeting. The meeting will occur on FEBRUARY 4, 2004 from 6:00 to 8:00 p.m., and will be held at the GATEWAY BUILDING located at 200 NORTHEAST WATER STREET, PEORIA, ILLINOIS 61602.

Any questions regarding the above mentioned public notice may be directed to Lynn Linder (Heart of Illinois Project Impact) at (309) 494-8674, or to Matt Wahl (Peoria County) at (309) 672-6915.

Certificate of Publication

STATE OF ILLINOIS,

ss

County of Peoria.

The Peoria Journal Star, Inc. (which is incorporated and doing business under and by virtue of the Laws of the State of Illinois) HEREBY CERTIFIES that it is the printer and publisher of the Journal Star, which is a public secular newspaper of general circulation printed and published daily in the City of Peoria, County of Peoria and State of Illinois, and that said newspaper has been regularly published in said City for at least one (1) year prior to the first publication of the notice hereto attached.

Said Corporation further certifies that the said notice entitled:

"PUBLIC NOTICEHEART OF ILLINOISPROJECT IMPACT DISASTERMITIGATION" hereto attached has been published **1 time(s)** in the Peoria Journal Star, on the following respective dates:

The **13th** day of **March** A.D., **2004**

IN WITNESS WHEREOF, the said Corporation has caused this Certificate to be signed in its name on its behalf by **Judy Little** this **13th** day of **March** A.D., **2004**.

The Peoria Journal Star, Inc.

By: Judy Little

Legal Notice

PUBLIC NOTICE
HEART OF ILLINOIS
PROJECT IMPACT DISASTER
MITIGATION PLANNING
PROGRAM
PUBLIC INPUT FORUM

Notice is hereby given that Peoria County, Tazewell County, Woodford County, the City of Peoria, and the City of Pekin will be conducting a public meeting to receive public comments on preparation for a County/City Disaster Mitigation Plan. Representatives of the participating governments and Heart of Illinois Project Impact will be available to answer questions and discuss the merits of the subject project.

The public is strongly encouraged to attend and participate in this meeting. The meeting will occur on MARCH 24, 2004 from 6:00 to 8:00 p.m., and will be held at the GATEWAY BUILDING Ballroom located at 200 NORTHEAST WATER STREET, PEORIA, ILLINOIS 61602.

Any questions regarding the above mentioned public notice may be directed to Lynn Linder (Heart of Illinois Project Impact) at (309) 494-8079, or to Matt Wohl (Peoria County) at (309) 672-8915.

APPENDIX B

HEART OF ILLINOIS PROJECT IMPACT RESIDENT OPINION SURVEY

APPENDIX B — HEART OF ILLINOIS PROJECT IMPACT RESIDENT OPINION SURVEY

yes☐ no☐ no opinion☐ I agree that my community has a high probability for natural disasters

yes☐ no☐ no opinion☐ I agree that the most likely natural disaster in my community is flooding

yes☐ no☐ no opinion☐ I agree that the second most likely natural disaster in my community is tornadoes or severe wind events

yes☐ no☐ no opinion☐ I agree that the third most likely natural disaster in my community is winter storms

yes☐ no☐ no opinion☐ I agree that the fourth most likely natural disaster in my community is land subsidence

yes☐ no☐ no opinion☐ I believe the two most important natural disasters for my neighborhood are _____

_____

yes☐ no☐ no opinion☐ I agree that my county and city have the resources in place to handle the most common natural disasters

yes☐ no☐ no opinion☐ I agree that my county and city should recommend actions people can take to lessen the impact of these natural disasters

yes☐ no☐ no opinion☐ My county and city should spend tax dollars or provide grants to residents to make the homes and businesses in my county and city less prone to damage by natural disasters

yes☐ no☐ no opinion☐ I agree that the public needs more education on how they can improve the disaster resistance of their homes and businesses

yes☐ no☐ no opinion☐ I agree that distributing NOAA weather radios will help decrease the economic and personal loss in a natural disaster

yes☐ no☐ no opinion☐ I agree that putting more disaster resistance requirements in building codes will lessen the economic and personal loss in a natural disaster for my community

yes☐ no☐ no opinion☐ I agree that my community has the right number of policies and regulations to manage natural disasters

yes☐ no☐ no opinion☐ I agree that my community needs to update the regulations and policies that manage natural disasters

yes☐ no☐ no opinion☐ I believe the weakest area of regulation for natural disasters in my community is _____

_____

_____

yes☐ no☐ no opinion☐ I agree that the older developments in my community are the most vulnerable to natural disasters and agree that someone needs to develop a granting program to upgrade the businesses and homes in those areas

yes☐ no☐ no opinion☐ I agree that my community could easily evacuate to safety if threatened by a natural disaster

yes☐ no☐ no opinion☐ I agree that my community has enough safe shelter that people could find if threatened by a natural disaster

yes☐ no☐ no opinion☐ I agree that the government should leave things as they are and if a natural disaster happens then the community will take care of the cost to rebuild

yes☐ no☐ no opinion☐ I agree that natural disasters happen and people can do very little to lessen their impact

yes☐ no☐ no opinion☐ I agree that my family can live wherever they want and if they choose to live where natural disasters usually happen it's our problem and not the government's responsibility to help us financially

yes☐ no☐ no opinion☐ I agree that my community should create no-build zones where homes or businesses probably will get damaged by natural disasters

yes☐ no☐ no opinion☐ I believe that my community enforces the building and zoning ordinances well

yes☐ no☐ no opinion☐ I believe that natural disasters happen and there's nothing you can do to lessen their economic or personal cost

Other comments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Information about the survey taker:

Male☐ Female☐

Homeowner☐ Renter☐ Business owner☐

Over 21 yes☐ no☐

Live in Peoria County☐ Tazewell County☐ Woodford County☐

Other☐ _____

City of Pekin☐ City of Peoria☐

Other ☐ _____

Name _____

Survey developed for

HEART OF ILLINOIS PROJECT IMPACT

PO BOX 9331 PEORIA IL 61612

C/O Lynn Linder, Development Coordinator

APPENDIX C

SAMPLE RESOLUTION TO ADOPT THE HEART OF ILLINOIS NATURAL HAZARDS MITIGATION PLAN

APPENDIX C — SAMPLE RESOLUTION TO ADOPT THE HEART OF ILLINOIS NATURAL HAZARDS MITIGATION PLAN

RESOLUTION ADOPTING A NATURAL HAZARDS MITIGATION PLAN FOR THE COUNTY OF PEORIA, COUNTY OF WOODFORD, COUNTY OF TAZEWELL, CITY OF PEORIA, CITY OF PEKIN

WHEREAS, the Disaster Mitigation Act of 2000, as amended, requires that local governments develop and adopt natural hazard mitigation plans in order to receive certain federal assistance, and

WHEREAS, Heart of Illinois Project Impact's Disaster Mitigation Advisory Committee ("MAC") comprised of the directors of the Emergency Services and Disaster Agencies of the respective county or city municipality, and contributing citizens, members of the business community and non-profit organizations working with the regional leadership was convened in order to study the City's/County's risks from and vulnerabilities to natural hazards, and to make recommendations on mitigating the effects of such hazards on the City/County; and

WHEREAS, a request for proposals was issued to hire an experienced consulting firm to work with the MAC to develop a comprehensive natural hazard mitigation plan for the City/County; and

WHEREAS, the efforts of the MAC members and the region's consulting firm have resulted in the development of a Natural Hazards Mitigation Plan for the Cities of Peoria and Pekin, and the unincorporated areas in the Counties of Woodford, Tazewell, and Peoria.

NOW THEREFORE, BE IT RESOLVED by the Council of the county of Peoria, county of Tazewell, county of Woodford, city of Peoria, and city of Pekin in the state of Illinois, that the Natural Hazards Mitigation Plan dated xxxxxxxxx is hereby approved and adopted for the unincorporated parts of the counties of Peoria, Tazewell, and Woodford, as well as the cities of Peoria, and Pekin in the state of Illinois. A copy of the plan is attached to this resolution.

ADOPTED by the county of Peoria, county of Tazewell, county of Woodford, city of Peoria, and city of Pekin in the state of Illinois this ____ day of _____, 2004.

APPROVED:

_____

Mayor/County Board Chair

ATTEST:

_____

Clerk of the Council or Board

APPENDIX D

HAZARD HISTORY

Appendix D: Flood Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Flood Height (Peoria)	Data Source
4/1-6/1933	Flood	Kickapoo Creek: many flooded basements, minor damage.	City of Peoria	20			12 bridges, 600 yards of gravel washed away			City of Peoria HVA 1983
5/18/1933	Flood	Illinois River: 2 manholes blew open, CILCO basement flooded but still provided power, minor damage.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County				Rte. 29 closed, Rock Is. Tracks under water		25.3 feet	City of Peoria HVA 1983
5/3/1935	Flood	Kickapoo Creek: 500 feet of Rock Island road bed under water, minor damage.	City of Peoria	6			Rte. 29 closed, Rock Is. Tracks under water			City of Peoria HVA 1983
6/28/1935	Thunder-storm	6 fires started by lightning, streets flooded, serious damage.	City of Peoria							City of Peoria HVA 1983
1/24/1938	Flood	Illinois River: minor damage.	City of Peoria	6			Trains			City of Peoria HVA 1983
6/25/1938	Flood	Storm caused flash flooding, serious damage.	City of Peoria		Many stores flooded	>1000 homes lost power	Streets closed, 4 railways shut down	$250,000		City of Peoria HVA 1983
7/6/1939	Storm	Kickapoo Creek flooded 100's of basements; 60 mph winds took roofs off several buildings; boats thrown at yacht club; dock torn from moorings; dairy barn near Mt. Hawley Airport leveled.	City of Peoria	100s			Streets washed out			City of Peoria HVA 1983
5/24/1943	Flood	Illinois River crested at 28.82 feet (higest in history); closed Century Distilling, RG LeTourneau, Keystone, Bemis Bag, Caterpillar; worse in East Peoria; major damage; National Guard called to help.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County	several	several		Streetcars Rtes. 29 & 24 train depot P&PU railroad		28.8 feet	City of Peoria HVA 1983
4/27/1944	Flood	Illinois River crested at 23.8 feet.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County						23.8 feet	City of Peoria HVA 1983
4/29/1950	Flood	Illinois River crested at 25.0 feet.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County						25 feet	City of Peoria HVA 1983
7/22-28/1951	Flood	Kickapoo Creek: Bartonville roundhouse and switchyard flooded, bus station flooded; large crop land acreage ruined; major damage.	Peoria County, City of Peoria	several	Bartonville stores flooded	Power out in Hanna City; phones out in Elmwood	Rt. 8 closed; RR tracks, covered bridge washed out on County Road between Hanna City & Glasford	$1,000,000		City of Peoria HVA 1983
3/30/1960	Flood	Kickapoo Creek: Farmington Road closed	City of Peoria	3			Road closed	$100,000		City of Peoria HVA 1983
8/18-19/1960	Flood	Kickapoo Creek: 2 children drowned in 2 days playing in flooded creek	City of Peoria							City of Peoria HVA 1983
3/20/1962	Flood	50 mph winds on river loosened 24 barges from moorings and blew them into Franklin Street bridge damaging steel sections and walkway; boathouse collapsed; 700 foot dock swept away; 4-8 foot waves on river.	City of Peoria				RR tracks twisted	$310,000	23.7 feet	City of Peoria HVA 1983
1/1/1965	Flood	Kickapoo Creek: 41 basements flooded; 4.44 inches of rain in 27 hours; minor damage.	City of Peoria	41						City of Peoria HVA 1983
Spring 1970	Flood	Illinois River: trains placed on RR bridges to weigh them down; animal shelter evacuated; over 100 homes in Rome were surrounded by water, Bemis Bag Co. closed; river crested at 25.9 feet on May 19; serious damage.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County	200+	1				25.9 feet	City of Peoria HVA 1983
1/3-5/1971	Flood	Illinois river crested at 20.8; fear of ice flows but river dropped 3 feet; minor damage.	City of Peoria						20.8 feet	City of Peoria HVA 1983
4/26-28/1973	Flood	Illinois river crested at 25.9 feet; Sears parking deck, Greater Peoria Sanitary District forced to close resulting in release of 35 million gallons of untreated raw sewage; minor damage in Peoria City. Parts of stated declared Federal Disaster Area.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County		2			$3,000,000	25.9 feet	City of Peoria HVA 1983
6/22-23/1974	Flood	Kickapoo Creek: Worst flood in Edwards history; sewer backup; above average flood; major damage.	Peoria County, City of Peoria	100s	1	12,000 w/out power, 25,000 w/out phone	1 state route and 3 county roads closed			City of Peoria HVA 1983

Appendix D: Flood Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Flood Height (Peoria)	Data Source
3/8/1976	Flood	Illinois River crested at 23.6 feet; 4,000-5,000 sandbags given out; minor damage.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County						23.6	City of Peoria HVA 1983
March/April 1979	Flood	The Illinois river crested at 28.7 feet in Peoria (second highest ever); 22.5 foot breakoff point; flood lasted 23 days (longest in county history following coldest & snowiest winter in county history). Efforts to contain river hampered by harsh weather and wind created 6 foot waves on the river at one point; major damage. Federal Disaster Area declared March 15.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County	1269	Keystone, Peoria Animal Shelter, Bemis		Coast Guard closed river; multiple roads closed (including Franklin St. bridge)	$50,000,000 (in Illinois)	28.7	City of Peoria HVA 1983
6/2/1980	Hail Storm	Flash flood created by hailstorm; 1,500 acres of farmland under water; most damage to roads; worse in Tazewell County. State Disaster Area declared.	Tazewell County, City of Peoria, Peoria County			Hospital lost power briefly	Franklin St. bridge closed, many streets flooded	$200,000		City of Peoria HVA 1983
3/1/1982	Flood	The Illinois river crested at 27.1 feet in Peoria; 7,400 sandbags given out; average flood.	Peoria County, City of Peoria	50					27.1	City of Peoria HVA 1983
3/22/1982	Flood	The Illinois river crested at 27.1 feet. Major housing damage. Federal disaster assistance provided.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County	67				$60,000 - $180,000		Woodford Co. HIRA Packet
8/24/1982	Flood	Flash flood; 2.2 inches of rain in 1 hour; minimal damage	City of Peoria				Flooded interesection			City of Peoria HVA 1983
12/9/1982	Flood	The Illinois river crested at 27.4 feet 30,000 sandbags given out; above-average flood. Federal Disaster Area declared.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County	100s	Peoria Animal Shelter & River station closed		Old Rte 29 to Rome closed	$100,000,000 (in Illinois)	27.4	City of Peoria HVA 1983, Woodford Co. HIRA Packet
4/17/1983	Flood	The Illinois river crested at 25.7 feet in Peoria.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County						25.7	City of Peoria HVA 1983
March 1985	Flood	The Illinois river crested at 28.4 feet. Federal Disaster declared for all 3 counties.	Peoria County, City of Peoria, Tazewell County, City of Pekin, Woodford County	600+	100s		Many roads closed	$1.4M (Peoria); $1.381M (Tazewell); $1.297M (Woodford)	28.4	Woodford Co. HIRA Packet
724/1993	Flood	Major flood: Federal Disaster declared. Flood locations available along with building and crop damage estimates.	Peoria County, Tazewell County, Woodford County							Peoria Co. Packet
8/23/1993	Flood	Flash Flood.	Tazewell County, Peoria County				Street flooding occurred			NCDC Storm Events Website
5/14-31/1995	Flood	2 reported injuries.	Peoria County, Woodford County							NCDC Storm Events Website
6/1-15/1995	Flood	No description.	Peoria County, Woodford County							NCDC Storm Events Website
6/6/1996	Flood	Flash flood in Mossville. Several homes sustained minor flood damage when between 3-4 inches of rain fell in a short amount of time. Route 29 was flooded for a while. The flooding uprooted numerous trees which were strewn over Route 6. No injuries reported and no damage estimate available.	Peoria County	several			Route 29 was flooded. Route 6 had trees strewn across it.			NCDC Storm Events Website
2/21/1997 - 3/6/1997	Storm	The area received 2 day totals of 3 to 4.5 inches of rain, which fell on frozen grounds. Numerous tributaries of the Illinois River flooded and in response, the Illinois River began to rise. It rose over flood stage in Havana on the 21st, on the 22nd in Henry and Peoria, and on the 23rd in Beardstown. Another storm system moved through on the 26th and produced 1 to 2 inches of rain over the Illinois River basin. The river crested at Henry on the 2nd, Peoria on the 3rd, Havana on the 4th, and at Beardstown on the 6th. A few homes in Henry were inundated by flood waters and a few buildings on the east side of Sparland were damaged. It took over two weeks to a month for the river to fall below flood stage. The result was the 6th worst flood in history at Peoria and the 7th worst flood in history at Henry. Several homes just south of Spring Bay were flooded as well as several homes in Liverpool. No damage estimate was available.	Tazewell County, Peoria County, Woodford County	several						NCDC Storm Events Website
5/7/1998	Flood	Rte. 8 water across road; Edwards: Powdermill Road and Layne Road flooded; Pottstown: water up to bridge and RR tracks.	Peoria County				Several roads flooded			Peoria Co. Packet

Appendix D: Flood Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Flood Height (Peoria)	Data Source
5/18/2001	Flood	Flash flood: Heavy rain fell across much of the county, resulting in numerous reports of flooded roads, with the most extensive flooding occurring in Pekin, Delavan and Tremont. In Tremont, Route 9 was covered with flowing flood waters.	Tazewell County, City of Pekin				Route 9 was flooded			NCDC Storm Events Website
6/6/2001	Flood	Flash flood: Pekin reported several roads/bridges that crossed a local drainage ditch closed due to flooding. A few adjacent city roads were also closed due to high water.	Tazewell County, City of Pekin				Several roads closed due to flooding			NCDC Storm Events Website
7/21/2001	Flood	Flash flood: A rainfall report of nearly 5 inches was received from along Illinois Route 89. A section of the highway, from Cazenovia to Low Point, was flooded for a period of time.	Woodford County				Several roads flooded			NCDC Storm Events Website
5/11/2002	Flood	Flash flood that briefly flooded several roads near Hanna City	Peoria County				Several roads flooded			NCDC Storm Events Website
5/11/2002	Flood	Flash flood: Several roads and basements in the Deer Ridge Subdivision were flooded due to between 3 and 4 inches of rain in a short amount of time.	Tazewell County							NCDC Storm Events Website
5/11-13/2002	Flood	Over 4 inches of rain fell in a short amount of time. Several creeks went out of their banks. Even though the rain had ended much earlier in the day, numerous roads remained flooded for a time. Runoff continued to cause flood problems in Woodford County, especially in the Eureka and Roanoke areas. Two families had to be evacuated from their homes due to rising waters.	Woodford County				Several roads flooded			NCDC Storm Events Website
5/12-31/2002	Flood	After several rounds of precipitation over Central Illinois during the first couple weeks of May, area rivers rose above flood stage at most locations. The following rivers were in flood during May: Spoon River, Illinois River, Mackinaw River, Sangamon River, Embarras River and the Little Wabash. Not too many homes were affected despite record or near record crests on many of the rivers in Central Illinois. Since the 1993 floods, many levies were built or existing ones were extended to prevent widespread flooding. The Mechanicsburg (Sangamon Co.) water treatment plant was inundated on the 13th by the Sangamon River. Also, several homes in the Riverton and Rochester areas were flooded due to the Sangamon River.	Peoria County, Tazewell County, Woodford County	several	several		Numerous roads flooded; damage to several bridges			NCDC Storm Events Website; Woodford Co. HIRA Packet
6/26/2002	Flood	Flash flood: Almost 5 inches of rain fell in Minonk in a short amount of time. It caused numerous streets and basements in town to be flooded. No injuries reported.	Woodford County				Several roads flooded			NCDC Storm Events Website

Appendix D: Wind Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
5/5/1933	Thunder-storm	Weather Bureau reported 33 mph wind, but with 8-mile wide strip with stronger winds; roofs blown off, walls blown down, major damage. 4 reported injuries.	City of Peoria	several	20				City of Peoria HVA 1983
7/6/1939	Storm	Kickapoo Creek flooded 100's of basements, 60 mph winds took roofs off several buildings, boats thrown at yacht club, dock torn from moorings, dairy barn near Mt. Hawley Airport leveled.	City of Peoria	100s			Streets washed out		City of Peoria HVA 1983
7/28/1943	Hail Storm	60 mph wind for 3 minutes; crop loss estimated at $1 million; thousands of windows broken - 5,000 in schools, 7,000 in homes; homes/small buildings leveled; major damage. 20 reported injuries.	City of Peoria	100s	many	All power, most phones out		$1,000,000	City of Peoria HVA 1983
4/29/1947	Tornado	2 separate tornados hit Kingston Mines and Glasford; 1 tavern demolished, public garage, office buildings, horse killed, 1 barn leveled on farm. 2 reported injuries.	City of Peoria	1	4	Phones/ power lines down		$120,000	City of Peoria HVA 1983
11/13/1951	Tornado	Most damage in Peoria County near Edelstein (all rural); minor damage	Peoria County, City of Peoria		Farms				City of Peoria HVA 1983
7/2/1953	High Wind	High winds caused average damage at Heart of Illinois Fair	City of Peoria			Scattered outtages			City of Peoria HVA 1983
7/5/1953	Storm	2 storms (afternoon & evening): wind gusts to 96 mph; sustained 65 mph for 5 minutes; injury at Heart of Illinois Fair, damage to roof of Sacred Heart Church and White School, many planes damaged at airport; 3.5 inches of rain, some hail; major damage. 3 serious injuries reported.	City of Peoria			Most power out 2-5 days, 800 phones out	2 RR tracks washed out; 4 highways blocked by downed wires	$1,500,000	City of Peoria HVA 1983
5/28/1954	Tornado	F1. No injuries reported.	Woodford County					$25,000	NCDC Storm Events Website
5/26/1955	Tornado	F2. 1 injury reported.	Tazewell County					$250,000	NCDC Storm Events Website
8/13/1956	Tornado	F3. No injuries reported.	Tazewell County					$25,000	NCDC Storm Events Website
3/14/1957	High Wind	Bartonville: 250 foot length of roof ripped off CECo Steel Products warehouse; average damage	City of Peoria			Power & phone lines out			City of Peoria HVA 1983
4/16/1960	Tornado	F1. No injuries reported.	Tazewell County					$3,000	NCDC Storm Events Website
5/16/1960	Tornado	F2. No injuries reported.	Tazewell County					$25,000	NCDC Storm Events Website
5/25/1960	Tornado	F2. No injuries reported.	Tazewell County					$25,000	NCDC Storm Events Website
5/14/1961	Tornado	F3 tornado 5 miles west of Princeville; Baptist Church blown off foundation. No injuries reported.	Peoria County, City of Peoria, Woodford County	1 farmhouse, 2 outbuildings				$2,500,000	City of Peoria HVA 1983; NCDC Storm Events Website
8/1/1961	Tornado	F0	Woodford County					$3,000	NCDC Storm Events Website
3/20/1962	Flood	50 mph winds on river loosened 24 barges from moorings and blew them into Franklin Street bridge damaging steel sections and walkway; boathouse collapsed; 700 foot dock swept away; 4-8 foot waves on river	City of Peoria				RR tracks twisted	$310,000	City of Peoria HVA 1983
5/28/1962	Tornado	F0. No injuries reported.	Peoria County					$0	NCDC Storm Events Website
4/21/1964	High Wind	Several homes under construction leveled in Wardcliffe Hamilton Park subdivision; CILCO lost high voltage power line	City of Peoria	18		High voltage line downed; 40 phones out			City of Peoria HVA 1983
11/20/1964	High Wind	35 mph winds gusting to 70 mph; garbage container blew into gas pipe causing gas leak; average damage. 6 injuries reported.	City of Peoria			CILCO & IL Bell down			City of Peoria HVA 1983
9/14/1966	Tornado	An F3 tornado destroyed Hiram Walker Cooperage Plant, Norwood Grade School; Peoria Union Stockyard ripped apart; roof of Belwood Nursing Home damaged; major damage. 28 injuries reported.	Peoria County, City of Peoria	144	20	CILCO out, phones out in Elmwood, Hanna City, Elmwood, Trivoli	Airport tower out of commission due to building movement	$1,500,000	City of Peoria HVA 1983
1/24/1967	Tornado	F2. No injuries reported.	Tazewell County					$3,000	NCDC Storm Events Website
10/10/1969	Tornado	F2. No injuries reported.	Tazewell County					$250,000	NCDC Storm Events Website

Appendix D: Wind Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
5/9/1970	Tornado	F1. No injuries reported.	Woodford County					$250,000	NCDC Storm Events Website
6/15/1971	Tornado	F0. No injuries reported.	Woodford County					$0	NCDC Storm Events Website
6/18/1973	Tornado	F0. No injuries reported.	Woodford County					$0	NCDC Storm Events Website
3/31/1973	Tornado	F1. No injuries reported.	Peoria County						NCDC Storm Events Website
9/4/1973	Tornado	F0. No injuries reported.	Tazewell County, Woodford County					$0	NCDC Storm Events Website
12/4/1973	High Wind	Winds destroyed machine shed in Princeville; tree limbs down all over; tornado in Stark County; minor damage	Peoria County, City of Peoria			Scattered wires down		$4,000	City of Peoria HVA 1983
6/8/1974	Tornado	F0. No injuries reported.	Peoria County					$0	NCDC Storm Events Website
6/19/1974	High Wind	A Cessna flipped while trying to land at the Greater Peoria Airport; roof of Union Stockyards blew off, wind affected Peoria, Mossville, Elmwood, Princeville, Farmington, and was worse in Tazewell County (F0) and Woodford County (F2)	Tazewell County, Peoria County, City of Peoria, Woodford County			12,000 without power			City of Peoria HVA 1983, NCDC Storm Events Website
6/22/1974	Tornado	F2. No injuries reported.	Woodford County					$25,000	NCDC Storm Events Website
4/18/1975	Tornado	F1. No injuries reported.	Tazewell County					$25,000	NCDC Storm Events Website
4/30/1975	Tornado	F0. No injuries reported.	Tazewell County					$0	NCDC Storm Events Website
5/25/1975	Tornado	F0. No injuries reported.	Woodford County					$0	NCDC Storm Events Website
3/26/1976	Thunder-storm	50 mph winds, hail and 0.38 inches of rain. The storm uprooted trees, ripped sides off a garage, broke windows, billboards; above-average damage	Peoria County, City of Peoria			Jet City & Bartonsville CILCO substations knocked out, 5,000 homes w/out power			City of Peoria HVA 1983
3/26/1976	Tornado	F2. No injuries reported.	Woodford County					$250,000	NCDC Storm Events Website
3/26/1976	Tornado	F1. No injuries reported.	Tazewell County					$250,000	NCDC Storm Events Website
6/29/1976	Tornado	F4. No injuries reported.	Peoria County					$250,000	NCDC Storm Events Website
6/29/1976	Tornado	F0. No injuries reported.	Woodford County					$3,000	NCDC Storm Events Website
3/28/1977	High Wind	50 mph winds blew down billboards, utility poles; damage to United Facilities Warehouse; average damage	City of Peoria			200 homes w/out power	Fallen trees and poles in streets		City of Peoria HVA 1983
9/7/1977	Tornado	F1. No injuries reported.	Tazewell County					$250,000	NCDC Storm Events Website
1/26/1978	Winter Storm	40 mph winds, -36 wind chill. 3 injuries reported.	City of Peoria				Roads closed		City of Peoria HVA 1983
9/16/1980	Tornado	F0. No injuries reported.	Tazewell County					$0	NCDC Storm Events Website
4/13/1981	Tornado	F1. No injuries reported.	Woodford County					$25,000	NCDC Storm Events Website
5/27/1981	Tornado	F0. No injuries reported.	Peoria County					$0	NCDC Storm Events Website
6/8/1981	Tornado	F1. No injuries reported.	Tazewell County					$25,000	NCDC Storm Events Website

Appendix D: Wind Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
7/25/1981	Tornado	F2. No injuries reported.	Peoria County					$250,000	NCDC Storm Events Website
4/3/1982	High Wind	62 mph gust of wind; minor damage	City of Peoria			8,000 homes w/out power			City of Peoria HVA 1983
9/24/1986	Tornado	F2. No injuries reported.	Woodford County					$250,000	NCDC Storm Events Website
9/29/1986	Tornado	F2. No injuries reported.	Tazewell County					$2,500,000	NCDC Storm Events Website
5/20/1987	Tornado	F1. No injuries reported.	Woodford County					$3,000	NCDC Storm Events Website
6/2/1987	Tornado	F0. No injuries reported.	Tazewell County					$0	NCDC Storm Events Website
6/13/1990	Tornado	F0 Estimated damage $3,000 in Peoria. No injuries reported.	Peoria County, Woodford County					$3,000	NCDC Storm Events Website
6/19/1990	Tornado	F1. No injuries reported.	Tazewell County					$2,500,000	NCDC Storm Events Website
6/22/1990	Tornado	F1. No injuries reported.	Woodford County					$25,000	NCDC Storm Events Website
11/27/1990	Tornado	F2. 2 deaths reported.	Tazewell County					$2,500,000	NCDC Storm Events Website
4/29/1991	Tornado	F0. No injuries reported.	Woodford County					$0	NCDC Storm Events Website
5/14/1991	Tornado	F0. No injuries reported.	Tazewell County					$0	NCDC Storm Events Website
5/31/1991	Tornado	F0. No injuries reported.	Tazewell County					$0	NCDC Storm Events Website
10/4/1991	Tornado	F1. No injuries reported.	Tazewell County					$250,000	NCDC Storm Events Website
5/4/1992	Tornado	F0. No injuries reported.	Tazewell County					$3,000	NCDC Storm Events Website
7/20/1994	Tornado	Trees were blown down. Power lines were blown down. Lightning started a tree on fire.	Peoria County					$100	Peoria County Packet, NCDC Storm Events Website
7/20/1994	High Wind	A 30-square-foot brick facade of a building collapsed near downtown Peoria. 1 injury reported.	City of Peoria					$5,000	NCDC Storm Events Website
5/13/1995	Tornado	An F1 tornado touched down 1 W of Princeville and traveled to the east northeast. Two homes were destroyed and two homes had major damage. Several outbuildings were either damaged or destroyed, as well as numerous trees. A country club in Edelstein sustained major roof damage. Numerous power poles were blown down as well. No injuries were reported and no damage estimate was available.	Peoria County						NCDC Storm Events Website
5/13/1995	Tornado	An F0 tornado briefly touched down 2 SW of Congerville damaging one home and five outbuildings. The roof of a mobile home was blown off and several trees and power poles were blown over. No one was injured and no damage estimate was available.	Woodford County	several					NCDC Storm Events Website
6/26/1995	Tornado	An F0 tornado briefly touched down twisting a trampoline around a tree, throwing a swingset 40 to 50 feet, and blew down one tree. No damage estimate was available. No injuries reported.	Woodford County						NCDC Storm Events Website
3/25/1996	High Wind	Strong gradient winds caused minor damage across Central Illinois. The winds blew down numerous power lines, tore off the roof of a building in Rushville, and metal shething and insulation from the roof of a mobile home was blown off in Bloomington. 1 death reported.	Peoria County, Tazewell County, Woodford County	several	several	Downed power lines		n/a	NCDC Storm Events Website

Appendix D: Wind Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
4/19/1996	Tornado	An F2 tornado touched down just south of the Logan/Tazewell County line (on 1350E), causing minor damage to three homes. Then the tornado travelled to the northeast, through the south side of Armington, destroying one home as well as several outbuildings. Also, 2 homes sustained major damage and 5 homes sustained minor damage. After moving through the Armington area, the tornado moved into southwestern McLean County. Damage was estimated around $1 million in Tazewell County. No injuries reported.	Tazewell County					$1,000,000	NCDC Storm Events Website
4/19/1996	Tornado	An F0 tornado touched down 1 mile southwest of Brimfield and moved to the northeast into the south side of Brimfield, causing minor damage. The tornado then lifted to tree top level and caused some damage to trees in Jubilee State Park before lifting completely. The tornado uprooted a 12 inch diameter pine tree in Brimfield, caused rivets to pop out of the metal siding on one business, and damaged a steeple on one church. Also, a van parked in a driveway was moved sideways up against a bush in the yard. No injuries were reported and no damage estimate was available.	Peoria County					n/a	NCDC Storm Events Website
6/6/1996	Tornado	An F0 tornado touched down 1 mile south southwest of Mossville in the Brookview Estates Subdivision. Most of the damage occurred to trees, which caused some minor damage to a few homes in the area. The tornado was only on the ground for a half a mile before lifting. No injuries were reported and no damage estimate was available.	Tazewell County					n/a	NCDC Storm Events Website
10/30/1996	High Wind	High winds associated with a strong area of low pressure caused damage in numerous counties throughout Central Illinois. Sustained winds averaged 30 to 40 mph with gusts to near 65 mph in some areas. Most of the damage was to trees, tree limbs, and power lines. In Peoria, 3 busstop benches were blown over. One tree in Peoria Heights fell onto an unoccupied car causing major damage. In Pekin, one tree fell onto a house causing damage to one bedroom. In Roanoke (Woodford County), the roof of a large storage building was blown off which damaged a small storage shed and a few trees when the roof landed on them. No injuries reported and no damage estimates available from any of the counties.	Peoria County, Tazewell County, Woodford County	several	several	Downed power lines		n/a	NCDC Storm Events Website
4/6/1997	High Wind	The combination of a strong area of low pressure over Lake Superior and a strong area of high pressure over Texas created very high gradient winds over Central Illinois. Sustained winds averaged between 25 and 40 mph with higher gusts to 65 mph in some areas. These gradient winds blew down numerous trees, tree limbs, and power lines throughout Central Illinois. In Woodford County near El Paso a semi was blown over on US 24, but no injuries were reported. No damage estimates were available for this event.	Peoria County, Tazewell County, Woodford County	several	several	Downed power lines		n/a	NCDC Storm Events Website
4/30/1997	Tornado	An F0 tornado touched down 1 mile east of Yates City and 3 miles west northwest of Brimfield (Peoria County), knocking down several power poles in both locations. Four miles northwest of Brimfield, the tornado touched down again, ripping the top floor of a split level home off and destroyed a nearby shed and garage. No injuries reported.	Peoria County					$25,000	NCDC Storm Events Website
4/30/1997	Tornado	A F0 tornado briefly touched down 7 miles southwest of Pekin in the Country View Estates Subdivision severely damaging a home under construction causing around $90,000 in damage. Also, the tornado damaged a garage across the street and four other homes in the area sustained minor roof damage with shingles missing. A 20 inch diameter tree was blown down blocking Bass Road. The total dollar amount of damage is estimated around $115,000. Severe thunderstorms developed resulting in numerous reports of trees, tree limbs, and power lines knocked down. Also, 6 tornadoes were reported across the area. A few minor injuries and 1 death were reported.	Tazewell County					$115,000	NCDC Storm Events Website
4/30/1997	High Wind	Strong gradient winds in excess of 50 mph with gusts to around 70 mph followed behind a line of severe thunderstorms. The gradient winds lagged behind the thunderstorms by about 20 to 30 minutes and continued during the night finally letting up the next day, May 1st. Thousands of people across Central Illinois lost power for a time as hundreds of power lines were blown down. Several semis were blown over. Also, numerous trees and tree limbs were blown down and widespread structural damage was reported. The gradient winds blew down a 150 foot communications tower in Princeville. Numerous sheds, and grain bins were either blown over, damaged, or destroyed by the gradient winds. No deaths or serious injuries reported.	Peoria County, Tazewell County, Woodford County	numerous	numerous	Downed power lines			NCDC Storm Events Website
9/29/1997	High Wind	Low pressure over Lake Superior created strong gradient winds over a large portion of the upper midwest. Sustained winds ranged from 25 to 35 mph with gusts to over 60 mph. Numerous trees, tree limbs, and power lines were blown down. In Chillicothe, a large tree fell down damaging a garage and a nearby shed. No injuries reported. No damage estimates available.	Peoria County, Tazewell County, Woodford County	several		Downed power lines		n/a	NCDC Storm Events Website

Appendix D: Wind Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Affected Businesses	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
4/7/1998	Tornado	An F0 tornado briefly touched down in a field 3 miles west of Hanna City. No injuries or damage were reported.	Peoria County					$0	NCDC Storm Events Website
6/29/1998	Tornado	An F1 tornado formed over Marquette Heights downing numerous trees and power lines. Numerous homes and businesses sustained minor to moderate damage in the Groveland area. The tornado intensified over Morton, causing considerable damage to a 30 store shopping center, tearing half the roof off and breaking windows. In this same area it also caused moderate damage to a cinema, several restaurants and other businesses, as well as approximately 24 homes. A large bow echo system developed. Wind speeds were measured or estimated to be between 60 to 80 mph. Hundreds of trees fell onto structures and vehicles, and numerous sheds, and silos were either damaged or destroyed. Considerable crop damage was sustained in most areas. In some areas, microbursts about 1/2 mile wide caused intense structural damage. Speeds of these microbursts were measured or estimated in these areas at 100 to 110 mph. Spin-up tornadoes occurred along the leading edge of the bow echo structure causing significant damage in narrow swaths. No injuries reported.	Peoria County, Tazewell County					$1,000,000	NCDC Storm Events Website
11/10/1998	High Wind	Winds gusted to over 50 mph at times with sustained winds well over 35 mph. Thousands of power lines and tree limbs were blown down throughout Central Illinois and hundreds of trees were blown over. High winds ripped sheet metal from a storage tank containing ammonia near Creve Coeur (Tazewell County). Some pieces of sheet metal sheared open two relief valves, releasing gas fumes into the air. Homes in the area were evacuated. No one was injured and the leak was soon fixed. The high winds prevented the gas fumes from stagnating over the area. 1 injury reported.	Peoria County, Tazewell County, Woodford County	several		Downed power lines		n/a	NCDC Storm Events Website
6/4/1999	Tornado	An F0 tornado touched down one mile southwest of Washburn. It caused extensive damage to one house's roof when it blew down several nearby trees, which then fell onto the house. It then moved into the Snag Creek Golf Course and blew down several more trees before lifting and dissipating. No injuries were reported.	Woodford County						NCDC Storm Events Website
6/4/1999	Tornado	An F1 tornado touched down on the northwest side of Delavan, uprooting several large trees. The only structural damage in this area was due to tree branches. As it travelled to the east southeast, it blew a small outdoor amphitheater into a nearby creek. As the tornado moved into the northeast side of town, it knocked down numerous trees. One tree fell onto an unoccupied truck, another one fell onto the roof of a house, and still another one fell onto a mobile home. Several other homes sustained minor damage to their roofs and siding on a few homes was ripped off. A small shed was destroyed 2 miles east southeast of Delavan. No injuries were reported.	Tazewell County					$0	NCDC Storm Events Website
5/8/2000	Tornado	An F1 tornado briefly touched down 1.5 miles west of Parkland on a farm. It destroyed 4 large grain bins and blew a machine shed 100 yards from where it had been. A garage nearby sustained minor damage with siding and a door blown off. No injuries were reported.	Tazewell County					$275,000	NCDC Storm Events Website
5/18/2000	Tornado	An F0 tornado briefly touched down half a mile west of Metamora just south of Illinois Route 116. 1 injury reported.	Woodford County					$5,000	NCDC Storm Events Website
3/9/2002	High Wind	Magnitude 76 knots. 2 injuries reported.	Tazewell County, Woodford County						NCDC Storm Events Website
5/8/2002	Tornado	A weak tornado touched down in extreme southeastern Woodford County near the intersection of County Road 700N and 2500E. It was on the ground for a mile knocking down some power poles. It then lifted briefly before touching down again 1.8 miles southeast of El Paso. As it travelled to the northeast, it crossed into the extreme northwestern corner of McLean County. At this location, it took the roof off of a barn, damaged two other barn roofs, tipped over a grain auger, as well as, blowing down trees and tree limbs. It hit another farm with only minor tree limb and house guttering damage before lifting and dissipating. No injuries were reported.	Woodford County						NCDC Storm Events Website

Appendix D: Winter Storm Hazard History

Date	Event Type	Event Description	Affected Communities	# of Injuries	# of Deaths	Power Disruption	Affected Infrastructure	Data Source
4/8/1938	Ice Storm	Streetcar wires encased in ice, phone, telegraph, and power lines down, average damage.	City of Peoria			Lines down	Trains/streetcars stopped	City of Peoria HVA 1983
1/26/1967	Blizzard	8 inches of snow on ground as paper went to press; still falling & blowing.	City of Peoria	3		Some CILCO and phone lines out	Roads and airport closed	City of Peoria HVA 1983
12/8/1995	Winter Storm	A winter storm brought one to five inches of snow to Central Illinois during the day and evening of the 8th. A sharp cold front moved through during the evening of the 8th dropping temperatures as much as 25 degrees in three hours. Strong winds developed behind the front at 20 to 30 mph overnight and during the day on the 9th, causing considerable blowing and drifting of the snow, especially in open areas. The brisk winds and temperatures near zero created wind chills as low as 45 degrees below zero. One death reported.	City of Pekin, City of Peoria, Peoria County, Tazewell County, Woodford County	0	1			NCDC Storm Events Website
12/18-19/1995	Winter Storm	A winter storm brought heavy rains the evening of the 18th, which changed to freezing rain overnight before changing to all snow by 0700 on the 19th. Snowfall ranged from one inch in Mason County to six inches in Edgar County. Numerous accidents were reported, though only one fatality occurred. Numerous power lines were knocked down throughout Central Illinois, due to the freezing rain and strong winds of 20 to 30 mph. The strong winds also caused considerable blowing and drifting of snow closing some roads in Central Illinois until the winds subsided in the evening on the 19th.	Peoria County, Tazewell County, Woodford County	0	1	Some downed power lines	Some roads closed	NCDC Storm Events Website
1/4/1996	Winter Storm	Following on the heels of the January 2nd/3rd storm, another winter storm moved through Central Illinois on January 4th. Snowfall ranged from 2 to 7 inches. Numerous minor accidents were reported across the area, though no major injuries were reported.	Peoria County, Tazewell County, Woodford County	0	0			NCDC Storm Events Website
1/18-19/1996	Winter Storm	A major winter storm moved through Central Illinois January 18th and 19th. Severe thunderstorms moved through the area during the late morning and early afternoon hours. Afterward, temperatures began to drop quickly. Most locations recorded a 60 degree drop over a 12 hour period. The rain changed to ice than snow causing numerous power outages and minor accidents. Gusty winds of 25 to 35 mph created winds chills near 40 below zero across most of Central Illinois.	Peoria County, Tazewell County, Woodford County	0	0	Power outtages		NCDC Storm Events Website
1/8-9/1997	Heavy Snow	A winter storm developed over the southern Plains and tracked to the northeast across southern Illinois. The storm dumped between 3 and 11 inches of snow over central Illinois. The heaviest snow fell in a corridor just north of I-70. Charleston in Coles County reported the most snow with 11 inches. Numerous accidents were reported throughout central Illinois. However, only 6 minor injuries were reported.	Peoria County, Tazewell County, Woodford County	6	0			NCDC Storm Events Website
1/15-17/1997	Winter Storm	A winter storm developed over the central Rockies and moved east into the Midwest. The storm brought between 4 and 6 inches of snow to a large part of central Illinois north of I-70. South of I-70 a mixture of freezing rain, sleet, and snow occurred with snow totals of 1 to 3 inches. After the snow stopped, the winds picked up to between 20 and 30 mph with higher gusts, causing near whiteout conditions. Also, temperatures fell below zero across the entire area, so with the strong winds and cold temperatures, wind chill readings dipped well below minus 40 degrees in many locations. Numerous accidents were reported along with 6 minor injuries, 1 serious injury and 1 death.	Peoria County, Tazewell County, Woodford County	7	1			NCDC Storm Events Website
1/24/1997	Winter Storm	A winter storm developed over the central Rockies and moved into southern Illinois on the 24th. Central Illinois received a mix of rain, freezing rain, sleet, and snow with the system which caused numerous accidents though no injuries were reported. Snow amounts were on the light side, up to 2 inches. However, some scattered areas in west central Illinois reported up to half an inch of ice accumulation.	Peoria County, Tazewell County, Woodford County	0	0			NCDC Storm Events Website
1/26-27/1997	Winter Storm	A winter storm developed over the southern Plains and moved east, to the south of Illinois. One area of snow moved through central Illinois on the 26th with snow amounts ranging from 1 to 4 inches. Then the snow let up around 4 pm on the 26th. A mixed bag of precipitation began to fall over the southern areas of central Illinois around 4 am on the 27th and spread north into the rest of central Illinois. By the time the precipitation ended in the evening of the 27th, another 1 to 5 inches of snow had fallen. Numerous accidents were reported, especially in the morning hours on the 27th. Nine minor injuries were reported	Peoria County, Tazewell County, Woodford County	9	0			NCDC Storm Events Website
1/10-11/1997	Heavy Snow	An early spring snow storm dumped between 4 and 13.5 inches of heavy wet snow over northern portions of Central Illinois. A 30 mile wide band centered along a line from just south of Galesburg to just north of Peoria received from 10 to 13.5 inches of snow. Numerous trees, tree branches, and powerlines collapsed due to the weight of the heavy wet snow. Some caused damage to vehicles and homes. Also, numerous accidents occurred throughout the area with a few minor injuries reported.	Peoria County, Tazewell County, Woodford County	9	0	Downed power lines		NCDC Storm Events Website
12/9-10/1997	Heavy Snow	A strong low pressure system moving northeast through Southern Illinois and into Central Indiana spread a band of heavy snow in about a 50 mile wide swath centered along the Illinois River. Most locations reported about 5 inches of snowfall with some locally heavier amounts around 6 inches. Numerous traffic accidents were reported, one resulted in a death in Peoria County.	Peoria County, Tazewell County, Woodford County	0	1			NCDC Storm Events Website
12/24/1997	Heavy Snow	A winter storm system produced a band of heavy snow in areas mainly northwest of the Illinois River on Christmas Eve. Snow fall began around noon and ended by mid evening. Snow amounts ranged from 2 inches along the Illinois River with up to 5 inches across Knox County. Numerous traffic accidents were reported due to the slick roads but no serious injuries resulted.	Peoria County, Tazewell County	0	0			NCDC Storm Events Website

Appendix D: Winter Storm Hazard History

Date	Event Type	Event Description	Affected Communities	# of Injuries	# of Deaths	Power Disruption	Affected Infrastructure	Data Source
1/8/1998	Heavy Snow	Rain across Central Illinois quickly changed over to snow northwest of a line from Springfield to Bloomington during the early morning hours. Heavy snow amounts occurred across these areas before ending by early evening. Snowfall amounts of greater than 3 inches occurred in these areas. the heaviest snow occurred along and northwest of the Illinois River with total snowfall amounts of 4 to 8 inches. Numerous traffic accidents were noted but no serious injuries were reported.	Peoria County, Tazewell County, Woodford County	0	0			NCDC Storm Events Website
1/14/1998	Winter Storm	A winter Storm across much of Central Illinois produced widespread Freezing Rain, Sleet and Snow mainly affecting areas northwest of a Taylorville to Champaign line. The precipitation spread from west to east across the area during the morning hours. This resulted in several traffic accidents across the area, but no serious injuries were reported.	Peoria County, Tazewell County	0	0			NCDC Storm Events Website
3/8-9/1998	Winter Storm	A storm over the Southern Plains moved northeast bringing rain to the area which switched over to snow in the evening on March 8th. The snowfall persisted overnight with a mixture of freezing rain and snow in our southeastern counties. By the time the snow tapered off, snowfall amounts ranged from 2 inches in Coles county to over 6 inches in Knox, Peoria, and Fulton counties. Numerous accidents were reported with dozens of minor injuries. Two men died in separate traffic accidents in Peoria County. Even after the snowfall subsided, gusty winds to 50 mph created near white-out conditions in most locations, before subsiding during the evening hours on the 9th.	Peoria County, Tazewell County, Woodford County	dozens	2			NCDC Storm Events Website
1/1-3/1999	Heavy Snow	A major winter storm paralyzed much of the region during the first few days of 1999. Locations near and south of Charleston/Mattoon saw periods of mixed precipitation, including freezing rain, while farther north snow was predominate. After the snowfall and precipitation diminished, winds increased from the northwest and temperatures dropped, causing dangerous wind chills and treacherous driving conditions with extensive blowing and drifting snow through January 3rd. Total snow accumulations topped 6 inches mainly along and north of Interstate 70. Lesser amounts fell to the south, where more freezing precipitation was reported. The heaviest snow band in Central Illinois was found west and north of a line from Quincy to Virginia (Cass County) to Peoria to Bloomington to Champaign where reports of 14 or more inches of snow were common. The weight of the heavy snow and ice caused many roofs to collapse. In Pekin (Tazewell County), a storage building roof collapsed. No damage estimates were available. In addition, many locations sustained temporary or extended power outages during the storm.	City of Pekin, City of Peoria, Peoria County, Tazewell County, Woodford County	0	0	Power outtages		NCDC Storm Events Website
3/8-9/1999	Heavy Snow	A winter storm developed in the Southern Rockies and moved northeast into Illinois. The heaviest snow fell mainly north of interstate I-72/I-74 from Jacksonville to Danville. Wet snowfall amounts ranged from 6-11 inches in a little over 12 hours, though the snow fell for 24 hours. Light freezing rain was also reported in some locations with the snow. 7.5 inches of snow fell in Chillicothe (Peoria County), 9 inches in South Pekin (Tazewell County). Snowfall amounts averaged between 2 to 4 inches between I-72 and I-70 with less than 1 inch of snow southeast of I-70 where rain generally fell. Some light freezing rain was also reported south of I-72/I-74 but ice accumulations were less than a quarter inch. Dozens of accidents occurred throughout the area during the event with numerous minor injuries.	Peoria County, Tazewell County, Woodford County	5	0			NCDC Storm Events Website
1/19/2000	Winter Storm	During the day and early evening hours on the 19th, a winter storm with heavy snow affected Central Illinois with 4 to 6 inches of snow across a large area. Blowing and drifting of snow was reported as well. The storm caused numerous road closures as well as accidents. Two injuries were reported with a couple of the accidents (one in Peoria Co. and one in Vermilion Co.).	Peoria County, Tazewell County, Woodford County	1	0		Numerous roads closed	NCDC Storm Events Website
3/17-18/2000	Ice Storm	An ice storm affected central parts of Illinois, near the Illinois River Valley, from late in the evening on February 17th through the late afternoon hours of February 18th. A quarter to half an inch of ice resulted in numerous reports of downed power lines and tree limbs, extended power outages and traffic accidents.	Peoria County, Tazewell County, Woodford County	0	0	Downed power lines		NCDC Storm Events Website
12/11/2000	Winter Storm	Between 6 and 10 inches of snow accumulated within 24 hours on Monday, December 11, 2000 along and north of a Canton to Morton to Gridley line. Freezing rain and sleet mixed in with the snow, especially along and south of this line. Peoria set a new daily record snowfall of 8 inches nearly doubling the previous record of 4.4 inches set in 1932. The snow started falling around 1 AM, reaching 6 inch amounts by 6 pm and ending by 11 pm on December 11. Northwest winds of 25 to 35 mph with gusts to 45 mph produced considerable blowing and drifting snow along with wind chills of 30-40F below zero. Numerous minor vehicle accidents were reported in this first heavy snow event of the 2000-2001 winter season in Central Illinois.	Peoria County, Tazewell County, Woodford County	0	0			NCDC Storm Events Website
January 2001	Snow Storm	Declared disaster for snow storm. Assistance from FEMA received.	Peoria County					Peoria County Packet
1/30-31/2002	Winter Storm	Between a quarter and half inch of ice accumulated across the northern two thirds of Tazewell County. Between 6 and 9 inches of snow accumulated across Knox, Stark, Marshall and northern Peoria counties along with a quarter to half inch of ice. The southern half of Peoria county had around a half inch of ice along with 1 to 2 inches of snow. There were local three quarter to 1.5 inches of ice across higher terrain (Illinois River blufffs) near Mapleton. Several trees and power lines were downed from ice accumulations across Peoria and surrounding counties lasting from several hours to a couple of days.	Peoria County, Tazewell County, Woodford County	0	0	Downed power lines		NCDC Storm Events Website
3/1-3/2002	Heavy Snow	Snowfall totals of 6 to 8 inches were measured in the central Illinois counties along and west of the Illinois River from early in the evening on the 1st through the 2nd. Strong northwest winds, with gusts approaching 40 mph produced signficant blowing and drifting snow. Most roads were snow and ice covered, with numerous traffic accidents reported.	Peoria County, Tazewell County, Woodford County	0	0			NCDC Storm Events Website

Appendix D: Winter Storm Hazard History

Date	Event Type	Event Description	Affected Communities	# of Injuries	# of Deaths	Power Disruption	Affected Infrastructure	Data Source
3/25/2002	Winter Storm	Snowfall totals of 2 to 4 inches, along with significant blowing and drifting snow, created near whiteout conditions in Peoria, Woodford, northern Tazewell and northwest McLean counties the morning of the 25th. Numerous accidents occurred as a result of the snow covered roads and decreased visibility. Ice accumulations around one-quarter inch were observed at the ASOS in Champaign.	Peoria County, Tazewell County, Woodford County	0	0			NCDC Storm Events Website

Appendix D: Severe Storm Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
5/5/1933	Thunder-storm	Weather Bureau reported 33 mph wind, but with 8-mile wide strip with stronger winds; roofs blown off, walls blown down, major damage. Approximately 20 businesses damaged.4 injuries reported.	City of Peoria	several				City of Peoria HVA 1983
6/28/1935	Thunder-storm	6 fires started by lightning, streets flooded, serious damage	City of Peoria					City of Peoria HVA 1983
7/6/1939	Storm	Kickapoo Creek flooded 100's of basements, 60 mph winds took roofs off several buildings, boats thrown at yacht club, dock torn from moorings, dairy barn near Mt. Hawley Airport leveled.	City of Peoria	100s		Streets washed out		City of Peoria HVA 1983
7/28/1943	Hail Storm	60 mph wind for 3 minutes; crop loss estimated at $1 million; thousands of windows broken - 5,000 in schools, 7,000 in homes; homes/small buildings leveled; major damage. 20 reported injuries.	City of Peoria	100s	All power, most phones out		$1,000,000	City of Peoria HVA 1983
7/5/1953	Storm	2 storms (afternoon & evening): wind gusts to 96 mph; sustained 65 mph for 5 minutes; injury at Heart of Illinois Fair, damage to roof of Sacred Heart Church and White School, many planes damaged at airport; 3.5 inches of rain, some hail; major damage. 3 serious injuries reported.	City of Peoria		Most power out 2-5 days, 800 phones out	2 RR tracks washed out; 4 highways blocked by downed wires	$1,500,000	City of Peoria HVA 1983
9/14/1955	Thunder-storm	Lightning caused 21 separate fires, mostly to homes and to the Spaulding Institute. 1 reported injury.	City of Peoria	20	Most power out, 350 phones out		$10,700	City of Peoria HVA 1983
5/13/1957	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
5/15/1960	Hail Storm	Magnitude: 1.25 in.	Peoria County					NCDC Storm Events Website
6/4/1960	Hail Storm	Magnitude: 1.00 in.	Peoria County					NCDC Storm Events Website
9/2/1961	Hail Storm	Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website
6/10/1963	Hail Storm	Magnitude: 1.00 in.	Tazewell County					NCDC Storm Events Website
4/6/1964	Hail Storm	Magnitude: 0.75 in.	Tazewell County					NCDC Storm Events Website
7/14/1964	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
6/10/1967	Hail Storm	Magnitude: 0.75 in.	Tazewell County					NCDC Storm Events Website
7/18/1967	Thunder-storm	Fires started by lightning; destroyed 3 buildings and threatened Allied Chemical. 1 reported injury.	City of Peoria				$100,000	City of Peoria HVA 1983
5/15/1968	Hail Storm	Magnitude: 1.75 in.	Tazewell County					NCDC Storm Events Website
5/13/1970	Hail Storm	Magnitude: 1.00 in.	Tazewell County					NCDC Storm Events Website
8/14/1971	Hail Storm	Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website
6/9/1972	Hail Storm	Magnitude: 1.75 in.	Tazewell County					NCDC Storm Events Website
4/3/1974	Hail Storm	Magnitude: 0.75 in.	Woodford County					NCDC Storm Events Website
6/14/1974	Hail Storm	Magnitude: 0.75 in.(Woodford) 1.00 in.(Peoria); 1.75 in.(Tazewell)	Peoria County, Tazewell County, Woodford County					NCDC Storm Events Website
6/21/1974	Hail Storm	Magnitude: 0.75 in.	Woodford County					NCDC Storm Events Website
5/10 - 6/30/1974	Severe Storms	Numerouse severe storms and flooding occurred during this period. These storms damaged 2 bridges in Woodford County beyond repair which cost around $143K to replace. Presidential Disaster declared in all 3 counties.	Peoria County, Tazewell County, Woodford County			Winkler and Staab-Hoffer bridges damaged beyond repair	$143,000 (in Woodford County)	Woodford County HIRA Packet
7/10/1974	Hail Storm	Magnitude: 1.50 in.; 1.75 in.	Woodford County					NCDC Storm Events Website
5/19/1975	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
5/30/1975	Hail Storm	Magnitude: 1.00 in.	Tazewell County					NCDC Storm Events Website
6/13/1975	Hail Storm	Magnitude: 0.75 in., 1.75 in.(Peoria); 2.00 (Woodford)	Peoria County, Woodford County					NCDC Storm Events Website
6/14/1975	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
6/20/1975	Hail Storm	Magnitude: 0.75 in.; 1.00 in.	Tazewell County					NCDC Storm Events Website
8/18/1975	Hail Storm	Magnitude: 1.75 in.	Tazewell County					NCDC Storm Events Website
3/26/1976	Thunder-storm	50 mph winds, hail and 0.38 inches of rain. The storm uprooted trees, ripped sides off a garage, broke windows, billboards; above-average damage	Peoria County, City of Peoria		Jet City & Bartonsville CILCO substations knocked out, 5,000 homes w/out power			City of Peoria HVA 1983
5/5/1977	Hail Storm	Magnitude: 0.75 in.(Woodford); 1.50 in., 1.75 in.(Peoria)	Peoria County, Woodford County					NCDC Storm Events Website
1/26/1978	Winter Storm	40 mph winds, -36 wind chill. 3 reported deaths.	City of Peoria			Roads closed		City of Peoria HVA 1983

Appendix D: Severe Storm Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
5/28/1978	Hail Storm	Magnitude: 1.25 in.	Tazewell County					NCDC Storm Events Website
6/25/1978	Hail Storm	Magnitude: 1.50 in.	Peoria County					NCDC Storm Events Website
7/26/1978	Hail Storm	Magnitude: 1.75 in., 2.00 in.(Tazewell); 2.00 in (Woodford)	Tazewell County, Woodford County					NCDC Storm Events Website
1979		No description available (see flood section)	Woodford County	100s			$300,000	Woodford County HIRA Packet
6/2/1980	Hail Storm	Flash flood created by hailstorm; 1,500 acres of farmland under water; damage to roads; magnitude: 1.75 in. Worse in Tazewell County; magnitude: 2.75 in. State Disaster declared.	Tazewell County, City of Peoria, Peoria County		Hospital lost power briefly	Franklin St. bridge closed, many streets flooded	$200,000	City of Peoria HVA 1983, NCDC Storm Events Website
4/10/1981	Hail Storm	Magnitude: 1.75 in., 2.75 in.	Peoria County					NCDC Storm Events Website
4/2/1982	Hail Storm	Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website
5/26/1982	Hail Storm	Magnitude: 1.00 in.	Peoria County					NCDC Storm Events Website
7/13/1982	Hail Storm	Magnitude: 1.75 in.	Tazewell County					NCDC Storm Events Website
11/1/1982	Hail Storm	Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website
8/18/1983	Hail Storm	Magnitude: 1.00 in.	Peoria County					NCDC Storm Events Website
3/27-28/1985	Hail Storm	Magnitude: 1.50 in.; 1.75 in.	Tazewell County					NCDC Storm Events Website
6/23/1985	Hail Storm	Magnitude: 1.75 in.	Tazewell County					NCDC Storm Events Website
6/30/1985	Hail Storm	Magnitude: 1.00 in.	Peoria County					NCDC Storm Events Website
7/2/1985	Hail Storm	Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website
5/11/1987	Hail Storm	Magnitude: 1.00 in.	Peoria County					NCDC Storm Events Website
5/21/1987	Hail Storm	Magnitude: 1.25 in.	Woodford County					NCDC Storm Events Website
5/31/1987	Hail Storm	Magnitude: 0.75 in.	Woodford County					NCDC Storm Events Website
4/4/1988	Hail Storm	Magnitude: 1.75 in.	Woodford County					NCDC Storm Events Website
3/17/1989	Hail Storm	Magnitude: 0.75 in.	Tazewell County					NCDC Storm Events Website
7/9/1990	Hail Storm	Magnitude: 2.75 in.	Peoria County					NCDC Storm Events Website
8/29/1990	Hail Storm	Magnitude: 0.75 in.; 1.75 in.	Peoria County					NCDC Storm Events Website
5/17/1991	Hail Storm	Magnitude: 2.00 in.	Woodford County					NCDC Storm Events Website
6/13/1991	Hail Storm	Magnitude: 1.75 in.	Woodford County					NCDC Storm Events Website
6/15/1991	Hail Storm	Magnitude: 1.75 in.	Tazewell County					NCDC Storm Events Website
10/23/1991	Hail Storm	Magnitude: 1.75 in.(Tazewell); 1.00 in.(Woodford)	Tazewell County					NCDC Storm Events Website
12/8/1991	Hail Storm	Magnitude: 1.00 in. (Peoria); 2.75 in. (Tazewell)	Peoria County, Tazewell County					NCDC Storm Events Website
4/15/1992	Hail Storm	Magnitude: 0.75 in., 1.50 in.	Woodford County					NCDC Storm Events Website
6/26/1994	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
5/13/1995	Hail Storm	A tornado briefly touched down 2 SW of Congerville damaging one home and five outbuildings. The roof of a mobile home was blown off and several trees and power poles were blown over. No one was injured and no damage estimate was available. Magnitude: 0.75 in., 1.75 in.	Woodford County	several				NCDC Storm Events Website
4/14/1996	Hail Storm	Magnitude: 1.00 in.	Woodford County					
4/19/1996	Hail Storm	Magnitude: 0.75 in.	Woodford County					
2/27/1996	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
4/18/1996	Hail Storm	Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website
4/19/1996	Hail Storm	Golfball sized hail was reported in Delavan. Also, thunderstorm winds blew down numerous power lines in Delavan. Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website
12/23/1996	Hail Storm	Magnitude: 1.00 in.	Peoria County					NCDC Storm Events Website
8/24/1997	Hail Storm	Peoria magnitude: 1.75 in.; One inch hail fell in East Peoria, Morton, and Delavan as the severe thunderstorms moved southeast across Tazewell county: magnitude 1.00 in.; 1.25 in.	Peoria County, Tazewell County					NCDC Storm Events Website
4/7/1998	Hail Storm	Magnitude: 1.25 in.(Peoria); 1.75 in.(Tazewell); 1.75 in. (Woodford)	Peoria County, Tazewell County, Woodford County					NCDC Storm Events Website
4/15/1998	Hail Storm	Magnitude: 1.75 in.	City of Pekin, Tazewell County					NCDC Storm Events Website

Appendix D: Severe Storm Hazard History

Date	Event Type	Event Description	Affected Communities	Affected Homes	Power Disruption	Affected Infrastructure	Estimated Damage $	Data Source
4/20/1998	Hail Storm	Golfball sized hail broke several windows on a car 5 miles east of Roanoke. No injuries reported and no damage estimate available. Magnitude: 1.75 in.	Woodford County					NCDC Storm Events Website
5/12/1998	Hail Storm	Magnitude: 1.00 in. (Peoria); 1.75 in. (Tazewell)	Peoria County, City of Pekin, Tazewell County					NCDC Storm Events Website
5/19/1998	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
6/11/1998	Hail Storm	Magnitude: 1.25 in.	Tazewell County					NCDC Storm Events Website
8/4/1998	Hail Storm	Magnitude: 1.00 in.	Peoria County					NCDC Storm Events Website
5/5/1999	Hail Storm	Magnitude: 1.75 in.	Woodford County					NCDC Storm Events Website
5/17/1999	Hail Storm	Magnitude: 0.88 in.	Tazewell County					NCDC Storm Events Website
6/4/1999	Hail Storm	Dime size hail fell in East Peoria, Washington, and 4 miles east northeast of Delavan. Golfball sized hail was reported in Tremont. Magnitude 1.75 in.(Tazewell & Woodford)	Tazewell County, Woodford County					NCDC Storm Events Website
4/20/2000	Hail Storm	Magnitude: 1.00 in.(Peoria); 1.75 in.(Tazewell)	Peoria County, Tazewell County					NCDC Storm Events Website
5/8/2000	Hail Storm	Magnitude: 0.75 in. (Peoria); 1.00 in.(Tazewell)	Peoria County, Tazewell County					NCDC Storm Events Website
5/12/2000	Hail Storm	Over 100 cars sustained hail damage in the Eureka and Roanoke areas. Magnitude: 1.25 in., 1.50 in.(Tazewell); 2.50 in. (Woodford)	Tazewell County, Woodford County				$300,000	NCDC Storm Events Website
5/18/2000	Hail Storm	Magnitude: 0.75 in.; 0.88 in. (Peoria); 1.75 in. (Tazewell); 1.00 in.(Woodford)	Peoria County, Tazewell County, Woodford County					NCDC Storm Events Website
6/23/2000	Hail Storm	Magnitude: 1.75 in.(Peoria); 0.88 in.(Woodford)	Peoria County, Woodford County					NCDC Storm Events Website
4/10/2001	Hail Storm	Hail ranging from pea to golf ball size fell for at least 20 minutes in parts of Minonk and piled several inches deep. Widespread damage was noted to vehicles, with some minor roof damage to homes. At least 50 vehicles were reported to have between $2000 and $4000 in damage each. Damage estimates are based on minimum damage figures available and is likely higher. Magnitude: 1.75 in (Woodford); 1.00 in.(Tazewell)	Tazewell County, Woodford County				$100,000	NCDC Storm Events Website
4/21/2001	Hail Storm	Numerous reports of hail were reported in the Spring Lake, Pekin and Mackinaw areas. Magnitude: 1.25 in.(Tazewell); 1.00 in.(Woodford)	City of Pekin, Tazewell County, Woodford County					NCDC Storm Events Website
6/17/2001	Hail Storm	Magnitude: 0.88 in.	Tazewell County					NCDC Storm Events Website
8/18/2001	Hail Storm	Magnitude: 2.50 in.	Tazewell County					NCDC Storm Events Website
8/30/2001	Hail Storm	Magnitude: 0.75 in.	Peoria County					NCDC Storm Events Website
4/2/2002	Hail Storm	Magnitude: 0.75 in. (Peoria & Woodford)	Peoria County, Woodford County					NCDC Storm Events Website
4/27/2002	Hail Storm	Magnitude: 0.88 in. (Peoria); 0.75 in.(Tazewell & Woodford)	Peoria County, Tazewell County, Woodford County					NCDC Storm Events Website
5/11/2002	Hail Storm	Magnitude: 1.50 in.	Peoria County					NCDC Storm Events Website
5/13/2002	Hail Storm	Magnitude: 0.88 in.	Peoria County					NCDC Storm Events Website
6/4/2002	Hail Storm	Magnitude: 2.00 in.(Peoria); 0.88 in.(Woodford)	Peoria County, Woodford County					NCDC Storm Events Website
7/26/2002	Hail Storm	Magnitude: 2.00 in.(Peoria); 1.00 in.(Tazewell)	Peoria Co., Tazewell Co.					NCDC Storm Events Website
7/28/2002	Hail Storm	Magnitude: 1.75 in.	Peoria County					NCDC Storm Events Website

Appendix D: Extreme Temperature Hazard History

Date	Event Type	Event Description	Affected Communities	# of Injuries	# of Deaths	Affected Infrastructure	Data Source
2/2-4/1996	Extreme Cold	Bitterly cold weather took hold of Central Illinois on the 2nd, 3rd, and 4th of this month. New record low temperatures were made with a low of minus 19 in both Peoria and Springfield on February 3rd. Also, new record low high temperatures were made when the temperatures at Peoria and Springfield never went above zero on the 2nd and 3rd. Many people experienced problems with cars and frozen pipes. However, two deaths were reported due to the extreme cold.	Peoria County, Tazewell County, Woodford County	0	2		NCDC Storm Events Website
7/26-27/1997	Excessive Heat	A brief heat wave hit Central Illinois persisting for a little less than 48 hours from July 26th to July 27th. Temperatures ranged from 95 to 100 degrees both days with heat index values ranging from 105 to 115 degrees. There were numerous reports of heat related injuries in most area hospitals. Also, there were numerous reports of roads buckling due to the high temperatures.	Peoria County, Tazewell County, Woodford County	several	0	Buckling roads	NCDC Storm Events Website
6/26-28/1998	Excessive Heat	High temperatures on June 26th and 27th climbed into the middle and upper 90s. This combined with the high humidity values produced heat indicies of 105 to 110 degrees at times. Several heat related illnesses were reported in area hospitals due to the heat. One death was reported in Peoria and was confirmed to be heat related on June 27th. Also, several highways in the area had sections of roadway buckle due to the excessive heat.	Peoria County, Tazewell County, Woodford County	several	1	Buckling roads	NCDC Storm Events Website
1/5/1999	Extreme Cold	A clear sky, light winds and thick snowcover set the stage for record cold morning temperatures across the region. A new state record low was set at Congerville, 36 degrees below zero. Other bitterly cold record readings came from Peoria with 19 degrees below zero.	Peoria County, Tazewell County, Woodford County	0	0		NCDC Storm Events Website
7/20-26/1999	Excessive Heat	The excessive heat wave began on the 20th of July and continued for most of the area through the 26th. Temperatures were in the lower to middle 90s with heat index values in the 105 to 110 degree range each day. In West Peoria (Peoria County), one heat-related death was reported on the 24th.	Peoria County, Tazewell County, Woodford County	0	1		NCDC Storm Events Website
7/28-31/1999	Excessive Heat	The heat returned to Central Illinois after a two day break. Temperatures rose into the lower to middle 90s again with heat index values in the 105 to 110 degree range. By the 30th a cold front began to move through the area, so the heat advisory was cancelled for northern sections of the area, but the excessive heat persisted in the rest of Central Illinois through the 31st	Peoria County, Tazewell County, Woodford County	0	0		NCDC Storm Events Website

APPENDIX E

DETAILED HAZARD IDENTIFICATION PARAMETERS AND METHODOLOGY

APPENDIX E — DETAILED HAZARD IDENTIFICATION PARAMETERS AND METHODOLOGY

Based on all local and regional hazard data collected, an analysis of the potential hazards that can affect the Tri-County area was performed based on the four parameters that are described below. These four parameters were based on two separate factors — ***the probabilities that a potential hazard will affect the city and the potential impacts on the city should a hazard event occur***. Hazard identification parameters and computations used to prioritize the potential hazards that can threaten the Tri-County area are listed in tabular form at the end of this appendix.

- **Probability** — This parameter addresses the probability that a potential hazard will affect the city. The probability for each hazard was determined based on the history of events in the Tri-County area, as well as any other relevant available data. Hazard probabilities were classified into one of four distinct categories by estimating the hazard's average annual frequency, which is the probability of a specific hazard event occurring in the Tri-County area in a given year.

- **Affected Area** — This parameter is the first of three impact parameters, and addresses the potentially affected geographic area within the city should a hazard event occur. The extent of the affected area for each hazard was determined based on the specific characteristics of each hazard, the history of such events in the Tri-County area, and experience with similar events that have occurred near the area. The affected areas were classified into one of four distinct categories based on the extent of the city directly impacted by the hazard, ranging from a single building or facility to a widespread area of the Tri-County area.

- **Primary Impact** — This second impact parameter addresses the potential direct damages to city buildings, facilities, and individuals should a hazard event occur. The primary impact was determined based on the specific characteristics of each hazard, the history of such events in the Tri-County area, and experience with similar events that have occurred in the region. Primary impacts were classified into one of four distinct categories by estimating the typical damage to a city building or facility from a given hazard, ranging from negligible (less than 10% damage) to catastrophic (greater than 50% damage).

- **Secondary Impacts** — This third impact parameter addresses the potential secondary impacts on the city should a hazard event occur. Note that while primary impacts are a direct result of the hazard, secondary impacts can only arise subsequent to a primary impact. For example, a primary impact of a flood

event may be road closures due to submerged pavement; while a secondary impact could be restricted access of emergency vehicles to citizens in a portion of the community due to the road closure. Other examples of secondary impacts include loss of building or facility services (functional downtime), power outages, and mass evacuation of city residents. The secondary impacts were determined based on the specific characteristics of each hazard, the history of such events in the Tri-County area, and experience with similar events in the region. Secondary impacts were classified into one of four distinct categories by estimating the typical impacts to the city at large from a given hazard, ranging from negligible (no loss of function, downtime, and/or evacuations) to high (major loss of function, downtime, and/or evacuations).

Once these parameters were determined, a preference scale was utilized to arrive at a hazard level for each of the hazard types considered for the Tri-County area. The preference scale method has been used as a means of quantifying hazard assessment results in other communities, and similar scales were developed to rank alternatives in other FEMA documents such as FEMA Publication 259. The preference scale used for this hazard analysis first assigned a numerical value between 1 and 4 to each parameter, with 1 representing the lowest hazard potential and 4 being the highest. These numerical values were then modified by weighing each parameter by a factor to reflect the overall importance of that parameter, with 0.5 representing parameters of lowest importance and 2.0 representing parameters of highest importance. Importance factors may also be adjusted to reflect the level of confidence with the information supplied for a given parameter. For this reason, probability parameters were assigned a factor of 2.0 to reflect their high importance and the generally high confidence in the available information. However, the affected area, primary impact and secondary impacts parameter were assigned factors of 0.8, 0.7 and 0.5 to reflect their lower importance and the low confidence in the available information. Finally, the factored values assigned to the various parameters for each hazard were totaled, and the hazard types with the highest totals were considered the highest potential hazard level.

In order to quantify these hazard parameters, the following formula was developed to assign a value for probability and impact for each of the hazards considered.

Hazard Level = Probability x Impacts

Where: Probability = (Probability score x Importance factor)

Impacts = (Affected Area + Primary Impact + Secondary Impacts)

Affected Area = Affected Area score x Importance factor

Primary Impact = Primary Impact score x Importance factor

Secondary Impact = Secondary Impact score x Importance factor

The preference scale computations used to determine the hazard level for each of the potential hazards impacting the Tri-County area are summarized in tabular form at the end of this appendix. The hazard levels are broken down into four distinct categories that represent the likelihood of a hazard event of that type significantly impacting the Tri-County area: High, Medium-High, Medium, and Low. Note that the assigning of numerical values and importance factors for parameters is qualitative in nature and based on data from a number of sources with varying degrees of accuracy. For this reason, a margin or error of $\pm$10 percent was assumed for the total scores used to arrive at the hazard level values.

HAZARD ANALYSIS WORKSHEET - TRI-COUNTY AREA

Hazard Type	Probability	Impact			Total Score	Hazard Level
		Affected Area	Primary Impact	Secondary Impacts		
WINTER STORM	6	3.2	0.7	1.5	32	Medium-High
DROUGHT	4	3.2	2.1	1	25	Medium
EARTHQUAKE	2	3.2	1.4	1.5	12	Medium
WILDFIRE	4	0.8	1.4	1.5	15	Medium
FLOODING - RIVERINE	8	3.2	2.1	2	58	High
FLOODING - FLASH	6	2.4	2.1	1.5	36	Medium-High
FLOODING - STORM WATER	4	3.2	1.4	2	26	Medium
HAIL STORM	6	2.4	1.4	1	29	Medium
HEAT WAVE	4	3.2	0.7	1	20	Medium
ICE STORM	4	3.2	1.4	1.5	24	Medium
LANDSLIDES	6	1.6	2.1	0.5	25	Medium
LAND SUBSIDENCE/MINE SUBSIDENCE	6	2.4	2.1	1	33	Medium-High
WIND - MICROBURST/STRAIGHT LINE WIND	8	3.2	1.4	1.5	49	High
SEVERE THUNDERSTORM	8	2.4	0.7	1.5	37	Medium-High
SOIL EROSION	2	1.6	1.4	0.5	7	Low
TORNADO - ALL CATEGORIES	6	2.8	2.1	1	35	Medium-High
TORNADO - CATEGORY F0	8	2.4	2.1	0.5	40	High
TORNADO - CATEGORY F1	8	2.4	2.1	1	44	High
TORNADO - CATEGORY F2	6	2.4	2.1	1	33	Medium-High
TORNADO - CATEGORY F3	4	3.2	2.8	1.5	30	Medium
TORNADO - CATEGORY F4	2	3.2	2.8	1.5	15	Medium
TORNADO - CATEGORY F5	2	3.2	2.8	2	16	Medium

The probability of each hazard is determined by assigning a level, from 1 to 4, based on the likelihood of occurrence from historical data. The total impact value includes the affected area, primary impact and secondary impact levels of each hazard. These levels are then multiplied by an importance factor to obtain a score for each category. The probability score is multiplied by the sum of the three impact categories to determine the total score for the hazard. Based on this total score, the hazards will be separated into four categories based on the hazard level they pose to the communities: unlikely, possible, critical and highly likely.

Probability Importance 2.0

Based on estimated likelihood of occurrence from historical data

Level	Probability	Score
1	Less than 1% occurrence	2
2	Between 1% and 10% occurrence	4
3	Between 10% and 100% occurrence	6
4	Near 100% occurrence	8

Affected Area Importance 0.8

Based on size of geographical area of community affected by hazard

Level	Affected Area	Score
1	Isolated	0.8
2	Small	1.6
3	Medium	2.4
4	Large	3.2

Primary Impact Importance 0.7

Based on percentage of damage to typical facility in community

Level	Impact	Score
1	Negligible - less than 10% damage	0.7
2	Limited - between 10% and 25% damage	1.4
3	Critical - between 25% and 50% damage	2.1
4	Catastrophic - more than 50% damage	2.8

Secondary Impacts Importance 0.5

Based on estimated secondary impacts to community at large

Level	Impact	Score
1	Negligible - no loss of function, downtime, and/or evacuations	0.5
2	Limited - minimal loss of function, downtime, and/or evacuations	1
3	Moderate - some loss of function, downtime, and/or evacuations	1.5
4	High - major loss of function, downtime, and/or evacuations	2

Total Score = Probability x Impact, where:
Probability = (Probability Score x Importance)
Impact = (Affected Area + Primary Impact + Secondary Impacts), where:
Affected Area = Affected Area Score x Importance
Primary Impact = Primary Impact Score x Importance
Secondary Impacts = Secondary Impacts Score x Importance

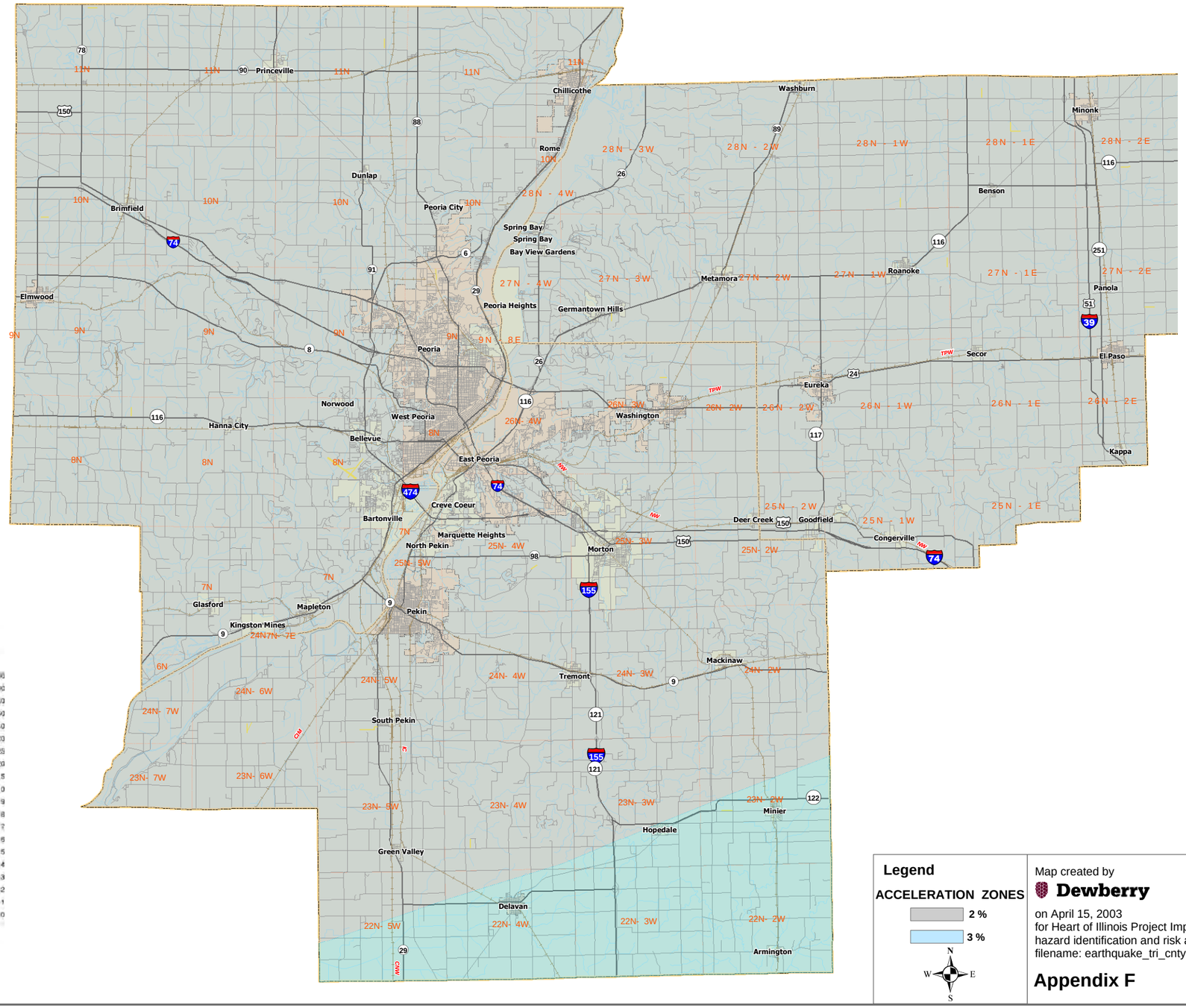
Hazard Level

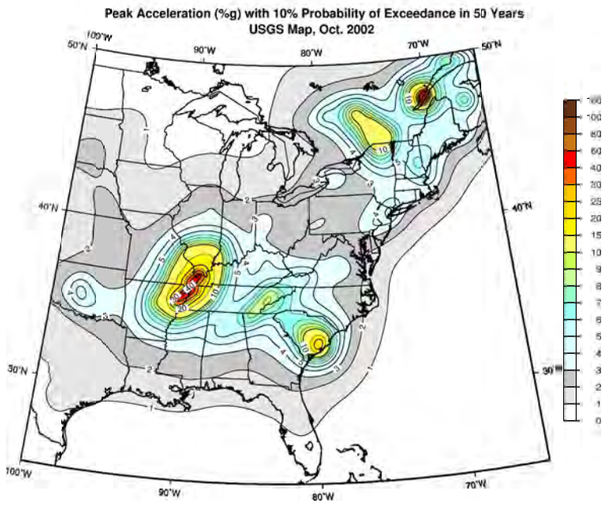
Total Score (Range)		Hazard Level	Distribution
0.0	12.0	Low	1
12.1	32.0	Medium	11
32.1	39.6	Medium-High	6
39.7	64.0	High	4

APPENDIX F

PEAK ACCELERATION DATA TRI-COUNTY AREA AND BASE MAPS

Peak Acceleration Data Tri-County Area
Peoria,Tazwell, Woodford Counties, Illinois





Legend

ACCELERATION ZONES

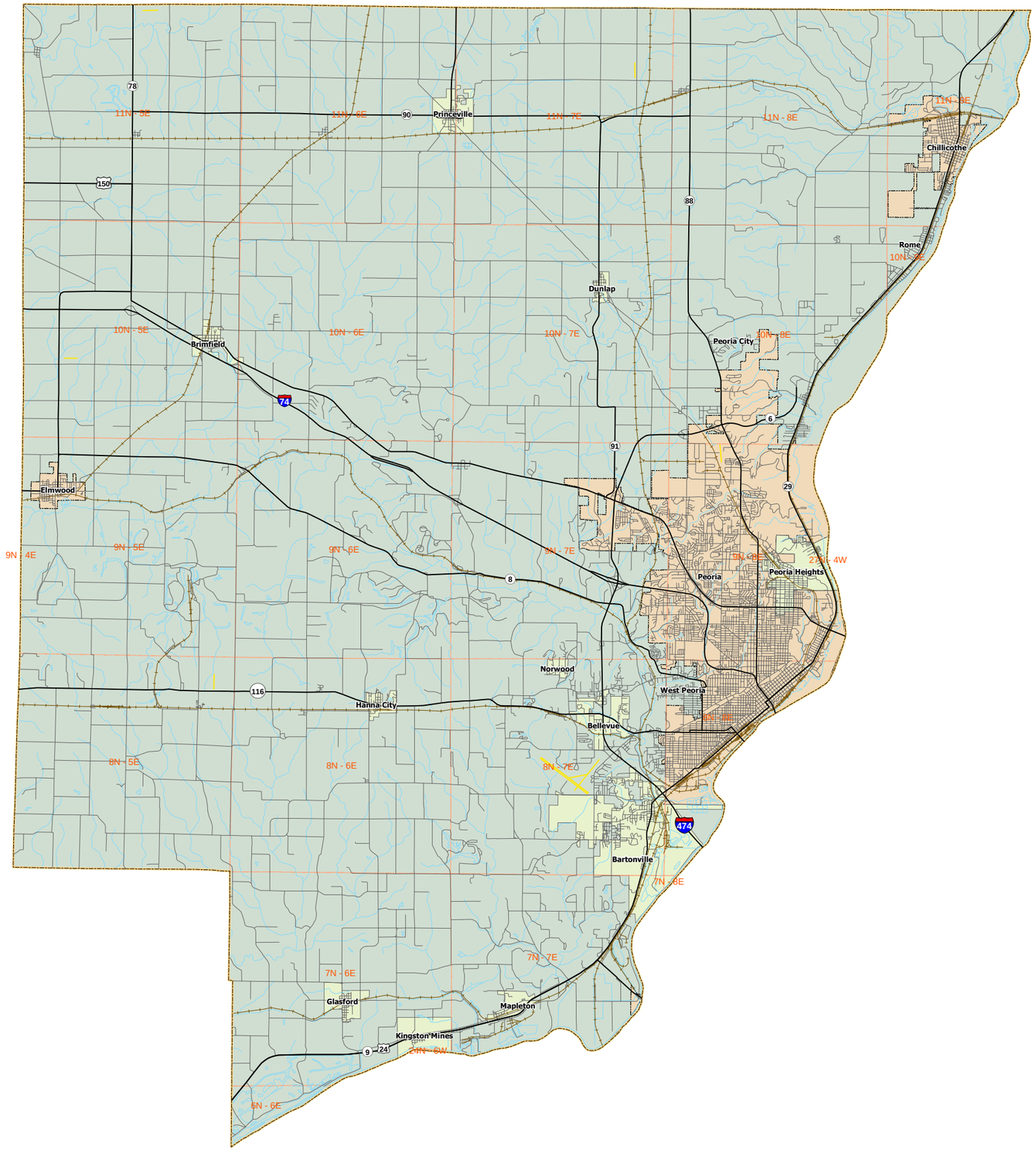
- 2 %
- 3 %

Map created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: earthquake_tri_cnty.mxd

Appendix F

Peoria County, IL Basemap

Heart of Illinois PROJECT IMPACT



N
W E
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Legend

- Major Roads
- Minor Roads
- Airports
- Railroads
- Streams
- Township Boundary
- City Boundary
- Village Boundary

Map Created by

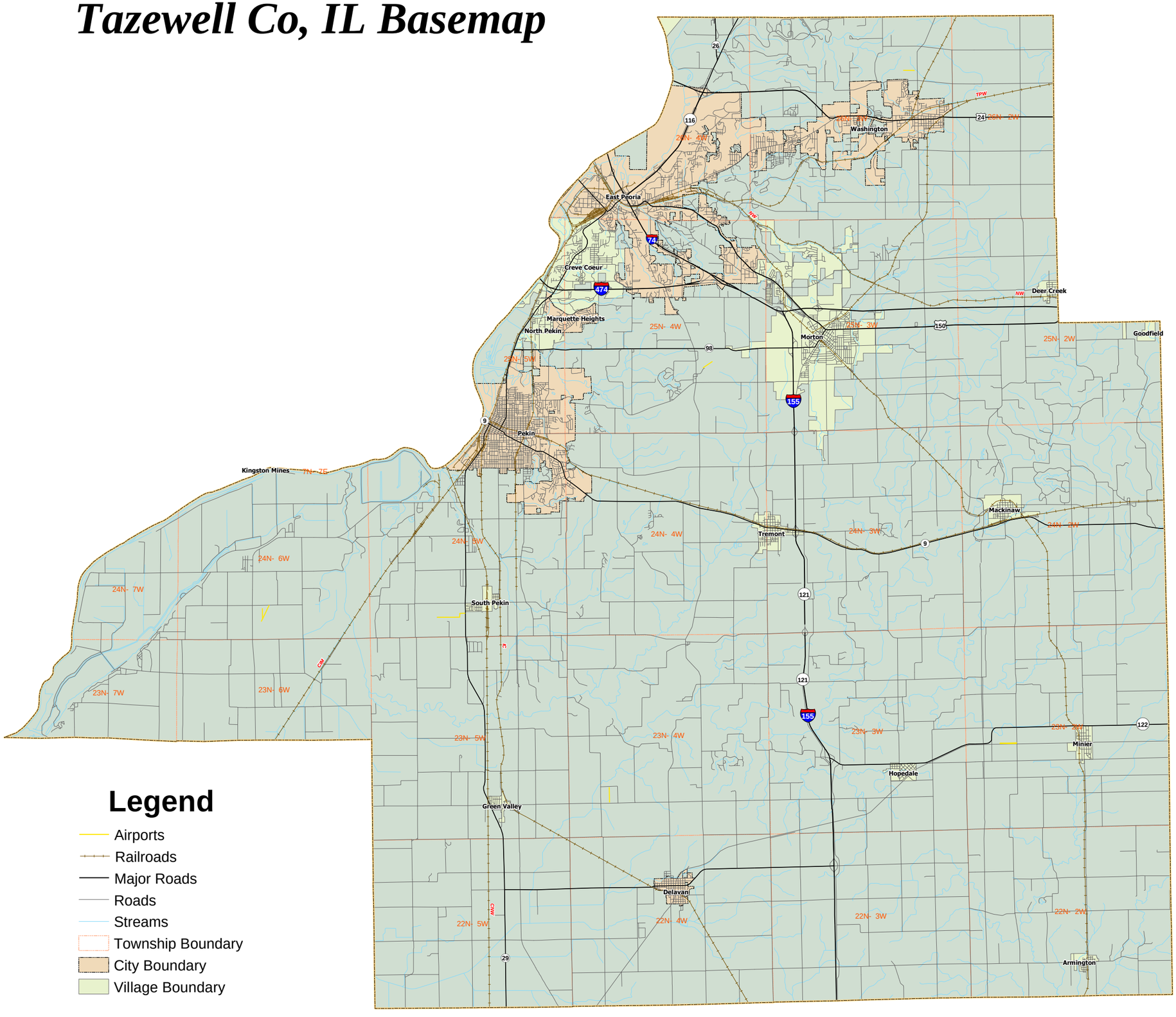
Dewberry

on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: base_peoria.mxd

Appendix F

Tazewell Co, IL Basemap

Heart of Illinois PROJECT IMPACT



Legend

- Airports
- Railroads
- Major Roads
- Roads
- Streams
- Township Boundary
- City Boundary
- Village Boundary

N
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Map Created by

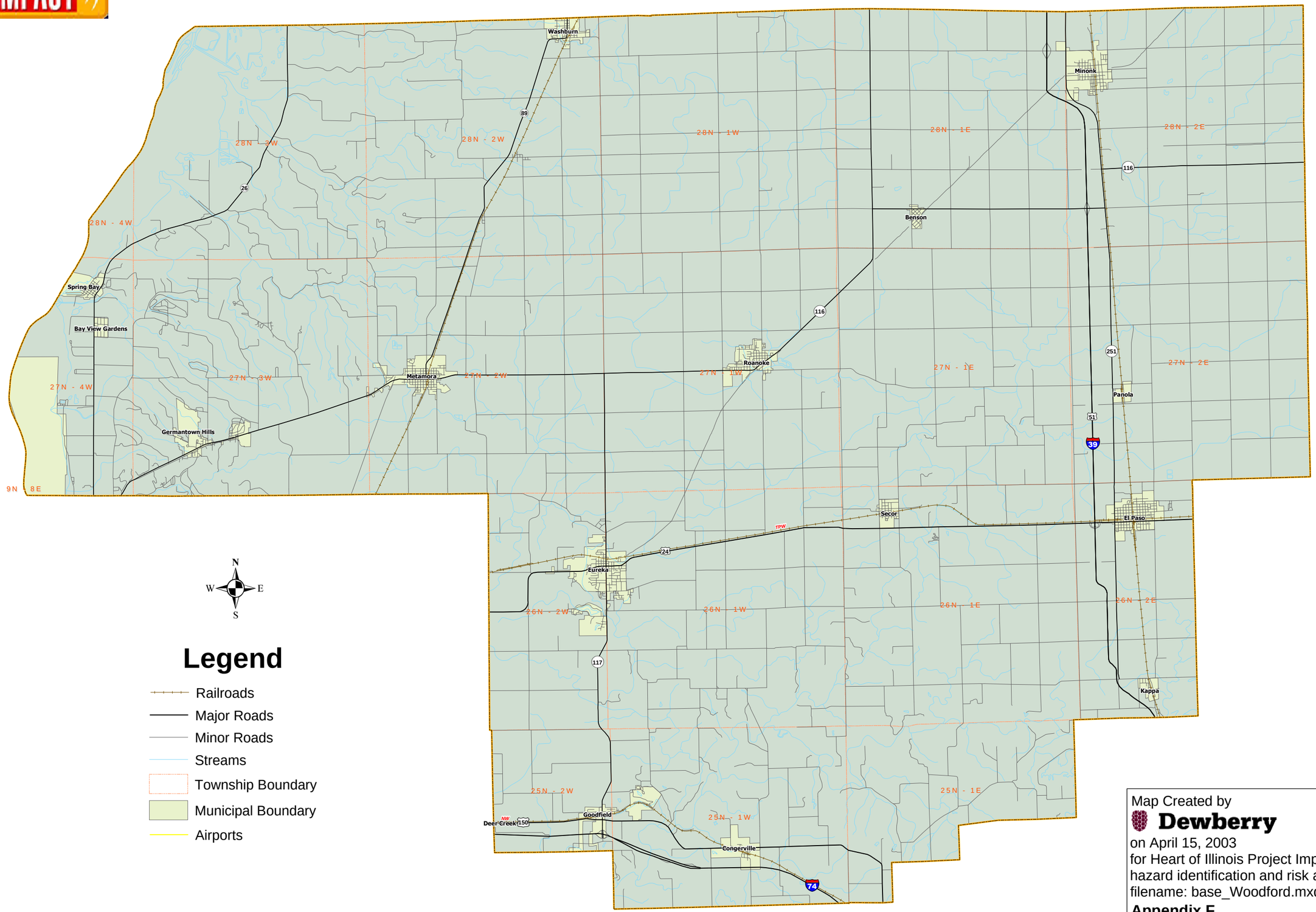
Dewberry

on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: base_tazewell.mxd

Appendix F

Woodford County, IL Basemap

Heart of Illinois PROJECT IMPACT



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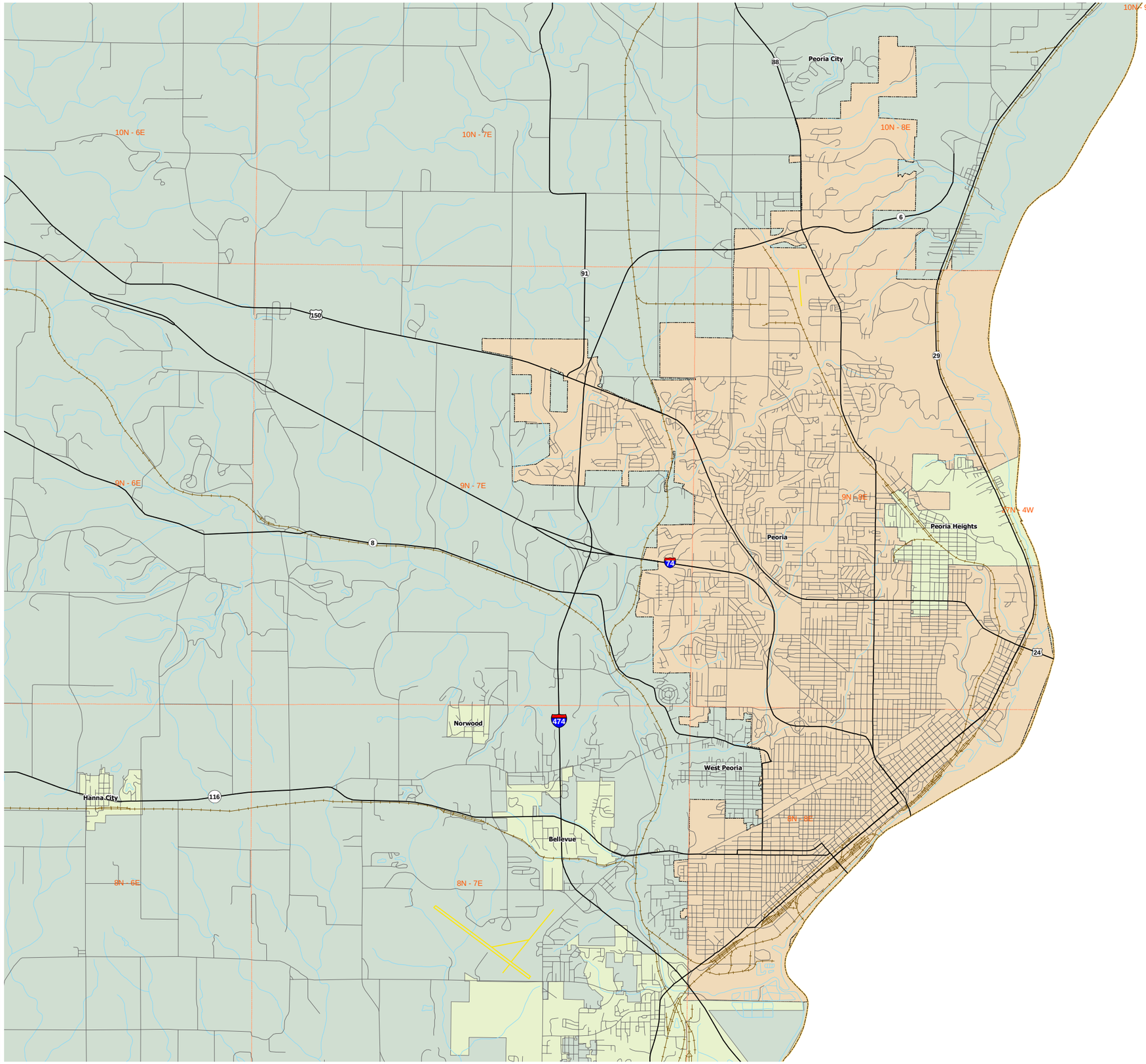
Legend

- Railroads
- Major Roads
- Minor Roads
- Streams
- Township Boundary
- Municipal Boundary
- Airports

Map Created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: base_Woodford.mxd
Appendix F

Peoria City
Peoria County, IL
Basmap

Heart of Illinois PROJECT IMPACT



N
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Legend

- City Owned Facilities
- Major Roads
- Minor Roads
- Airports
- Railroads
- Streams
- Township Boundary
- City Boundary
- Village Boundary

Map Created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: base_peoria_city.mxd

Appendix F

City of Pekin
Tazewell County, IL
Basemap

Heart of Illinois PROJECT IMPACT

Legend

- Airports
- Railroads
- Major Roads
- Minor Roads
- Streams
- Township Boundary
- City Boundary
- Village Boundary

N
W E
S

North Pekin
Pekin
25N- 5W
25N- 4W
24N- 5W
24N- 4W
98
9
29
CNW
CNW
CNW

Map Created by
Dewberry
on April 15, 2003
for Heart of Illinois Project Impact
hazard identification and risk analysis
filename: base_pekin.mxd

Appendix F

APPENDIX G

POTENTIAL FLOOD DAMAGE WORKSHEET

Appendix G - Potential Losses Due to a 100-Year Event, Peoria County, Illinois River Flood Study Area

Type of Complex	No. of Units	$ Value in Flood Zone	Average Value Per Strucutre	BFE	Avg. First Floor Elevation	Avg. Flood Depth	Assumed Building Type	% Building Damage	Building Damage ($$)	Content Value as % of Building	Contents Value	% Contents Damaged	Contents Damage ($$)	Yearly Housing Cost	No. of Days	Total Loss of Function per Event	Total Damages per Structure	Total Damages per Sector	% Damage of Assessed Value
Residential Properties	190	$11,400,000	$60,000.00	460.3	456.44	3.86	1 w/o	29%	$17,160	50%	$30,000	43%	$13,020	$6,000	45	$740	$30,920	$5,874,748	52%

Type of Complex Property type.

No. of Units Total number of units in the study area.

$ Value in Flood Zone (No. of Units x Average Value per Structure); represents the total dollar value of all units in the study area.

Average Value per Structure Pre-determined average value for a single structure of a given complex type.

BFE Base Flood Elevation: Estimated elevation of flooding during a 100-year event.

Average First Floor Elevation (BFE - Average Flood Depth); Surveyed elevation of each structure's first floor.

Average Flood Depth The calculated average flood depth for all structures in the study area with first floor elevations below BFE.

Assumed Building Type Building type determined by the number of stories a structure has, and whether or not it has a basement.

% Building Damage Taken from Federal Insurance Administration depth damage curve for all building types.

Building Damage $$ (Average Value per Structure x % Building Damage); represents the damage dollar value to the structure.

Content Value as % of Building The ratio of content value within the structure, to the structure itself.

Contents Value (Content Value as % of Building x Average Value per Structure); estimated value of all contents within a structure.

% Contents Damage Taken from Federal Insurance Administration depth damage curve.

Contents Damaged $$ (Contents Value x % Contents Damaged); represents the dollar figure of damage to contents in each structure.

Yearly Housing Cost Estimated yearly housing cost.

No. of Days Average number of days flooded.

Total Loss of Function per Event (Yearly Budget/365) x No. of Days; represents the money lost per structure in a flooding event.

Total Damages per Structure (Building Damage $$ + Contents Damaged $$ + Total Loss of Function per Event); sum of all damages.

Total Damages per Sector (Total Damages per Sector x No. of Units); represents total dollar amount of damages for the properties within the study area.

% Damage of Assesed Value: (Total Damages per Sector / $ Value in Flood Zone); ratio between the total damage value and the overall property value of the study area.

APPENDIX H

FACILITIES IN LANDSLIDE AREA

Hazard Identification and Risk Assessment
Heart of Illinois Project Impact

Hazard	Type of Facility	Name of Facility	Street Address	City/Town	Zip Code	County	Comments
Undermined Land/ Mine Subsidence	School	Bartonville Public School	6000 S. Adams St.	Bartonville	61607	Peoria	
		Hollis School District	5613 W. Tuscarora Rd.	Bartonville	61607	Peoria	
		Holy Cross Lutheran Church	618 S. Maxwell Rd.	Bartonville	61607	Peoria	
		Limestone Community H.S.	4201 S. Airport Rd.	Bartonville	61607	Peoria	
		Limestone-Walters School	8221 W. Smithville Rd.	Bartonville	61607	Peoria	
		Monroe School	5137 W. Cisna Rd.	Bartonville	61607	Peoria	
		Oak Grove West School	6018 W. Lancaster Rd.	Bartonville	61607	Peoria	
		Hanna City School Dist. #324	511 N. Main St.	Hanna City	61536	Peoria	
		Mapleton School	10107 S. Vine St.	Mapleton	61547	Peoria	
		Bartonville Public School	1915 W. Garfield Ave.	Peoria	61607	Peoria	
		Norwood School	6521 W. Farmington Rd.	Peoria	61604	Peoria	
		Pleasant Hill School	3717 W. Malone St.	Peoria	61605	Peoria	
		Pleasant Valley North Elem.School	4607 W. Elwood Dr.	Peoria	61604	Peoria	
		Pleasant Valley Elem. School	4623 W. Red Bud Dr.	Peoria	61604	Peoria	
		Rising Sun Baptist Church	4310 W. Charter Oak Rd.	Peoria	61615	Peoria	
	TV/Radio Communications	CBW1 Peoria Weather Tower					
	Airport	Greater Peoria Airport	1900 S. Maxwell Rd.	Peoria		Peoria	
	Electric	CILCO		Limestone		Peoria	
	Railroad Bridge	Kickapoo Creek Bridge #1702	CNWRR			Peoria	
	Emergency Services	Peoria Police Benevolent	3703 S. Airport Rd.	Bartonville	61607	Peoria	
	School	Parkview Jr. High School	800 Groveland St.	Creve Coeur	61610	Tazewell	
		Broadmoor Jr. High School	501 Maywood Ave.	Pekin	61554	Tazewell	
		Pekin Community H.S.		Pekin	61555	Tazewell	
		Schramm Education Center	300 Cedar St.	Pekin	61554	Tazewell	
		Sunset Hills Elem. School	1730 Highwood Ave.	Pekin	61554	Tazewell	
		Willow Elem. School	1110 Veerman St.	Pekin	61554	Tazewell	
	TV/Radio Communications	WCBU FM 89.9				Tazewell	
		WHOI TV Ch. 19				Tazewell	
		WIRL AM 1290				Tazewell	
		WTVP TV Ch. 47				Tazewell	
	School	Roanoke Benson CUSD	208 W. High St.	Roanoke	61561	Woodford	
		Saint Joseph's Catholic Church	508 W. Randolph	Roanoke	61561	Woodford	
		Sowers Elementary School	202 W. High St.	Roanoke	61561	Woodford	

Hazard Identification and Risk Assessment
Heart of Illinois Project Impact

Hazard	Type of Facility	Name of Facility	Street Address	City/Town	Zip Code	County	Comments
	Emergency Services	Roanoke Fire Dept.	108 Broad St.	Roanoke	61561	Woodford	
		Roanoke Police Dept.	201 Husseman St.	Roanoke	61561	Woodford	
Landslide	School	Brimfield High School	200 Clinton St.	Brimfield	61517	Peoria	
		Brimfield Grade School	200 Clinton St.	Brimfield	61517	Peoria	
		Charter Oak School	5221 W. Timberedge Dr.	Peoria	61615	Peoria	Near landslide zone
	Airport	Hendryx Private Airfield		Chillicothe		Peoria	
	School	Averyville Baptist School	1070 Spring Bay Rd.	E. Peoria	61611	Woodford	Near landslide zone
		Riverview Community College	1421 Spring Bay Rd.	E. Peoria	61611	Woodford	Near landslide zone
	Airport	Jerry E. Stabb Private Airfield		Peoria		Woodford	

APPENDIX I

FLOOD MAP REPOSITORY

APPENDIX I — FLOOD MAP REPOSITORY

Peoria County: Planning and Zoning Department
Peoria County Courthouse
324 Main Street
Room 301
Peoria, IL 61602

City of Peoria: Planning and Zoning Department
419 Fulton Street
Peoria, IL 61602

City of Pekin: Administrative Department
111 South Capitol Street
Pekin, IL 61554

Tazewell County: Planning and Zoning Department
11 South 4th Street
Pekin, IL 61554

Woodford County: Zoning Department
114 South Main Street
Eureka, IL 61530

APPENDIX J

ACRONYMS

APPENDIX J — ACRONYM LIST

AEC – Area of Environmental Concern

ASFPM – Association of State Floodplain Managers

BDEGS – Building Code Effectiveness Grading Schedule

BFE – Base Flood Elevation

CIP – Capital Improvement Plan

CIS – Community Information System

CRS – Community Rating System

DMA2K – Disaster Mitigation Act of 2000

EMI – Emergency Management Institute

EOC – Emergency Operations Centers

ESDA – Emergency Services and Disaster Agencies

FEMA – Federal Emergency Management Agency

FIA – Flood Insurance Administration

FIRM – Flood Insurance Rate Map

FMA – Flood Mitigation Assistance

GIS – Geographical Information System

HAZUS – Hazards U.S.

HIRA – Hazard Identification Risk Assessment

HMGP – Hazard Mitigation Grant Program

IBC – International Building Code

IDNR – Illinois Department of Natural Resources

IEMA – Illinois Emergency Management Agency

IMSF – Illinois Mine Subsidence Fund

ISGS – Illinois State Geological Survey

ISO – Insurance Services Office

IT – Information Technology

LEOP – Local Emergency Operations Plan

LEPC – Local Emergency Planning Committee

MAC – Mitigation Advisory Committee

NAI – No Adverse Impact

NCDC – National Climatic Data Center

NFIP – National Flood Insurance Program

NOAA – National Oceanic Atmospheric Administration

NPDES – National Pollutant Discharge Elimination System

NWS – National Weather Service

PDM – Pre-Disaster Mitigation

SBA – Small Business Administration

SFHA – Special Flood Hazard Area

SOP – Standard Operating Procedures

STAPLE/E – Social, Technical, Administrative, Political, Legal, Economic and Environmental

USACE – United States Army Corps of Engineers

USGS – United States Geological Survey

APPENDIX K

PEORIA ELEVATION DATA AND ACQUIRED PROPERTY LIST

APPENDIX A SECTION I
SURVEY RESULTS

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
001	05-29-476-001	01	17706	Oaklawn Ave	458.5	460.1	31.7	-0.2	EL	DM	MV	YES	PRIVATE
002	05-29-476-002	01	6403	Beach Dr	458.2	461.5	33.1	1.2	EL	DM	MV	YES	PRIVATE
003	05-29-477-013	01	17616	Oaklawn Ave	458.4	461.4	33.0	1.1	EL	DM	MV	YES	PRIVATE
004	05-29-477-004	01	17606	Oaklawn Ave	455.4	460.3	31.9	0	EL	DM	MV	YES	PRIVATE
005	05-29-454-014	01	17525	Oaklawn Ave	463.9	466.0	37.6	5.7	NA			YES	PRIVATE
006	05-29-454-015	01	17515	Oaklawn Ave	461.4	463.6	35.2	3.3	NA			YES	PRIVATE
007	05-29-454-016	01	17511	Oaklawn Ave	458.1	455.4	27.0	-4.9	EL	DM	MV	YES	PRIVATE
008	05-29-477-010	01	17514	Oaklawn Ave	455.5	460.4	32.0	0.1	EL	DM	MV	YES	PRIVATE
009	05-29-477-011	01	17510	Oaklawn Ave	454.5	460.1	31.7	-0.2	EL	DM	MV	YES	PRIVATE
010	05-29-477-012	01	17504	Oaklawn Ave	454.7	459.8	31.4	-0.5	EL	DM	MV	YES	PRIVATE
011	05-29-455-013	01	17505	River Ln	457.3	462.1	33.7	1.8	EL	DM	MV	YES	PRIVATE
012	05-29-478-010	01	17506	River Ln	450.7	458.4	30.0	-1.9	EL	DM	MV	YES	PRIVATE
013	05-29-478-009	01	17512	River Ln	456.2	458.1	29.7	-2.2	EL	DM	MV	YES	PRIVATE
014	05-29-478-008	01	17516	River Ln	456.1	458.4	30.0	-1.9	EL	DM	MV	YES	PRIVATE
015	05-29-478-007	01	17520	River Ln	455.1	455.7	27.3	-4.6	EL	DM	MV	YES	PRIVATE
016	05-29-478-006	01	17524	River Ln	455.3	455.9	27.5	-4.4	EL	DM	MV	YES	PRIVATE
017	05-29-478-005	01	17532	River Ln	453.9	462.7	34.3	2.4	EL	DM	MV	YES	PRIVATE
018	05-29-478-011	01	17604	River Ln	457.9	459.8	31.4	-0.5	EL	DM	MV	YES	PRIVATE
019	05-29-478-002	01	17610	River Ln	458.4	459.8	31.4	-0.5	EL	DM	MV	YES	PRIVATE
020	05-29-478-001	01	17620	River Ln	455.7	458.7	30.3	-1.6	EL	DM	MV	YES	PRIVATE
021	05-32-229-001	01	17424	Bonati Ln	451.4	454.6	26.2	-5.7	NA			YES/EL	PRIVATE
022	05-32-226-003	01	17418	Bonati Ln	451.8	456.7	28.3	-3.6	EL	DM	MV	YES	PRIVATE
023	05-32-226-004	01	17413	Bonati Ln	452.1	457.8	29.4	-2.5	EL	DM	MV	YES	PRIVATE
024	05-32-226-005	01	17408	Bonati Ln	451.9	454.7	26.3	-5.6				YES	PRIVATE
025	05-32-226-006	01	17404	Bonati Ln	453.7	455.8	27.4	-4.5	EL	DM	MV	YES	PRIVATE
026	05-32-202-004	02	17334	Second St	452.6	463.8	35.4	3.5				NO	PEO CO
027	05-32-202-009	02	17328	Second St	454.0	455.9	27.5	-4.4	EL	DM	MV	YES	PRIVATE
028	05-32-202-007	02	17322	Second St	462.1	465.9	37.5	5.6	NA			YES	PRIVATE
029	05-32-202-010	02	17324	Second St	456.2	458.4	30.0	-1.9	EL	DM	MV	YES	PRIVATE
030	05-32-202-011	02	17320	Second St	455.8	458.6	30.2	-1.7	EL	DM	MV	YES	PRIVATE
031	05-32-203-004	02	17318	Ivy Ln	456.2	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE
032	05-32-203-005	02	17314	Ivy Ln	454.5	456.8	28.4	-3.5	EL	DM	MV	YES	PRIVATE
033	05-32-204-002	02	17308	Ivy Ln	456.6	458.9	30.5	-1.4	EL	DM	MV	YES	PRIVATE
034	05-32-204-003	02	17306	Ivy Ln	454.8	456.2	27.8	-4.1	EL	DM	MV	YES	PRIVATE
035	05-32-204-004	02	17304	Second St	456.4	459.6	31.2	-0.7	EL	DM	MV	YES	PRIVATE
036	05-32-204-004	02	17304	Second St	455.3	458.1	29.7	-2.2	EL	DM	MV	YES	PRIVATE
037	05-32-205-002	03	17218	Second St	456.1	462.2	33.8	1.9	EL	DM	MV	YES	PRIVATE
038	05-32-204-005	02	17224	Second St	468.6	471.1	42.7	10.8	NA			YES	PRIVATE
039	05-32-205-004	03	17118	Moonriver Ln	456.8	458.3	29.9	-2	EL	DM	MV	YES	PRIVATE
040	05-32-204-005	03	17108	Moonriver Ln	456.8	459.0	30.6	-1.3	EL	DM	MV	YES	PRIVATE
041	05-32-252-001	03	17106	Holiday Harbor	459.1	460.0	31.6	-0.3	EL	DM	MV	YES	PRIVATE
042	05-32-251-001	03	17102	Holiday Harbor	458.6	459.5	31.1	-0.8	EL	DM	MV	YES	PRIVATE
043	05-32-252-002	03	17014	Holiday Harbor	458.1	459.6	31.2	-0.7	EL	DM	MV	YES	PRIVATE
044	05-32-251-001	03	17102	Holiday Harbor	456.6	458.2	29.8	-2.1	EL	DM	MV	YES	PRIVATE
045	05-32-251-001	03	17102	Holiday Harbor	455.9	457.7	29.3	-2.6	EL	DM	MV	YES	PRIVATE
046	05-32-252-005	04	16826	Holiday Harbor	455.1	457.4	29.0	-2.9	EL	DM	MV	YES	PRIVATE
047	05-32-252-006	04	16820	Holiday Harbor	454.8	455.1	26.7	-5.2	EL	DM	MV	YES	PRIVATE
048	05-32-326-001	04	Hamm's	Hamm's	454.9	455.7	27.3	-4.6	EL	DM	MV	YES	PRIVATE
049	05-32-326-001	04	Hamm's	Hamm's	455.9	458.9	30.5	-1.4	EL	DM	MV	YES	PRIVATE
050	05-32-326-001	04	Hamm's	Hamm's	455.4	458.5	30.1	-1.8	EL	DM	MV	YES	PRIVATE
051	05-32-326-001	04	Hamm's	Hamm's	459.2	464.5	36.1	4.2	EL	DM	MV	YES	PRIVATE
052	05-32-376-002	05	16534	Second St	468.0	468.5	40.1	8.2	NA			YES	PRIVATE
053	05-32-376-001	05	16530	Second St	468.8	468.9	40.5	8.6	NA			YES	PRIVATE
054	05-32-376-004	05	16526	Second St	467.5	468.7	40.3	8.4	NA			YES	PRIVATE
055	05-32-376-005	05	16520	Second St	467.1	469.4	41.0	9.1	NA			YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
056	05-32-376-006	05	16514	Second St	464.9	470.0	41.6	9.7	NA			YES	PRIVATE
057	05-32-376-008	05	16424	Second St	467.4	469.0	40.6	8.7	NA			YES	PRIVATE
058	05-32-378-001	05	5900	Proctor St	462.4	465.1	36.7	4.8	NA			YES	PRIVATE
059	05-32-379-001	05	5912	Proctor St	452.8	455.4	27.0	-4.9	EL	DM	MV	YES	PRIVATE
060	05-32-380-001	05	16408	Beach Ct	449.7	465.2	36.8	4.9	EL	DM	MV	YES	PRIVATE
061	05-32-377-009	05	16418	Lakeview St	451.8	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
062	05-32-377-008	05	16420	Lakeview St	453.2	456.9	28.5	-3.4	EL	DM	MV	YES	PRIVATE
063	05-32-377-007	05	16426	Lakeview St	453.6	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE
064	05-32-377-006	05	16428	Lakeview St	453.3	457.1	28.7	-3.2				NO	PEO CO
065	05-32-377-012	05	16502	Lakeview St	453.6	456.8	28.4	-3.5	EL	DM	MV	YES	PRIVATE
066	05-32-377-005	05	16434	Lakeview St	453.6	456.6	28.2	-3.7	EL	DM	MV	YES	PRIVATE
067	05-32-377-011	05	16508	Lakeview St	453.9	456.4	28.0	-3.9				NO	PEO CO
068	05-32-377-003	05	16510	Lakeview St	453.3	461.5	33.1	1.2	EL	DM	MV	YES	PRIVATE
069	05-32-377-002	05	16514	Lakeview St	453.2	462.3	33.9	2	EL	DM	MV	YES	PRIVATE
070	05-32-377-001	05	16516	Lakeview St	452.8	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
071	05-32-379-002	05	16401	Beach Ct	452.4	460.7	32.3	0.4				NO	PEO CO
072	05-32-380-002	05	16402	Beach Ct	452.5	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
073	05-32-380-004	05	16330	Beach Ct	452.2	461.6	33.2	1.3	EL	DM	MV	YES	PRIVATE
074	05-32-380-002	05	16402	Beach Ct	452.3	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE
075	05-32-380-003	05	16336	Beach Ct	451.8	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
076	05-32-380-011	05	16324	Beach Ct	451.0	457.4	29.0	-2.9				NO	PRIVATE
077	05-32-380-011	06	16318	Beach Ct	452.6	462.7	34.3	2.4	EL	DM	MV	YES	PRIVATE
078	05-32-380-007	06	16314	Beach Ct	452.7	461.7	33.3	1.4	EL	DM	MV	YES	PRIVATE
079	05-32-380-008	06	16306	Beach Ct	453.3	456.6	28.2	-3.7	EL	DM	MV	YES	PRIVATE
080	10-05-128-038	06	16300	Beach Ct	454.6	463.4	35.0	3.1	EL	DM	MV	YES	PRIVATE
081	10-05-128-002	06	16220	Portage St	454.5	464.2	35.8	3.9	EL	DM	MV	YES	PRIVATE
082	10-05-128-034	06	16216	Portage St	453.6	464.1	35.7	3.8	EL	DM	MV	YES	PRIVATE
083	10-05-128-005	06	16212	Portage St	454.5	456.9	28.5	-3.4	EL	DM	MV	YES	PRIVATE
084	10-05-128-032	06	16210	Portage St	453.1	460.8	32.4	0.5	EL	DM	MV	YES	PRIVATE
085	10-05-128-035	06	16206	Portage St	453.4	455.4	27.0	-4.9	EL	DM	MV	YES	PRIVATE
086	10-05-128-035	06	16206	Portage St	453.2	453.6	25.2	-6.7	EL	DM	MV	YES	PRIVATE
087	10-05-128-009	06	16124	Portage St	453.6	453.9	25.5	-6.4	EL	DM	MV	YES	PRIVATE
088	10-05-128-008	06	5816	High Ave	454.4	456.1	27.7	-4.2	EL	DM	MV	YES	PRIVATE
089	10-05-127-001	06	5804	High Ave	458.2	460.3	31.9	0	EL	DM	MV	YES	PRIVATE
090	10-05-126-001	06	5805	High Ave	457.3	457.9	29.5	-2.4	EL	DM	MV	YES	PRIVATE
091	10-05-126-001	06	5805	High Ave	458.4	460.7	32.3	0.4	EL	DM	MV	YES	PRIVATE
092	05-32-378-008	06	16304	Second St	459.2	461.5	33.1	1.2	NA			YES	PRIVATE
093	05-32-378-003	05	16406	Second St	460.4	465.0	36.6	4.7	EL	DM	MV	YES	PRIVATE
094	10-05-127-014	06	16104	Portage St	455.9	456.9	28.5	-3.4	EL	DM	MV	YES	PRIVATE
095	10-05-127-013	06	16110	Portage St	455.6	457.2	28.8	-3.1	EL	DM	MV	YES	PRIVATE
096	10-05-128-030	06	16120	Portage St	453.2	455.2	26.8	-5.1	EL	DM	MV	YES	PRIVATE
097	10-05-128-015	06	16116	Portage St	453.0	455.2	26.8	-5.1				NO	PEO CO
098	10-05-128-016	06	16114	Portage St	454.6	455.0	26.6	-5.3				NO	CHILLI
099	10-05-128-033	06	16108	Portage St	453.9	455.0	26.6	-5.3	EL	DM	MV	YES	PRIVATE
100	10-05-128-024	06	16038	Portage St	452.5	455.3	26.9	-5	EL	DM	MV	YES	PRIVATE
101	10-05-127-006	06	16032	Second St	454.1	455.3	26.9	-5	EL	DM	MV	YES	PRIVATE
102	10-05-128-026	06	16032	Portage St	453.0	463.2	34.8	2.9	EL	DM	MV	YES	PRIVATE
103	10-05-129-006	07	16026	Front St	452.9	458.1	29.7	-2.2				NO	PRIVATE
104	10-05-129-007	07	16024	Front St	452.4	453.7	25.3	-6.6	EL	DM	MV	YES	PRIVATE
105	10-05-129-008	07	16022	Front St	452.4	455.9	27.5	-4.4	EL	DM	MV	YES	PRIVATE
106	10-05-129-009	07	16020	Front St	453.2	458.4	30.0	-1.9	EL	DM	MV	YES	PRIVATE
107	10-05-129-017	07	16011	Front St	453.1	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
108	10-05-129-017	07	16018	Front St	453.3	454.6	26.2	-5.7	EL	DM	MV	YES	PRIVATE
109	10-05-129-008	07	16022	Front St	453.3	460.9	32.5	0.6	EL	DM	MV	YES	PRIVATE
110	10-05-129-013	07	16008	Front St	455.9	458.6	30.2	-1.7	EL	DM	MV	YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
111	10-05-127-006	06	16032	Second St	460.3	464.0	35.6	3.7	EL	DM	MV	YES	PRIVATE
112	10-05-108-002	07	16016	Second St	460.2	462.4	34.0	2.1	EL	DM	MV	YES	PRIVATE
113	10-05-108-003	07	16012	Second St	459.2	462.9	34.5	2.6	EL	DM	MV	YES	PRIVATE
114	10-05-108-010	07	16006	Second St	459.3	468.5	40.1	8.2	EL	DM	MV	YES	PRIVATE
115	10-05-108-003	07	16012	Second St	457.4	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE
116	10-05-108-011	07	16011	Second St	461.9	462.3	33.9	2	NA			YES	PRIVATE
117	10-05-157-003	07	15918	Second St	455.9	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
118	10-05-157-001	07	5704	Washington St	455.4	456.8	28.4	-3.5	EL	DM	MV	YES	PRIVATE
119	10-05-157-002	07	5708	Washington St	455.5	456.1	27.7	-4.2	EL	DM	MV	YES	PRIVATE
120	10-05-157-005	07	5718	Washington St	454.6	456.3	27.9	-4	EL	DM	MV	YES	PRIVATE
121	10-05-129-005	07	16007	Front St	454.0	455.1	26.7	-5.2	EL	DM	MV	YES	PRIVATE
122	10-05-129-005	07	16007	Front St	454.1	455.1	26.7	-5.2	EL	DM	MV	YES	PRIVATE
123	10-05-129-003	07	5717	Washington St	455.0	457.6	29.2	-2.7				NO	PEO CO
124	10-05-129-002	07	5709	Washington St	455.3	456.3	27.9	-4	EL	DM	MV	YES	PRIVATE
125	10-05-129-014	07	5705	Washington St	456.5	459.8	31.4	-0.5	EL	DM	MV	YES	PRIVATE
126	10-05-157-005	07	5718	Washington St	454.9	463.7	35.3	3.4	EL	DM	MV	YES	PRIVATE
127	10-05-157-006	07	15919	Front St	455.5	456.4	28.0	-3.9	EL	DM	MV	YES	PRIVATE
128	10-05-157-007	07	15907	Front St	457.1	460.2	31.8	-0.1	EL	DM	MV	YES	PRIVATE
129	10-05-160-001	07	15822	Riverbeach Dr	456.3	459.2	30.8	-1.1	EL	DM	MV	YES	PRIVATE
130	10-05-160-005	07	5712	Main St	456.0	457.8	29.4	-2.5				NO	PRIVATE
131	10-05-160-013	07	5716	Main St	455.2	457.1	28.7	-3.2	EL	DM	MV	YES	PRIVATE
132	10-05-160-007	07	15823	Front St	454.6	455.7	27.3	-4.6				NO	PRIVATE
133	10-05-160-008	07	15819	Front St	454.1	455.1	26.7	-5.2	EL	DM	MV	YES	PRIVATE
134	10-05-160-009	07	15817	Front St	454.6	456.5	28.1	-3.8	EL	DM	MV	YES	PRIVATE
135	10-05-160-010	07	15811	Front St	454.8	457.3	28.9	-3	EL	DM	MV	YES	PRIVATE
136	10-05-160-011	07	15807	Front St	454.8	460.8	32.4	0.5	EL	DM	MV	YES	PRIVATE
137	10-05-160-012	07	15805	Front St	453.9	456.2	27.8	-4.1	EL	DM	MV	YES	PRIVATE
138	10-05-162-006	07	15727	Front St	452.9	456.3	27.9	-4				NO	PEO CO
139	10-05-162-007	07	15715	Front St	452.3	454.4	26.0	-5.9	EL	DM	MV	YES	PRIVATE
140	10-05-162-007	07	15715	Front St	452.2	454.2	25.8	-6.1	EL	DM	MV	YES	PRIVATE
141	10-05-160-004	07	15804	Riverbeach Dr	457.2	458.3	29.9	-2	EL	DM	MV	YES	PRIVATE
142	10-05-160-003	07	15810	Riverbeach Dr	456.6	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
143	10-05-160-002	07	15816	Riverbeach Dr	456.2	459.1	30.7	-1.2	EL	DM	MV	YES	PRIVATE
144	10-05-159-004	07	15817	Riverbeach Dr	457.6	459.5	31.1	-0.8	EL	DM	MV	YES	PRIVATE
145	10-05-161-007	07	15715	Riverbeach Dr	458.3	458.8	30.4	-1.5	EL	DM	MV	YES	PRIVATE
146	10-05-162-003	07	15714	Riverbeach Dr	458.6	460.1	31.7	-0.2	EL	DM	MV	YES	PRIVATE
147	10-05-162-002	07	15726	Riverbeach Dr	458.0	459.7	31.3	-0.6	EL	DM	MV	YES	PRIVATE
148	10-05-302-001	08	15616	Riverbeach Dr	452.2	459.3	30.9	-1	EL	DM	MV	YES	PRIVATE
149	10-05-163-003	08	5628	East Knox St	459.4	460.4	32.0	0.1	EL	DM	MV	YES	PRIVATE
150	10-05-163-006	08	15619	Riverbeach Dr	460.3	461.1	32.7	0.8	EL	DM	MV	YES	PRIVATE
151	10-05-301-024	08	15613	Riverbeach Dr	459.6	463.0	34.6	2.7	EL	DM	MV	YES	PRIVATE
152	10-05-301-008	08	15607	Riverbeach Dr	458.4	459.0	30.6	-1.3	EL	DM	MV	YES	PRIVATE
153	10-05-302-005	08	15532	Riverbeach Dr	456.2	458.6	30.2	-1.7	EL	DM	MV	YES	PRIVATE
154	10-05-302-046	08	15606	Riverbeach Dr	461.2	467.5	39.1	7.2	NA			YES	PRIVATE
155	10-05-302-003	08	15608	Riverbeach Dr	457.7	460.3	31.9	0	EL	DM	MV	YES	PRIVATE
156	10-05-302-013	08	15534	Riverbeach Dr	452.0	452.8	24.4	-7.5	EL	DM	MV	YES	PRIVATE
157	10-05-302-015	08	15530	Riverbeach Dr	452.7	461.3	32.9	1				NO	PEO CO
158	10-05-302-014	08	15526	Riverbeach Dr	452.2	453.6	25.2	-6.7				NO	PEO CO
159	10-05-302-016	08	15522	Riverbeach Dr	452.4	460.9	32.5	0.6	EL	DM	MV	YES	PRIVATE
160	10-05-302-017	08	15518	Riverbeach Dr	452.8	454.2	25.8	-6.1				NO	PEO CO
161	10-05-302-018	08	15514	Riverbeach Dr	453.5	456.9	28.5	-3.4	EL	DM	MV	YES	PRIVATE
162	10-05-302-048	08	15524	Riverbeach Dr	456.5	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
163	10-05-301-010	08	15529	Riverbeach Dr	458.9	459.5	31.1	-0.8	EL	DM	MV	YES	PRIVATE
164	10-05-301-011	08	15525	Riverbeach Dr	460.6	463.1	34.7	2.8	NA			YES	PRIVATE
165	10-05-301-012	08	15519	Riverbeach Dr	460.1	460.8	32.4	0.5	EL	DM	MV	YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
166	10-05-301-013	08	15513	Riverbeach Dr	460.0	461.7	33.3	1.4	EL	DM	MV	YES	PRIVATE
167	10-05-301-015	08	15507	Riverbeach Dr	460.0	461.1	32.7	0.8	EL	DM	MV	YES	PRIVATE
168	10-05-301-017	08	15429	Riverbeach Dr	459.4	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
169	10-05-301-018	08	15423	Riverbeach Dr	459.5	461.6	33.2	1.3	EL	DM	MV	YES	PRIVATE
170	10-05-302-051	08	15426	Riverbeach Dr	456.2	456.8	28.4	-3.5	EL	DM	MV	YES	PRIVATE
171	10-05-302-020	08	15510	Riverbeach Dr	452.9	456.6	28.2	-3.7	EL	DM	MV	YES	PRIVATE
172	10-05-302-021	08	15506	Riverbeach Dr	452.8	454.7	26.3	-5.6	EL	DM	MV	YES	PRIVATE
173	10-05-302-043	08	15504	Riverbeach Dr	453.2	454.9	26.5	-5.4				NO	PEO CO
174	10-05-302-023	08	15428	Riverbeach Dr	453.0	454.8	26.4	-5.5				NO	PEO CO
175	10-05-302-045	08	15424	Riverbeach Dr	453.3	453.3	24.9	-7	EL	DM	MV	YES	PRIVATE
176	10-05-302-050	08	15422	Riverbeach Dr	452.6	454.3	25.9	-6	EL	DM	MV	YES	PRIVATE
177	10-05-302-026	08	15420	Riverbeach Dr	452.4	456.0	27.6	-4.3	EL	DM	MV	YES	PRIVATE
178	10-05-302-027	08	15414	Riverbeach Dr	453.9	456.9	28.5	-3.4	EL	DM	MV	YES	PRIVATE
179	10-05-302-028	08	15408	Riverbeach Dr	455.0	457.1	28.7	-3.2	EL	DM	MV	YES	PRIVATE
180	10-05-302-029	09	15404	Riverbeach Dr	454.9	457.8	29.4	-2.5	EL	DM	MV	YES	PRIVATE
181	10-05-302-030	09	15400	Riverbeach Dr	454.7	455.3	26.9	-5	EL	DM	MV	YES	PRIVATE
182	10-05-302-031	09	15326	Riverbeach Dr	454.7	456.1	27.7	-4.2	EL	DM	MV	YES	PRIVATE
183	10-05-302-033	09	15324	Riverbeach Dr	454.6	455.8	27.4	-4.5				NO	PEO CO
184	10-05-302-034	09	15320	Riverbeach Dr	454.6	455.6	27.2	-4.7				NO	PEO CO
185	10-05-302-035	09	15314	Riverbeach Dr	455.4	455.6	27.2	-4.7				NO	PEO CO
186	10-05-302-036	09	15310	Riverbeach Dr	455.2	456.3	27.9	-4	EL	DM	MV	YES	PRIVATE
187	10-05-301-019	09	15417	Riverbeach Dr	459.4	463.0	34.6	2.7	EL	DM	MV	YES	PRIVATE
188	10-05-301-020	09	15407	Riverbeach Dr	461.9	465.2	36.8	4.9	NA			YES	PRIVATE
189	10-05-301-021	09	15405	Riverbeach Dr	459.3	463.4	35.0	3.1	EL	DM	MV	YES	PRIVATE
190	10-06-431-001	09	15231	Riverbeach Dr	464.9	466.6	38.2	6.3	NA			YES	PRIVATE
191	10-06-431-002	09	15333	Riverbeach Dr	465.1	466.5	38.1	6.2	NA			YES	PRIVATE
192	10-05-301-022	09	15331	Riverbeach Dr	461.6	463.1	34.7	2.8	NA			YES	PRIVATE
193	10-05-301-023	09	15329	Riverbeach Dr	463.5	469.4	41.0	9.1	NA			YES	PRIVATE
194	10-06-431-003	09	15327	Riverbeach Dr	461.3	463.5	35.1	3.2	NA			YES	PRIVATE
195	10-06-477-001	09	15325	Riverbeach Dr	458.7	470.9	42.5	10.6	EL	DM	MV	YES	PRIVATE
196	10-05-302-037	09	15308	Riverbeach Dr	455.6	457.9	29.5	-2.4	EL	DM	MV	YES	PRIVATE
197	10-05-302-038	09	15304	Riverbeach Dr	455.0	457.2	28.8	-3.1				NO	PEO CO
198	10-05-302-039	09	15300	Riverbeach Dr	455.2	457.8	29.4	-2.5	EL	DM	MV	YES	PRIVATE
199	10-05-302-040	09	15230	Riverbeach Dr	455.3	457.9	29.5	-2.4				NO	PEO CO
200	10-06-477-003	09	15313	Riverbeach Dr	457.2	459.3	30.9	-1				NO	PEO CO
201	10-06-478-013	09	15228	Riverbeach Dr	455.3	456.2	27.8	-4.1				NO	PEO CO
202	10-06-478-014	09	15226	Riverbeach Dr	455.6	457.8	29.4	-2.5	EL	DM	MV	YES	PRIVATE
203	10-06-478-002	09	15224	Riverbeach Dr	455.3	455.6	27.2	-4.7				NO	PEO CO
204	10-06-478-004	09	15212	Riverbeach Dr	456.0	457.2	28.8	-3.1				NO	PEO CO
205	10-06-478-015	09	15204	Riverbeach Dr	456.2	456.3	27.9	-4				NO	PEO CO
206	10-06-477-004	09	15235	Riverbeach Dr	460.3	463.5	35.1	3.2	EL	DM	MV	YES	PRIVATE
207	10-06-477-005	09	15221	Riverbeach Dr	458.0	461.8	33.4	1.5	EL	DM	MV	YES	PRIVATE
208	10-06-477-018	09	15211	Riverbeach Dr	459.1	461.5	33.1	1.2	EL	DM	MV	YES	PRIVATE
209	10-06-478-006	09	15134	Riverbeach Dr	456.3	456.7	28.3	-3.6	EL	DM	MV	YES	PRIVATE
210	10-06-478-008	09	15124	Riverbeach Dr	456.4	458.3	29.9	-2				NO	PEO CO
211	10-06-478-009	09	15120	Riverbeach Dr	456.0	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
212	10-06-478-010	10	15112	Riverbeach Dr	456.9	457.2	28.8	-3.1	EL	DM	MV	YES	PRIVATE
213	10-06-478-011	10	15106	Riverbeach Dr	457.4	459.3	30.9	-1	EL	DM	MV	YES	PRIVATE
214	10-06-477-011	10		Riverbeach Dr	459.2	461.1	32.7	0.8	EL	DM	MV	YES	PRIVATE
215	10-06-477-016	10	15131	Riverbeach Dr	459.5	461.3	32.9	1	EL	DM	MV	YES	PRIVATE
216	10-06-477-016	10	15131	Riverbeach Dr	459.6	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
217	10-06-478-012	10	15102	Riverbeach Dr	456.9	459.2	30.8	-1.1	EL	DM	MV	YES	PRIVATE
218	10-07-227-001	10	15040	Riverbeach Dr	455.5	455.7	27.3	-4.6				NO	PEO CO
219	10-06-477-012	10	15103	Riverbeach Dr	460.7	464.9	36.5	4.6	NA			YES	PRIVATE
220	10-06-477-013	10	15101	Riverbeach Dr	461.6	463.1	34.7	2.8	NA			YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
221	10-06-477-014	10	15049	Riverbeach Dr	460.5	464.2	35.8	3.9	NA			YES	PRIVATE
222	10-06-477-015	10	15045	Riverbeach Dr	458.6	460.4	32.0	0.1	EL	DM	MV	YES	PRIVATE
223	10-07-226-002	10	15039	Riverbeach Dr	458.6	460.4	32.0	0.1	EL	DM	MV	YES	PRIVATE
224	10-07-226-003	10	15035	Riverbeach Dr	457.9	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
225	10-07-226-005	10	15029	Riverbeach Dr	457.9	458.8	30.4	-1.5	EL	DM	MV	YES	PRIVATE
226	10-07-227-006	10		Riverbeach Dr	456.0	456.0	27.6	-4.3	EL	DM	MV	YES	PRIVATE
227	10-07-227-005	10	15024	Riverbeach Dr	455.9	460.1	31.7	-0.2				NO	PEO CO
228	10-07-226-004	10	15031	Riverbeach Dr	460.4	462.4	34.0	2.1	NA			YES	PRIVATE
229	10-07-226-006	10	15027	Riverbeach Dr	458.1	460.9	32.5	0.6	EL	DM	MV	YES	PRIVATE
230	10-07-226-007	10	15021	Riverbeach Dr	458.0	459.3	30.9	-1	EL	DM	MV	YES	PRIVATE
231	10-07-226-010	10	14936	Riverbeach Dr	459.1	462.1	33.7	1.8	EL	DM	MV	YES	PRIVATE
232	10-07-226-009	10	15009	Riverbeach Dr	459.4	461.2	32.8	0.9	EL	DM	MV	YES	PRIVATE
233	10-07-251-003	11	14911	Riverbeach Dr	457.8	460.2	31.8	-0.1	EL	DM	MV	YES	PRIVATE
234	10-07-255-001	11	14836	Riverbeach Dr	457.1	457.8	29.4	-2.5	EL	DM	MV	YES	PRIVATE
235	10-07-255-003	11	14826	Riverbeach Dr	455.7	457.3	28.9	-3				NO	PEO CO
236	10-07-255-004	11	14820	Riverbeach Dr	456.6	457.4	29.0	-2.9				NO	PEO CO
237	10-07-255-029	11	14816	Riverbeach Dr	455.1	457.1	28.7	-3.2				NO	PEO CO
238	10-07-251-007	11	14739	Riverbeach Dr	455.7	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
239	10-07-251-011	11	14817	Riverbeach Dr	458.4	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
240	10-07-251-009	11	14727	Riverbeach Dr	455.3	459.1	30.7	-1.2	EL	DM	MV	YES	PRIVATE
241	10-07-255-030	11	14622	Riverbeach Dr	454.1	454.7	26.3	-5.6				NO	PEO CO
242	10-07-255-031	11	14614	Riverbeach Dr	454.5	459.9	31.5	-0.4				NO	PEO CO
243	10-07-255-020	12	14604	Riverbeach Dr	452.7	455.9	27.5	-4.4				NO	PEO CO
244	10-07-255-022	12	14538	Riverbeach Dr	453.6	456.7	28.3	-3.6	EL	DM	MV	YES	PRIVATE
245	10-07-255-024	12	14536	Riverbeach Dr	452.2	454.2	25.8	-6.1				NO	PRIVATE
246	10-07-255-032	12	14530	Riverbeach Dr	452.6	455.7	27.3	-4.6				NO	PEO CO
247	10-07-255-032	12	15242	Riverbeach Dr	452.9	454.6	26.2	-5.7				NO	PEO CO
248	10-07-255-032	12	14520	Riverbeach Dr	453.1	458.2	29.8	-2.1				NO	PEO CO
249	10-07-255-032	12	14516	Riverbeach Dr	453.5	457.1	28.7	-3.2				NO	PEO CO
250	10-07-182-032	12	14514	Riverbeach Dr	452.1	455.7	27.3	-4.6				NO	PEO CO
251	10-07-254-001	12	14535	Riverbeach Dr	453.6	457.1	28.7	-3.2	NA			YES/EL	PRIVATE
252	10-07-253-010	12	14609	Riverbeach Dr	454.7	457.8	29.4	-2.5				NO	PEO CO
253	10-07-179-006	12	4832	Sand Point Ln	454.8	460.5	32.1	0.2	EL	DM	MV	YES	PRIVATE
254	10-07-179-016	12	4816	Sand Point Ln	456.3	457.6	29.2	-2.7	EL	DM	MV	YES	PRIVATE
255	10-07-178-007	12	4817	Sand Point Ln	459.8	464.0	35.6	3.7	EL	DM	MV	YES	PRIVATE
256	10-07-178-001	11	4900	Willow Ln	465.4	466.7	38.3	6.4	NA			YES	PRIVATE
257	10-07-252-002	11	4903	Willow Ln	464.0	465.4	37.0	5.1				NO	CHILLI
258	10-07-252-003	11	4907	Willow Ln	461.2	462.8	34.4	2.5				NO	CHILLI
259	10-07-252-004	11	4911	Willow Ln	460.8	462.4	34.0	2.1	NA			YES	PRIVATE
260	10-07-252-013	11	4915	Willow Ln	454.4	456.7	28.3	-3.6				NO	CHILLI
261	10-07-252-013	11	4923	Willow Ln	452.6	452.7	24.3	-7.6				NO	CHILLI
262	10-07-252-011	11	14631	Riverbeach Dr	454.0	463.9	35.5	3.6	EL	DM	MV	YES	PRIVATE
263	10-07-252-013	11	14637	Riverbeach Dr	455.3	457.8	29.4	-2.5				NO	CHILLI
264	10-07-255-030	11	14630	Riverbeach Dr	454.4	455.8	27.4	-4.5				NO	PEO CO
265	10-07-255-030	11	14634	Riverbeach Dr	454.3	457.5	29.1	-2.8				NO	PEO CO
266	10-07-255-030	11	14638	Riverbeach Dr	454.5	456.9	28.5	-3.4				NO	PEO CO
267	10-07-252-001	11	14711	Riverbeach Dr	455.6	457.1	28.7	-3.2	EL	DM	MV	YES	PRIVATE
268	10-07-251-013	11	14719	Riverbeach Dr	460.1	469.4	41.0	9.1	EL	DM	MV	YES	PRIVATE
269	10-07-179-017	12	14533	Riverbeach Dr	454.1	457.0	28.6	-3.3				NO	CHILLI
270	10-07-253-011	11	14617	Riverbeach Dr	452.5	458.8	30.4	-1.5				NO	CHILLI
271	10-07-182-005	12	14512	Riverbeach Dr	452.5	457.4	29.0	-2.9				NO	PEO CO
272	10-07-182-005	12	14510	Riverbeach Dr	454.2	462.8	34.4	2.5				NO	PEO CO
273	10-07-180-016	12	14517	Riverbeach Dr	453.4	455.5	27.1	-4.8				NO	CHILLI
274	10-07-180-016	12	4818	Shoreview Dr	452.7	459.4	31.0	-0.9				NO	CHILLI
275	10-07-180-016	12	4806	Shoreview Dr	452.5	456.2	27.8	-4.1				NO	CHILLI

APPENDIX A SECTION I
SURVEY RESULTS

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
276	10-07-179-018	12	4811	Shoreview Dr	453.8	459.5	31.1	-0.8				NO	PEO CO
277	10-07-180-016	12	14507	Riverbeach Dr	452.5	462.8	34.4	2.5				NO	CHILLI
278	10-07-180-014	12	14503	Riverbeach Dr	452.5	453.4	25.0	-6.9	EL	DM	MV	YES	PRIVATE
279	10-07-180-016	12	4719	Beachview Ln	452.3	454.3	25.9	-6				NO	CHILLI
280	10-07-180-016	12	4715	Beachview Ln	451.7	454.2	25.8	-6.1				NO	CHILLI
281	10-07-180-008	12	4711	Beachview Ln	451.7	454.0	25.6	-6.3				NO	CHILLI
282	10-07-181-004	12	4714	Beachview Ln	453.7	457.1	28.7	-3.2				NO	CHILLI
283	10-07-181-005	12	14449	Riverbeach Dr	454.6	457.3	28.9	-3	EL	DM	MV	YES	PRIVATE
284	10-07-326-005	12	14439	Riverbeach Dr	452.1	452.8	24.4	-7.5				NO	CHILLI
285	10-07-181-009	12	4705	Bar Harbor Ln	452.2	461.2	32.8	0.9				NO	CHILLI
286	10-07-327-012	12	14419	Riverbeach Dr	452.1	461.7	33.3	1.4				NO	CHILLI
287	10-07-327-012	12	14415	Riverbeach Dr	452.0	458.3	29.9	-2				NO	CHILLI
288	10-07-327-012	13	14411	Riverbeach Dr	452.5	457.7	29.3	-2.6				NO	CHILLI
289	10-07-327-007	13	14405	Riverbeach Dr	452.6	460.2	31.8	-0.1	EL	DM	M	YES	PRIVATE
290	10-07-181-004	12	4714	Beachview Ln	451.8	464.6	36.2	4.3				NO	CHILLI
291	10-07-351-021	13	14219	Riverbeach Dr	456.2	461.6	33.2	1.3	EL	DM	MV	YES	PRIVATE
292	10-07-351-022	13	14209	Riverbeach Dr	455.3	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE
293	10-07-351-023	13	14137	Riverbeach Dr	457.1	459.2	30.8	-1.1	EL	DM	MV	YES	PRIVATE
294	10-07-351-024	14	14129	Riverbeach Dr	456.5	457.9	29.5	-2.4	EL	DM	MV	YES	PRIVATE
295	10-07-351-025	14	14121	Riverbeach Dr	457.0	457.3	28.9	-3	EL	DM	MV	YES	PRIVATE
296	10-07-351-026	14	14113	Riverbeach Dr	462.2	462.5	34.1	2.2	NA			YES	PRIVATE
297	10-07-351-027	14	14105	Riverbeach Dr	457.8	459.2	30.8	-1.1	EL	DM	MV	YES	PRIVATE
298	10-07-351-034	14	14025	Riverbeach Dr	459.0	460.7	32.3	0.4	EL	DM	MV	YES	PRIVATE
299	10-07-351-028	14	14029	Riverbeach Dr	459.9	463.3	34.9	3	EL	DM	MV	YES	PRIVATE
300	10-07-351-034	14	14021	Riverbeach Dr	458.4	463.2	34.8	2.9	EL	DM	MV	YES	PRIVATE
301	10-07-351-031	14	14017	Riverbeach Dr	461.5	463.4	35.0	3.1	NA			YES	PRIVATE
302	10-07-351-032	14	14013	Riverbeach Dr	460.9	463.8	35.4	3.5	NA			YES	PRIVATE
303	09-12-479-003	14	14009	Riverbeach Dr	462.5	463.9	35.5	3.6	NA			YES	PRIVATE
304	09-12-479-001	14	14001	Riverbeach Dr	460.0	462.2	33.8	1.9	EL	DM	MV	YES	PRIVATE
305	09-12-479-004	14	13919	Riverbeach Dr	461.6	462.7	34.3	2.4	NA			YES	PRIVATE
306	09-12-479-005	14	13913	Riverbeach Dr	462.0	465.1	36.7	4.8	NA			YES	PRIVATE
307	09-12-479-006	16	13907	Riverbeach Dr	459.0	461.5	33.1	1.2	EL	DM	MV	YES	PRIVATE
308	09-12-479-007	16	13903	Riverbeach Dr	460.0	462.2	33.8	1.9	EL	DM	MV	YES	PRIVATE
309	09-13-226-024	16	13831	Riverbeach Dr	457.0	459.1	30.7	-1.2	EL	DM	MV	YES	PRIVATE
310	09-13-226-021	16	13819	Riverbeach Dr	457.9	462.2	33.8	1.9	EL	DM	MV	YES	PRIVATE
311	09-13-226-018	16	13811	Riverbeach Dr	456.6	458.7	30.3	-1.6	EL	DM	MV	YES	PRIVATE
312	09-13-226-017	16	13807	Riverbeach Dr	459.5	463.2	34.8	2.9	EL	DM	MV	YES	PRIVATE
313	09-13-226-015	16	13803	Riverbeach Dr	455.8	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
314	09-13-226-012	16	13739	Riverbeach Dr	455.9	458.2	29.8	-2.1	EL	DM	MV	YES	PRIVATE
315	09-13-226-011	16	13735	Riverbeach Dr	456.2	457.4	29.0	-2.9	EL	DM	MV	YES	PRIVATE
316	09-13-227-009	16	13710	Riverbeach Dr	456.6	459.2	30.8	-1.1	EL	DM	MV	YES	PRIVATE
317	09-13-226-008	16	13721	Riverbeach Dr	456.2	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
318	09-13-226-010	16	13731	Riverbeach Dr	456.0	459.6	31.2	-0.7	EL	DM	MV	YES	PRIVATE
319	09-13-226-007	16	13715	Riverbeach Dr	456.6	459.0	30.6	-1.3	EL	DM	MV	YES	PRIVATE
320	09-13-226-006	16	13713	Riverbeach Dr	456.3	460.9	32.5	0.6	EL	DM	MV	YES	PRIVATE
321	09-13-227-010	16	13714	Riverbeach Dr	455.1	460.1	31.7	-0.2				NO	MEDINA
322	09-13-226-007	16	13715	Riverbeach Dr	457.6	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
323	10-07-181-009	12	4701	Bar Harbor Ln	450.2	451.5	23.1	-8.8				NO	CHILLI
324	09-13-226-025	16	13703	Riverbeach Dr	459.5	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
325	09-13-202-042	16	13643	Riverbeach Dr	460.8	462.0	33.6	1.7	NA			YES	PRIVATE
326	09-13-202-042	16	13643	Riverbeach Dr	460.4	461.4	33.0	1.1	NA			YES	PRIVATE
327	09-13-202-041	16	13637	Riverbeach Dr	460.0	462.0	33.6	1.7	EL	DM	MV	YES	PRIVATE
328	09-13-202-040	16	13633	Riverbeach Dr	459.8	461.4	33.0	1.1				NO	PRIVATE
329	09-13-227-001	16	13634	Riverbeach Dr	456.9	457.7	29.3	-2.6				NO	PEO CO
330	09-13-226-025	16	13709	Riverbeach Dr	462.5	463.4	35.0	3.1				NO	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
331	09-13-251-043	17	13626	Riverbeach Dr	458.3	459.2	30.8	-1.1				NO	MEDINA
332	09-13-202-039	17	13629	Riverbeach Dr	459.7	463.2	34.8	2.9	EL	DM	MV	YES	PRIVATE
333	09-13-202-038	17	13625	Riverbeach Dr	462.8	463.5	35.1	3.2	NA			YES	PRIVATE
334	09-13-202-037	17	13619	Riverbeach Dr	460.5	462.4	34.0	2.1	NA			YES	PRIVATE
335	09-13-202-036	17	13615	Riverbeach Dr	462.4	465.5	37.1	5.2	NA			YES	PRIVATE
336	09-13-202-035	17	13611	Riverbeach Dr	461.6	466.0	37.6	5.7	NA			YES	PRIVATE
337	09-13-251-038	17	13612	Riverbeach Dr	459.0	459.5	31.1	-0.8				NO	MEDINA
338	09-13-251-048	17	13604	Riverbeach Dr	459.0	460.6	32.2	0.3				NO	MEDINA
339	09-13-202-033	17	13605	Riverbeach Dr	464.5	465.6	37.2	5.3	NA			YES	PRIVATE
340	09-13-202-031	17	13541	Riverbeach Dr	463.6	466.6	38.2	6.3	NA			YES	PRIVATE
341	09-13-202-029	17	13535	Riverbeach Dr	463.6	466.4	38.0	6.1	NA			YES	PRIVATE
342	09-13-202-028	17	13533	Riverbeach Dr	463.7	466.3	37.9	6	EL	DM	MV	YES	PRIVATE
343	09-13-202-026	17	13529	Riverbeach Dr	462.6	466.8	38.4	6.5	NA			YES	PRIVATE
344	09-13-202-044	17	13527	Riverbeach Dr	463.7	466.0	37.6	5.7	NA			YES	PRIVATE
345	09-13-251-032	17	13540	Riverbeach Dr	459.3	459.6	31.2	-0.7				NO	MEDINA
346	09-13-251-030	17	13536	Riverbeach Dr	459.8	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
347	09-13-251-050	17	13534	Riverbeach Dr	460.6	461.4	33.0	1.1	EL	DM	MV	YES	PRIVATE
348	09-13-251-050	17			460.8	462.4	34.0	2.1				NO	PRIVATE
349	09-13-251-027	17	13528	Riverbeach Dr	460.9	461.5	33.1	1.2	NA			YES	PRIVATE
350	09-13-251-026	17	13524	Riverbeach Dr	459.6	460.4	32.0	0.1	EL	DM	MV	YES	PRIVATE
351	09-13-251-025	17	13520	Riverbeach Dr	460.3	462.1	33.7	1.8				NO	PEO CO
352	09-13-251-024	17	13516	Riverbeach Dr	459.8	460.6	32.2	0.3				NO	PEO CO
353	09-13-202-044	17	13517	Riverbeach Dr	463.6	466.7	38.3	6.4	NA			YES	PRIVATE
354	09-13-202-018	17	13511	Riverbeach Dr	463.0	466.3	37.9	6	NA			YES	PRIVATE
355	09-13-202-017	17	13509	Riverbeach Dr	463.5	464.5	36.1	4.2	NA			YES	PRIVATE
356					465.3	465.5	37.1	5.2	NA				
357	09-13-251-020	17	13506	Riverbeach Dr	458.9	459.6	31.2	-0.7				NO	PEO CO
358	09-13-251-019	17	13502	Riverbeach Dr	459.3	459.3	30.9	-1				NO	PEO CO
359					469.5	468.7	40.3	8.4					
360					468.8	469.0	40.6	8.7					
361					467.2	469.9	41.5	9.6					
362					466.1	468.2	39.8	7.9					
363					464.1	469.8	41.4	9.5					
364	09-13-251-013	17	13430	Riverbeach Dr	463.0	462.7	34.3	2.4	NA			YES	PRIVATE
365	09-13-251-012	18	13424	Riverbeach Dr	463.1	464.2	35.8	3.9	NA			YES	PRIVATE
366	09-13-251-011	18	13420	Riverbeach Dr	464.2	464.7	36.3	4.4	NA			YES	PRIVATE
367	09-13-251-010	18	13418	Riverbeach Dr	464.0	464.3	35.9	4				NO	MEDINA
368	09-13-251-009	18	13416	Riverbeach Dr	463.3	464.3	35.9	4	NA			YES	PRIVATE
369	09-13-251-008	18	13412	Riverbeach Dr	464.0	464.5	36.1	4.2				NO	MEDINA
370	09-13-251-007	18	13408	Riverbeach Dr	464.2	462.8	34.4	2.5				NO	MEDINA
371	09-13-251-006	18	13406	Riverbeach Dr	464.7	462.9	34.5	2.6	NA			YES	PRIVATE
372	09-13-251-005	18	13404	Riverbeach Dr	464.5	463.7	35.3	3.4	NA			YES	PRIVATE
373	09-13-251-004	18	13400	Riverbeach Dr	464.2	465.2	36.8	4.9	NA			YES	PRIVATE
374	09-13-251-003	18	13340	Riverbeach Dr	464.8	465.9	37.5	5.6				NO	PEO CO
375					467.7	470.1	41.7	9.8	NA				
376					467.2	469.9	41.5	9.6	NA				
377	09-13-251-002	18	13338	Riverbeach Dr	465.1	465.7	37.3	5.4	NA			YES	PRIVATE
378	09-13-179-012	18	13332	Riverbeach Dr	464.3	465.4	37.0	5.1	NA			YES	PRIVATE
379	09-13-179-013	18	13328	Riverbeach Dr	465.3	466.8	38.4	6.5	NA			YES	PRIVATE
380	09-13-179-008	18	13322	Riverbeach Dr	465.6	467.3	38.9	7	NA			YES	PRIVATE
381	09-13-179-014	18	13316	Riverbeach Dr	465.0	467.0	38.6	6.7	NA			YES	PRIVATE
382	09-13-179-002	18	13306	Riverbeach Dr	464.5	464.8	36.4	4.5	NA			YES	PRIVATE
383	09-13-329-019	18	13224	Riverbeach Dr	456.5	456.7	28.3	-3.6				NO	MEDINA
384	09-13-326-017	18	13230	Riverbeach Dr	461.3	461.5	33.1	1.2	NA			YES	PRIVATE
385	09-13-326-009	19	13214	Riverbeach Dr	460.9	462.9	34.5	2.6	NA			YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
386	09-23-253-001	20	12400	Riverbeach Dr	464.0	464.5	36.1	4.2	NA			YES	PRIVATE
387	09-23-253-002	20	12330	Riverbeach Dr	463.2	463.7	35.3	3.4	NA			YES	PRIVATE
388	09-23-253-003	20	12328	Riverbeach Dr	462.9	463.4	35.0	3.1	NA			YES	PRIVATE
389	09-23-253-009	20	12306	Riverbeach Dr	463.8	463.4	35.0	3.1	EL	DM	MV	YES	PRIVATE
390	09-23-253-005	20	12320	Riverbeach Dr	464.0	465.5	37.1	5.2	NA			YES	PRIVATE
391	09-23-253-006	20	12318	Riverbeach Dr	462.1	462.4	34.0	2.1	NA			YES	PRIVATE
392	09-23-253-007	20	12314	Riverview Rd	457.5	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE
393	09-23-253-008	20	12310	Riverview Rd	459.1	463.6	35.2	3.3	EL	DM	MV	YES	PRIVATE
394	09-23-253-009	20	12306	Riverview Rd	456.8	457.4	29.0	-2.9	EL	DM	MV	YES	PRIVATE
395	09-23-253-010	20	12230	Riverview Rd	456.7	458.5	30.1	-1.8	EL	DM	MV	YES	PRIVATE
396	09-23-253-011	20	12228	Riverview Rd	456.4	456.3	27.9	-4	EL	DM	MV	YES	PRIVATE
397	09-23-253-013	20	12220	Riverview Rd	457.6	457.8	29.4	-2.5	EL	DM	MV	YES	PRIVATE
398	09-23-253-014	20	12216	Riverview Rd	457.1	458.5	30.1	-1.8	EL	DM	MV	YES	PRIVATE
399	09-23-253-015	20	12210	Riverview Rd	457.8	459.2	30.8	-1.1	EL	DM	MV	YES	PRIVATE
400	09-23-253-016	20	12206	Riverview Rd	457.5	460.2	31.8	-0.1	EL	DM	MV	YES	PRIVATE
401	09-23-253-017	20	12202	Riverview Rd	458.0	461.7	33.3	1.4	EL	DM	MV	YES	PRIVATE
402	09-23-253-018	21	12134	Riverview Rd	456.6	457.3	28.9	-3	EL	DM	MV	YES	PRIVATE
403	09-23-252-005	21	12133	Riverview Rd	460.8	464.6	36.2	4.3	NA			YES	PRIVATE
404	09-23-252-004	21	12137	Riverview Rd	462.2	464.6	36.2	4.3	NA			YES	PRIVATE
405	09-23-252-001	20	12211	Riverview Rd	465.7	467.3	38.9	7	NA			YES	PRIVATE
406	09-23-253-019	21	12130	Riverview Rd	456.3	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
407	09-23-253-020	21	12126	Riverview Rd	456.9	459.4	31.0	-0.9	EL	DM	MV	YES	PRIVATE
408	09-23-253-021	21	12122	Riverview Rd	456.6	458.1	29.7	-2.2	EL	DM	MV	YES	PRIVATE
409	09-23-253-022	21	12118	Riverview Rd	457.4	458.6	30.2	-1.7	EL	DM	MV	YES	PRIVATE
410	09-23-253-023	21	12116	Riverview Rd	456.3	457.2	28.8	-3.1	EL	DM	MV	YES	PRIVATE
411	09-23-253-024	21	12112	Riverview Rd	456.5	461.9	33.5	1.6	EL	DM	MV	YES	PRIVATE
412	09-23-253-026	21	12106	Riverview Rd	455.7	458.4	30.0	-1.9	EL	DM	MV	YES	PRIVATE
413	02-23-402-002	21	12032	Riverview Rd	454.4	454.8	26.4	-5.5	EL	DM	MV	YES	PRIVATE
414	09-23-252-011	21	12109	Riverview Rd	458.6	461.6	33.2	1.3	EL	DM	MV	YES	PRIVATE
415	09-23-252-010	21	12111	Riverview Rd	458.0	460.6	32.2	0.3	EL	DM	MV	YES	PRIVATE
416	09-23-252-009	21	12113	Riverview Rd	458.3	459.2	30.8	-1.1	EL	DM	MV	YES	PRIVATE
417	09-23-252-008	21	12119	Riverview Rd	459.8	463.0	34.6	2.7	EL	DM	MV	YES	PRIVATE
418	09-23-252-007	21	12123	Riverview Rd	460.4	463.1	34.7	2.8	NA			YES	PRIVATE
419	09-23-252-006	21	12127	Riverview Rd	461.5	461.6	33.2	1.3	NA			YES	PRIVATE
420	09-23-252-012	21	12103	Riverview Rd	458.4	460.1	31.7	-0.2	EL	DM	MV	YES	PRIVATE
421	09-23-252-013	21	12031	Riverview Rd	458.9	459.3	30.9	-1	EL	DM	MV	YES	PRIVATE
422	09-23-401-001	21	12023	Riverview Rd	458.9	460.6	32.2	0.3	EL	DM	MV	YES	PRIVATE
423	09-23-401-017	21	12017	Riverview Rd	459.2	460.1	31.7	-0.2	EL	DM	MV	YES	PRIVATE
424	09-23-402-008	21	12010	Riverview Rd	457.0	458.2	29.8	-2.1	EL	DM	MV	YES	PRIVATE
425	09-23-402-006	21	12020	Riverview Rd	456.4	457.4	29.0	-2.9	EL	DM	MV	YES	PRIVATE
426	09-23-402-004	21	12028	Riverview Rd	455.0	456.7	28.3	-3.6	EL	DM	MV	YES	PRIVATE
427	09-23-402-009	21	12008	Riverview Rd	457.2	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE
428	09-23-402-010	21	12004	Riverview Rd	457.5	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
429	09-23-402-011	21	12000	Riverview Rd	457.7	460.9	32.5	0.6	EL	DM	MV	YES	PRIVATE
430	09-23-402-012	21	11938	Riverview Rd	457.0	457.4	29.0	-2.9	EL	DM	MV	YES	PRIVATE
431	09-23-402-013	21	11936	Riverview Rd	456.9	457.1	28.7	-3.2	EL	DM	MV	YES	PRIVATE
432	09-23-402-014	21	11932	Riverview Rd	456.9	457.0	28.6	-3.3				NO	MEDINA
433	09-23-402-015	21	11928	Riverview Rd	457.6	458.1	29.7	-2.2	EL	DM	MV	YES	PRIVATE
434	09-23-402-016	21	11924	Riverview Rd	456.6	458.8	30.4	-1.5				NO	MEDINA
435	09-23-402-017	21	11922	Riverview Rd	456.8	459.5	31.1	-0.8				NO	MEDINA
436	09-23-402-018	21	11918	Riverview Rd	457.6	459.9	31.5	-0.4	EL	DM	MV	YES	PRIVATE
437	09-23-401-012	21	11925	Riverview Rd	459.4	461.6	33.2	1.3	EL	DM	MV	YES	PRIVATE
438	09-23-401-019	21	11923	Riverview Rd	458.9	462.1	33.7	1.8	EL	DM	MV	YES	PRIVATE
439	09-23-401-014	21	11919	Riverview Rd	460.3	461.9	33.5	1.6	EL	DM	MV	YES	PRIVATE
440	09-23-401-018	21	11917	Riverview Rd	460.3	462.1	33.7	1.8	EL	DM	MV	YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
441	09-23-402-020	22	11910	Riverview Rd	460.4	461.3	32.9	1	NA			YES	PRIVATE
442	09-23-403-002	22	11910	Riverview Rd	458.9	458.9	30.5	-1.4	EL	DM	MV	YES	PRIVATE
443	09-23-402-022	22	11900	Riverview Rd	459.9	460.8	32.4	0.5	EL	DM	MV	YES	PRIVATE
444	09-23-327-001	22	11850	Riverview Rd	462.1	463.7	35.3	3.4	NA			YES	PRIVATE
445	09-23-327-002	22	11846	Riverview Rd	461.2	461.7	33.3	1.4	NA			YES	PRIVATE
446	09-23-327-003	22	11840	Riverview Rd	463.2	465.3	36.9	5	NA			YES	PRIVATE
447	09-23-327-004	22	11836	Riverview Rd	462.4	463.0	34.6	2.7	NA			YES	PRIVATE
448	09-23-327-005	22	11832	Riverview Rd	464.5	465.0	36.6	4.7	NA			YES	PRIVATE
449	09-23-327-006	22	11826	Riverview Rd	465.0	465.9	37.5	5.6	NA			YES	PRIVATE
450	09-23-376-002	22	11822	Riverview Rd	463.9	465.2	36.8	4.9	NA			YES	PRIVATE
451	09-23-376-024	22	11806	Riverview Rd	467.3	474.7	46.3	14.4	NA			YES	PRIVATE
452	09-23-376-004	22	11738	Riverview Rd	466.7	466.1	37.7	5.8	NA			YES	PRIVATE
453	09-23-376-005	22	11732	Riverview Rd	466.7	469.7	41.3	9.4	NA			YES	PRIVATE
454	09-23-376-006	22	11728	Riverview Rd	466.9	467.2	38.8	6.9	NA			YES	PRIVATE
455	09-23-376-007	22	11724	Riverview Rd	467.0	469.6	41.2	9.3	NA			YES	PRIVATE
456	09-23-376-008	22	11718	Riverview Rd	465.0	465.4	37.0	5.1	NA			YES	PRIVATE
457	09-23-376-009	22	11714	Riverview Rd	466.8	467.1	38.7	6.8	NA			YES	PRIVATE
458	09-23-376-011	23	11708	Riverview Rd	466.6	469.5	41.1	9.2	NA			YES	PRIVATE
459	09-23-376-012	23	11702	Riverview Rd	468.8	470.6	42.2	10.3	NA			YES	PRIVATE
460	09-23-376-013	23	11700	Riverview Rd	468.9	470.4	42.0	10.1	NA			YES	PRIVATE
461	09-23-376-025	23	11624	Riverview Rd	468.8	470.3	41.9	10	NA			YES	PRIVATE
462	09-23-376-016	23	11612	Riverview Rd	468.4	470.3	41.9	10	NA			YES	PRIVATE
463	09-23-376-026	23	11608	Riverview Rd	470.3	472.5	44.1	12.2				NO	PRIVATE
464	09-23-376-026	23	11602	Riverview Rd	470.6	472.8	44.4	12.5	NA			YES	PRIVATE
465	09-23-376-019	23	11528	Riverview Rd	471.8	472.8	44.4	12.5	NA			YES	PRIVATE
466	09-23-376-023	23	11518	Riverview Rd	471.8	472.9	44.5	12.6	NA			YES	PRIVATE
467	09-23-376-022	23	11508	Riverview Rd	472.5	473.7	45.3	13.4	NA			YES	PRIVATE
468	09-34-403-015	24	1604	Hendryx Pl	456.7	458.3	29.9	-2	EL	DM	MV	YES	PRIVATE
469	09-34-402-012	24	1611	Hendryx Pl	458.5	460.9	32.5	0.6	EL	DM	MV	YES	PRIVATE
470	09-34-402-011	24	1607	Hendryx Pl	459.5	460.3	31.9	0	EL	DM	MV	YES	PRIVATE
471	09-34-403-015	24	1604	Hendryx Pl	459.4	460.1	31.7	-0.2	EL	DM	MV	YES	PRIVATE
472	09-34-403-016	24	1606	Hendryx Pl	458.9	461.2	32.8	0.9	EL	DM	MV	YES	PRIVATE
473	09-34-403-017	24	1608	Hendryx Pl	458.1	458.2	29.8	-2.1	EL	DM	MV	YES	PRIVATE
474	09-34-403-018	24	1622	Hendryx Pl	456.5	456.8	28.4	-3.5	EL	DM	MV	YES	PRIVATE
475	09-34-403-014	24	1600	Hendryx Pl	456.2	456.7	28.3	-3.6	EL	DM	MV	YES	PRIVATE
476	09-23-403-013	24	1526	Hendryx Pl	457.4	458.0	29.6	-2.3	EL	DM	MV	YES	PRIVATE
477	09-34-403-012	24	1520	Hendryx Pl	458.5	459.1	30.7	-1.2	EL	DM	MV	YES	PRIVATE
478	09-34-403-011	24	1516	Hendryx Pl	460.2	462.2	33.8	1.9	EL	DM	MV	YES	PRIVATE
479	09-34-402-007	24	1521	Hendryx Pl	460.2	462.3	33.9	2	EL	DM	MV	YES	PRIVATE
480	09-34-402-009	24	1527	Hendryx Pl	458.5	460.8	32.4	0.5	EL	DM	MV	YES	PRIVATE
481	09-34-403-033	24	1525	Hendryx Pl	457.5	458.7	30.3	-1.6	EL	DM	MV	YES	PRIVATE
482	09-34-403-032	24	1521	Hendryx Pl	459.6	461.1	32.7	0.8	EL	DM	MV	YES	PRIVATE
483	09-34-403-031	24	1517	Hendryx Pl	460.9	463.0	34.6	2.7				YES	PRIVATE
484	09-34-403-030	24	1511	Hendryx Pl	463.2	465.2	36.8	4.9				YES	PRIVATE
485	09-34-404-011	24	1506	Hendryx Pl	461.6	463.1	34.7	2.8				YES	PRIVATE
486	09-34-404-012	24	1512	Hendryx Pl	460.2	460.7	32.3	0.4	EL	DM	MV	YES	PRIVATE
487	09-34-404-013	24	1514	Hendryx Pl	459.5	461.4	33.0	1.1	EL	DM	MV	YES	PRIVATE
488	09-34-404-014	24	1520	Hendryx Pl	458.6	460.0	31.6	-0.3	EL	DM	MV	YES	PRIVATE
489	09-34-404-015	24	1524	Hendryx Pl	456.7	457.2	28.8	-3.1	EL	DM	MV	YES	PRIVATE
490	09-34-404-016	24	1526	Hendryx Pl	456.2	456.6	28.2	-3.7	EL	DM	MV	YES	PRIVATE
491	09-34-404-017	24	1600	Hendryx Pl	455.2	455.9	27.5	-4.4	EL	DM	MV	YES	PRIVATE
492	09-34-404-018	24	1604	Hendryx Pl	454.4	454.7	26.3	-5.6	EL	DM	MV	YES	PRIVATE
493	09-34-404-019	24	1610	Hendryx Pl	453.8	455.1	26.7	-5.2	EL	DM	MV	YES	PRIVATE
494	09-34-403-034	24	1601	Hendryx Pl	455.6	456.5	28.1	-3.8	EL	DM	MV	YES	PRIVATE
495	09-34-403-035	24	1605	Hendryx Pl	455.4	457.5	29.1	-2.8	EL	DM	MV	YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
496	09-34-403-037	24	1611	Hendryx Pl	455.6	457.8	29.4	-2.5	EL	DM	MV	YES	PRIVATE
497	09-34-403-039	24	1617	Hendryx Pl	451.9	453.2	24.8	-7.1	EL	DM	MV	YES	PRIVATE
498	09-34-403-040	24	1623	Hendryx Pl	450.6	456.0	27.6	-4.3	EL	DM	MV	YES	PRIVATE
499	09-34-404-020	24	1616	Hendryx Pl	453.1	453.7	25.3	-6.6	EL	DM	MV	YES	PRIVATE
500	09-34-404-021	24	1622	Hendryx Pl	452.6	454.3	25.9	-6	EL	DM	MV	YES	PRIVATE
501	09-34-404-043	24	1623	Melaik Ct	456.8	458.4	30.0	-1.9	EL	DM	MV	YES	PRIVATE
502	09-34-404-038	24	1617	Melaik Ct	457.1	459.3	30.9	-1	EL	DM	MV	YES	PRIVATE
503	09-34-404-037	24	1611	Melaik Ct	458.3	459.6	31.2	-0.7	EL	DM	MV	YES	PRIVATE
504	09-34-404-036	24	1603	Melaik Ct	458.6	459.7	31.3	-0.6	EL	DM	MV	YES	PRIVATE
505	09-34-405-048	24	1600	Melaik Ct	458.1	458.7	30.3	-1.6	EL	DM	MV	YES	PRIVATE
506	09-34-405-015	24	1606	Melaik Ct	457.2	458.7	30.3	-1.6	EL	DM	MV	YES	PRIVATE
507	09-34-405-016	24	1612	Melaik Ct	456.4	457.9	29.5	-2.4	EL	DM	MV	YES	PRIVATE
508	09-34-404-035	24	1527	Melaik Ct	460.9	463.2	34.8	2.9	NA			YES	PRIVATE
509	09-34-404-034	24	1523	Melaik Ct	460.8	464.7	36.3	4.4	NA			YES	PRIVATE
510	09-34-404-044	24	1515	Melaik Ct	463.4	464.3	35.9	4	NA			YES	PRIVATE
511	09-34-404-031	24	1507	Melaik Ct	464.4	465.2	36.8	4.9	NA			YES	PRIVATE
512	09-34-404-030	24	1503	Melaik Ct	464.8	465.4	37.0	5.1	NA			YES	PRIVATE
513	09-34-405-045	24	1522	Melaik Ct	460.3	460.3	31.9	0	EL	DM	MV	YES	PRIVATE
514	09-34-405-010	24	1512	Melaik Ct	461.9	463.6	35.2	3.3	NA			YES	PRIVATE
515	09-34-405-008	24	1506	Melaik Ct	463.1	464.7	36.3	4.4	NA			YES	PRIVATE
516	09-34-405-007	24	1500	Melaik Ct	462.6	463.0	34.6	2.7	NA			YES	PRIVATE
517	09-34-406-001	25	9416	N Broadway	469.1	471.6	43.2	11.3	NA			YES	PRIVATE
518	09-34-406-003	25	1412	Resthaven	467.6	468.5	40.1	8.2	NA			YES	PRIVATE
519	09-34-406-004	25	1416	Resthaven	466.9	467.5	39.1	7.2	NA			YES	PRIVATE
520	09-34-406-005	25	1418	Resthaven	465.6	467.4	39.0	7.1	NA			YES	PRIVATE
521	09-34-406-006	25	1422	Resthaven	466.7	468.0	39.6	7.7	NA			YES	PRIVATE
522	09-34-406-016	25	1430	Resthaven	464.9	466.9	38.5	6.6	NA			YES	PRIVATE
523	09-34-406-009	25	1438	Resthaven	462.1	463.6	35.2	3.3	NA			YES	PRIVATE
524	09-34-405-029	25	1437	Resthaven	463.4	468.1	39.7	7.8	NA			YES	PRIVATE
525	09-34-405-030	25	1501	Resthaven	461.2	462.6	34.2	2.3	NA			YES	PRIVATE
526	09-34-405-031	25	1507	Resthaven	460.1	461.8	33.4	1.5	EL	DM	MV	YES	PRIVATE
527	09-34-405-032	25	1515	Resthaven	460.0	461.6	33.2	1.3	EL	DM	MV	YES	PRIVATE
528	09-34-406-013	25	1514	Resthaven	459.1	460.7	32.3	0.4	EL	DM	MV	YES	PRIVATE
529	09-34-405-033	25	1519	Resthaven	458.9	460.3	31.9	0	EL	DM	MV	YES	PRIVATE
530	09-34-405-034	25	1523	Resthaven	458.1	460.1	31.7	-0.2	EL	DM	MV	YES	PRIVATE
531	09-34-405-035	25	1527	Resthaven	457.3	458.1	29.7	-2.2	EL	DM	MV	YES	PRIVATE
532	09-34-405-036	26	1603	Resthaven	457.4	459.1	30.7	-1.2	EL	DM	MV	YES	PRIVATE
533	09-34-405-037	26	1607	Resthaven	456.2	457.0	28.6	-3.3	EL	DM	MV	YES	PRIVATE
534	09-34-405-038	26	1613	Resthaven	455.4	456.8	28.4	-3.5	EL	DM	MV	YES	PRIVATE
535	09-34-428-012	26	1602	Resthaven	456.0	457.6	29.2	-2.7	EL	DM	MV	YES	PRIVATE
536	09-34-406-015	26	9417	N Cross St	460.9	463.1	34.7	2.8	NA			YES	PRIVATE
537	09-34-405-039	26	1619	Resthaven	455.9	456.8	28.4	-3.5	EL	DM	MV	YES	PRIVATE
538	09-34-405-040	26	1623	Resthaven	453.5	460.3	31.9	0	EL	DM	MV	YES	PRIVATE
539	09-34-429-001	26	9404	N Cross St	456.4	458.1	29.7	-2.2	EL	DM	MV	YES	PRIVATE
540	09-34-429-002	26	9332	N Cross St	455.8	457.9	29.5	-2.4	EL	DM	MV	YES	PRIVATE
541	09-34-407-014	25	9407	N Cross St	456.4	458.7	30.3	-1.6	EL	DM	MV	YES	PRIVATE
542	09-34-451-015	25	9327	N Cross St	456.1	457.7	29.3	-2.6	EL	DM	MV	YES	PRIVATE
543	09-34-451-035	25	1516	Valley Shores	458.0	460.2	31.8	-0.1	EL	DM	MV	YES	PRIVATE
544	09-34-451-013	25	1512	Valley Shores	457.5	459.3	30.9	-1	EL	DM	MV	YES	PRIVATE
545	09-34-407-013	25	1517	Valley Shores	457.2	458.6	30.2	-1.7	EL	DM	MV	YES	PRIVATE
546	09-34-407-012	25	1513	Valley Shores	459.4	461.7	33.3	1.4	EL	DM	MV	YES	PRIVATE
547	09-34-407-011	25	1509	Valley Shores	459.0	460.5	32.1	0.2	EL	DM	MV	YES	PRIVATE
548	09-37-407-010	25	1501	Valley Shores	460.5	465.3	36.9	5	NA			YES	PRIVATE
549	09-34-407-009	25	1423	Valley Shores	462.2	464.6	36.2	4.3	NA			YES	PRIVATE
550	09-34-451-010	25	1420	Valley Shores	460.6	461.3	32.9	1	NA			YES	PRIVATE

BLD	TAX ID#	MAP	ADDRESS	STREET	GRD ELV	FF ELV	RIVGAU	DEPTH	MIT1	MIT2	MIT3	STRUCTURE	OWNER
551	09-34-451-011	25	1502	Valley Shores	460.0	461.5	33.1	1.2	EL	DM	MV	YES	PRIVATE
552	09-34-451-012	25	1506	Valley Shores	458.8	460.4	32.0	0.1	EL	DM	MV	YES	PRIVATE
553	09-34-451-009	25	1416	Valley Shores	461.8	463.8	35.4	3.5	NA			YES	PRIVATE
554	09-34-451-008	25	1412	Valley Shores	462.8	464.5	36.1	4.2	NA			YES	PRIVATE
555	09-34-451-007	25	1406	Valley Shores	463.8	465.3	36.9	5	NA			YES	PRIVATE
556	09-34-407-008	25	1421	Valley Shores	463.4	465.1	36.7	4.8	NA			YES	PRIVATE
557	09-34-407-007	25	1419	Valley Shores	462.7	464.9	36.5	4.6	NA			YES	PRIVATE
558	09-34-407-006	25	1415	Valley Shores	464.6	466.3	37.9	6	NA			YES	PRIVATE
559	09-34-407-005	25	1403	Valley Shores	465.8	467.9	39.5	7.6	NA			YES	PRIVATE
560	09-34-407-004	25	1321	Valley Shores	467.6	469.3	40.9	9	NA			YES	PRIVATE
561	09-34-407-003	25	1317	Valley Shores	467.1	469.2	40.8	8.9	NA			YES	PRIVATE
562	09-34-407-002	25	1313	Valley Shores	468.5	470.0	41.6	9.7	NA			YES	PRIVATE
563	09-34-407-001	25	9406	N Broadway	469.3	471.0	42.6	10.7	NA			YES	PRIVATE
564	09-34-452-006	27	1324	Beach St	461.9	462.4	34.0	2.1	NA			YES	PRIVATE
565	09-34-452-023	27	1403	Dean St	457.6	458.6	30.2	-1.7	EL	DM	MV	YES	PRIVATE
566	09-34-452-021	27	1323	Dean St	461.2	463.9	35.5	3.6	NA			YES	PRIVATE
567	09-34-451-022	27	1401	Beach St	461.9	464.1	35.7	3.8	NA			YES	PRIVATE
568	09-34-451-037	27	1415	Beach St	458.5	460.0	31.6	-0.3	EL	DM	MV	YES	PRIVATE
569	09-34-451-026	27	1417	Beach St	458.5	460.8	32.4	0.5	EL	DM	MV	YES	PRIVATE
570	09-34-452-010	27	1420	Beach St	457.5	459.3	30.9	-1	EL	DM	MV	YES	PRIVATE
571	09-34-452-011	27	1422	Beach St	457.2	457.7	29.3	-2.6	EL	DM	MV	YES	PRIVATE
572	09-34-452-012	27	1424	Beach St	456.8	458.3	29.9	-2	EL	DM	MV	YES	PRIVATE
573	09-34-452-014	27	1500	Beach St	455.6	457.1	28.7	-3.2	EL	DM	MV	YES	PRIVATE
574	09-34-452-015	27	1516	Beach St	454.9	457.2	28.8	-3.1	EL	DM	MV	YES	PRIVATE
575	09-34-451-032	27	1519	Beach St	454.8	459.8	31.4	-0.5	EL	DM	MV	YES	PRIVATE
576	09-34-429-004	27	1603	Beach St	454.2	462.7	34.3	2.4	EL	DM	MV	YES	PRIVATE
577	09-34-453-007	27	1402	Dean St	457.2	457.7	29.3	-2.6	EL	DM	MV	YES	PRIVATE
578	09-34-453-022	27	9300	N Kenneth	458.1	461.0	32.6	0.7	EL	DM	MV	YES	PRIVATE
579	09-34-453-021	27	9302	N Kenneth	459.8	461.3	32.9	1	EL	DM	MV	YES	PRIVATE

Acquired Properties in Peoria County

1987 to Present

NO	ST NO.	ST NAME	PROGRAM	STRUCTURE	OWNER
1	13540	RIVERBEACH	DWR	RESIDENTIAL	MEDINA TWP
2	13418	RIVERBEACH	DWR	RESIDENTIAL	MEDINA TWP
3	13612	RIVERBEACH	DWR	RESIDENTIAL	MEDINA TWP
4	NA	RIVERBEACH	DWR	VACANT	MEDINA TWP
5	NA	RIVERBEACH	DWR	VACANT	MEDINA TWP
6	NA	RIVERBEACH	DWR	VACANT	MEDINA TWP
7	13622	RIVERBEACH	DWR	VACANT	MEDINA TWP
8	13412	RIVERBEACH	DWR	RESIDENTIAL	MEDINA TWP
9	13408	RIVERBEACH	DWR	RESIDENTIAL	MEDINA TWP
10	13234	RIVERBEACH	DWR	RESIDENTIAL	MEDINA TWP
11	NA	RIVERBEACH	DWR	VACANT	MEDINA TWP
12	NA	RIVERBEACH	DWR	VACANT	MEDINA TWP
13	13340	RIVERBEACH	DWR	RESIDENTIAL	MEDINA TWP
14	13718	RIVERBEACH	OWR	VACANT	MEDINA TWP
15	13720	RIVERBEACH	OWR	VACANT	MEDINA TWP
16	13722	RIVERBEACH	OWR	VACANT	MEDINA TWP
17	13520	RIVERBEACH	OWR	RESIDENTIAL	MEDINA TWP
18	13516	RIVERBEACH	OWR	RESIDENTIAL	MEDINA TWP
19	13634	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
20	13714	RIVERBEACH	FEMA	RESIDENTIAL	MEDINA TWP
21	13604	RIVERBEACH	FEMA	RESIDENTIAL	MEDINA TWP
22	13626	RIVERBEACH	FEMA	RESIDENTIAL	MEDINA TWP
23	15428	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
24	15504	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
25	15314	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
26	15224	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
27	15218	RIVERBEACH	FEMA	VACANT	PEORIA CO
28	15212	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
29	14512	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
30	14510	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO

NO	ST NO.	ST NAME	PROGRAM	STRUCTURE	OWNER
31	NA	RIVERBEACH	DWR	VACANT	PEORIA CO
32	14826	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
33	14638	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
34	14634	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
35	14630	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
36	NA	RIVERBEACH	FEMA	VACANT	PEORIA CO
37	14622	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
38	14614	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
39	14610	RIVERBEACH	DWR	VACANT	PEORIA CO
40	14536	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
41	14530	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
42	14520	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
43	14516	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
44	NA	RIVERBEACH	FEMA	VACANT	PEORIA CO
45	14620	RIVERBEACH	DWR	VACANT	CHIL PK DIST
46	14604	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
47	15040	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
48	15304	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
49	15518	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
50	15228	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
51	15124	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
52	15320	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
53	15204	RIVERBEACH	FEMA	RESIDENTIAL	PEORIA CO
54	15024	RIVERBEACH	OWR	RESIDENTIAL	PEORIA CO
55	14820	RIVERBEACH	OWR	RESIDENTIAL	PEORIA CO
56	14816	RIVERBEACH	OWR	RESIDENTIAL	PEORIA CO
57	4821	SANDPOINT	DWR	VACANT	CHIL PK DIST
58	4824	SANDPOINT	DWR	VACANT	CHIL PK DIST
59	14533	RIVERBEACH	FEMA	RESIDENTIAL	CHIL PK DIST
60	NA	RIVERBEACH	FEMA	VACANT	CHIL PK DIST
61	NA	RIVERBEACH	FEMA	VACANT	CHIL PK DIST
62	14439	RIVERBEACH	FEMA	RESIDENTIAL	CHIL PK DIST
63	4806	SHOREVIEW	FEMA	RESIDENTIAL	CHIL PK DIST

NO	ST NO.	ST NAME	PROGRAM	STRUCTURE	OWNER
64	NA	SHOREVIEW	FEMA	VACANT	CHIL PK DIST
65	4802	SHOREVIEW	FEMA	VACANT	CHIL PK DIST
66	4703	BEACHVIEW	DWR	VACANT	CHIL PK DIST
67	4709	BEACHVIEW	DWR	VACANT	CHIL PK DIST
68	4705	BAR HARBOR	DWR	RESIDENTIAL	CHIL PK DIST
69	4703	BAR HARBOR	DWR	VACANT	CHIL PK DIST
70	4715	BEACHVIEW	DWR	RESIDENTIAL	CHIL PK DIST
71	4719	BEACHVIEW	FEMA	RESIDENTIAL	CHIL PK DIST
72	14517	RIVERBEACH	FEMA	RESIDENTIAL	CHIL PK DIST
73	14507	RIVERBEACH	FEMA	RESIDENTIAL	CHIL PK DIST
74	NA	RIVERBEACH	FEMA	VACANT	CHIL PK DIST
75	4818	SHOREVIEW	FEMA	RESIDENTIAL	CHIL PK DIST
76	4819	SHOREVIEW	FEMA	VACANT	CHIL PK DIST
77	4714	BEACHVIEW	FEMA	RESIDENTIAL	CHIL PK DIST
78	4701	BAR HARBOR	FEMA	RESIDENTIAL	CHIL PK DIST
79	4903	WILLOW	CDAP	RESIDENTIAL	CHIL PK DIST
80	4915	WILLOW	FEMA	RESIDENTIAL	CHIL PK DIST
81	14703	RIVERBEACH	DWR	VACANT	PEORIA CO
82	14637	RIVERBEACH	DWR	RESIDENTIAL	CHIL PK DIST
83	4910	WILLOW	DWR	VACANT	CHIL PK DIST
84	14617	RIVERBEACH	CDAP	RESIDENTIAL	CHIL PK DIST
85	NA	RIVERBEACH	CDAP	VACANT	CHIL PK DIST
86	14419	RIVERBEACH	DWR	RESIDENTIAL	CHIL PK DIST
87	14415	RIVERBEACH	CDAP	RESIDENTIAL	CHIL PK DIST
88	14411	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
89	4923	WILLOW	FEMA	RESIDENTIAL	CHIL PK DIST
90	4907	WILLOW	CDAP	RESIDENTIAL	CHIL PK DIST
91	4711	BEACHVIEW	FEMA	RESIDENTIAL	CHIL PK DIST
92	16401	COTTAGE BEACH	FEMA	RESIDENTIAL	PEORIA CO
93	16428	LAKEVIEW	FEMA	RESIDENTIAL	PEORIA CO
94	16508	LAKEVIEW	FEMA	RESIDENTIAL	PEORIA CO
95	16116	PORTAGE	FEMA	RESIDENTIAL	PEORIA CO
96	11924	RIVERVIEW	FEMA	RESIDENTIAL	MEDINA TWP

NO	ST NO.	ST NAME	PROGRAM	STRUCTURE	OWNER
97	3727	FARMINGTON	FEMA	INDUSTRIAL	PEORIA CO
98	15313	RIVERBEACH	DWR	RESIDENTIAL	PEORIA CO
99	14816	RIVERBEACH	OWR	RESIDENTIAL	PEORIA CO
100	14820	RIVERBEACH	OWR	RESIDENTIAL	PEORIA CO
101	15024	RIVERBEACH	OWR	RESIDENTIAL	PEORIA CO
102	4811	SHOREVIEW	OWR	RESIDENTIAL	PEORIA CO
103	13506	RIVERBEACH	OWR	RESIDENTIAL	STATE OF IL
104	NA	RIVERBEACH	OWR	VACANT	STATE OF IL
105	14609	RIVERBEACH	OWR	RESIDENTIAL	STATE OF IL
106	15526	RIVERBEACH	OWR	VACANT	STATE OF IL
107	15530	RIVERBEACH	OWR	RESIDENTIAL	STATE OF IL
108	15230	RIVERBEACH	HMGP	RESIDENTIAL	PEORIA CO
109	13504	RIVERBEACH	HMGP	RESIDENTIAL	PEORIA CO
110	13332	RIVERBEACH	HMGP	RESIDENTIAL	PEORIA CO
111	3800	FARMINGTON	FMAP	COMMERCIAL	PEORIA CO
112	17330	SECOND	OWR	RESIDENTIAL	STATE OF IL
113	14503	RIVERBEACH	HMGP	RESIDENTIAL	PEORIA CO
114	17306	IVY	OWR	RESIDENTIAL	STATE OF IL
115	14219	RIVERBEACH	HMGP	RESIDENTIAL	PEORIA CO
116	15029	RIVERBEACH	HMGP	RESIDENTIAL	PEORIA CO
117	14631	RIVERBEACH	HMGP	RESIDENTIAL	PEORIA CO
118	5717	WASHINGTON	FEMA	RESIDENTIAL	PEORIA CO
119	14405	RIVERBEACH	HMGP	RESIDENTIAL	STATE OF IL
120	15811	FRONT	OWR	RESIDENTIAL	PEORIA CO

APPENDIX L

PEORIA COUNTY – KICKAPOO VALLEY ELEVATION DATA

KICKAPOO VALLEY HAZARD MITIGATION PROJECT - BUILDING SURVEY

BDG	PIN	MAP #	STREET NAME	GRD EL	FF EL	BASE FLOOD ELEV	DEPTH	MA1	MA2	MA3
N\A	17-01-426-018	8	1103 N. Abel Court		N\A	480.0			AC	
N\A	17-01-427-003	8	1202 N. Abel Court		N\A	480.0			AC	
N\A	17-01-427-004	8	1128 N. Abel Court	475.2	N\A	480.0			AC	
N\A	17-01-427-005	8	1124 N. Abel Court	474.4	N\A	480.0			AC	
N\A	17-01-426-017	8	1105 N. Abel Court		N\A	480.0			AC	
N\A	17-01-426-016	8	1107 N. Abel Court		N\A	480.0			AC	
N\A	17-01-426-012	8	1125 N. Abel Court		N\A	480.0			AC	
N\A	17-01-426-013	8	1119 N. Abel Court		N\A	480.0			AC	
N\A	17-01-426-014	8	1115 N. Abel Court		N\A	480.0			AC	
N\A	17-01-426-015	8	1113 N. Abel Court		N\A	480.0			AC	
N\A	17-01-427-006	8	1120 N. Abel Court		N\A	480.0			AC	
N\A	17-01-427-007	9	1114 N. Abel Court	474.1	N\A	480.0			AC	
N\A	17-01-428-011	9	1124 N. Haven Court		N\A	480.0			AC	
N\A	17-01-427-029	9	3220 W. Farmington Rd.		N\A	480.0			AC	
N\A	17-01-428-015	9	1108 N. Haven Court		N\A	480.0			AC	
N\A	17-01-428-016	9	1102 N. Haven Court		N\A	480.0			AC	
N\A	17-01-427-027	9	1103 N. Haven Court		N\A	480.0			AC	
N\A	17-01-427-026	9	1107 N. Haven Court		N\A	480.0			AC	
N\A	17-01-427-008	8	1110 N. Abel Court	474.7 476.2	N\A	480.0			AC	
N\A	17-01-427-009	8	1106 N. Abel Court		N\A	480.0			AC	
N\A	17-01-427-010	8	1102 N. Abel Court		N\A	480.0			AC	
N\A	17-01-427-024	9	1113 N. Haven Court		N\A	480.0			AC	
N\A	17-01-426-004	8	No assigned address - W. Farmington Rd.	475.6	N/A	480.0			AC	
N\A	17-01-427-002	8	1208 N. Abel Court	475.5	N\A	480.0			AC	

BDG	PIN	MAP #	STREET NAME	GRD EL	FF EL	BASE FLOOD ELEV	DEPTH	MA1	MA2	MA3
N\A	13-35-427-001	3	No assigned address – W. Pottstown Rd.	486.0	N\A	480.0			AC	
N\A	17-01-251-004	6	1409 N. Raber Rd.		N\A	481.0			AC	
1	13-35-427-002	3	4315 W. Pottstown Rd.	486.0	488.4	480.0		8.4	A	
2	13-35-427-003	3	4307 W. Pottstown Rd.	486.0	488.6	480.0		8.6	A	
3	13-35-428-001	3	4304 W. Pottstown Rd.	481.2	481.3	480.0		1.3	AC	
4 5	13-35-428-002	3	4312 W. Pottstown Rd.	485.3	484.6	480.0		4.6	A	
6	13-35-428-003	3	4314 W. Pottstown Rd.	485.4	486.0	480.0	6.0	A		
7	17-01-176-003	4	3605 W. Farmington Rd.	487.1	487.3	480.8	6.5	A		
8	17-01-401-001	4,6	3601 W. Farmington Rd.	479.9	480.2	480.8	-0.6	AC	WF	
9 10	17-01-252-001 & 17-01-401-002	6	3527 W. Farmington Rd.	481.4	481.5 481.6	480.8	0.7 0.8	AC AC	WF WF	
11 12	17-01-401-003 & 17-01-252-002	6	3523 W. Farmington Rd.	481.4 480.8	481.5	480.8	0.7	AC AC	WF WF	EL EL
13	17-01-251-002	6	1323 N. Raber Rd.	481.9	480.5	480.9	-0.4	AC	WF	DF
14 15	17-01-251-003	6	1321 N. Raber Rd.	480.2	480.4 480.8	480.9	-0.6 -0.1	AC AC	WF WF	
16	17-01-251-006	6	1323 N. Raber Rd.	480.3	480.2	480.9	-0.7	AC	WF	
17	17-01-251-005	6	1323 N. Raber Rd.	179.7	480.2	481.0	-0.3	AC	WF	
18	17-01-251-007	6	3435 W. Farmington Rd.	478.2	478.8	481.1	-2.3	AC		
19 20	17-01-253-001	6	1420 N. Raber Rd.	476.6	477.8 477.8	481.1	-3.3 -3.3	AC		
21	17-01-253-002	6	1418 N. Raber Rd.	477.4	477.4	481.1	-3.7	AC		
22 23	17-01-253-003	6	1410 N. Raber Rd.	478.9	478.5 478.7	481.0	-2.5 -2.3	AC AC		
24	17-01-253-004	6	No assigned address - N. Raber Rd.	479.9	480.0	480.9	-0.9	AC	WF	DF
25	17-01-253-005	6	1320 N. Raber Rd.	479.2	479.6	480.9	-1.3	AC	WF	
26 27	17-01-253-006	6	3433 W. Farmington Rd.	482.3	482.4 481.2	480.8	1.6 0.4	AC AC	WF WF	DF DF

BDG	PIN	MAP #	STREET NAME	GRD EL	FF EL	BASE FLOOD ELEV	DEPTH	MA1	MA2	MA3
28	17-01-253-007	6	3431 W. Farmington Rd.	478.7	478.9	480.8	-1.9	AC		
29	17-01-402-003	5	3800 W. Farmington Rd.		473.5	480.8	2.7	AC		
30	17-01-402-005	5	3520 W. Farmington Rd.		469.3	480.0	-10.7	AC		
31	17-01-402-006	7	3428 W. Farmington Rd.	477.6	477.6	480.0	-2.4	AC		
32	17-01-402-007	7	No assigned address - W. Farmington Rd.	473.8	473.8	480.0	3.8	AC		
33 34 35 36	17-01-426-001	8	3404 W. Farmington Rd.	475.4	476.5 476.3 479.1 474.7	480.0	-3.5 -3.7 -0.9 -5.3	AC AC AC AC		
37	17-01-426-002	8	3330 W. Farmington Rd.	476.0	476.4	480.0	-3.6	AC		
38	17-01-426-005	8	No assigned address - W. Farmington Rd.	476.0	476.2	480.0	-3.8	AC		
39	17-01-426-003	8	3314 W. Farmington Rd.	476.5	476.5	480.0	-3.5	AC		
40 41	17-01-426-006	8	3310 W. Farmington Rd.	476.8	477.2	480.0	-2.8	AC		
42	17-01-426-007	8	3308 W. Farmington Rd.	477.0	476.8	480.0	-3.2	AC		
43	17-01-426-008	8	1213 N. Abel Court	475.8	477.5	480.0	-2.5	AC	WF	
44	17-01-426-019	8	1207 N. Abel Court		479.8	480.0	-0.2	AC	WF	
45	17-01-427-001	8	3222 W. Farmington Rd.	478.1	478.1	480.0	-1.9	AC		
46	17-01-427-028	8	3220 W. Farmington Rd.	478.4	480.9	480.0	0.9	A		
47	17-01-427-012	9	3216 W. Farmington Rd.	480.1	481.9	480.0	1.9	A		
48	17-01-427-013	9	3212 W. Farmington Rd.	479.1	482.4	480.0	2.4	A		
49	17-01-427-014	9	3208 W. Farmington Rd.	479.7	480.3	480.0	0.3	A		
50	17-01-427-015	9	1213 N. Haven Court	479.2	479.4	480.0	-0.6	AC	WF	
51	17-01-427-016	9	1211 N. Haven Court	479.1	481.4	480.0	1.4	AC	WF	
52	17-01-427-0017	9	1207 N. Haven Court	479.0	481.6	480.0	1.6	AC	WF	
53	17-01-427-018	9	1203 N. Haven Court	478.0	480.6	480.0	0.6	AC	WF	
54	17-01-427-019	9	1129 N. Haven Court	478.1	480.5	480.0	0.5	AC	WF	

BDG	PIN	MAP #	STREET NAME	GRD EL	FF EL	BASE FLOOD ELEV	DEPTH	MA1	MA2	MA3
55	17-01-427-020	9	1127 N. Haven Court	478.0	480.7	480.0	0.7	AC	WF	
56	17-01-427-021	9	1121 N. Haven Court	477.0	479.4	480.0	-0.6	AC	WF	
57	17-01-427-022	9	1119 N. Haven Court		479.6	480.0	-0.4	AC		
58	17-01-427-023	9	1115 N. Haven Court		479.6	480.0	-0.4	AC		
59	17-01-427-025	9	1109 N. Haven Court		480.3	480.0	0.3	AC		
60	17-01-428-014	9	1112 N. Haven Court	477.8	481.2	480.0	1.2	AC	WF	
61	17-01-428-013	9	1116 N. Haven Court	477.7	481.4	480.0	1.4	AC	WF	
62	17-01-428-012	9	1120 N. Haven Court	478.1	479.2	480.0	-0.8	AC	WF	
63	17-01-428-010	9	1126 N. Haven Court	478.0	481.1	480.0	1.1	AC	WF	
64	17-01-428-009	9	1128 N. Haven Court	477.9	480.5	480.0	0.5	AC	WF	
65	17-01-428-008	9	1204 N. Haven Court	477.4	479.2	480.0	-0.8	AC	WF	
66	17-01-428-007	9	1208 N. Haven Court	478.6	481.1	480.0	1.1	AC	WF	
67	17-01-428-006	9	1212 N. Haven Court	478.6	480.6	480.0	0.6	AC	WF	
68	17-01-428-001	9	3202 W. Farmington Rd.	479.6	482.8	480.0	2.8	A		
69	17-01-428-002	9	3128 W. Farmington Rd.	480.6	483.1	480.0	3.1	A		
70	17-01-428-003	9	3124 W. Farmington Rd.	480.8	483.0	480.0	3.0	A		
71 72	17-01-428-004	9	3118 W. Farmington Rd.	480.8	480.8 480.9	480.0	0.8 0.9	AC AC	WF WF	
73	17-01-428-017	9	1201 N. Swords Avenue	481.2	480.5	480.0	0.5	AC	WF	DF
74 75	17-01-428-005	9	3106 W. Farmington Rd.		481.6 483.9	480.0	1.6 3.9	AC A	WF	
76 77 78	17-01-428-018	9	1113 N. Swords Avenue		479.5 479.3 479.8 481.0	480.0	-0.5 -0.7 -0.8 1.0	AC AC AC	WF WF WF	DF DF DF
79	17-01-428-019	9	1113 N. Swords Avenue		479.0	480.0	-1.0	AC	WF	DF
80	17-01-176-001 17-01-401-001	9	3716 W. Farmington Rd.	489	490.0	481.6	8.4	A		

The column under the title MA 1 indicates recommended mitigation alternative.

The column under the title MA 2 indicates the secondary mitigation alternative.

The column under the title MA 3 indicates the third choice for mitigation alternative.

Mitigation alternatives are coded as follows:

A - Mitigation not required

AC - acquisition of the property and demolition of the structure is recommended.

EL - raising the structure above the flood protection elevation is recommended.

DF - dry floodproofing the structure is recommended.

WF - wet floodproofing the structure is recommended.

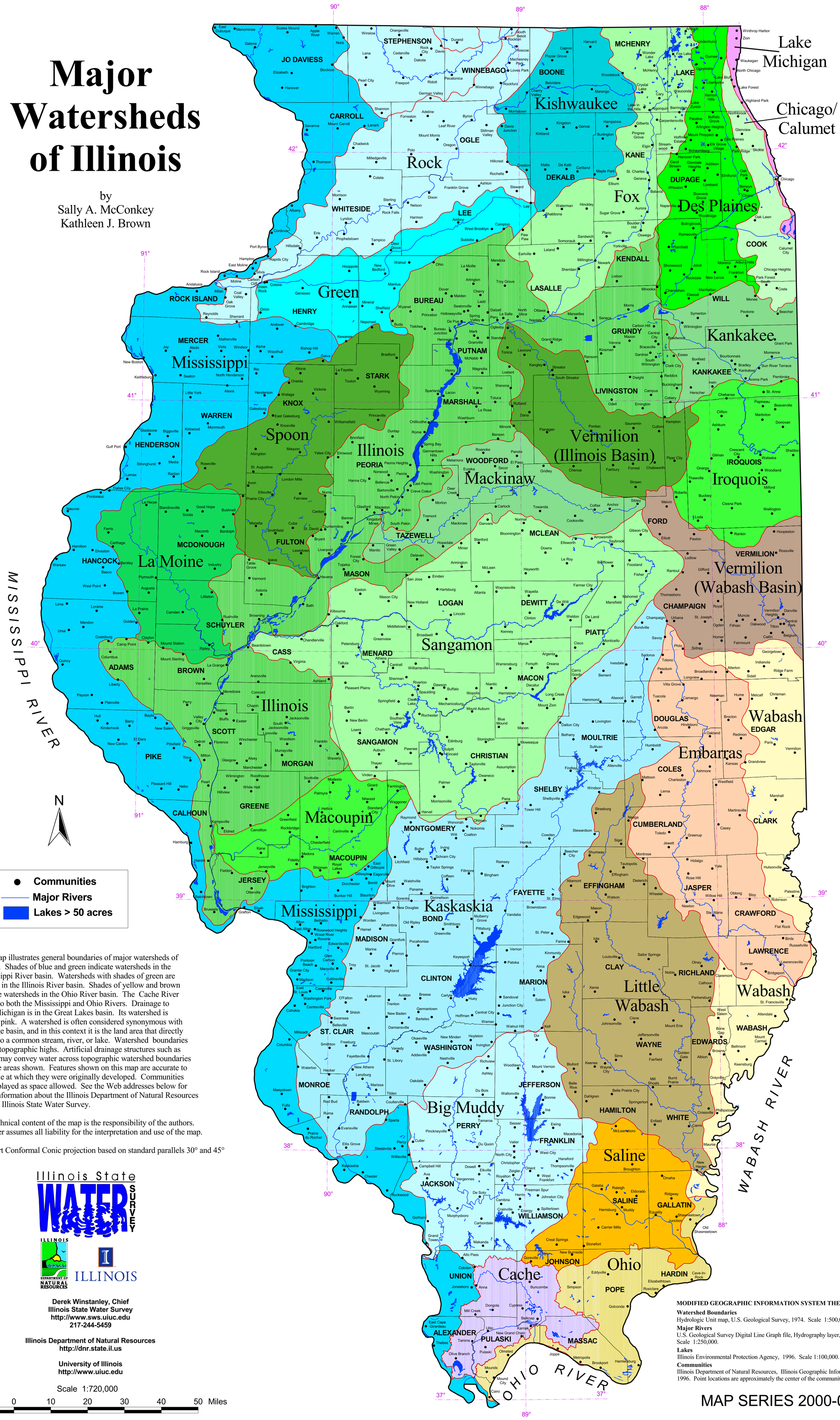
AC - Vacant property; acquisition recommended

APPENDIX M

ILLINOIS WATERSHED MAP

Major Watersheds of Illinois

by
Sally A. McConkey
Kathleen J. Brown



This map illustrates general boundaries of major watersheds of Illinois. Shades of blue and green indicate watersheds in the Mississippi River basin. Watersheds with shades of green are located in the Illinois River basin. Shades of yellow and brown indicate watersheds in the Ohio River basin. The Cache River drains to both the Mississippi and Ohio Rivers. Drainage to Lake Michigan is in the Great Lakes basin. Its watershed is shaded pink. A watershed is often considered synonymous with drainage basin, and in this context it is the land area that directly drains to a common stream, river, or lake. Watershed boundaries follow topographic highs. Artificial drainage structures such as canals may convey water across topographic watershed boundaries in some areas shown. Features shown on this map are accurate to the scale at which they were originally developed. Communities are displayed as space allowed. See the Web addresses below for more information about the Illinois Department of Natural Resources and the Illinois State Water Survey.

The technical content of the map is the responsibility of the authors. The user assumes all liability for the interpretation and use of the map.

Lambert Conformal Conic projection based on standard parallels 30° and 45°

Illinois State WATER SURVEY

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

ILLINOIS

Derek Winstanley, Chief
Illinois State Water Survey
http://www.sws.uiuc.edu
217-244-5459

Illinois Department of Natural Resources
http://dnr.state.il.us

University of Illinois
http://www.uiuc.edu

MODIFIED GEOGRAPHIC INFORMATION SYSTEM THEMES

Watershed Boundaries
Hydrologic Unit map, U.S. Geological Survey, 1974. Scale 1:500,000.

Major Rivers
U.S. Geological Survey Digital Line Graph file, Hydrography layer, 1980 - 1986. Scale 1:250,000.

Lakes
Illinois Environmental Protection Agency, 1996. Scale 1:100,000.

Communities
Illinois Department of Natural Resources, Illinois Geographic Information System, 1996. Point locations are approximately the center of the community.

MAP SERIES 2000-01

APPENDIX N

LAND USE PLAN AND MAPS REPOSITORIES

LAND USE PLAN AND MAPS REPOSITORIES

Peoria County: Planning and Zoning Department
Peoria County Courthouse
324 Main Street
Room 301
Peoria, IL 61602

City of Peoria: Planning and Zoning Department
419 Fulton Street
Peoria, IL 61602

City of Pekin: Administrative Department
111 South Capitol Street
Pekin, IL 61554

Tazewell County: Planning and Zoning Department
11 South 4th Street
Pekin, IL 61554

Woodford County: Zoning Department
114 South Main Street
Eureka, IL 61530

APPENDIX O

HEART OF ILLINOIS PROJECT IMPACT PARTNERS

Appendix O - Heart of Illinois Project Impact Partners

Company	First Name	Last Name	City
Acme Home Improvement	Jim	Wooward	Peoria
AmerenCILCO	Neal	Johnson	Peoria
American Red Cross	Billy	Woodward	Eureka
American Red Cross	Kathy	Cape	Peoria
Bartonville Police	Brian	Fengel	Bartonville
Bartonville Village	Derek	Brown	Peoria
Bradley University	Rollin	Arnett	Princeville
Caterpillar	Cpt. Bret	Bloompott	Peoria
City of Pekin	Greg	Ranney	Pekin
CityLink	Tom	Smith	Peoria
FCI Construction	Terry	Bradford	Bartonville
Federal Warehouse	Carol	Meyers	East Peoria
FEMA	Anna	Pudlo	Chicago
Greater Peoria Regional Airport	Solomon	Balraj	Bartonville
Greater Peoria Sanitary District	Stan	Browning	Peoria
Heartland Marketing	Molly	Ogden	Peoria
HOIPI ex dir	Deb	Craig	Peoria
IAWC	Chuck	Orton	Peoria
IEMA	Ron	Davis	Springfield
Insight Communications	Doug	Dial	Peoria
JMP Media	Kevin	Cassulo	Peoria
Limestone Township	Skip	Light	Bartonville
Mike Lewis Construction	Mike	Lewis	Peoria
National Weather Service	Chris	Miller	Lincoln
Peoria Area Amateur Radio Club	Ron	Morgan	Peoria
Peoria Area Amateur Radio Club	Stephen	Craig	Farmington
Peoria County coroner	Daniel	Heinz	Peoria
Peoria County ESDA	Vicky	Turner	Brimfield
Peoria County Planning & Zoning	Matt	Wahl	Peoria
Peoria County Sherrif	Chief Deputy Joe	Needham	Hanna City
Peoria ESDA	Curtis	Simpson	Peoria
Peoria Fire Department	Greg	Walters	Peoria
Peoria Fire Department	Kent	Tomblin	Peoria
Peoria Network	Wayne R.	Miller	Peoria
Peoria Park District	Gene	Veginski	Peoria
Peoria Police Department	Cpt. Stephen	Eakle	Peoria
State Farm	Aaron	Simmons	Peoria
Tazewell County Board	James	Unsicker	Morton
Tazewell County Emergency Communications	Steve	Thompson	Peoria
Tremont Roofing	Greg	Terrence	Tremont
Tri-County Regional Planning Commission	Greg	Sachau	Peoria
TazComm Emergency Services	Steve	Thompson	Pekin
Vidicom	Geri	Bastian	Peoria
WEEK-TV	Sandy	Gallant	East Peoria
WHOI-TV	Val	Bricka	Creve Coeur
Woodford County & ESDA	Bob	Hix	Peoria
Woodford County Farm Bureau	Jolene	Jamison	Eureka
WTVP	Linda	Miller	Peoria

APPENDIX P

NON-PARTICIPATING MUNICIPALITIES

List of Non-Partipating Jurisdictions within the Tri-County Area

Woodford County	
1	BAYVIEW GARDENS
2	BENSON
3	CONGERVILLE
4	DEER CREEK
5	EL PASO
6	EUREKA
7	GERMANTOWN HILLS
8	GOODFIELD
9	KAPPA
10	METAMORA
11	MINONK
12	PANOLA
13	ROANOKE
14	SECOR

Tazewell County	
1	ARMINGTON
2	CREVE COEUR
3	DELAVAN
4	EAST PEORIA
5	GREEN VALLEY
6	HOPEDALE
7	MACKINAW
8	MARQUETTE HEIGHTS
9	MINIER
10	MORTON
11	NORTH PEKIN
12	SOUTH PEKIN
13	TREMONT
14	WASHINGTON

Peoria County	
1	BARTONVILLE
2	BELLEVUE
3	BRIMFIELD
4	CHILLICOTHE
5	DUNLAP
6	ELMWOOD
7	GLASFORD
8	HANNA CITY
9	KINGSTON MINES
10	MAPLETON
11	NORWOOD
12	PEORIA HEIGHTS
13	PRINCEVILLE
14	ROME
15	WEST PEORIA