A Appendix

A: PRE-DISASTER / HAZARD MITIGATION PLAN

INTRODUCTION

Figure 1 – North Levee Break on the Embarras River on June 10, 2008 3.5 miles West of Lawrenceville Airport (Source: Lawrence County EMA)

On June 10, 2008, one of the worst disasters in the history of Lawrence County occurred when 4 levees were breached (Figure 1). Lawrence County is surrounded by two rivers; the Embarras River on the central-western side of the county and Wabash River on the eastern side of the county which creates the Illinois-Indiana state line. As a result of the levee breaks, nearly 200 homes were severely damaged or completely destroyed, with most of them located in the eastern side of the county and in the City of Lawrenceville. Erosion created by the levee breach left the City of Lawrenceville and several surrounding towns without clean water.

In response to this disaster, the City of Lawrenceville received a grant from the Community Development Block Grant (CDBG) grant program to develop an updated Comprehensive Plan and new FEMA-approved Pre-Disaster Mitigation Plan (PDMP). The revised Comprehensive Plan serves as a guide in considering policy changes, land use planning, budget preparation, capital improvement planning, zoning changes, economic opportunities/development, transportation choices, housing/community development, disaster mitigation and recovery, etc. The PDMP identifies pre-disaster mitigation planning to prevent and/or better respond to natural disasters. The PDMP meets Federal Emergency Management Agency (FEMA) requirements so that the city is eligible for FEMA hazard mitigation grants. This PDMP was prepared under the direction of an American Institute of Certified Planners (AICP) certified planner from Christopher B. Burke Engineering LLC (CBBEL).

DISASTER LIFE CYCLE

Figure 2 – the Disaster Life Cycle (Source: CBBEL)

FEMA defines the disaster life cycle as the process through which emergency managers respond to disasters when they occur; help people and institutions recover from them; reduce the risk of future losses; and prepare for emergencies and disasters.

The disaster life cycle shown in Figure 2 includes 4 phases:

1. Response– the mobilization of the necessary emergency services and first responders to the disaster area (search and rescue; emergency relief)
2. Recovery – to restore the affected area to its previous state (rebuilding destroyed property, re-employment, and the repair of other essential infrastructure)
3. Mitigation – to prevent or to reduce the effects of disasters (building codes and zoning, vulnerability analyses, public education)
4. Preparation– planning, organizing, training, equipping, exercising, evaluation and improvement activities to ensure effective coordination and the enhancement of capabilities (preparedness plans, emergency exercises/training, warning systems)

This PDMP focuses on the mitigation phase of the disaster life cycle. According to FEMA, mitigation is most effective when it's based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs. The PDMP identifies hazards, the extent that they affect the city, and formulates mitigation practices to ultimately reduce the social, physical, and economic impact of the hazards.

PROJECT SCOPE & PURPOSE

A local mitigation plan is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000). According to DMA 2000, the purpose of mitigation planning is for State, local, and Indian tribal governments to identify the natural hazards that impact them, to identify actions and activities to reduce any losses from those hazards, and to establish a coordinated process to implement the plan, taking advantage of a wide range of occurrences.

A FEMA-approved PDMP is required in order to apply for and/or receive project grants under the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), Flood Mitigation Assistance (FMA), and Severe Repetitive Loss (SRL). FEMA may require a local mitigation plan under the Repetitive Flood Claims (RFC) program. Although the City of Lawrenceville PDMP meets the requirements of DMA 2000 and eligibility requirements of these grant programs, additional detailed studies may need to be completed prior to applying for these grants.

In order for National Flood Insurance Program (NFIP) communities to be eligible for future mitigation funds, they must adopt either their own local mitigation plan or participate in the development of a multi-jurisdictional mitigation plan. The IEMA and the United States Department of Homeland Security (US DHS)/FEMA Region V offices administer the mitigation planning program in Illinois. It is required that local jurisdictions review, revise, and resubmit a mitigation plan every 5 years. These updates must demonstrate that progress has been made in the last 5 years to fulfill the commitments outlined in the previously approved mitigation plan.

A Appendix

ORGANIZATION OF THE PDMP

Key planning and policy components of the PDMP are integrated into the updated Comprehensive Plan and included as a standalone document in this Appendix. The format of the PDMP follows Federal Emergency Management Agency's (FEMA) October 2011 Local Mitigation Plan Review Guidance as directed by the State of Illinois Emergency Management Agency (IEMA).

These sections include:

- Element A: Planning Process
- Element B: Hazard Identification and Risk Assessment
- Element C: Mitigation Strategy
- Element D: Plan Review, Evaluation, and Implementation
- Element E: Plan Adoption

1. Reduce the social, physical, and economic losses associated with hazard incidents through emergency services, natural resource protection, prevention, property protection, public information, and structural control mitigation practices.

a. Locate future development outside of the designated flood plain (hazard area)

b. Research and work with the Greater Wabash Regional Plan Commission to understand Senate Bill 1869 which gives Illinois municipalities greater ability to build and invest in innovative stormwater management infrastructure to help mitigate damaging floods such as green roofs, rain gardens, bioswales, tree boxes, porous pavement, native plantings, constructed wetlands and more. The law expands existing law to include these items among the measures a municipality can employ to help prevent flooding.

2. Provide protective services that are capable of meeting the City's demand

a. Evaluate the effectiveness of current emergency response service areas and determine if the City has sufficient emergency response employees.

b. Evaluate the effectiveness of severe weather sirens respective to operation and service area.

c. Consider creating inter-local agreements with other agencies to assist in the event of a natural disaster.

d. Determine and publish the location of severe weather shelters (i.e. schools, churches)

e. Partner with Lawrence County to ensure all properties within the City are mapped in an e-911 system to prepare for potential disasters.

LAWRENCEVILLE PRE-DISASTER MITIGATION PLAN

ELEMENT A: PLANNING PROCESS

A1. Document the planning process, including how it was prepared and who was involved in the process for each jurisdiction as outlined in requirement 44 CFR 201.6(c)(1).

The PDMP planning process was conducted in conjunction with the updated Comprehensive Planning process. The two planning processes very much complimented one another. The planning process to prepare both of these plans began in September 2013 and concluded in April 2014. This timeline was accelerated to meet the CDBG Disaster Recovery "IKE" Program grant deadline funding this planning effort. The process was led by a Project Steering Committee with input from key stakeholders with expertise in hazard preparedness, response, recovery, and mitigation. Public engagement is critical to the successful development and implementation of these plans. For this planning effort, A variety of method were used to gather community input and ensure the both these plans reflected the needs and vision of the current and future residents. The following provides an overview of the public planning process. A full summary is documented in Appendix D of the Comprehensive Plan.

- Project Steering Committee – a committee of large and small businesses, residents, the Mayor, City staff, City Council members, county economic development and planning, and the development community met 4 times over the course of the 8-month planning process to identify strengths and weaknesses, goals and objectives, the community's vision, and review drafts of the plan.

  Project Steering Committee
  Ed Brumley, Resident, Community College Professor
  Donna Burton, Resident, Lawrence County Historical Society
  Doug Florkowski, Resident, Lawrence County Memorial Hospital
  Rachel Gard, Resident, Lawrenceville Chamber of Commerce
  Mike Gill, Resident, Concerned Citizen
  Charles Gillespie, Resident, Bi-State Airport Authority and Route 50 Coalition
  Sarah Mann, Director, Greater Wabash Area Plan Commission
  Mike Neal, Resident, City Attorney
  Matt Pargin, Resident, Lawrenceville Downtown Revitalization Committee
  Brady Rice, Resident, Local Realtor, County Council
  Roxana Schultz Resident, Plan Commission, City of Lawrenceville
  Judy Seitzinger, Resident, Workforce Development Director
  Dan Stanescu, Resident, Vice President, Lawrence County Memorial Hospital
  Wendell Stevens, Resident, City Council, City of Lawrenceville
  Don Wagner, Resident, Mayor of the City of Lawrenceville
  Chris Winkles, Resident, Plan Commission President, City of Lawrenceville
  Patricia Wright, Resident, Sign of the Kingdom
  Courtney Yost, Resident, Director, Lawrenceville Industrial Council/Illinois State University Extension Service
- Key Stakeholder Interviews – approximately 25 community members with specific experienceand expertise to residential issues, the business community, and emergency management were invited and assembled into

- targeted groups on October 3, 2013 to discuss issues specific to their interests. The group that was specifically assembled to discuss emergency management issues (listed below) because they are knowledgeable of local hazards; have been involved in hazard mitigation; and/or have the tools necessary to reduce the impact of future hazard events. Individuals from this group were consulted with throughout the planning process to clarify hazard information, response efforts, and identify effective mitigation practices.

  Emergency Management Group
  Jess Angle, Lawrence County Emergency Management
  Jack Campbell, Lawrenceville Parks Department
  Mark Griggs, Lawrenceville Street Department
  Bruce Laslie, Lawrenceville Sewer & Water
  Mike Mefford, Lawrenceville Public Safety
  Dan Stanescu, Lawrence County Memorial Hospital
  Dick Trowbridge, Lawrence Township Transportation

- Public Workshop – the general public was invited to a public workshop on October 3, 2013 and lead through a series of engaging planning exercises to discuss economic development, redevelopment, natural hazards, and transportation issues.
- Community Vision Survey – surveys were distributed at the public meeting, key stakeholder meetings, and distributed to other interested parties through members of the steering committee. This survey included questions about general demographics, community character, economic development, priorities for public services, and ranking of natural hazards.
- Open House - approximately 15-20 persons attended the March 3, 2014 open house to review the draft plan, maps, ask the consulting team questions, and provide input on the plan and implementation.
- Online Planning Tools – project information and updates were made available throughout the eight-month planning process via the www.CommunityCollaborate.com web portal.
- Plan Commission Public Hearing - RATIO presented the Comprehensive and Pre-Disaster Mitigation Plan to the Lawrenceville Plan Commission in a public hearing held on March 25, 2014. This event was publicly advertised. Approximately 15 persons attended this event. At the conclusion of the presentation and public comment period the Lawrenceville Plan Commission made and seconded a motion to recommend the Lawrenceville Comprehenisve and Pre-Disaster Mitigation Plan to the Lawrenceville City Council. The motion carried 5 in favor and 0 against (2 members not present were absent).
- City Council Adoption Hearing and FEMA Approval - On April 10, 2014 and again on September 11, 2014 the Lawrenceville City Council adopted the Lawrenceville Comprehensive and Pre-Disaster Mitigation Plan by a vote of eight in favor and zero against. The plan was adopted by council resolution 4-1-14, and re-adopted by council resolution 9-1-14. FEMA approved the plan on 9-12-2014.

A2. Document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process as outlined in requirement 44 CFR 201.6(b)(2).

The Lawrence County Emergency Management Agency (EMA) Director was very much engaged in the planning process as a participant in the key stakeholder interviews, phone conversations between meetings, the steering committee meeting to discuss and prioritize mitigation practices, and as a reviewer of the draft and final PDMP Appendix.

A3. Document how the public was involved in the planning process during the drafting stage as outlined in requirement 44 CFR 201.6(b)(1) and 201.6(c)(1).

Opportunities for the public to participate in the planning process were provided at the Public Workshop (October 3, 2013), Community Survey, the Open House/Public Meeting (March 3, 2014), and throughout the planning process via www.CommunityCollaborate.com web portal. Comments gathered from the public are summarized in the Comprehensive Plan. Copies of meeting announcements and media releases are included at the back of this Appendix.

A4. Document the review and incorporation of existing plans, studies, reports, and technical information as outlined in requirement 44 CFR 201.6(b)(3).

A variety of planning documents and technical data, reports and studies, as well as discussions with city and county staff knowledgeable about natural hazards was used to prepare this PDMP. The Reference Section at the end of this PDMP includes a full list of the resources used:

- FEMA Flood Insurance Rate Maps, 2011
- City of Lawrenceville Floodplain Ordinance, 2011
- Lawrence County Hazard Analysis, 2008
- City of Lawrenceville Comprehensive Plan, 1989
- City of Lawrenceville Hazardous Weather Operations Plan, (unknown date)
- Lawrence County EMA webpage (updated regularly)
- City of Lawrenceville webpage (updated regularly)

A5. Discuss on how the City of Lawrenceville will continue public participation in the plan maintenance process as outlined in requirement 44 CFR 201.6(c)(4)(iii).

Continued public involvement is critical to the successful implementation of this PDMP. Education efforts for hazard mitigation will be the focus of the annual Lawrence County Severe Weather Awareness Week, Fall Festival, and Get Ready with Freddy Program for 3rd grade students. As well as incorporated into the City's land use planning, economic development, and special projects/studies efforts.

Once adopted, a copy of this Plan will be available for the public in the library and the City website. Updates or modifications to this PDMP will require a public notice and/or meeting prior to submitting revisions for approval.

A6. Describe the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5□year cycle) as outlined in requirement 44 CFR 201.6(c)(4)(i).

At least annually, the Project Steering Committee and Lawrence County EMA Director will meet to monitor and evaluate the implementation of the mitigation practices identified in the PDMP. In 2019, the Mayor's office will initiate the 5-year PDMP update planning process.

ELEMENT B: HAZARD IDENTIFICATION & RISK ASSESSMENT

B1. Describe the type, location, and extent of all natural hazards that can affect the City of Lawrenceville as outlined in requirement 44 CFR 201.6(c)(2)(i) and 44 CFR 201.6(c)(2)(iii).

The following includes a description of the type, location, and the extent (strength or magnitude) of the natural hazard events that affect the City of Lawrenceville. These are based on the natural hazards included in the State of Illinois Hazard Mitigation Plan, discussions with the Lawrence County EMA Director and members of the Project Steering Committee, and research of historic hazard events impacting the city of Lawrenceville. These hazards include drought, earthquake, extreme heat, flood, severe storm and tornado, and severe winter storm.

DROUGHT

A drought is as a deficiency of precipitation over an extended period of time, usually a season or more that results in a water shortage for some activity, group, or environmental sector. A drought condition is not always directly associated with extreme heat. Droughts are labeled D0 to D4 based on intensity. D1 (Moderate Drought) being the least intense and D4 (Exceptional Drought) being the most intense. D0 (Abnormally Dry) are drought watch areas that are either drying out and possibly heading for drought, or are recovering from drought but not yet back to normal, suffering long-term impacts such as low reservoir levels. Since a drought typically impacts a large geographic area, the entire City of Lawrenceville could be affected.

EARTHQUAKE

An earthquake is a sudden and rapid shaking of the earth from slight tremors to destructive movements. Earthquakes are measured by magnitude and intensity. Magnitude is the measure of seismic energy released by an earthquake (Figure 3). A Richter Scale is used to measure magnitude and ranges from 2.5 or less (little to no damage) to 8.0 or greater (catastrophic damage).

Intensity is based on descriptive and the observations of the people affected by an earthquake. The Mercalli Intensity Scale is used to measure intensity and ranges from I (barely detected) to XII (significant movement). The USGS has documented six earthquakes in Illinois ranging from M 3.6 to M 5.4. Lawrence County has been rated as "high" 'for earthquakes in the 2013 State Hazard Mitigation Plan. The geographic area impacted by an earthquake is dependent on the magnitude and intensity of the event. As a result, the entire City of Lawrenceville could be affected by an earthquake.

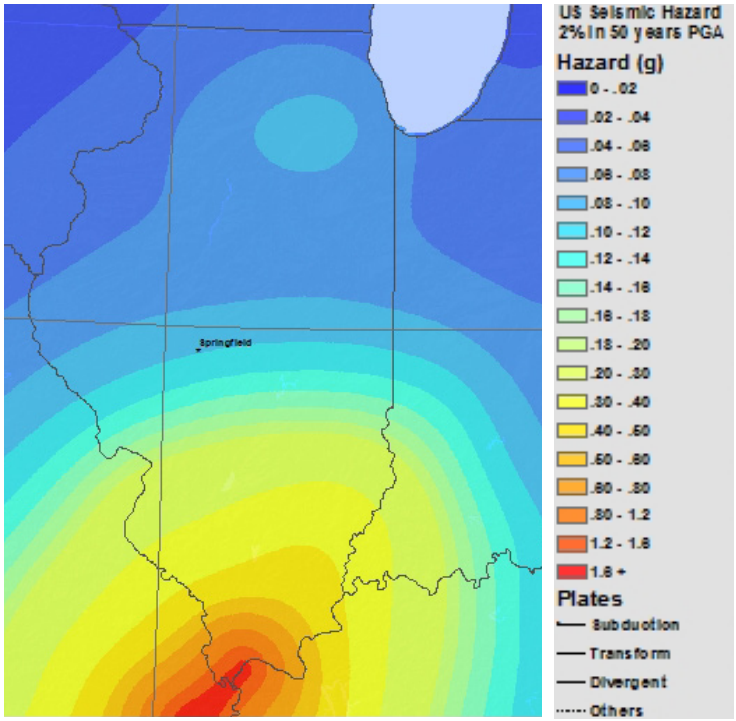

Figure 3 – Seismic hazard map (Source: FEMA)

EXTREME HEAT

Extreme heat conditions result when temperatures are 10 degrees or more above the average high temperature for several days to several weeks. In the Midwest, a heat wave is usually defined as a period of a last 3 consecutive days above 90 degrees. Extreme heat affects the people and animals by pushing their bodies beyond its limits. This condition is made worse when extreme heat is combined with humidity which retards sweat from naturally cooling the body. Young children, the elderly, those with respiratory or cardiovascular problems, and overweight are more susceptible to the effects of extreme heat conditions including heat cramps, heat exhaustion, heat stroke, and sun stroke. Extreme heat affects a large geographic area potentially impacting the entire City of Lawrenceville.

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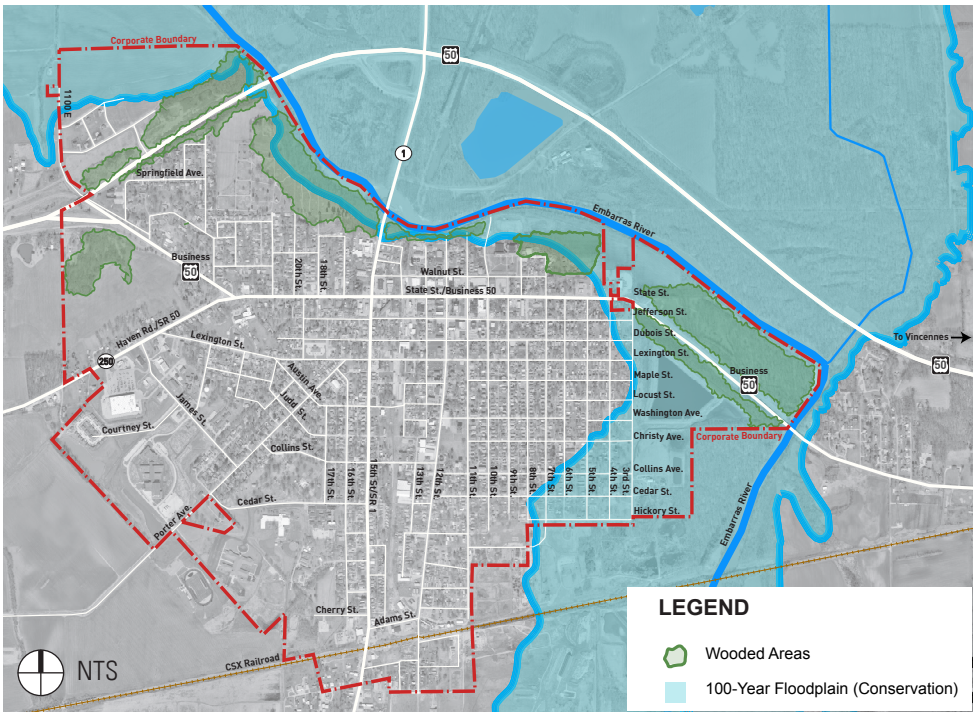
FLOOD

Flooding is a temporary condition of partial or complete inundation of 2 or more acres of normally dry land or an unusual and rapid accumulation or runoff of surface waters. Flooding may be the result of a riverine flood which is the accumulation of water in a river or stream over a period of days or weeks or it may be a flash flood which develops very quickly as the result of intense storms with a large volume of precipitation in a short period of time. Losses from flooding are attributed to encroachment and development of permanent structures in low-lying floodplain areas. Levees and dams are common structural solutions to control flooding however, when these become overtopped or breached, the impact of flooding can be catastrophic. Flooding would affect the portion of the City of Lawrenceville within the Embarras floodplain and low-lying areas. Approximately 21% of the City is within the 100-year floodplain. Figure 4 shows the area that will be inundated by a flood on the Embarras RIver.

Figure 4 - 100 year flood map (Source: FEMA)



SEVERE STORM & TORNADO

A severe storm includes wind, thunder and/or hailstorm. The NWS classifies a thunderstorm as "severe" if its winds reach or exceed 58 mph, it produces a tornado, or it drops surface hail at least 0.75 inch in diameter. A tornado is a localized and violently destructive windstorm characterized by a funnel-shaped cloud extending toward the ground. Of about 100,000 thunderstorms that occur annually in the United States, approximately 10 percent are classified as severe (Figure 5). Lawrence County has been rated as "severe" in the 2013 Illinois Hazard Mitigation Plan. A tornado is a localized and violently destructive windstorm characterized by a funnel-shaped cloud extending to the ground.

Tornadoes are measured using the Enhanced Fujita Scale which ranges from category F0 (65-85 mph) to F5 (200 mph or greater). Figure 6 shows tornado activity for the United States. The damage as a result of a tornado ranges from light damage to roofs, gutters, and tree limbs (F0) to leveling and/or significant damage to structures and large flying debris (F5). Based on data on tornadoes in the Illinois between 1950 and 2007, nearly 73% were rated as weak, 25% were rated as strong, and 2% were rated as violent. From the same data it is that weak tornadoes are typically 100 yards wide with a path length of 1 to 2 miles, strong tornadoes are usually 0.25 to 0.5 mile wide with a path length of up to 20 miles, and violent tornadoes are around 1 mile wide with path lengths greater than 20 miles. Lawrence County has been rated as "high" for tornadoes in the 2013 State Hazard Mitigation Plan. Since 1950, Illinois has averaged 36 tornadoes per year; however, in some years, this average was greatly exceeded. In 1974, 107 tornadoes were reported, and in 1998, 105 were reported followed by 79 in 1999. The year of 2003 had a record number of tornadoes with 155 tornadoes occurring.

The geographic area affected by a severe storm and tornado is difficult to predict and as a result, the entire City of Lawrenceville is at risk.

A Appendix

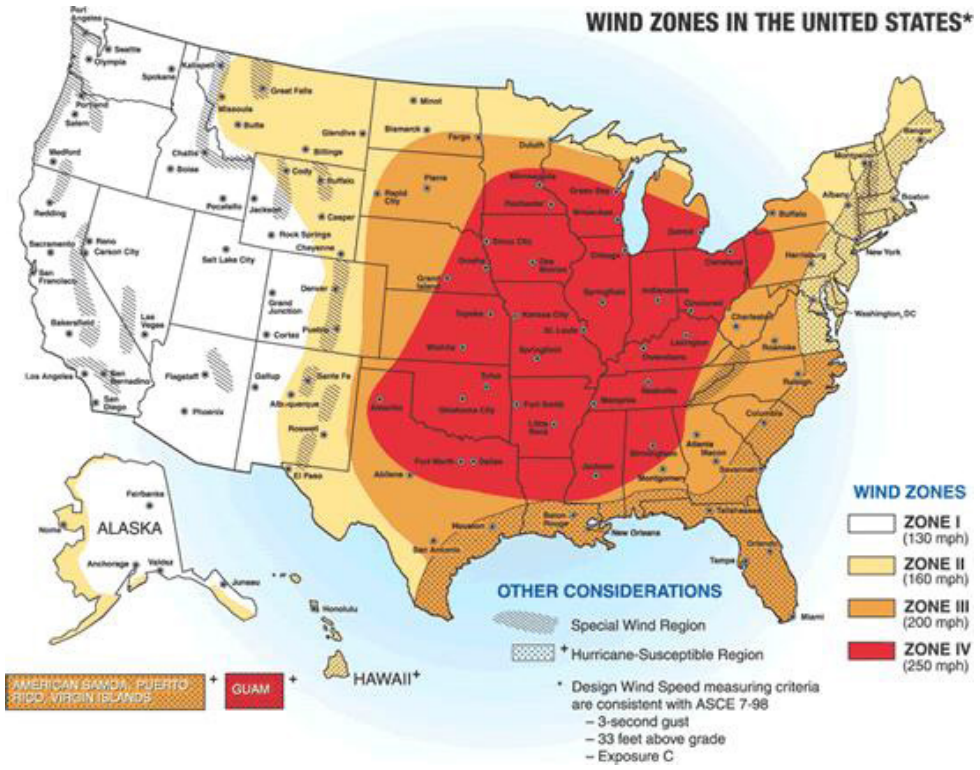


Figure 5 – United States wind zones (Source: USGS)

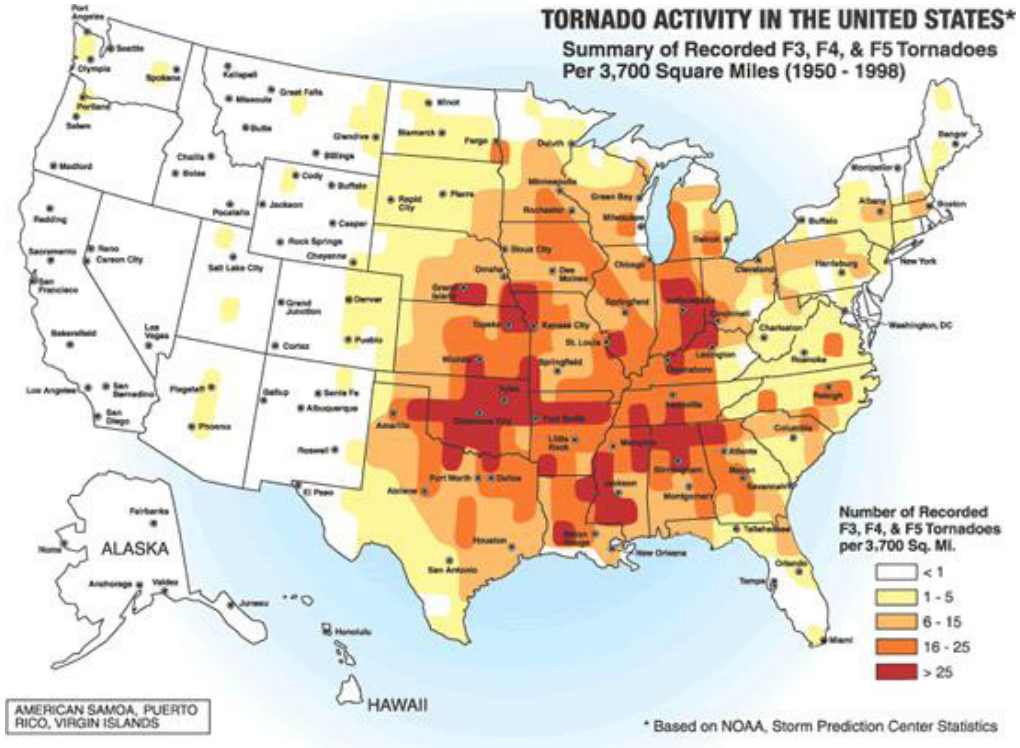


Figure 6 – United States tornado activity (Source: USGS)

SEVERE WINTER STORM

A severe winter storm includes blizzard conditions, heavy snow, and ice accumulation. Blizzards are the most dangerous of winter storms with blowing snow and winds of at least 35 mph, reducing visibility to less than a quarter mile. A heavy snow condition is an accumulation of 6 inches or more of snow in 48 hours or less. An ice storm is the result of precipitation freezing on contact and accumulating to a thickness of one-quarter inches. Severe winter storms impact a large geographic area including the entire City of Lawrenceville.

B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? 44 CFR 201.6(c)(2)(i)

The following includes a summary on the previous occurrences of drought, earthquake, extreme heat, flood, severe storm and tornado, and severe winter storm events as well as the probability of future events in the City of Lawrenceville. Information on previous occurrences was gathered from local stakeholders during meetings, the Lawrence County Emergency Management Agency (EMA), the State of Illinois Hazard Mitigation Plan, and the National Climatic Data Center (NCDC).

The probability or likelihood of future events is based the number of historical occurrences in the past 50 years. A score is assigned to the probability based on the Hazard Rating Process from the State Plan. Table 1 summarizes the level and score assigned to each level of probability.

The Hazard Ranking Process combines historical occurrences/probability, vulnerability, severity of impact, and population to provide an overall ranking of the natural hazards. The overall ranking as determined by local stakeholders in the City of Lawrenceville is included following the discussion on vulnerability (B3).

Table 1 – Probability of Future Events based on Historical Occurrences

Level	Score	Historical Occurrences
Low	6	0 to 10 occurrences in the last 50 years
Medium	12	11 to 50 occurrences in the last 50 years
High	18	More than 50 occurrences in the last 50 years

DROUGHT

Accordingto the State Mitigation Plan, the entire state was in a drought condition in September 1993 due to high temperatures and little precipitation. The NCDC database includes 6 additional drought conditions for the Lawrence County Zone, including Lawrenceville. In 2007, the combination of extended precipitation deficits and unseasonably hot conditions in August through October impacted crop yields and raised concerns about groundwater levels. A more recent prolonged period of dry weather from

June through September of 2012 resulted in Lawrence County and other southeast Illinois counties to be classified in an Exceptional Drought (D4) shown in Figure 7. As a result of this drought condition, the water level of the Embarras River at Lawrenceville dropped to the second lowest on record and the City enforced a ban on open burning.

Based on the available historical data and experience with these past events, the local stakeholders assigned a medium level and score of 12 to the probability of a future drought impacting the City of Lawrenceville.

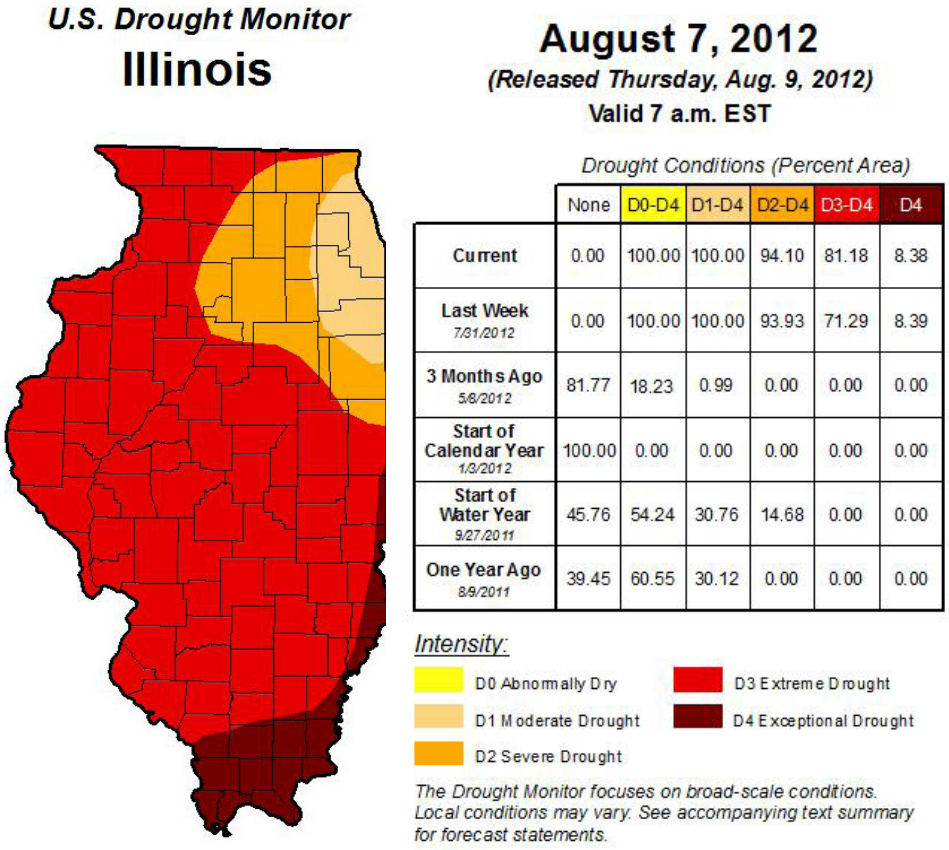


Figure 7 – Drought conditions in August 2012 (Source: U.S. Drought Monitor)

EARTHQUAKE

The State Hazard Mitigation Plan has documented 24 damaging earthquakes in southern Illinois. The damage from these earthquakes is typically minimal and includes fallen chimneys, broken windows or cracked masonry walls. Although none of the epicenters of these earthquakes has been in Lawrenceville or Lawrence County there have been several close by which have been felt by residents and resulted in some damage. The largest earthquake in central Illinois since 1895 occurred on April 18, 2008 in Mt Carmel, Illinois just 24 miles south of Lawrenceville. This earthquake measured M5.4 on the Richter Scale resulting in cracked plaster at the Lawrence County Courthouse (Figure 8) and bricks fell from a chimney and damaged a nearby parked car in Lawrenceville

Figure 8 – Earthquake damage to the Lawrence County Courthouse on April 18, 2008 (Source: Lawrence County EMA)

Based on the available historical data and experience with these past events, the local stakeholders assigned a low level and score of 6 to the probability of a future earthquake impacting the City of Lawrenceville

EXTREME HEAT

The State Hazard Mitigation Plan includes heat wave in July 1995 which resulted in multiple deaths and injuries previously unseen in the state. A combination of near-record high temperatures and humidity lead to heat indices in the 120-degree mark. In July 1999, similar conditions resulted in a prolonged period of temperatures above 100-degrees. The NCDC database includes excessive heat conditions in August 2010 and July 2012. In both cases temperatures were between 105 and 110 degrees. In 2012 the City of Lawrenceville opened cooling centers for the first time to allow the affected public to seek comfort from the extreme heat. No heat-related deaths or injuries have been reported in Lawrenceville. Figure 9 shows the relationship between temperature and likelihood of heat disorders.

Based on the available historical data and experience with these past events, the local stakeholders assigned a low level and score of 6 to the probability of a future extreme heat even impacting the City of Lawrenceville.

NOAA's National Weather Service

Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	118	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	126	130					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | External Danger

Figure 9 – the relationship between temperature and heat disorders (Source: NWS)

FLOOD

Figure 10 – flooding in Lawrenceville on June 10, 2008 (Source: Lawrence County EMA)

The NCDC has recorded 28 floods impacting Lawrence County since May 1995 resulting in $1.8M in property damage. Four of these floods were federally-declared disasters in Lawrence County. These following table summarizes these events and the individual and public assistance for Lawrence County.

Disaster No.	Diaster Date	Individual Assistance	Public Assistance
FEMA-DR-1991	June 7, 2011	$41,055	$235,658
FEMA-DR-1771	June 24, 2008	$1,497,010	$407,710
FEMA-DR-1416	May 21, 2002	$4,833	$101,415
FEMA-DR-1112	May 6, 1996	$68,127	$235,658

The most devastating of these was the Great Flood of June 2008 where multiple storm systems moved through the Midwest dumping more than 1 foot of water resulting in widespread flooding. The impact of this flood in Lawrenceville was devastating and the worst in the history of Lawrence County (Figure 10). As a result of rising flood waters 4 levees were breached. Lawrence County is surrounded by two rivers; the Embarras River on the central-western side of the county and Wabash River on the eastern side of the

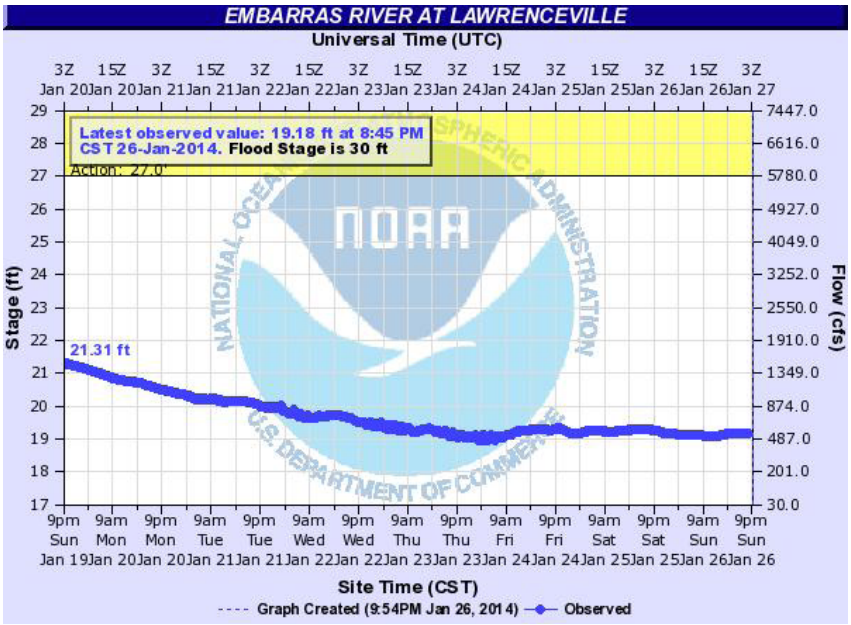


Figure 11 – Stream gage on Embarras River at Lawrenceville (Source: AHPS)

county which creates the Illinois-Indiana state line As a result of the levee breaks, nearly 200 homes were severely damaged or completely destroyed, with most of them located in the eastern side of the county.

Erosion created by the levee breach left the City of Lawrenceville and several surrounding towns without clean water. NCDC estimates the property damage from the June 2008 flood at $1.5M.

The NWS Advanced Hydrologic Prediction Service (AHPS) lists the following as critical river heights for the Embarras at Lawrenceville: action stage 27 feet, flood stage 30 feet, moderate flood stage 37 feet, and major flood stage at 41 feet (Figure 11). The June 10, 2008 stream gage reading on the Embarras River in Lawrenceville was 42.61 feet which is highest historic flood level recorded for this stream gage.

Since 2002, the stream gage on the Embarras River at Lawrenceville has recorded 24 flood stage events, 5 moderate flood stage events, and 2 major flood stage events. The major flood stage levels were recorded on May 15, 2002 and June 10, 2008.

Based on the available historical data and experience with these past events, the local stakeholders assigned a low level and score of 6 to the probability of a future flood impacting the City of Lawrenceville.

SEVERE STORM & TORNADO

Statistics on Illinois tornadoes provided by the Lawrence County EMA lists the average number of tornadoes in the state at 41. According to NCDC, eight of these tornadoes resulted in 15 injuries and $3.4M in property damages in Lawrence County. The most devastating tornado was on February 25, 1956 which resulted in two injuries and $2.5M in property damage. The majority of all the tornadoes documented in Lawrence County have winds under 110 mph or F0 and F1 tornadoes. While tornadoes can occur at any time under the right conditions, the greatest frequency of tornadoes has historically been in April, May and June.

Figure 12 – damage from high winds on April 19, 2011
(Source: Lawrence County EMA)

The NCDC has recorded 152 severe storms in Lawrence County with measured gusts from 57 to 80 mph and 0.75 to 1 inch sized hailstones. Damages from these severe storms included numerous uprooted trees and fallen limbs, downed power lines, and damage to outbuildings (Figure 12). One injury was reported from flying debris. The total reported property damage from these events was estimated at $466,000.

Four severe storms were federally declare disasters in Lawrence County. These include:

- FEMA-DR-1991 (June 7, 2011)
- FEMA-DR-1771 (June 24, 2008)
- FEMA DR-1416 (May 21, 2002)
- FEMA DR-1112 (May 6, 1996)

Figure 13 – ice accumulation on power lines and tree limbs (Source: CBBEL)

Based on the available historical data and experience with these past events, the local stakeholders assigned a medium level and score of 12 to the probability of a future severe storm and a low level and score of 6 to the probability of a future tornado impacting the City of Lawrenceville.

SEVERE WINTER STORM

Data provided by the Lawrence County EMA estimates an annual average snowfall of 16.5 inches in the County. The highest single snowfall in Lawrenceville was 12 inches in December 1973. The highest annual total snowfall in Lawrenceville was 37.6 inches in the winter of 1977-1978. The average number of days with ice and/or freezing rain is 2 per year. Figure 13 shows ice accumulated on overhead wires and tree branches.

The NCDC database lists 24 severe winter storm events in Lawrence County since 1960. These storms are responsible for two fatalities, two injuries, $90K in property damage, and $490K in crop damage (frost). One of these severe winter storms was a federally-declared disaster in Lawrence County. This includes:

- FEMA-DR-3199 (February 1, 2005) $33,898 Public Assistance

Snow accumulation from these severe winter storms ranged from 5 to 12 inches of snow causing downed tree limbs and power lines, snow accumulation on flat roof buildings, traffic accidents and impassible roads.

Based on the available historical data and experience with these past events, the local stakeholders assigned a low level and score of 6 to the probability of a future severe winter storm impacting the City of Lawrenceville.

B3. Describe each identified hazard's impact on the City of Lawrenceville as well as an overall summary of the city's vulnerability as outlined in requirement 44 CFR 201.6(c)(2)(ii).

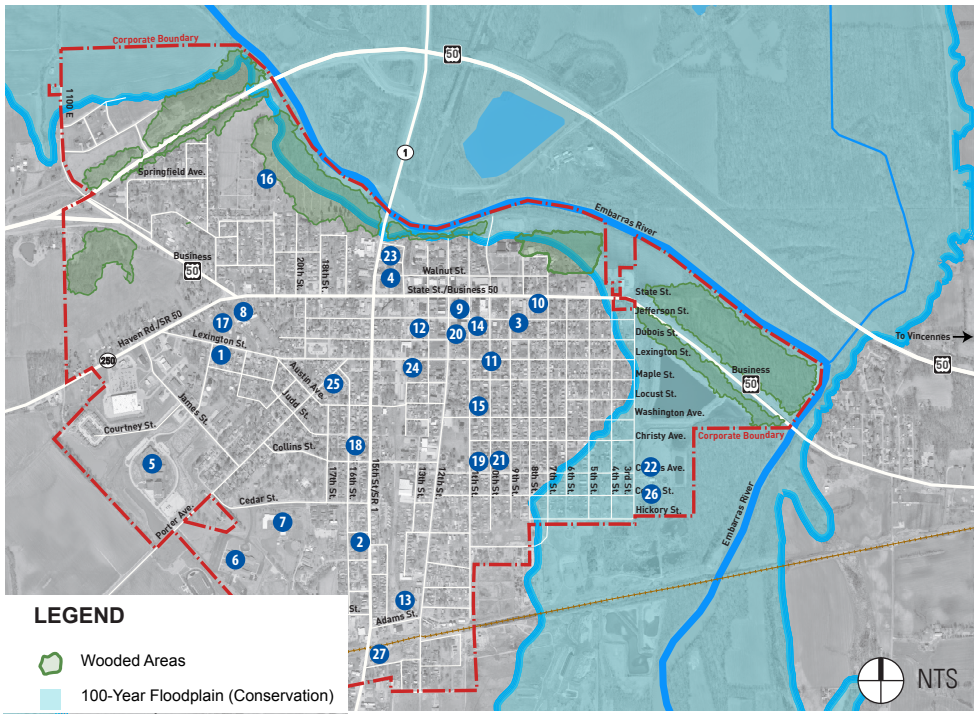
The following provides a summary of the City of Lawrenceville's vulnerability to drought, earthquake, extreme heat, flood, severe storm and tornado, and severe winter storm events. Vulnerability describes, in general terms, the current exposure, or risk, to the community regarding potential losses to critical facilities and the implications to future land use decisions and anticipated development trends. This discussion explores both the direct and indirect effects of each hazard for the City of Lawrenceville.

Also included in this discussion is the impact of hazards on critical facilities. Critical facilities are vital to the community's ability to provide essential services and protect life and property, are critical to the community's response and recovery activities, and/or are the facilities the loss of which would have a severe economic or catastrophic impact. The operation of these facilities becomes especially important following a hazard event. In the City of Lawrenceville there are 27 critical facilities, two of which are located in the 100-

Year Floodplain (Figure 14). The Mid-American Air Center is also a critical facility within the 100 year floodplain, but is located outside of City Limits (owned by the city).

The HAZUS-MH tool was used to estimate the impact and vulnerability from a simulated earthquake and flood event. HAZUS-MH is a loss estimation model that was developed by FEMA and the National Institute of Building Science (NIBS) for local, state, and regional

Lawrenceville Critical Facilities Map



officials to better understand the social, physical, and economic losses from potential earthquake and flood events.

The State Hazard Mitigation Plan uses 2 metrics to measure the risk and potential losses from hazards. These include vulnerability and severity of impact. Vulnerability is a measure of the relationship of where people live to the hazard area and the percentage of population that would be affected. Severity of impact is a measure of the types of injuries, fatalities, damage to personal property and critical facilities. Similar to probability, a score is assigned to the probability based on the Hazard Rating Process from the State Plan. Table 2 and 3 summarize the level and score assigned to each level of vulnerability and severity of impact.

Both the current population and population growth are important metrics in the Hazard Ranking Process. For the City of Lawrenceville the population metrics are fixed with

Critical Facilities List

1. *Faith Church of the Nazarene*
2. *First Church of God*
3. *First Baptist Church*
4. *First Christian Church*
5. *Lawrenceville High School*
6. *Parkside Elementary School*
7. *Parkview Jr. High School*
8. *Lawrence County Mem. Hospital*
9. *Lawrence County Courthouse*
10. *Lawrenceville City Hall*
11. *Free Menthodist Church*
12. *First Presbyterian Church*
13. *Lawrence Township Supervisor*
14. *Lawrenceville Post Office*
15. *Otterbein Methodist Church*
16. *Lawrenceville Cemetery*
17. *Lawrence Co. Hospital Heliport*
18. *Our Savior Lutheran Church*
19. *First United Methodist Church*
20. *Lawrence Public Library*
21. *St. Lawrence Catholic Church*
22. *Wastewater Treatment Plant*
23. *Drinking Water Plan*
24. *Lawrence County Sheriff/Jail*
25. *National Guard Armory*
26. *Lawrenceville Public Works*
27. *Lawrence County Highway Dept.*

Figure 14 – critical facilities in the City of Lawrenceville
Source: County GIS

low levels and scores of 1. The City's population of 4,348 is less than 100,000 and the projected population growth is not expected to increase more than 10%. Table 4 and 5 defines these.

The Hazard Ranking Process combines historical occurrences/probability, vulnerability, severity of impact, and population to provide an overall ranking of the natural hazards. The overall ranking as determined by local stakeholders in the City of Lawrenceville is included at the end of this discussion (B3).

Table 2: Vulnerability Based on the Percentage of Population Affected

Level	Score	Percentage of Population Affected
Low	6	Less than 10% of the total population
Medium	12	10% to 25% of the total population of the jurisdiction
High	18	More than 25% of the total population of the jurisdiction

Table 3: Severity of Impact based on Injuries, Property Damage, and Interruption to Critical Facilities

Level	Score	Impact
Low	6	Minor injuries (under 50) & property damage (under $1,000,000), or less than 24 hour shutdown of critical facilities
Medium	12	Serious injury (more than 50), major property damage ($1,000,001 to $15,000,000), or 24 to 72 hour shutdown of critical facilities
High	18	Multiple deaths (more than 5), property destroyed or damaged beyond repair (more than $15,000,000), or more than 3 days of shutdown for critical facilities

Table 4: Population Based on the Number in the Jurisdiction

Level	Score	Current Population
Low	1	0 to 100,000 population in the jurisdiction
Medium	2	100,001 to 500,000 population in the jurisdiction
High	3	More than 500,000 population in the jurisdiction

Table 5: Percentage of Increase of Population Growth

Level	Score	Projected Population
Low	1	% of decrease to 10% projected population increase in the jurisdiction
Medium	2	11% to 25% projected population increase in the jurisdiction
High	3	More than 25% projected population increase in the jurisdiction

DROUGHT

A drought will generally affect a large geographic area. According to the State Hazard Mitigation Plan, Southern Illinois is more vulnerable to drought due to soils that hold less water and water supplies are more likely to rely on shallow groundwater and surface water sources (Figure 15). The direct and indirect effects from a long period of drought on the City of Lawrenceville may include:

Figure 15 – low water levels during a drought
(Source: CBBEL)

Direct Effects:

- Loss of revenue from landscaping companies, golf courses, restrictions on industry cooling and processing demands, businesses dependent on crop yields; and increased potential for fires.
- Drinking water wells may be impacted during low water periods and may require drilling of deeper wells or loss of water service for a period of time.

Indirect Effects:

- Loss of income of employees from businesses and industry affected; loss of revenue to support services (food service, suppliers, etc.).
- Lower yields from domestic gardens increasing the demand on purchasing produce and increased domestic water usage for landscaping.
- Increased demand on emergency responders and firefighting resources.

It is difficult to estimate the potential losses associated with a drought because of the nature and complexity of this hazard and the limited data on past occurrences. As the City of Lawrenceville grows, protocols may need to be developed which create a consistency for burn bans and water usage advisories.

The local stakeholders assigned a medium level and score of 12 to the vulnerability metric and low level and score of 6 to the severity of impact metric for the City of Lawrenceville's risk and potential losses as a result of a drought.

EARTHQUAKE

Earthquakes generally affect broad areas and potentially many counties at one time. Types of loss caused by an earthquake could be physical, economic, or social in nature (Figure 16). Due to the unpredictability and broad impact regions associated with an earthquake, all critical and non-critical facilities are at risk of experiencing earthquake related damages. Damages to structures, infrastructure, and even business interruptions can be expected following an earthquake. Within the City of Lawrenceville the direct and indirect effects from an earthquake may include:

Figure 16 – minor earthquake damage
(Source: CBBEL)

Direct Effects:

- Damage due to structures and critical facilities.
- Bridges, buried utilities, earthen levees, and other infrastructure may be affected.

Indirect Effects:

- Provide emergency response personnel to assist in the areas with damage.
- Provide shelter for residents of areas with damage.
- Delays in delivery of goods or services originating from areas more affected by the earthquake.

In order to determine the losses associated with an earthquake, the HAZUS-MH software was utilized to estimate the impact from a M5.5 earthquake with an epicenter within the City of Lawrenceville.

According to the HAZUS-MH scenario, total economic loss associated with this earthquake is anticipated to be near $70,000. The HAZUS-MH model computes anticipated economic losses for the hypothetical earthquake due to direct building losses and business interruption losses. Direct building losses are the costs to repair or to replace the damage caused to the building and contents, while the interruption losses are associated with the inability to operate a business due to the damage sustained. Based on this earthquake scenario, HAZUS-MH estimates little to no significant damage to structures and no residents should be displaced or require temporary shelter following this earthquake scenario. Business interruption losses also include the temporary living expenses for those people displaced from their homes. Total building related losses are anticipated to be $60,000, of which 29% ($17,400) of the estimated business losses are related to business interruption. The HAZUS-MH model estimates no economic loss to the transportation system and $10,000 to the waste water utility system. Based on this scenario, it is anticipated that all critical facilities would be fully functional within one day following this earthquake.

Although the impact as estimated from the HAZUS-MH earthquake model are relatively low, the City should provide education and outreach about building codes and standards, safety precautions, and earthquake insurance. As the City grows, these efforts could mitigate the social, physical, and economic losses from earthquakes in the future.

The local stakeholders assigned a high level and score of 18 to both the vulnerability and severity of impact metrics for the City of Lawrenceville's risk and potential losses to an earthquake event.

EXTREME HEAT

Extreme heat will generally affect a large geographic area; however, certain portions of the population may be more vulnerable to extreme heat (Figure 17). For example, outdoor laborers, very young and very old populations, low income populations, and those in poor physical condition are at an increased risk to be impacted during these conditions.

By assessing the demographics of the City of Lawrenceville, a better understanding of the relative risk that extreme heat may pose to certain populations can be gained. In total, nearly 23% of the City's population is over 65 years of age, and 10% of the population is below the age of 5, and approximately 21% of the population is considered to be living below the poverty line.

People within these demographic categories are more susceptible to social or health related impacts associated with extreme heat. Within the City of Lawrenceville, direct and indirect effects from a long period of extreme temperature may include:

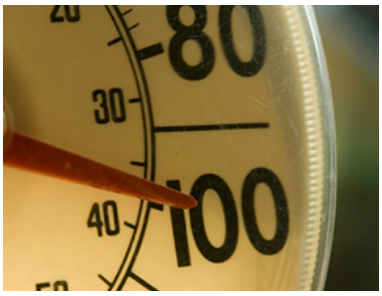


Figure 17 – high temperature
(Source: CBBEL)

Direct Effects:

- Health risks to the elderly, infants, people with chronic medical disorders, lower income families, outdoor workers, and athletes.

Indirect Effects:

- Increased need for cooling or warming shelters.
- Increased medical emergency response efforts.
- Increased energy demands for heating or cooling.

It is difficult to estimate the potential losses due to extreme heat as damages are not typically associated with buildings but instead, with populations and persons. As more and more citizens are experiencing economic difficulties, local power suppliers along with charitable organizations have implemented programs to provide cooling and heating mechanisms to residents in need. Often, these programs are donation driven and the need for such assistance must be demonstrated. As susceptible populations increase or as local economies are stressed, such programs may become more necessary to protect City of Lawrenceville's at risk populations.

The local stakeholders assigned a medium level and score of 12 to the vulnerability metric and low level and score of 6 to the severity of impact metric for the City of Lawrenceville's risk and potential losses to extreme heat.

FLOOD

Flood events are typically isolated to low-lying areas and poorly drained areas (Figure 18). The Embarras River floodplain is a significant area along the north and east boundary of the City of Lawrenceville. The direct and indirect effects of a flood event may include:

Direct Effects:

- Structural and content damages and/or loss of revenue for properties affected by flood water.
- Short and long term sheltering needs for the population displaced from a flood.

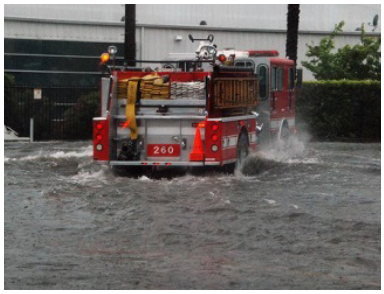


Figure 18 – fire engine driving through floodwater
(Source: CBBEL)

Indirect Effects:

- Increased response times for emergency personnel if roads are impassable.
- Increased costs associated with personnel to carry out evacuations in needed areas.
- Increased risk of explosions and other hazards associated with floating propane tanks or other debris.
- Losses associated with missed work or school due to closures or recovery activities.
- Cancellations of special events in impacted areas or water related activities that become too dangerous due to high water.

The HAZUS-MH software was utilized to determine the impact anticipated from a 1% annual chance flood (100-year flood) from the Embarras River. According to this scenario, the total economic loss is estimated at $4.54M. The HAZUS-MH model computes anticipated economic losses for the hypothetical flood based on direct building losses and business interruption losses. Direct building losses are the costs to repair or to replace the damage caused to the building and contents, while the interruption losses are associated with the inability to operate a business due to the damage sustained. Based on this flood scenario, HAZUS-MH estimates $4.53M in damage to structures alone. It is estimated that residential structures would sustain the greatest damage estimated at $2.87M followed by roughly $930,000 in building, inventory and content damage to commercial properties. The model estimates that 51 households would be displaced from the flood and roughly 100 people would need temporary shelter.losses and business interruption losses. Direct building losses are the costs to repair or to replace the damage caused to the building and contents, while the interruption losses are associated with the inability to operate a business due to the damage sustained. Based on this flood scenario, HAZUS-MH estimates $4.53 million in damage to structures alone. It is estimated that residential structures would sustain the greatest damage estimated at $2.87 million followed by roughly $930,000 in building, inventory and content damage to commercial properties. The model estimates that 51 households would be displaced from the flood and roughly 100 people would need temporary shelter.

Business interruption losses also include the temporary living expenses for those people displaced from their homes and are estimated at $20,000. The HAZUS-MH model estimates no economic loss to the transportation system or waste water utility system. Based on this scenario, it is anticipated that no critical facilities would be impacted by this flood event.

As the City of Lawrenceville grows in population, it can be anticipated that the number of critical and non-critical facilities will also increase accordingly. Location of these new facilities should be carefully considered and precautions should be encouraged to ensure that school, medical facilities, community centers, municipal buildings, and other critical facilities are located outside the 0.2% annual chance (500-year) floodplain and/or are protected to that level along with a flood-free access to reduce the risk of damages caused by flooding and to ensure that these critical facilities will be able to continue functioning during major flood events.

It is also important to ensure that owners and occupants of residences and businesses within the known hazard areas, such as delineated or approximated flood zones, are well informed about the potential impacts from flooding incidents as well as proper methods to protect themselves and their property. As detailed flood maps are developed for the Embarras River, residents and businesses within these areas should being notified that they may be subject to an increased risk of damages associated with flooding.

The local stakeholders assigned a medium level and score of 12 to the vulnerability metric and low level and score of 6 to the severity of impact metric for the City of Lawrenceville's risk and potential losses to a flood.

SEVERE STORM & TORNADO

The effects of a severe storm (hailstorm, thunderstorm, or windstorm) may be minimal to extensive in nature and may affect small or broad ranges of land area. As a path of a tornado is not pre-defined, it is difficult to isolate specific critical facilities and non-critical structures, or areas that would be more or less vulnerable (Figure 19). Direct and indirect effects from severe storm and tornado may include:

Direct Effects:

- Damages to personal property and structures, mobile homes, and accessory structures (pole barns, sheds, etc.).
- Damages to above ground utility lines and structures.

Indirect Effects:

- Damage sustained from blowing debris.
- Expenses related to debris clean-up and/or reconstruction.
- Loss associated with power outages.
- Loss of revenue for affected businesses.
- Loss of work if employers are affected.

Figure 19 – example of damage from a tornado.
(Source: CBBEL)

Due to the unpredictability of this hazard all critical facilities and non-critical structures in the City of Lawrenceville are at risk of damage including temporary or permanent loss of function. For hailstorms, thunderstorms, and windstorms, it is not possible to isolate specific critical facilities or non-critical structures that would be more or less vulnerable to damages. However, areas where utility lines are above ground and areas where dead or dying trees have not been removed may be at a higher risk of property damages or power outages during severe storms. Additionally, mobile homes and accessory

buildings such as pole barns and sheds may also be at a higher risk of damages if not properly anchored to the ground.

As the population of the City of Lawrenceville grows, it can be anticipated that the number of critical and non-critical structures will also increase. In order to reduce the vulnerability for damages resulting from a hailstorm, thunderstorm, or windstorm, measures such as proper anchoring, enforcement of the International Building Codes, and burial of power lines should be completed.

The local stakeholders assigned a medium level and score of 12 to the vulnerability metric and low level and score of 6 to the severity of impact metric for the City of Lawrenceville's risk and potential losses to a severe storm. In regards to the City's risk to tornados, the local stakeholders assigned a high level and score of 18.

SEVERE WINTER STORM

A severe winter storm typically affects a large regional area with potential for physical, economic, and/or social losses (Figure 20). Direct and indirect effects of a severe winter storm within the City of Lawrenceville may include:

Figure 20 – winter storms create difficult driving conditions. (Source: CBBEL)

Direct Effects:

- Employers may experience loss of production as employees may not be able to get to work.
- Roads may impassable.
- Expenses related to snow removal or brine/sand applications.
- Roof collapse under weight of snow.

Indirect Effects:

- Loss of revenue as businesses are closed.
- Increased emergency response times based on safety of roads.
- Loss of income if unable to get to place of employment.

Given the nature and complexity of a regional hazard such as a severe winter storm, it is difficult to quantify potential social, physical and economic losses. As populations increase and communities continue to grow in size, the need to respond to severe winter storms will remain an important municipal effort. As new construction or re-development occurs, especially new or existing critical facilities, it is important to ensure that these new structures are equipped to deal with the potential risks associated with this hazard.

Those may include lengthy power outages and potentially impassable transportation routes, making it difficult to obtain supplies or for passage of response vehicles. Those may include lengthy power outages and potentially impassable transportation routes, making it difficult to obtain supplies or for passage of response vehicles. vehicles.

The local stakeholders assigned a medium level and score of 12 to the vulnerability metric and low level and score of 6 to the severity of impact metric for the City of Lawrenceville's risk and potential losses to a severe winter storm.

HAZARD RANKING SUMMARY

The IEMA has developed a hazard ranking process to compare and evaluate natural hazards in Illinois. This process considers 1) the historic probability or frequency of an individual event, 2) the percentage of the population that would be vulnerable to an event, 3) the severity of the impact such as injuries, fatalities, personal property and infrastructure loss, and 4a) the number of people affected now and 4b) with anticipated population growth. The numerical values assigned in each of metrics is added to determine whether the hazard ranking is low, guarded, elevated, high, and severe.

Key stakeholders from Lawrenceville with experience in response and recovery efforts used this same hazard ranking process to determine the city's risk to these hazards. Table 6 summarizes the hazard ranking results from the local stakeholders.

Based on this hazard ranking, the hazards with the greatest risk to the City of Lawrenceville are earthquake and tornado. Even though the city has not had as many historical tornado or earthquake events, the vulnerability and severity

Table 6: Hazard Ranking Summary

HAZARD	Historical/ Probability	Vulnerability	Severity of Impact	Population (number)	Population (% increase)	TOTAL	RATING*
Drought	12	12	6	1	1	32	Elevated
Earthquake	6	18	18	1	1	44	High
Extreme Heat	6	12	6	1	1	26	Elevated
Flood	6	12	6	1	1	26	Elevated
Severe Storm	12	12	6	1	1	32	Elevated
Severe Winter Storm	6	12	6	1	1	26	Elevated
Tornado	6	18	18	1	1	44	High

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

of impact were thought to impact more than 25% of the population, cause multiple deaths, and destroy property beyond repair. Drought and severe storm (hailstorm, thunderstorm, and windstorm) were ranked as an elevated risk. These hazards are more frequent however less of the population would be affected and there would be less damage than from a tornado or earthquake. Extreme heat, flood, and severe winter storm also ranked as an elevated risk but with a lower score due to less frequent historic events. Somewhat of a surprise is the relatively low score associated with flooding based on the recent devastation from the June 2008 flood and the HAZUS-MH results discussed above. The key stakeholders felt that only a portion of the city is impacted and the severity from even a large flood is less than the destruction from a large scale tornado or earthquake.

B4. Identify NFIP insured structures within the City of Lawrenceville that have been repetitively damaged by floods as outlined in requirement 44 CFR 201.6(c)(2)(ii).

The Federal Emergency Management Agency defines a "repetitive loss structure" as an NFIP insured structure that has received 2 or more flood insurance claim payments of more than $1,000 each within any 10-year period since 1978. These structures account for approximately one-third of the nation's flood insurance claim payments. Identifying these structures and working with local jurisdictions to implement the appropriate mitigation measures to eliminate or reduce the damages caused by repeated flooding to these structures is important to FEMA and the NFIP. These structures not only increase the NFIP's annual losses, they drain funds needed to prepare for catastrophic events. The City has 1 property that fit this description. This property is a single-family dwelling that has had 2 loss claims as of May 16, 2002 resulting in $22K in total loss.

The City of Lawrenceville is currently in good standing with the NFIP and will continue to implement and enforce all NFIP requirements. The City will continue to improve and enforce zoning/building codes associated with floodplain management, while completing and developing current and accurate floodplain maps.

ELEMENT C: MITIGATION STRATEGY

C1. Document the City of Lawrenceville's existing authorities, policies, programs and resources, and its ability to expand on and improve these existing policies and programs as outlined in requirement 44 CFR 201.6(c)(3).

The City of Lawrenceville has a small population of 4,348, according to the 2010 Census data. City services are limited and emergency management is handled predominantly through the Lawrence County EMA. Preparing this PDMP has significantly increased elected officials, decision-makers and city staff's awareness and knowledge of natural hazards. This is reflected in the policies identified in the updated Comprehensive Plan and will be subsequently reflected in forthcoming updates to the zoning and subdivision

control ordinances, stormwater management ordinances, transportation and economic development policies.

The following lists the current City policies, programs, and resources that will be expanded upon and/or improved as a result of this PDMP:

- Comprehensive Plan, 1989 (updated 2014)
- Floodplain Ordinance, 2011
- TIF Districts, 2008 and Enterprise Zones, 2007
- Zoning Ordinance, 1992
- Hazardous Weather Operations Plan, (unknown date)
- webpage (updated regularly)

C2. Discuss the City of Lawrenceville's participation in the NFIP and continued compliance with NFIP requirements, as appropriate as outlined in requirement 44 CFR 201.6(c)(3)(ii).

The City of Lawrenceville participates in the NFIP (CID 170411) and continues to be compliant with the NFIP requirements. The City adopted a new floodplain ordinance in 2011 to complement the new flood maps that were issued from FEMA the same year. This ordinance regulates new construction in the floodplain including the construction of critical facilities if no other feasible alternative is available. However, the lowest floor (including the basement) of the critical facility must be elevated or structurally dry floodproofed to the 500-year or 3-feet above the 100-year flood whichever is greater. Roads and access ways to and from the critical facility must be flood free to the 100-year.

In 2011 the floodplain area was removed from the City's Enterprise Zone to discourage new construction in the floodplain.

The City acknowledges that the floodplain is a known hazard area where mitigation efforts such as voluntary acquisition and/or floodproofing could significantly reduce the social, physical, and economic losses associated with a flood event and restore the natural and beneficial function of the floodplain. This PDMP includes voluntary acquisition and/or floodproofing as a high priority mitigation practice.

C3. List the PDMP goal for the City of Lawrenceville to reduce/avoid long term vulnerabilities to the identified hazards as outlined in requirement 44 CFR 201.6(c)(3)(i).

The overall goal of the City of Lawrenceville PDMP is to reduce the social, physical, and economic losses associated with hazards events through emergency services, natural resource protection, prevention, property protection, public information, and structural control mitigation practices. This will be achieved through the following specific goals:

1. Protect the people of Lawrenceville and the places in the city where they live, work, and play from the dangers of natural hazards.
2. Prevent critical facilities and critical infrastructure from disruption before, during, and after a natural hazard.
3. Increase the overall awareness of natural hazards for elected officials, decision-makers, City staff, and the public to build support for and successful implementation of the mitigation practices in this PDMP.
4. Promote sustainable land use practices that restrict development and redevelopment in known hazard areas.

Figure 21 – example of an emergency evacuation route signage (Source: CBBEL)

C4. Identify and analyze a comprehensive range of specific mitigation actions and projects for the City of Lawrenceville that are being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure as outlined in requirement 44 CFR 201.6(c)(3)(ii) and 44 CFR 201.6(c)(3)(iv).

The following is a list of existing and proposed mitigation practices for the City of Lawrenceville under the following 6 types of mitigation practices identified by FEMA. These include: emergency services, natural resource protection, prevention, property protection, public information, and structural control mitigation practices.

Emergency Services

Measures that protect people during and after a hazard Existing Mitigation Practices:

Figure 22 – Community Emergency Response Training (CERT) (Source: Lawrence County EMA)

- County EMA has prepared a Disaster Situations: Hazardous Weather Operations Plan for the City of Lawrenceville which includes local warning system and SkyWarn Weather Spotter Activations; tornado, flood and severe summer and winter weather warnings; reporting damage to the National Weather Services; and evacuation shelter plans for the disabled.
- County EMA maintains and operates 2 outdoor warning sirens that provide good coverage of the City of Lawrenceville.
- County EMA has distributed NOAA weather radios to all critical facilities including the City of Lawrenceville.
- County EMA conducts regular Community Emergency Response Team (CERT)

trainings including interested businesses, organizations, and residents including the City of Lawrenceville (Figure 22).

- County EMA maintains a dedicated Emergency Operations Center (EOC) to coordinate resources and emergency response efforts during various hazard events including those impacting the City of Lawrenceville. An alternative EOC is located at the County Health Department.
- County EMA utilizes a reporting and tracking system to document resources needed and expenditures related to hazard events including those affecting the City of Lawrenceville.
- County EMA monitors the real-time stream gage on the Embarras River with AHPS capabilities to provide the City of Lawrenceville with river height and action levels
- County EMA coordinates with City Police and volunteer Fire Department to conduct door to door notifications during a flood event.
- County EMA coordinates trained weather spotters, amateur radio operators, and other volunteers to provide timely severe weather warnings including those impacting the City of Lawrenceville.
- American Red Cross in Mount Carmel works with the County EMA and the City of Lawrenceville to provide assistance as needed in response to a disaster, including set-up of temporary shelters.
- State EMA is in the process of implementing a statewide E911 public alert system that will include notification to the City of Lawrenceville.

Proposed Mitigation Practices and Key Implementation Steps:

ES1 Designate and maintain evacuation routes out of the City of Lawrenceville (Figure 21)

1. Identify and map evacuation routes.
2. Post and maintain signs in good condition.
3. Notify residents and businesses (City and EMA webpages, media, E911, Severe Weather Week, etc.).

ES2 Coordinate with local businesses to include electronic alerts on private message boards

1. Identify and map businesses willing to post emergency messages on private message boards.
2. Maintain contact information and specifics about message board

(number of characters, location, visibility, etc.).

ES3 Encourage residents and business to have battery powered or hand crank weather radios

1. Educate residents and businesses (City and EMA webpages, media, Severe Weather Week, etc.) on the value of having a weather radio.
2. As available, secure funding to purchase weather radios.
3. Provide weather radios to residents and businesses in need.

ES4 Designate and enforce snow removal routes with no street parking.

1. Identify and map snow removal routes.
2. Post and maintain signs in good condition.
3. Notify residents and businesses (City and EMA webpages, media, E911, Severe Weather Week, etc.).

NATURAL RESOURCE PROTECTION

Opportunities to preserve and restore natural areas and their function to reduce the impact of hazards.

Existing Mitigation Practices:

- City is in good standing with the NFIP and has a flood protection ordinance that goes above FEMA's minimum requirements.
- City provides drainage oversight and planning for new and redevelopment projects.
- City maintains a water conservation ordinance and has established procedures for issuing and enforcing burn bans during times of drought.

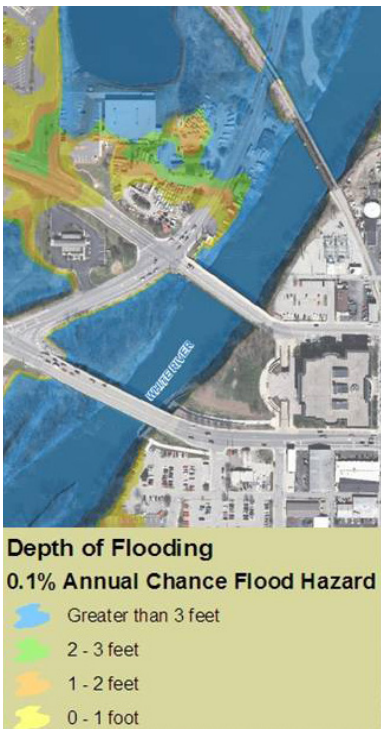


Figure 23 – example of flood depth mapping (Source: CBBEL)

Proposed Mitigation Practices and Key Implementation Steps:

NRP1 Conduct a detailed hydraulic analysis of the Embarras River to better understand flood risk and extent

1. Secure funding or funds from existing budget to complete floodplain study.
2. Hire a contractor to complete a detailed hydraulic analysis of the Embarras River and submit revisions to IDNR and FEMA.
3. Use designated flood zones to assist with local land use decisions.

NRP2 Conduct flood depth mapping to better understand anticipated flood depths (Figure 23)

1. Secure funding or use funds from existing budget to complete flood depth mapping.
2. Hire a contractor to complete flood depth map of the Embarras River floodplain in

Lawrenceville.

3. Notify land owners in the floodplain of the potential risk and damage based to their property and structures.

NRP3 Include "No Adverse Impact" and/or compensatory storage language in the floodplain management ordinance for future development in the floodplain

1. Review the City of Lawrenceville's current Floodplain Ordinance.
2. Determine areas where improvements or adjustments can be made to include compensatory storage requirements.
3. Review the Association of State Floodplain Managers (ASFPM) No Adverse Impact (NAI) language and incorporate into existing ordinance.
4. Adopt the updated and revised ordinance as appropriate.

NRP4 Encourage the restoration of natural drainage paths and the Embarras River in new and redevelopment projects .

1. Partner with the County SWCD and/or local land trust to establish a conservation easement program to permanently protect and restore natural drainage paths and provide a property tax incentive to land owners.
2. Educate developers about low impact development principles to utilize low lying natural drainage paths for stormwater management, flood control, and groundwater recharge.

PREVENTION

Measures that are designed to keep the problem from occurring or getting worse.

Existing Mitigation Practices:

- City has incorporated hazard information, risk assessment, and hazard mitigation practices into the Comprehensive Plan to better guide future growth and development as part of this joint PDMP and Comprehensive Plan update.
- City utilizes GIS to manage data geographically and aid in land use planning decisions.
- Utility providers routinely complete tree maintenance as needed to prevent dead and dying tree limbs from falling and damaging property and power lines, or injuring people during severe weather events.

Proposed Mitigation Practices and Key Implementation Steps:

P1 Conduct a "Safe Growth Audit" of development plans and codes.

1. Obtain a copy of the American Planning Association's Safe Growth Audit publication and questionnaire.
2. Assemble a team to review and discuss long-range plans, ordinances, and other municipal planning documents.
3. Utilize the PDMP hazard information to develop areas where growth should be limited or restricted.
4. Complete the questionnaire to identify areas where development plans and codes could be amended and resiliency to hazards improved.
5. Draft, adopt, and implement the amended language.

P2 Identify public and commercial structures that are at risk for damage from natural hazards.

1. Create an inventory of public and commercial structures that are at risk based on location, age of structure, building material, current condition, etc.
2. Develop criteria and prioritize structures to be retrofitted.
3. Secure funds and/or partner with developers interested in redevelopment opportunities to retrofit identified structures and improve resiliency to hazards.

P3 Establish an Abandoned Properties Action Plan that includes an inventory of unsafe structures that need to be demolished to reduce the likelihood of structural fires and/or arson (Figure 24).

1. Create an inventory of unsafe structures.
2. Develop criteria and prioritize structures to be demolished.
3. Partner with developers interested in infill development opportunities to prevent the lots from sitting vacant.
4. Secure funds including FEMA for structures in the floodplain (FEMA funds will require the floodplain area to remain as open space).
5. Safely demolish unsafe structures and rebuild with infill development or maintain as passive recreation open space.

PROPERTY PROTECTION

Measures that are used to modify buildings subject to hazard damage rather than to keep the hazard away.

Existing Mitigation Practices:

- City follows the International Building Code which includes minimum requirements to minimize damages from natural hazards.

- City Floodplain Ordinance allows new critical facilities in the floodplain if no other feasible alternative is available. However, the lowest floor (including the basement) must be elevated or structurally dry floodproofed to the 500-year or 3-feet above the 100-year flood whichever is greater.

Figure 24 – example of an unsafe structure that should be demolished (Source: CBBEL)

Proposed Mitigation Practices and Key Implementation Steps:

PP1 Relocate, buy-out, elevate, or floodproof (non-residential) existing non-critical facilities that are subject to repetitive flooding (Figure 25).

1. Identify and prioritize structure that are subject to repetitive flooding.
2. Review FEMA guidance on voluntary acquisition and floodproofing.
3. Conduct meetings with property owners to promote interest in the program.
4. Complete FEMA application process and submit for consideration.
5. Acquire properties, demolish structures, and maintain as passive recreation open space.

PP2 Encourage new or retrofitted critical facilities to incorporate structural bracing, shutters, laminated/impact resistant glass, and inter-locking roof coverings to minimize damage.

1. Maintain a current list of critical facilities and need for structural improvements.
2. Secure funds to incorporate structural improvements into new construction and/or retrofitted facilities.
3. Install structural improvements and improve resiliency to hazards.

PP3 Encourage the installation of lightning rods and grounding as well as surge protectors in all critical facilities.

1. Identify and prioritize critical facilities in need of lightning rods.
2. Secure funds to purchase and property install lightning rods.

Figure 25 – example of a house elevated above the regulatory floodplain. (Source: CBBEL)

PUBLIC INFORMATION

Those activities that advise property owners, potential property owners, and visitors about the hazards, ways to protect themselves and their property from the hazards.

Existing Mitigation Practices:

- County EMA provides educational seminars, trainings, and literature at Severe Weather Week, Fall Festival, EMA Office, City of Lawrenceville City Hall, County Health Department, and Get Ready with Freddy program for 3rd graders.
- County EMA maintains a detailed webpage of historic hazard events as well as current weather conditions, severe weather tracking and notifications.

Proposed Mitigation Practices and Key Implementation Steps:

PI1 Post information/warning signage in local parks and other public gathering places identifying safe refuges and emergency procedures (Figure 26)

1. Identify public gathering places and closest available shelter to accommodate largest anticipated crowd.
2. Educate owners of public gathering places and the general public what to do in the event of a hazard event at that location (City and EMA webpages, media, Severe Weather Week, etc.).
3. Post and maintain signs to direct public to shelter area and/or what to do if no shelter exists.

STRUCTURAL CONTROL MEASURES

Physical measures used to prevent hazards from reaching a property.

Existing Mitigation Practices:

- US Army Corp of Engineers (USACE) conducts regular inspections and maintenance of the levees along the Wabash and Embarras Rivers.
- County ordinance restricts public access and recreational vehicular use on levees.

Proposed Mitigation Practices and Key Implementation Steps:

SC1 Elevate the road or other structural means to ensure flood-free access to the Mid-American Air Center and waste water treatment facility

1. Hire a contractor to develop alternatives for flood-free access during at least the 100-year flood event.
2. Review, evaluate and select the best alternative.
3. Secure funds to implement the best alternative.

Figure 26 – signage to alert people where to take shelter during severe weather (Source: CBBEL)

C5. Identify mitigation actions and their prioritization for implementation (including cost benefit review) as outlined in requirement 44 CFR 201.6(c)(3)(iii) and 44 CFR (c)(3)(iv).

For each of the proposed mitigation practices the Project Steering Committee and the County EMA Director determined a priority ranking for implementation, discussed the benefit cost considerations, and what department in the City would be responsible for the successful implementation (Table 6). The benefit derived from each proposed mitigation practice and its associated cost is a based on the judgment and experience of the Project Steering Committee and County EMA Director. Preparing a detailed benefit cost analysis was beyond the scope of this planning effort and intent of the PDMP.

This PDMP is a necessary first step of a multi-step process to implement programs, policies, and projects to mitigate the effect of natural hazards in the City of Lawrenceville. The intent of this planning effort was to identify the hazards and the extent to which they affect the city and to determine what type of mitigation practices may be undertaken to mitigate for these hazards. A FEMA-approved mitigation plan is required in order to apply for and/or receive project grants under the HMGP, PDM, FMA, and SRL. FEMA may require a mitigation plan under the Repetitive Flood Claims (RFC) program. Although this PDMP meets the requirements of DMA 2000 and eligibility requirements of these grant programs additional detailed studies may need to be completed prior to applying for these grants.

C6. Describe the process by which the City of Lawrenceville will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate as outlined in requirement 44 CFR 201.6(c)(4)(ii).

This PDMP was developed in conjunction with the update to the City's Comprehensive Plan. The risk assessment and mitigation practices in the PDMP have directly influenced land use and economic development policies in the Comprehensive Plan as well as other ongoing planning efforts in Lawrenceville including:

- Floodplain Ordinance, 2011
- TIF Districts, 2008 and Enterprise Zones, 2007
- Zoning Ordinance, 1992
- Hazardous Weather Operations Plan, (unknown date)

It is anticipated that this PDMP will influence the City's proposed stormwater and/or drainage ordinance, subdivision control ordinance, thoroughfare plan, and open space plan.

Table 7 identifies the responsible party for implementing each mitigation practice. The overall responsibility for implementation of this PDMP is the Mayor who will work with the Plan Commission, Police, Public Works, Industrial Development Council, and the County EMA to monitor implementation of the mitigation practices. Availability of funding and staff resources will impact the successful implementation of the mitigation practices.

Table 7: Priority Ranking and Implementation Responsibility of Proposed Mitigation Practices

MITIGATION PRACTICE	PRIORITY RANKING*	BENEFIT COST RATIO	IMPLEMENTATION RESPONSIBILITY
ES1 – Evacuation Routes	High	High	City Police, County EMA, Red Cross
ES2 – Electronic Alerts	Medium	High	City Police, City DPW, County EMA
ES3 – Weather Radios	High	High	County EMA
ES4 – Snow Removal Routes	Low	High	City Police
NRP1 – Detailed River Study	Low	Moderate	City Plan Commission, City Mayor
NRP2 – Flood Depth Mapping	Low	Low	City Plan Commission, City Mayor
NRP3 – No Adverse Impact	Low	High	City Plan Commission, City Mayor
NRP4 – Natural Drainage	Low	High	City Plan Commission, City Mayor
P1 – Safe Growth Audit	Medium	High	City Plan Commission, City Mayor
P2 – Structures at Risk	Low	Moderate	City Plan Commission, City Mayor
P3 – Abandoned Property List	Low	Moderate	City Plan Commission, City Mayor
PP1 – Buyout or Elevate	High	High	City Plan Commission, City Mayor
PP2 – Strengthen Structures	Medium	Moderate	City Plan Commission, City Mayor
PP3 – Lightning Rods	Low	Moderate	City Plan Commission, City Mayor
PI1 – Warning Signage	Low	High	City Police
SC1 – Flood-free Access	High	Moderate	City Industrial Development Council

**High = implementation in 5 years, Medium = implementation in 5-10 years, Low = implementation in 10+ years*

ELEMENT D: Plan Review, Evaluation & Implementation

D1. Discuss how the revised plan reflects changes in development as outlined in requirement 44 CFR 201.6(d)(3).

- Not applicable. This is the City of Lawrenceville's first mitigation plan.

D2. Discuss how the revised plan reflects progress in local mitigation efforts as outlined in requirement 44 CFR 201.6(d)(3).

- Not applicable. This is the City of Lawrenceville's first mitigation plan.

D3. Discuss how the revised plan reflects changes in priorities as outlined in requirement 44 CFR 201.6(d)(3).

- Not applicable. This is the City of Lawrenceville's first mitigation plan.

ELEMENT E: Plan Adoption

E1. Document that the plan has been formally adopted by the City of Lawrenceville City Council as outlined in requirement 44 CFR 201.6(c)(5).

The City of Lawrenceville City County formally adopted this PDMP on April 10, 2014. The signed resolution is included in this Appendix.

E2. For mult-jurisdictional plans, document the adoption process for each jurisdiction requesting approval of the plan documented formal plan adoption as outlined in requirement 44 CFR 201.6(c)(5).

Not applicable. The City of Lawrenceville is the only jurisdiction that this PDMP applies to.

A Appendix

Carni, IL
Source: Wikipedia

CASE STUDY: VOLUNTARY ACQUISITION CARMI, ILLINOIS

Profile:

Carmi, Illinois is a small city in White County Illinois located along the Little Wabash River. This is an important case study for the City of Lawrenceville because the City is of comparable size (5400 persons in 2000) to Lawrencevile, has repetitive flooding and disinvestment on the east side of town, and is looking for a way to mitigate the effects of future flood losses and blight within affected areas of the community.

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) released $707,507 in Hazard Mitigation Grant Program (HMGP) funds the City of Carmi, Il., for the acquisition and demolition of 22 residential structures and the purchase of seven flood prone vacant lots located in the Little Wabash River floodplain. Following demolition, these properties will be maintained as permanent open space in the community. Mayor Jeff Pollard says demolition work should commence by this summer. He adds that grant money may be available to create walking paths or bike trails in parts of the floodplain. The floodplain stretches from the Little Wabash River to the railroad tracks in East Carmi. Not every homeowner agreed to sell their property. "I'm excited. I think people are ready to have these lots cleared" - stated Mayor Pollard. It will make a huge difference in the appearance of East Carmi."

For more information on the Hazard Mitigation Grant Program Visit: *http://www.fema.gov/hazard-mitigation-grant-program*

The properties must be maintained as open space in the community. Pollard said the city cannot resell the land for someone to build a home.

Burnt out house in East Carmi
Source: www.wrul.com

"The Hazard Mitigation Grant Program enables communities to implement critical mitigation measures to reduce the risk of loss of life and property," said FEMA Region V Administrator Andrew Velasquez III. "The acquisition and demolition of these homes permanently removes the structures from the floodplain and greatly reduces the financial impact on individuals and the community when future flooding occurs in this area.

"This grant will enable us to build on our previous flood mitigation efforts in Carmi, which removed more than three dozen homes from the floodplain," said Illinois Emergency Management Director Jonathon Monken. "With these additional property acquisitions, even more families can avoid the emotional and financial costs from future floods."

HMGP provides grants to state and local governments to implement long-term hazard mitigation measures. Through HMGP, FEMA will pay $707,507 or 75 percent of the project's total cost. The City of Carmi will contribute 25 percent of the remaining funds, or $235,836 (the match for this project was covered by the Illinois Department of Natural Resources).

Source: http://www.fema.gov/news-release/2014/03/05/fema-awards-707507-grant-city-carmi-hazard-mitigation-funds-will-be-used http://www.wrul.com/news-detail.php?ID=33129

OVERVIEW FEMA HAZARD MITIGATION GRANT PROGRAM

The Hazard Mitigation Grant Program (HMGP) was created to assist States, Tribes, and local communities in implementing long-term hazard mitigation measures following a major disaster declaration.

WHAT TYPES OF PROJECTS CAN BE FUNDED?

The HMGP can be used to fund projects to protect either public or private property, as long as the project fits within State and local government mitigation strategies to address areas of risk and complies with HMGP guidelines.

Examples of projects include:

- Acquiring and relocating structures from hazard-prone areas;
- Retrofitting structures to protect them from floods, high winds, earthquakes, or other natural hazards;
- Constructing certain types of minor and localized flood control projects;
- Constructing safe rooms inside schools or other buildings in tornado-prone areas;
- Developing State, local, or Tribal mitigation plans.

WHAT ARE THE ROLES OF COMMUNITIES, STATES, AND FEMA?

During the recovery phase of a disaster, local jurisdictions select projects that could reduce property damage from future disasters, and submit grant applications to the State. Local governments may apply for assistance to benefit individual property owners and businesses. The States administer the HMGP by establishing their mitigation priorities, facilitating the development of applications, and submitting applications to FEMA based on State criteria and available funding. The State also manages the project, monitors progress, and evaluates the effectiveness of projects implemented. FEMA conducts a final eligibility review to ensure compliance with Federal regulations. HMGP projects must comply with Federal environmental laws and regulations, be cost-effective, and be technically feasible. Federal law requires States and local jurisdictionsto have a mitigation plan prior to receipt of HMGP funds (this document).

For More Information Visit: http://www.fema.gov/media-library-data/20130726-1708-25045-9805/hazard_mitigation_grant_program_brochure.pdf

Source: http://www.fema.gov/media-library-data/20130726-1708-25045-9805/hazard_mitigation_grant_program_brochure.pdf

HAZARD MITIGATION ASSISTANCE - PROPERTY ACQUISITION (BUYOUTS)

Across the nation, more and more flood-inundated communities are choosing property acquisition as a hazard mitigation option. Besides being a permanent solution to a hazard-related problem, property acquisition achieves many other objectives, such as protecting critical habitat, providing opportunities for recreation, providing flood storage, or enhancing other natural or cultural resources.

HOW BUYOUTS WORK

It is important to understand that FEMA does not buy houses directly from the property owners. Acquisition or Buyout projects, while 75 percent funded by FEMA, are administered by the State and local communities. The State and local communities work together to identify areas where buyouts make the most sense. Individuals may not apply directly to the State, but the community may sponsor an application on their behalf. Buyouts are an important way to reduce the risk of future disasters. Money is limited and in most cases, the amount of money set aside for mitigation cannot meet all the mitigation needs following a disaster. States prioritize mitigation programs with input from the communities.

Property acquisition is one of many forms of hazard mitigation, but it is the most permanent form. It removes people from harm's way forever. In a property acquisition project, the community buys private property, acquires title to it, and then clears it. By law, that property, which is now public property, must forever remain open space land. The community can use it to create public parks, wildlife refuges, etc. but it cannot sell it to private individuals nor develop it. Property acquisitions work the same way as any other real estate transaction. Property owners who want to sell their properties will be given fair prices for them. It is a terrific opportunity for people who live on or near hazard areas to get to safer ground.

FAIR COMPENSATION

Communities may offer homeowners who agree to participate in a buyout project up to the fair market value of the home BEFORE the disaster struck. A licensed appraiser hired by the community determines the fair market value.

VOLUNTARY PARTICIPATION

Buyouts are strictly voluntary. No homeowners are ever forced to relinquish their property. Homeowners who decide not to participate in the buyout may need to take risk reduction measures, such as elevating their homes.

THE STEPS OF A BUYOUT

Homeowners do not apply to FEMA for a buyout. Buyouts are not part of the disaster application process and are not part of disaster assistance.

- An application for assistance is prepared by local officials with input from the community and those homeowners with destroyed or severely damaged properties. The local officials will have been notified by the State of what the State's priorities are or other special restrictions decided upon by State officials.
- The State receives and reviews the application and submits those deemed appropriate to FEMA for approval. FEMA reviews the applications to ensure they follow the rules, are environmentally sound, and are a cost-effective use of funds.
- Once FEMA gives its approval, the State begins the acquisition process. The communities actually conduct the purchase and title transfer. Then the buildings are removed or destroyed by the community, and the land is cleared.

Since a buyout is not a simple matter and requires a great deal of education and community input- it does not happen overnight. It may take months for a State and the affected communities to submit and agree to buyout proposals. Once a homeowner accepts a buyout offer, though, the average closing takes about 45 days.

COSTS THE COMMUNITY WILL PAY

If you choose to sell your property, the community will pay the costs usually associated with real estate transactions, including the appraisal, title search, and if necessary, lot survey. The community will also pay the closing costs. The property owner will be responsible for any mortgages, liens, etc., against their property...just like any other real estate sale.

Also, like any other real estate sale, you will be responsible for the moving costs and other costs associated with renting or buying new property. Since property acquisition relies on voluntary participation, the government does not pay any relocation costs. However, there are exceptions for any tenant who is displaced by an owner's decision to sell, and for owners whose income level might preclude them from affording other housing.

ADVANTAGES AND DISADVANTAGES

Individual property owners will want to weigh the advantages and disadvantages of property acquisition. The advantages of property acquisition include:

- Peace of mind because it reduces, if not eliminates, most of your future risk
- Fair compensation generally based on the pre-flood market value of your home
- A chance for a new start
- A means of recovery that is more advantageous than repair grants or loans
- An opportunity to recoup at least partially your financial investment in a property that has lost value

On the other hand, property acquisition has its disadvantages for you. These may include:

- Loss of roots
- Despite efforts to compensate you fairly, property acquisition may not make you "whole" again

The process can be lengthy. Property acquisition is not an overnight solution. Applying for funds, waiting for approval, transferring funds, conducting appraisals and closings, etc., take time, especially if the project involves many properties.

Source: http://www.fema.gov/application-development-process/hazard-mitigation-assistance-property-acquisition-buyouts

ONLINE RESOURCES:

Several online resources fully detail the process. The Property Acquisition Handbook for Local Communities brings together into one document the best practices from States that have successfully fostered property acquisition projects.

The Property Acquisition Handbook for Local Communities can be downloaded at the following link: http://www.gohsep.la.gov/mitigation/propacqhndbk.pdf

FEMA details the process at the following link: http://www.fema.gov/application-development-process/hazard-mitigation-assistance-property-acquisition-buyouts

LIST OF ACRONYMS

- AHPS Advanced Hydrologic Prediction Service
- AICP American Institute of Certified Planners
- CBBEL Christopher B. Burke Engineering, LLC
- CDBG Community Development Block Grant
- CERT Community Emergency Response Team
- DHS Department of Homeland Security (US)
- DMA Disaster Mitigation Act
- EMA Emergency Management Agency
- EOC Emergency Operations Center
- FEMA Federal Emergency Management Agency
- FIRM Flood Insurance Rate Map
- FIS Flood Insurance Study
- GIS Geographic Information System
- HAZUS-MH Hazard US – Multi-Hazard
- HMGP Hazard Mitigation Grant Program
- IEMA Illinois Emergency Management Agency
- IDNR Illinois Department of Natural Resources
- NCDC National Climatic Data Center
- NFIP National Flood Insurance Program
- NOAA National Oceanic Atmospheric Administration
- NWS National Weather Service
- PDMP Pre-Disaster Mitigation Plan
- SFHA Special Flood Hazard Area
- USGS United States Geological Service

A Appendix

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A Appendix

LOCAL MITIGATION PLAN REVIEW TOOL

The Local Mitigation Plan Review Tool demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this Local Mitigation Plan Review Guide when completing the Local Mitigation Plan Review Tool.

U.S. Department of Homeland Security
Region V
536 S. Clark St., 6th Floor
Chicago, IL 60605-1509

FEMA

SEP 12 2014

Mr. Ron Davis
State Hazard Mitigation Officer
Illinois Emergency Management Agency
1035 Outer Park Drive
Springfield, Illinois 62704

Dear Mr. Davis: Ron,

Thank you for submitting adoption documentation for the City of Lawrenceville Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The City of Lawrenceville met the required criteria for a local hazard mitigation plan and the plan is now approved for the city. We appreciate that this plan was adopted as part of the City's comprehensive plan and that its implementation will be reviewed by the city's planning commission.

The approval of this plan ensures continued availability of the full complement of Hazard Mitigation Assistance (HMA) Grants. All requests for funding, however, will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted.

We encourage the city to follow the plan's schedule for monitoring and updating the plan, and continue their efforts to implement the mitigation measures. The expiration date of the City of Lawrenceville plan is five years from the date of this letter. The plan must be reviewed, revised as appropriate, resubmitted, and approved no later than the plan expiration date.

Please pass on our congratulations to the jurisdictions for completing this significant action. If there are any questions, please contact Tom Smith at (312) 408-5220 or Thomas.Smith6@fema.dhs.gov.

Sincerely,

Christine Stack

Christine Stack, Director
Mitigation Division

www.fema.gov