

Section One: Introduction

Overview – Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA2K) was enacted by the federal government for the purpose of reducing or eliminating the long-term risk to human life and property from natural disasters. This legislation provides local communities with the guidance necessary to appropriately assess the natural disasters impacting these communities and to establish and implement mitigation activities that will result in reducing or eliminating these risks. The Act emphasizes cooperative efforts among all public sectors including local citizens; city, village, township, and county officials; and State and federal governmental agencies. It is to this end that the Ashland County Mitigation Plan for Natural Disasters is established.

Committee Mission

It is the mission of the Ashland County Mitigation Planning Committee to develop and implement a Mitigation Plan for Ashland County, Ohio that is directed specifically to natural disasters. Through cooperative efforts among those identified above, the Plan is designed to minimize the adverse effects of natural disasters on the lives and properties of citizens of Ashland County.

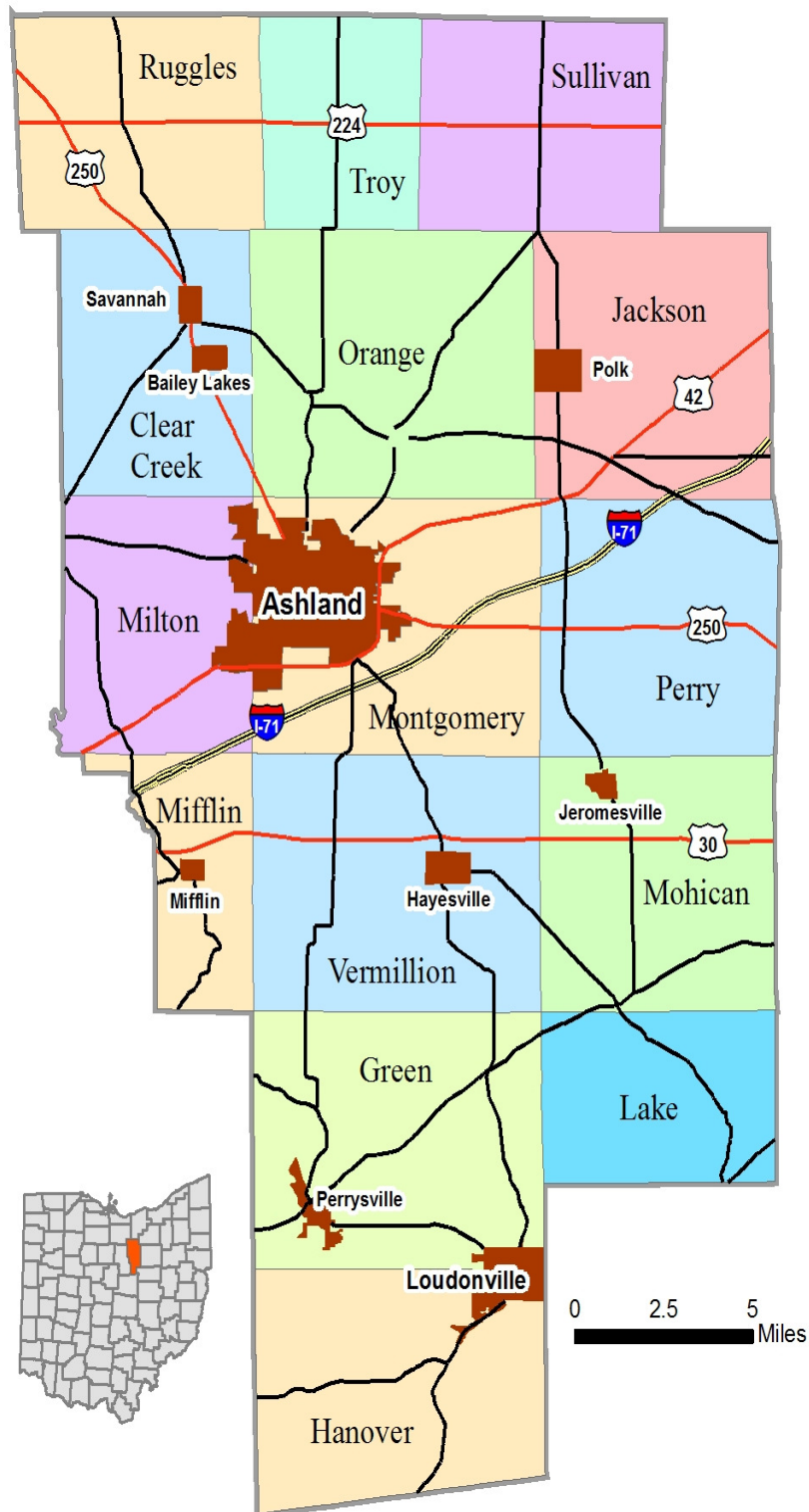
Plan Design

The Ashland County Mitigation Plan for Natural Disasters is designed, through its goals and action plans, for a five-year implementation period. It is considered a multi-jurisdictional plan. Multi-jurisdictional plans address issues specific to individual incorporated areas (the City of Ashland and County villages of Bailey Lakes, Hayesville, Jeromesville, Loudonville, Mifflin, Perrysville, Polk, and Savannah) and the 15 unincorporated areas (townships). The Plan describes the methods and procedures utilized in its development; provides the results of community assessments; identifies the mitigation activities determined to be most important to the citizens of Ashland County; and sets timelines for the implementation of those activities. This Plan will continue to be a working document.

Community Overview

Ashland County is one of 88 counties in the State of Ohio. It is located in the northeastern region of the State and is comprised of approximately 425 square miles. It is bounded by seven counties: Richland on the west; Huron on the north and west; Lorain on the north; Medina on the north and east; Wayne on the East; Holmes on the south and east; and Knox on the south. Ashland County is comprised of 24 political subdivisions; one city, 8 villages, and 15 townships. Ashland, the County Seat, is located centrally within the County. Ashland County has a population of over 54,000 (2004 data). According to the Ohio Department of Development, 60% of the land use in the County is agricultural (2000) but centers of manufacturing are dispersed throughout the County, mainly within the City of Ashland and the villages throughout the County.

Ashland County: Townships and Major Roads



Section Two: Organization

Committee Organization

One of the most important factors in this, as well as any planning effort, is to acquire the services of qualified and committed individuals who assist in the development of a formal planning document; in this endeavor, one that considers the well-being of each citizen within the County. The Ashland County Mitigation Planning Committee is comprised of such valued individuals.

Consideration for participation on the core Committee was centered upon those citizens who, because of their positions within the community, their involvement in public service activities, or because of other valued qualifications, would best provide expertise and direction to the development and implementation of a workable Mitigation Plan. Participation on the Committee by individuals with different backgrounds allows for a more well-balanced discussion with different perspectives of the important issues. This includes working knowledge of existing County Plans that involve mitigation issues. A more detailed description of these plans and how they impact mitigation activities can be found in Section Four.

Initial selection of Committee members were made by the Director of the Ashland County Office of Emergency Management and Homeland Security (ACOEMHS). In view of the extending period of overall Plan development, several members of the initial Committee were either replaced or modified their representation of County constituencies. Primary emphasis of Committee membership was given to governmental leaders at all levels within the County. Representation from the Ashland County OEMHS was considered paramount in forming the foundation for the remainder of the Committee. Representatives from governmental departments within the County such as Public Works, Solid Waste Management, and others were selected for their involvement in community planning. Other valuable assets to the Committee were representatives of County political subdivisions such as the Ashland County Commissioners and township trustees. Other community leaders representing the Ashland County Health Department, County fire departments, and law enforcement are participating on the core Committee.

Political Subdivision Participation

The success of any countywide mitigation planning effort is completely dependent upon the level of participation of those political entities that are benefited by the resulting plan. Consequently, a concerted effort, following the establishment of the Mitigation Planning Committee, was to elicit the support and direct involvement from the 24 political subdivisions within the County.

Levels of participation in the planning process by each County political subdivision varied throughout the stages of the mitigation planning effort. Initially, written correspondence and informal discussions were used to provide information on the Mitigation Act of 2000 and to describe elements of the mitigation planning process. As well, a majority of the political subdivision representatives met formally during the initial meeting of the Mitigation Planning Committee where the development of the County's Plan was initiated.

All political subdivisions within the County were afforded the opportunity to propose mitigation projects designed to lessen the impacts of natural disasters within their respective communities. These opportunities were discussed with political subdivision representatives through both verbal and written correspondence. The Committee assisted those communities in the development and submission of mitigation project proposals (see Appendix B5).

Following the completion of the draft Mitigation Plan, each incorporated political subdivision within the County, as well as the Ashland County Commissioners, was given the opportunity to formally adopt the Plan. Copies of the Plan were distributed to all political subdivisions where formal adoption of the Plan was necessary. The Plan was reviewed and discussed in formal meetings of the County Commissioners and the relevant City and Village Councils as previously described. Copies of formal resolutions adopting the Ashland County Mitigation Plan are presented in Appendix A following their passage by the relevant political subdivisions within the County.

As the planning process continues, each County political subdivision will play a valuable role in the dissemination of mitigation planning information to their respective constituents. As well, their continued involvement with mitigation initiatives is extremely important in the protection of community citizens and properties. Those efforts are described further in Section Six. Copies of the materials used during the planning process will be provided in Appendix B.

Regional Acknowledgement

The adverse effects of natural disasters are not bound by the borders of political subdivisions. Accordingly, the mitigation of natural disasters must take into consideration the impacts of natural disasters on counties adjacent to Ashland. A prime example would be the sharing of a river floodplain by counties neighboring one another. Because of these circumstances, attention must be given to the potentials of joint mitigation activities that would benefit citizens that may reside in close proximity to one another, but fall under separate county jurisdictions.

To that end, the Emergency Management Agency directors from adjacent counties (Richland, Huron, Lorain, Medina, Wayne, Holmes, and Knox) were contacted to inform them of the development of Ashland County's Mitigation Plan for Natural Disasters. The correspondence also expressed the Committee's willingness to assist in cooperative mitigation initiatives that might be developed with adjacent counties. The letter sent to these Directors, as well as their respective names and addresses can also be found in Appendix B. These potential initiatives are discussed further in Section Four: Goals and Activities.

Public Outreach

Another exceedingly important issue relating to the development and implementation of the Ashland County Mitigation Plan is the participation of County citizens in those processes. Information provided by the Planning Committee is critical in gaining the support and involvement of the citizenry in the overall planning effort. In order to be effective, the Mitigation Plan must fit the needs of the people it is charged to protect. It is important that public involvement be solicited from the early stages of plan development and continues throughout the entirety of the planning process. The Planning Committee's efforts to maximize community involvement are described in Section Six.

Section Three: Hazard Analysis

Overview

The Ashland County Mitigation Planning Committee provides the following Hazard Analysis of natural disasters that have affected, and will continue to potentially affect, Ashland County, Ohio. The purpose of this hazard analysis is to identify properties and populations within the County that are most at risk from the adverse impacts of natural disasters. To that end, the data and other information acquired during this portion of the mitigation process will be used to develop specific mitigation projects. These proposed projects, identified in a forthcoming section of the Plan, will be designed to lessen the adverse impacts of natural disasters on the citizens of Ashland County. The Hazard Analysis section of the Plan has been completed in accordance with provisions of the Federal Mitigation Act of 2000.

The Hazard Analysis section includes five unique components: Hazard Identification, Profiles of Hazard Events, Community Profile, Vulnerability Analysis, and Estimated Losses.

The Hazard Identification component is designed to recognize particular types of natural disasters that have the potential of occurring within the County. Recorded incidences of past natural disasters were used to make this determination. Sources used in this identification and incorporation within the Plan are described below. The natural disasters impacting Ashland County are listed specifically in this section. This section stands alone and is considered to be the foundation for the remaining components of the Hazard Analysis section. With the exception of the Vulnerability Analysis component, the data and other pertinent information for each of the remaining hazard analysis components is contained under the headings for each specific natural hazard listed.

Profiles of Hazards Events identify past incidences of natural disasters within Ashland County. The information and data presented in these profiles were obtained through review of historical data from news media sources, discussions with community residents, County officials, representatives from the Ohio Emergency Management Agency, Ohio Department of Natural Resources, and the National Weather Service. Internet websites were researched as were resources through Bowling Green State University. Additional sources of data/information are identified under specific natural disasters. Data provided on the extent of damage and losses are as complete to the best of our knowledge from the research conducted on each natural disaster. Utilizing these determinations is valuable in the mitigation process by focusing mitigation efforts on particular natural disasters deemed to be more pertinent to the County.

The Community Profile component compares overall County property statistics to those within the pertinent hazard area. The County property data are available through the office of the Ashland County Auditor. However, at this time, the relevant County data are not coordinated within a GIS (Geographic Informational System). Without GIS capability, accurate property loss data could not be calculated with any degree of certainty. Given these circumstances, no specific property use group or property loss data are provided at this time. Generalities for losses, however, will be mentioned as a component of each specific natural disaster identified in this Section. To that end, the Planning Committee has determined that the Hazard Analysis component of the Plan will base its conclusions of this Section on its remaining components. Conclusions will also be based on an understanding by members of the Planning Committee and the community at-large of what specific natural disasters are likely to impact the County, the areas of the County vulnerable to specific natural disasters, and the relative monetary losses to properties most vulnerable to those specific natural disasters. With due consideration to the importance of corroborating property loss data, specific calculations for use group property identifications and their respective value losses, both types of data will be calculated and incorporated within this Plan as GIS capability becomes

available. The process of incorporating a GIS program is currently a part of a grant proposal that has been submitted to the US Department of Homeland Security. This grant proposal is a joint venture between the County and the City of Ashland. If approved and the monies received, The County/City project would be required to be completed by 2011. Once the GIS program has been incorporated within the County system, property data calculations of effective parcels and property financial loss will then be made for each hazard identified and added to the Plan as routine updates occur.

Specific population data were also not included as a part of the Hazard Analysis. Historical documentation has indicated that injuries/deaths of Ashland County citizens due to natural disasters have been minimal. Some correlations can also be made between property occupancy types and populations without providing specific numbers of individuals. Mitigation planning, however, will continue to include personal injury/death potentials as a major consideration for proposed activities/projects.

The Vulnerability Analysis component is presented within the Appendices section of the Plan in the form of aerial photos and maps. Both are provided for County areas where localized hazard events are possible (e.g. Class I dam failure, flood, and tornado). Mapping of generalized hazard events (e.g. drought and severe winter storm) is not included as a formal part of the Plan due to their potential impact over the entire County. Aerial photos and maps were provided through the Department of Geography, Bowling Green State University.

Overall emergency planning and response authority for all natural disasters occurring within the County are under the authority of the Ashland County Office of Emergency Management and Homeland Security. Emergency planning and response activities are implemented in cooperation with all relevant County political subdivisions. Procedures and other provisions of emergency planning and response to natural disasters are specified within Ashland County's *Emergency Operations Plan*. Should the capabilities of response at the County level be exceeded, requests for assistance would be made by the Ashland County Office of Emergency Management and Homeland Security to the Ohio and/or Federal Emergency Management Agencies.

The final Hazard Analysis component, Estimated Losses, quantifies monetary damage that might be incurred to properties affected by the respective natural disaster. As previously explained, with the unavailability of GIS for County property data, definitive estimations of monetary losses to property are not provided. Generalizations of relative monetary losses to property are provided as a component of each natural disaster identified in this Section. Specific estimated losses will be incorporated within this Plan following the implementation of a Countywide GIS program.

As stated in the introductory section of the Plan, Ashland County is comprised of 24 political subdivisions; one city, 8 villages, and 15 townships. Ashland, the County's most populous incorporated area, is the County seat and is located mid-County. Villages are dispersed throughout the County and are not concentrated in any particular section within the County. Land use is primarily agricultural, but centers of commercialization are found throughout the County, most generally within the City of Ashland and the respective villages.

Future population growth within Ashland County is expected to remain fairly constant. Current and projected tendencies are for populations to increase, mainly in suburban locations. Current population increases have essentially been due to relocations from urban areas within the County and not relocations from other states/counties. Future increases will most likely occur from urban locations as well.

Expansion of structures within 100 year floodplain areas is also expected to be minimal. Any construction in these areas must meet the provisions of County resolution (unincorporated areas) and ordinances established by political subdivisions within the County. Floodplain management planning efforts will be addressed in an upcoming section of the Plan.

Hazard Identification

Based upon historical data and other information obtained from the aforementioned sources as well as Ashland County's *Emergency Operations Plan*, there are a number of natural disasters that have potentials for adversely impacting Ashland County. These are as follows: Class I dam failure, drought/extreme heat, earthquake, flood, hailstorm, severe winter storm, tornado, and windstorm. Individually, these natural disasters may affect the County in varying degrees of severity. As mentioned, the remaining three components of this hazard analysis will be addressed individually for each of these natural disasters.

When discussing the impacts of natural disasters on any community, one important issue lies in the vulnerability of critical facilities and the likelihood of their having a high potential of being severely damaged or destroyed by natural disasters. Critical facilities are considered those that provide essential services to the community that include schools, fire departments, law enforcement offices, hospital, and government buildings (see Appendix C, Fig. 1). Impacts of individual natural disasters on critical facilities will be addressed within the respective hazard description. Protection of critical facilities is identified as a goal of the Plan. Mitigation initiatives associated with specific critical facilities are provided in Section Five.

Class I Dams

According to the Ohio Department of Natural Resources, Class I dams are selected on the basis of three criteria: height (greater than 60 feet), storage volume (greater than 5,000 acre-feet, and potential downstream hazard (probable loss of life, serious hazard to health, and structural damage to high value property). Only one of these criteria needs to be met for a dam to be classified as Class I. The Ohio Department of Natural Resources has identified five Class I dams for Ashland County (see Appendix C, Fig.2). All of these Class I dams are earthfill with four being located in the geographical southern half of the County.

The largest Class I dam is located at Pleasant Hill Lake in Hanover Township. The dam contains a capacity of 128M gallons of water and it provides flood control for the Clear Fork Mohican River and an area of recreation for public use. The reservoir was constructed in 1936 with the nearest community to the dam being Greer at a distance of 14.4 miles.

A second large Class I dam is found in Mifflin Township at Charles Mill Lake. It was also constructed in 1936 and it is used for flood control for the Black Fork Mohican River and also as a public recreation area. The dam's nearest affected community is Perrysville at a distance of 9.8 miles.

Another of Ashland County's Class I dams is the Cinnamon Lake dam having a capacity of 47.8M gallons. The dam is located in Jackson Township in the northeastern section of the County and is owned by the Cinnamon Lake association, Inc. Its drainage area is 3.41 square miles with the closest affected community being West Salem, 4.2 miles away. The dam contains waters from Muddy Fork for the purpose of private recreation.

A fourth Class I dam, located in Mohican Township, is the Mohicanville dam. The dam was constructed in 1936 and the nearest affected community is Lakeville, 5.3 miles away. It is a dry dam with the sole purpose of flood control.

The smallest of the five Class I dams is located at Artesian Lake in Montgomery Township. The dam was constructed before 1968 for the purpose of private recreation. The drainage area of the dam is calculated at 0.49 square miles.

Profile of Hazard Event – Class I Dams

There have been no failures of any of the aforementioned Class I dams in Ashland County since they were constructed. The probability of a Class I dam breach would be considered as low.

Community Profile/Estimation of Losses– Class I Dams

Flooding of nearby homes and other occupied structures would be considered a likely outcome should a breach of a Class I dam occur. Roadways within close proximity to the dams and some adjacent agricultural property may also be affected.

As mentioned previously, cost estimations are not provided in this Section. However, overall considerations for losses due to a Class I dam failure would be minimal from both a property and associated financial loss basis. It is also projected that there would be no losses to human life associated with a failure of any or all Class I dams within Ashland County.

Drought/Extreme Heat

FEMA considers drought as “a persistent and abnormal moisture deficiency having adverse effects on vegetation, animals, or people.” Extreme heat, which may precede drought conditions, is considered to involve conditions where temperatures are 10 degrees or more above the average high temperature for the region and last for several weeks.

Profile of Hazard Events – Drought/Extreme Heat

The following is a listing of annular periods of drought and related periods of extreme heat that have occurred in Ashland County since 1900.

1930-36 (drought with periods of extreme heat)	1988 (drought/extreme heat)
1939-1946 (drought with periods of extreme heat)	1995 (extreme heat)
1952-1957 (drought with periods of extreme heat)	1996 (drought)
1959-1968 (drought with periods of extreme heat)	1999 (drought/extreme heat)

Community Profile/Estimation of Losses – Drought/Extreme Heat

Seasons of drought and periods of extreme heat can potentially occur during any particular year when climatic conditions are conducive. Effects of both drought and extreme heat would be expected to impact the entire County. Agricultural losses to crops and livestock would primarily be affected during periods of drought versus buildings and infrastructure. Drought can also result in the reduction of potable water supplies for humans and animals; necessitating water conservation methods. Extreme heat could result in adverse health-related affects to both humans and animals.

Financial losses to structures would not be applicable to periods of drought. As mentioned, losses of agricultural productivity would indeed be an issue. Definitive financial losses to agriculture due to drought are, for the most part, unavailable. The exception is \$200M in crop losses in 1999. These losses were projected over most of Ohio, including Ashland County. Estimations of the percentage of crop loss were available for the 1996 and 1999 droughts. These losses were set at 10-30% individually. Using this range of percentage crop losses for corn, soybeans, and wheat and average yearly yields and prices (1981-2001), the range of monetary losses for Ashland County would be estimated at \$5M - \$17M. Data for the average yields and related costs were provided by the Ohio Farm Bureau.

Projected financial losses to structures/parcels due to extreme heat would not be applicable as well. Decreased water supplies and health-related effects to both humans and animals from extreme heat would also be difficult to project and quantify. Mitigation activities relating to drought and extreme heat would come primarily in the form of public education and other informational releases that would limit these effects on the community. Mitigation planning activities are addressed in a subsequent section of the Plan.

Earthquake

Earthquakes are caused by the movements of the Earth's tectonic plates. Effects of earthquakes can range from minor ground motion to severe ground surface faults. Earthquake severity, in terms of magnitude, is measured using several different scales. For the purpose of this document, the Richter Magnitude Scale (RMS), as described below, will be used.

Descriptor	Richter Magnitudes	Earthquake Effects	Average Annually
Micro	Less than 2.0	Micro-earthquakes, not felt.	About 8,000 per day
Very minor	2.0-2.9	Generally not felt, but recorded.	About 1,000 per day
Minor	3.0-3.9	Often felt, but rarely causes damage.	49,000 (estimated)
Light	4.0-4.9	Noticeable shaking of indoor items, rattling noises. Significant damage unlikely.	6,200 (estimated)
Moderate	5.0-5.9	Can cause major damage to poorly constructed buildings over small regions. At most slight damage to well-designed buildings.	800
Strong	6.0-6.9	Can be destructive in areas up to about 100 miles across in populated areas.	120
Major	7.0-7.9	Can cause serious damage over larger areas.	18
Great	8.0 or greater	Can cause serious damage in areas several hundred miles across.	1

According to the US Geological Survey (USGS), the entirety of Ashland County falls within the New Madrid Seismic Zone. This seismic zone has been the source of numerous earthquakes that have resulted in earthquakes of magnitudes that span the Richter Scale. The USGS identifies a Peak Acceleration Level (% g) for Ashland County at 2-4%. This level is on a scale of 0-180 and would be considered relatively low risk.

Profile of Hazard Events - Earthquake

According to data from the Ohio Seismic Network, there were four earthquakes with an RMS greater than 2.0 recorded in Ashland County since 1776. All four occurred between June and August of 1940, three with an RMS of 2.9 and one with an RMS of 3.0.

Community Profile/Estimation of Loses - Earthquake

Effects to structures, as well as to infrastructure, may be possible from future incidences of an earthquake within the County. Past earthquake events have resulted in no structural damage. There have been no human loses (injuries or deaths). Based upon these historical data, the entirety of Ashland County would continue to have an earthquake potential. However, as previously stated, the losses that might be incurred in such events would be estimated as minimal.

Flood

According to the Ohio Ashland County is a part of the Muskingum River Basin that includes a number of watersheds. Rivers and streams in the northwestern section of the County are a part of the Huron and Vermillion River Basins. The Lower Mohican River Basin, the Black Fork Basin and, to a much lesser extent, the Kokosing River Basin serve as the watersheds in the southern area of the County. The County contains a number of rivers, streams, and ditches that could potentially flood (see Appendix C, Fig. 3). Severe flooding would affect most Ashland County waterways and, in turn, would impact properties that represent a variety of use groups. Areas of potential flooding during a 100-year flood are presented in Appendix C, Fig. 4. The specific incorporated areas affected by the individual floodplains are described below.

Flooding could result from torrential rains occurring for a short period of time (flash floods), moderate to heavy rains lasting an extended period of time, normal level rains on saturated land areas, and from melting snow and ice, or from ice jams in waterways that release during increased water flow in winter.

Profile of Hazard Events - Flood

The table below provides data on past flooding events. These data were obtained from a variety of sources including, but not limited to, the National Climate Data Center, the U.S. Geological Survey, FEMA, NOAA, personal interviews, Ohio Department of Natural Resources, and Ashland County Library research. Due to the number of individual flooding events that have occurred in the past, only those of relative significance will be described. Mitigation planning for floods, however, will consider all occurrences.

Date of Occurrence	Location	Description of Losses	\$ in Losses (2008 Values)
March 1913	Countywide	Damage to homes, businesses, etc. throughout County	No data found
January 1959	Countywide	Extensive damage to homes, businesses, and roads	No data found
July 1969	Countywide	Flood caused damage to homes and businesses, banks of reservoir gave way, 1 death	\$1.4M
January 1993	Countywide	Power outages, basements and roads flooded	\$1M
August 1998	Countywide	Damage to homes, businesses, etc. throughout County	\$329K
August 2006	Southern Ashland County	Flooding in areas of the Mohican State Park, flooded homes and roadways, evacuations necessary	Approximately \$1.4M

Community Profile/Estimation of Losses – Flood

Flooding of County rivers and streams may result in damage to structures, personal property, roadways, and other infrastructure. Depending upon the severity of the flooding, evacuation of individuals may be necessary. There are several critical facilities located within the 100-year floodplain, primarily water and wastewater treatment facilities. These facilities are located in the City of Ashland, and the villages of Bailey Lakes, Loudonville, and Perrysville. Backups of municipal sewerage systems would be possible as well as the pooling of water. The pooling of water poses the potential for mosquito breeding if the water remains for extended periods. Increased mosquito populations, in turn, increase the potential for the spread of mosquito-borne diseases.

Repetitive loss structures are also of concern when considering mitigation efforts. A repetitive loss structure is defined as one that is damaged in excess of \$1,000; occurring at a frequency of less than 10 years. An identification of those structures is maintained by FEMA and the Ohio Department of Natural Resources. According to repetitive loss structure data for Ashland County, there is one repetitive loss structure within the County (see Appendix C, Fig. 5).

The City of Ashland has been a member of the NFIP since 1977. Their current floodplain ordinance was adopted in 1977. Flooding occurred along the Lang Creek area on June 13, 1981 and July 3, 1987. One uninsured small business in the northeast part of the city This structure was built before the city's NFIP membership date and experienced flooding in 1981. The structure was flooded again in 1987 and suffered over \$5000 in content damage. This is a repetitive loss structure. When the U.S. Route 250 bypass was constructed years after both flooding events, the roadway's elevation formed a berm that acts like a floodwall and solved the problem

For the purposes of this hazard analysis, projections of affected parcels and associated monetary losses are not quantified at this time, but will be incorporated within this Section as the County GIS becomes available. Due to the importance of flood mitigation in the planning process and the lack of specific loss data, a brief narrative is provided for each relevant floodplain. The narrative provides sufficient

background information to adequately assess the risk for each floodplain area. These narratives, along with similar narratives in this Section, will be used to formulate conclusions to direct mitigation action plan development (see Section Five).

Visualizations of the County's 100-year floodplain areas are found in Appendix C. These maps were the based on the impacts resulting from a 100-year flood. Maps included as a part of this Plan component relate to data obtained from FEMA.

The narrative below is provided for the entire floodplain as indicated, as well as for the individual incorporated areas impacted by the particular floodplain.

Community Profile/Estimation of Losses – Countywide

From the perspective of the impacts on the entire County from a 100-year flood, the majority of any damages would be to the central and southern areas of the County. Properties affected would be considered as primarily agricultural. However, residential areas within the County would also be impacted, possibly resulting in evacuation. Financial losses Countywide would be in the millions of dollars.

Community Profile/Estimation of Losses – Jerome Fork (Ashland, Jeromesville)

Jerome Fork runs diagonally from west to east, primarily through Montgomery Township, intersecting the far eastern portion of the City of Ashland and the western section of the Village of Jeromesville in Mohican Township (see Appendix C, Fig. 6). Properties mainly affected by a 100-year flood would be agricultural in nature with residential properties in the northeastern section of Ashland city and the western portion of Jeromesville also being impacted. Property damage in the City of Ashland would involve both the waster and wastewater treatment facilities. However, according to the City of Ashland Director of Water and Wastewater, both are protected by diking that is designed to withstand flooding up to a 200-year flood. Pumps for these diked areas have backup generators if power should be interrupted.

Agricultural losses, as well as those property losses within the City of Ashland and the Village of Jeromesville would also be in the millions of dollars.

Community Profile/Estimation of Losses – Black Fork of Mohican River (Perrysville, Loudonville)

The Black Fork of the Mohican River passes through both the Village of Perrysville and the Village of Loudonville in the southern section of the County (see Appendix C, Fig. 7). A 100-year flood would affect a large agricultural area northwest of Perrysville as well as residential properties within both villages. As mentioned earlier, the treatment facilities in both Perrysville and Loudonville are within the 100-year floodplain. Damage to those facilities would present serious problems to both villages. Also, depending on the time of year, flooding in this area of the County would also affect visitors and campers at Mohican State Park located southwest of Perrysville and Loudonville, resulting in their evacuation. Again, financial losses within this floodplain would be in the millions of dollars.

Community Profile/Estimation of Losses – Vermillion River (Bailey Lakes)

In the northeastern area of the County, the Vermillion River runs diagonally from northwest to southeast, skirting the southwest corner of the Village of Savannah and the center of the Village of Bailey Lakes (see Appendix C, Fig. 8). The major affected area would be agricultural properties within Ruggles Township. However, within the Village of Bailey Lakes, the sanitary sewer system, as well as residential properties, would be severely affected. Overall financial losses from a 100-year flood to the Vermillion River would, again, be within the millions of dollars.

Community Profile/Estimation of Losses – Mohican River at Charles Mill Lake (Mifflin)

The Village of Mifflin is located near the western border of the County just east of Charles Mill Lake. A 100-year flood would result in flooding of the western portion of Mifflin, affecting residential properties in that area (see Appendix C, Fig. 9). Adjacent agricultural property would also be affected, resulting in monetary losses in the millions of dollars.

Hailstorm

Hail is a product of raindrops that are frozen in the upper atmosphere that fall to earth due to gravity. The size of individual hail stones vary, contingent upon their being repeatedly blown into higher elevations. Hailstorms are always associated with heavy rain, gusty winds, thunderstorms, and lightning. Depending upon the size of the hailstones and the severity of the respective storm, damage can occur to property (structures, vehicles, etc.) as well as to crops.

Profile of Hazard Events – Hailstorm

According to various sources, 63 hailstorms have occurred within Ashland County from 1965 to the present. No monetary losses were found in the research of State and local resources consulted. Specific incidents of hailstorms listed below were identified based upon the hail size diameter noted during the event.

Date of Occurrence	Location	Description of Losses	\$ in Losses (2008 Values)
July 1965	Countywide	Losses to crops and other property damage (hail size diameter – 1.5 in.)	No data found
April 1974	None Specified	Losses to crops and other property damage (hail size diameter – 1.75 in.)	No data found
June 1995 (two events)	Ashland and Savannah	Losses to crops and other property damage (hail size diameters – 0.75/1.75 in.)	\$42K property damage
July 1999 (two events)	Polk	Losses to crops and other property damage (hail size diameter – 0.75/1.00 in.)	\$25K crop damage
April – June 2002 (five events)	Countywide	Losses to crops and other property damage (hail size diameter – 0.75/1.00 in.)	\$36K crop damage (total)

Community Profile/ Estimation of Losses – Hailstorm

As noted, hailstorms have, and will continue to provide, the potential for causing damage to structures, personal property, and crops throughout Ashland County – including critical facilities. Impact on infrastructure would be considered as minimal. Damage costs resulting from hailstorms can be extremely variable. Because of this variability, no specific estimates of losses are provided. Even though financial losses can be potentially extensive, mitigation activities associated with hailstorms from a planning perspective are considered as having low priority.

Severe Winter Storm

Severe winter storms can produce a variety of adverse weather conditions. These include heavy snow, blizzards, ice storms, and extreme cold. Damage to structures due to severe winter storms is not as likely to occur as are loss of services – primarily electrical service. Severe winter storms can contribute to other losses including vehicular accidents, personal injuries, and losses of life.

Profile of Hazard Events – Severe Winter Storm

Over the past 100 years, there have been a number of severe winter storms that have affected Ashland County. Most have involved multiple counties. Those most notable are described below. Due to the fact that severe winter weather events involve multiple counties, quantifications of losses are typically based on the region affected. Losses incurred to Ashland County alone have not been identified.

Date of Occurrence	Location	Description of Losses	\$ in Losses (2008 Values)
Jan. 1978	Countywide (Northeastern United States)	Damage to some homes, roads closed, personal property damage (35 lives lost in Ohio)	\$32.5M (Statewide)
March 1994	Countywide (31 counties)	Blowing and drifting snow (four to six inches), sleet and freezing rain, roads closed, power outages	\$725K
Jan. 1995	Countywide (two events – 36 effected counties combined)	Blowing and drifting snow, roads closed, personal property damage (eight injuries)	\$2.1M
Jan. 1996	Countywide (two events – 26 effected counties combined)	Blowing and drifting snow, roads closed, downed trees and power lines (one injury)	\$4.6 M
Jan. 1999	Countywide (three events – 81 effected counties combined)	Sleet and freezing rain changing to snow, blowing and drifting snow 56 injuries in effected area	\$922K
Dec. 2000	Countywide (25 effected counties)	Ice storm – tree limbs, electrical wires downed	\$3.2M
Dec. 2004	Countywide (12 effected counties combined)	Blowing and drifting snow, freezing rain, heavy ice accumulations	\$62M
Feb. 2006	Countywide (nine effected counties)	Blowing and drifting snow (six to eight inches)	\$695.4K

Community Profile/ Estimation of Losses – Severe Winter Storm

In consideration that winter storms can adversely impact the entirety of Ashland County during any winter season with varying severity, projected losses cannot be estimated with any degree of certainty. With few exceptions, structural damage from future severe winter storms, as well as the impact on infrastructure, would be predicted as minimal. Projected physical damage to critical facilities would be considered minimal as well. As previously indicated, losses of services and personal property through vehicular accidents and similar maladies would be more indicative of this type of natural disaster. Data on specific County-based losses are either not available or a part of multi-county incidents. Given the absence of more definitive data and the difficulties in predicting the effects from such disasters, specific projections of losses will not be provided at this time.

Tornado

Tornadoes are violent storms with rotating winds of high velocity. They appear as funnel-shaped clouds extending toward the ground from the base of a thunderstorm cloud (wall cloud). Tornadoes are discerned by the velocity of their rotating winds. The Fujita Scale below identifies the different types of tornadoes.

The Fujita Scale

F-Scale Number	Intensity Phrase	Type of Damage Done
F0	Gale tornado (40-72 mph)	Light damage. Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.
F1	Moderate tornado (73-112 mph)	Moderate damage. The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
F2	Significant tornado (113-157 mph)	Significant damage. Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	Severe tornado (158-206 mph)	Severe damage. Roof and some walls torn off well constructed houses; trains overturned; most trees in forest uprooted. Cars lifted off ground and thrown.
F4	Devastating tornado (207-260 mph)	Devastating damage. Well-constructed houses leveled; Parcels with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	Incredible tornado (261-318 mph)	Incredible damage. Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete Parcels badly damaged.

Ashland County is located on the northeast fringe of a geographical area within the United States known as “Tornado Alley.” This designation indicates an area of the United States that has a greater potential for occurrence of tornadoes. The relative strength of the storms most likely to impact Tornado Alley is also greater than in other locations of the country. According to the American Society of Civil Engineers (ASCE), Ashland County is located in Zone IV. This indicates that community shelters within this zone should be constructed to withstand a wind speed of 250 mph. Losses resulting from tornadoes within Ashland County include those to personal property, agricultural components (crops, livestock, etc.), services, as well as injuries and deaths of community residents.

Profile of Hazard Events – Tornado

According to the National Climate Data Center, there have been 13 tornadoes recorded for Ashland County between January 1950 and May 2006. The Fugita Scale ratings of these storms have ranged in strength from F-0 (6) to F-2 (2) – including those rated F-1 (5). Earlier tornadoes have been documented but have not been categorized by strength.

The following table describes some of the tornadoes that have occurred within Ashland County over the past 100 years.

Date of Occurrence	Location	Description of Losses	\$ in Losses (2008 Values)
May 1953	Ashland County	Damage to homes and other structures (six injuries)	\$2M
April & June 1977 (two events)	Ashland County (F-1/F-0 Tornadoes)	Extensive damage to homes and other structures, power lines downed, property damage	\$8.1M
June 1981	Ashland County (F-1 Tornado)	Damage to homes and other structures	\$591K
August 2000	Ashland County (F-1 Tornado)	Extensive damage to homes and other structures, power lines downed, extensive property damage	\$2.5M
Nov. 2002	Polk (Jackson Township)	Major damage to homes and other structures, roofs blown off. Five and one-half mile damage path	\$1.9M

Community Profile/Estimation of Losses – Tornado

As mentioned, the entirety of Ashland County is at risk for the occurrence of tornadoes of varying strengths during any period when climatic conditions are favorable. Damage to structures, personal property, infrastructure, as well as injuries and deaths are possible; including adverse impacts to critical facilities. Ashland County, in general, would be considered at moderate risk for the potential for a tornado to occur during any particular tornado season.

In addressing the potential losses to properties within the County due to a tornado, two historical tornadoes are depicted as well as two conceivable worst-case tornado scenarios. The scenarios projected here incorporated the following assumptions. Considering tornado strength, an F-4 was selected to be the most logical of the severe tornadoes to impact the County. In determining length/width of the projected

path, several sources were consulted. First, an average was taken of both parameters for all the F-4 tornadoes identified in Ohio by the National Climate Data Center (NCDC). Secondly, discussions with representatives from the National Weather Service office in Cleveland, Ohio provided the additional data necessary to make the projection. Based on the information obtained, the estimated length of the path was set at 20 miles and the width at 400 yards.

The two historical tornadoes and the two tornado path scenarios are provided in Appendix C, Fig. 10. The two historic tornadoes are the August 6, 2000 tornado that passed through portions of the City of Ashland and the November 10, 2002 tornado that impacted the Village of Polk. The two tornado scenarios describe a projected path through the City of Ashland and the Village of Polk and a path impacting the Village of Perrysville, The Village of Hayesville, and the Village of Polk. Again, as stated throughout this Section, specific predictions of affected parcels and associated monetary losses are not quantified at this time, but will be incorporated within this Section as the County GIS becomes available. Due to the importance of tornado mitigation in the planning process and the lack of specific loss data, a general statement of considered losses is as follows: damage to property structures and their associated monetary losses would be significant using the projected tornado paths depicted in Appendix C, Fig. 11. Of most concern would be the potential for injuries and/or deaths of County residents and animals that might be within the path of the projected tornadoes. To that end, action plans within Section Five will address tornado mitigation based upon that level of considered losses.

Community Profile/Losses – City of Ashland (August 6, 2000)

The following is a description of the event provided by the NOAA Satellite and Information Service:

A tornado touched down on the west side of Ashland near Lindale Avenue then moved east along West Main Street causing significant damage and four minor injuries. The damage path was 50 to 100 yards wide, intermittent and nearly three miles in length. The most severe damage occurred a few blocks west of downtown. Major structural damage occurred to several homes in the area including one that had an entire side blown apart. Damage to the downtown business district was much less severe with most of the damage being in the form of broken windows and torn off siding. However, three buildings lost large sections of roof and a fourth had a brick wall collapse. The roof of one of the buildings was found six blocks east of downtown. East of the business district, the damage path was intermittent with only a dozen or so homes sustaining minor damage. In total, 112 homes and 20 businesses were damaged. Of those totals, 23 homes and four businesses suffered major damage. Several cars were destroyed and hundreds of trees were toppled. Six power poles were also snapped near ground level. Property damage from the tornado was set at \$2.4M (2006 values).

Community Profile/Losses – Village of Polk (November 10, 2002)

The following is a description of the event provided by the NOAA Satellite and Information Service:

A tornado touched down two miles southwest of Polk near the intersection of County Road 601 and Township Road 902. A new home at this location was destroyed. The tornado then traveled northeast across the western and northern portions of Polk. Two homes on the west side of Polk were heavily damaged and a small barn was leveled just north of town. Another 10 to 12 buildings, including two public buildings sustained minor damage in Polk. From Polk, the tornado traveled northeast across rural areas and passed just to the west of Albion. Two homes along County Road 620 just west of Township Road 521 lost entire roofs and had exterior walls partially or entirely knocked down. A nearby barn was

leveled with debris thrown as much as one half mile. A small boat tethered in a pond near the barn was found a quarter mile away and the pond itself was filled with debris. A church in the area had its steeple toppled. The tornado continued northeast and damaged several more homes and buildings. The tornado moved into Medina County just east of County Road 175. In the county, a total of five homes were either completely destroyed or declared unlivable with another 11 homes sustaining enough damage to require significant repairs. Approximately 30 additional homes and buildings suffered minor damage. A few dozen cars sustained varying amounts of damage. The tornado was on the ground in Ashland County for approximately five and a half miles with the damage path no more than 50 yards in width. Property damage from this tornado was set at \$1.8M (2006 values).

Community Profile/Estimation of Losses – Ashland/Polk Scenario

A tornado passing through the City of Ashland and the Village of Polk would cause devastating losses to both properties and infrastructure. Injuries and deaths to citizens within the tornado path as well as agricultural animals would also be possible. Financial losses, as expected, would be in the millions of dollars.

Community Profile/Estimation of Losses – Hayesville/Jeromesville Scenario

The villages of Hayesville, and Jeromesville could be severely affected by a tornado moving through that area. Residential properties within these villages would receive the greatest impact. Even though the villages themselves are not extremely populated, damage to village properties and surrounding agricultural land could be in the millions of dollars.

Community Profile/Estimation of Losses – Perrysville/Loudonville Scenario

The villages of Perrysville and Loudonville could be severely affected by a tornado moving through that area. Because of their proximity to Mohican State Park, an event occurring during heavy occupancy of the area poses an increased risk to visitors and the personal property of those individuals. Residential properties within these villages could also receive the great deal of damage. Again, financial losses could be in the millions of dollars.

Windstorm

Windstorms could be characterized as periods where either of the following occurs: 1) sustained non-rotating surface winds (1-minute average) of 40 mph (35 knots) or greater lasting for 1 hour or longer; or 2) sustained non-rotating winds or gusts of 58 mph (50 knots) or greater for any duration. These could also be considered as “straight-line” winds. Severe winds do indeed present conditions that have caused damage throughout areas of Ashland County.

Profile of Hazard Events - Windstorm

Incidents of windstorms and their resulting damages have occurred frequently in the past within the County. According to NOAA, Ashland County has been affected by thunderstorms/high winds 174 times since June of 1959. Generally, damage has been limited to the downing of tree limbs and power lines, partial losses to structures, and similar conditions that reflect a moderate range of damage. The most volatile of the historical windstorm occurrences are as follows:

Date of Occurrence	Location	Description of Losses	\$ in Losses (2008 Values)
June 1959	Ashland	Trees downed, chimneys toppled, loss of power (53 knots)	No data found
July 1980	Ashland	Damage to homes, barns, power lines (69 knots)	No data found
October 1996	Entire County (30 total counties involved)	Trees downed, structural damage (69 knots)	\$7.3M – property \$3.2M – crops (in affected areas)
July 1999 (seven events)	Entire County	Damage to homes, barns, power lines (52 knots – one injury)	\$421K – property \$25.2K – crops (all events)
August 2000	Savannah	Damage to homes, trees downed, etc.	\$562K
May 2003	Entire County (28 Ohio counties affected)	Damage to homes, trees downed, electrical services lost	\$1.4M (in affected areas)
March 2004	Entire County (28 Ohio counties affected)	Severe damage to homes, barns, power lines (52 knots – one injury in region)	\$2.7M (in affected areas)
Sept. 2008	Entire County	Severe damage to homes, barns, power lines, widespread power outages (63 knots)	\$3.5M – property \$750K - crops

Community Profile/ Estimation of Losses - Windstorm

As previously mentioned, windstorms present potential damaging effects on structures and other personal property throughout the entirety of the County. Effects on infrastructure would be considered minimal. Damage would most generally be limited and total destruction would be rare. Additionally, monetary losses identified in the table above are either not available or represent losses over multiple county areas. Because of these conditions, quantifying losses to properties becomes difficult and will not be provided as a part of this document. The potential of windstorm occurrence would be considered as high.

Conclusions

Hazard analysis, as it relates to the mitigation of natural disasters within Ashland County, involves several processes. The first is to obtain data and information on relevant hazards that have, and will continue to, affect County property and populations. Subsequently, these data and relevant information are reviewed and analyzed using established parameters. Once completed, the results of this review can be used to develop and implement specific mitigation efforts that will be of most benefit to Ashland County and its citizens.

The review and analysis of the Hazard Analysis section was performed by the Ashland County Mitigation Planning Committee. This review entailed the initial consideration of the entirety of data and information contained in this section. Each natural disaster identified as a part of Hazard Identification was then rated on the basis of three criteria: the potential for the occurrence of the disaster; the severity of the impact on populations and property; and the level of need for implementing mitigation activities relating to that specific natural disaster. The natural disasters were then assessed using those criteria. Criteria parameters were set at three levels; low, moderate, and high. Results from this review are as follows:

Type of Hazard	Potential for Occurrence	Severity of Impact	Mitigation Potential
Class I Dam Failure	Low	Low	Low
Drought/Extreme Heat	Moderate/Moderate	Moderate/Low	Low*/Moderate*
Earthquake	Low	Low	Low
Flood	High	High	High**
Hailstorm	Moderate	Moderate	Low
Severe Winter Storm	Moderate	Moderate	High*
Tornado	Moderate	High	High**
Windstorm	High	Moderate	Low

* Potential for public information only

** Potential for mitigation including public information

These determinations, as mentioned, will be valuable in identifying and proposing specific mitigation projects. The mitigation projects proposed in a forthcoming section of the Plan will be based upon this overall assessment and will be designed to lessen the adverse impacts of natural disasters on the citizens of Ashland County.

Section Four: Mitigation Goals and Activities

Mitigation Goals

Establishing achievable goals forms the foundation for the activities that will assist Ashland County in attaining the overall mission of the Mitigation Planning Committee.

Prior to the identification of specific mitigation goals, existing County documents and plans were identified to determine their potential impact on the goals. The plans identified include portions of the *Ashland County Comprehensive Plan* and Ashland County's *Emergency Operations Plan*. The *Ashland County Comprehensive Plan* in conjunction with the *Ashland County Profile* provides specific requirements for floodplain management within the County. There are also various floodplain management ordinances effected by individual County political subdivisions, primarily individual townships. The County's *Comprehensive Plan* addresses multiple planning initiatives including land uses for residential, agricultural, commercial and industrial properties, open space and recreational land use, transportation, the management of wetlands, and other planning issues that may impact the County.

Provisions within the established plans reflected satisfactory applications of mitigation considerations. Continuation and strengthening of mitigation provisions in these existing plans and ordinances is addressed in Section Five: Mitigation Action Plans (Goal 5).

Potential goals were established by the Mitigation Planning Committee based upon their relationship to the potential adverse impact upon the community. These goals were identified and separated by hazard. Those goals that address mitigation for the entirety of the natural hazards that might impact the County are provided under the heading of "multi-hazard goals." Additional goals specifically addressing tornados, floods, and severe winter storms are listed under their respective headings. The goals adopted reflect the consensus of the Committee and are as follows:

Multi-Hazard Goals

- Incorporate a GIS component as a part of County-wide planning and property data system
 - Obtaining GIS capability is paramount in any mitigation planning efforts. Inability to utilize such an important planning tool places the County at a disadvantage in preparing for natural disasters. As previously stated, the County, in conjunction with the City of Ashland, has applied for grant funding through the federal Department of Homeland Security for implementing a Countywide GIS program.
- Enhance public information and educational programs for both pre-disaster and post-disaster situations
 - Adequate knowledge of natural disasters and their effects is paramount to the protection of the citizens of Ashland County. Timely dissemination of educational materials can reduce the adverse effects to life and property both before and after the occurrence of a natural disaster

- Strengthen existing partnerships among all public and private sectors within and beyond Ashland County
 - Cooperative relationships among all sectors of the community enhance planning efforts, the development of mitigation initiatives, and the ability to appropriately respond to the impacts of natural disasters
- Integrate, as necessary, mitigation components within the existing Ashland County plans whose provisions are influenced by the mitigation of natural disasters
 - Assuring the presence of natural disaster mitigation components within all relevant Ashland County plans, enhances the protection of citizens, personal property, and natural systems throughout the County
- Identify and pursue opportunities for funding of mitigation projects
 - Adequate funding sources must continually be identified and solicited, and monies successfully obtained, in order to fully achieve the intended purpose of natural disaster mitigation within Ashland County
- Solidify mitigation initiatives directed toward critical facilities (schools, medical facilities, emergency services, etc.)
 - Critical facilities, such as schools, healthcare facilities, nursing homes, fire departments, and law enforcement offices, must be afforded maximum consideration for mitigation initiatives to assure their functioning following occurrences of natural disasters

Tornado Goals

- Enhance early warning systems to maximize public notification
 - Early warning of Ashland County citizens on impending natural disasters is crucial in minimizing injuries, deaths, and losses to personal property

Flood Goals

- Minimize flood losses to structures and properties within Ashland County
 - Damage to structures and properties due to flooding need to be minimized to limit financial losses

Mitigation Activities

Mitigation activities are those which direct the implementation of tasks that will accomplish the goals established by the Mitigation Committee. These activities are also directed toward the hazards outlined in the Hazard Analysis section and their respective priority levels. The mitigation activities identified will be used to develop action plans and specific tasks associated with those plans.

Developing or continuing existing mitigation activities is contingent upon an understanding of those activities currently in place. The following provides an explanation of the major mitigation activities already implemented by County political subdivisions.

There are, at this time, no definitive mitigation activities that address Class I dam failure, drought, earthquake, hailstorm, and windstorm. There are, however, public information and response activities in place that may need to be implemented to lessen the impact of these disasters. Preliminary notification of an impending hailstorm or high wind advisories, for example, would be managed through the National Weather Service via local news media sources and the Emergency Alert System. Lessening the impacts of the adverse effects from a Class I dam failure or earthquake (flood damage, power outage, debris removal, etc.) may involve both public information and formal response actions undertaken by public entities.

Formal mitigation activities are currently in place for those natural disasters deemed to be of greatest concern to the County; tornado, flood, and indirectly, severe winter storm. Recently, a reverse 911 communication system was established within the County. Early warning of these natural disasters is paramount in their mitigation. Additionally, some of the more important mitigation activities are as follows:

Tornado

The presence of early warning tornado sirens dispersed through the County provides the most substantial mitigation effort relating to tornadoes. Installation and placement of warning sirens along with battery backup systems is a function of cooperative efforts between the political subdivision in question and the Ashland County Office of Emergency Management and Homeland Security (ACOEMHS). Testing of these warning devices is conducted routinely under the auspices of ACOEMHS. Formal activation of tornado sirens follows procedures established by ACOEMHS and other public safety entities within the County.

Pre-disaster information on tornado topics (definitions of watches/warnings, sheltering issues, etc.) are available through and disseminated by various entities including the Ashland County Office of Emergency Management and Homeland Security, the Ashland County Health Department, American Red Cross, and others.

Public notification relating to the potential development and sighting of tornados is primarily through the watches/warnings issued by the National Weather Service that are disseminated via the local TV/radio stations and the National Oceanic and Atmospheric Administration (NOAA) weather radio system. Post-disaster mitigation activities, as described above, may involve both preventative and response components. Public information to lessen the impacts of the disaster, are, as well, available from the Ashland County Health Department and other public service organizations (American Red Cross, etc.). Removal of debris, repairing downed power lines, traffic control, and other response activities are a function of cooperative efforts outlined in the ACOEMHS *Emergency Operations Plan*.

Flood

As mentioned previously, the County's *Comprehensive Plan* addresses the management of wetlands, zoning and land use, agricultural resources, transportation, and other services that may be impacted by flooding. The majority of the County's townships, as well as the City of Ashland have established parameters for floodplain management activities within these areas of Ashland County.

The *Comprehensive Plan* incorporates specific requirements relating to construction and other types of development within determined floodplain areas. Flood hazard areas within the County (both incorporated and unincorporated) are identified by the Federal Emergency Management Agency (FEMA) from Flood Insurance Studies conducted by the Ohio Department of Natural Resources. Flood Insurance Rate Maps (FIRM) and other flood data form the foundation of these reports.

Political subdivisions within the County have also established individual floodplain management programs as a part of the National Flood Insurance Program (NFIP), including the City of Ashland. These jurisdictional requirements for construction and other development within identified floodplain areas stand alone and are not identical to provisions outlined in the *Comprehensive Plan* adopted by the Board of County Commissioners. The County, as a whole, is covered under the NFIP. The latest floodplain studies conducted within the County occurred in January of 1988 with existing provisions being made for an update of the flood maps (FIRM) within the calendar year.

Continued Compliance with the National Flood Insurance Program

Ashland County jurisdictions participating in NFIP:

Communities Participating in the National Flood Program							
CID	Community Name	Entity	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Reg-Emer Date	Tribal
390759#	Ashland	County	02/10/78	01/01/88	01/01/88(L)	01/01/88	No
390007#	Ashland	City	04/12/74	01/02/80	09/01/83	01/02/80	No
390008A	Jeromesville	Village	05/03/74	09/01/86	09/01/86(L)	09/01/86	No
390009A	Loudonville	Village	05/31/74	08/01/87	12/02/08(L)	08/01/87	No
390730	Perrysville	Village	03/28/75	08/01/87	08/01/87(L)	08/01/87	No

Communities NOT Participating in the National Flood Program							
CID	Community Name	Entity	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Sanction Date	Tribal
390799	Mifflin	Village	7/8/1977		7/8/1977	7/8/1978	No
390792	Bailey Lakes	Village		8/18/2009	8/18/2009		No
390786	Hayesville	Village		8/18/2009	8/18/2009		No
390796	Polk	Village		8/18/2009	8/18/2009		No
390861	Savannah	Village		8/18/2009	8/18/2009		No

The Ashland County Planning Commission continues to work with the Villages of Bailey Lakes, Hayesville, Polk, and Savannah to encourage these communities to join and participate in the NFIP. The Planning Commission is increasing efforts for the Village of Mifflin to be brought into NFIP compliance.

Floodplain Identification and Mapping.

Ashland County will be receiving updated maps due to state and federal map modernization programs. This project was initiated in August 2006 with preliminary maps released in September 2007. An Open House was conducted on April 9, 2008 where both local government officials, agencies and the general public were given opportunities to review map changes, ask questions and provide comment. A period for appeals and formal comments was conducted in the third and fourth quarters of 2008. Letters of Final Determination were released in February 2009 for the map updates to take effect in August 2009.

Each participating community in the NFIP program formally adopts effective flood maps by resolution or ordinance. Other activities include community programs for the awareness of flood hazards and actuarial rating for new construction for flood insurance

Floodplain Management.

Each participating community in the NFIP program has a Designated Floodplain Administrator (DFPA) that serves as the jurisdiction's Floodplain Administrator per resolution or ordinance. Each Designee is generally the person actively administering the floodplain management program in the community, although there may be others to assist.

The participating NFIP communities have current floodplain standards and regulations included in zoning, building codes and subdivision regulations. If necessary, special purpose regulations are adopted by formal resolution or ordinance. These codes and regulations are enforced by each jurisdiction's Floodplain Administrator who also conducts floodplain monitoring. Mitigation efforts on new and improved structures are controlled through building permits and other applications submitted to the Ashland County Planning Commission – Building Permit Division.

Flood Insurance.

Five communities participate in NFIP. The other five communities have chosen not participate. Currently, there are 153 flood insurance policies in Ashland County. Below is a table of flood insurance policy holder totals by each participating jurisdiction:

Community Name	Number of insurance Policies
Ashland County	44
Ashland (City)	72
Jeromesville	0
Loudonville	3
Perrysville	4
Ashland County Total:	153 Flood Insurance Policies

Public outreach activities are programmed for communities, homeowners and renters, insurance professionals and lenders through workshops, training and public speaking engagements. One of the best opportunities was the Map Modernization Open House conducted in April 2008 where the public had the chance to view map changes and had representatives on hand to discuss and answer questions about the National Flood Insurance Program. Also available, then and now, is the FloodSmart.gov cost interactive tool which pictorially demonstrates flood level versus cost. This demonstration is also coupled with a representative that can address questions about NFIP and identify insurers that carry NFIP for homeowners and renters.

Educational information for citizens on post-flood disaster activities (cleanup procedures, managing water/food supplies contaminated by flood waters, etc.) are also available from public entities such as the Ashland County Health Department.

The Ashland County's *Emergency Operations Plan* addresses mitigation activities for flooding from both preventative and response perspectives. Information from the National Weather Service to County citizens is provided through the Ashland County Office of Emergency Management and Homeland Security, local news media, and the National Oceanic and Atmospheric Administration (NOAA) weather radio system.

Additionally, Manufactured Home Park Rules (Chapter 3701-27 of the Ohio Administrative Code) require that all manufactured homes placed within a manufactured home park in a 100-year floodplain after November of 1992 must comply with stipulated blocking requirements. The rules also require that all manufactured homes placed in a manufactured home park after June 1, 1979, must secure the home with tiedowns in accordance with manufacturer's specifications.

Severe Winter Storm

Existing mitigation activities relating to severe winter storm mainly come in the form of preliminary notification and post-disaster response. Public information of an impending severe winter storm is primarily provided by area news media affiliates and the National Oceanic and Atmospheric Administration (NOAA) weather radio system based on predictions from the National Weather Service.

As previously mentioned, the adverse effects of severe winter storms can also be reduced by mitigation procedures outlined in the Ashland County's *Emergency Operations Plan*.

Identification and Prioritization of Activities

Given these existing mitigation components, the Mitigation Committee's efforts focused on the development of additional mitigation initiatives that would supplement those currently in place. These new or expanded activities serve as the basis for the creation of action plans that will be implemented as a part of the Ashland County Mitigation Plan. Specific action plans are described in Section Five.

There were two informally established categories of mitigation initiatives that were reviewed by the Committee. One category included those activities considered to be general in nature. These were generated by the Mitigation Planning Committee itself and were approved through the consensus of the Committee. These general activities addressed the multi-hazard goals that were coupled with goals relating specifically to tornado, flood, and severe winter storm hazards.

Definitive mitigation activities, also referred to as mitigation projects, were those submitted by many political subdivisions throughout the County. Consistent with the determinations from the Hazard Analysis, many of the proposed projects submitted by the city of Ashland, villages, and townships were directed toward tornado hazards. Other individual projects submitted addressed flood and severe winter storm hazards. Activities focusing upon multi-hazard goals were seen as valuable opportunities to provide added protection to the citizens and properties within the County.

As mentioned, mitigation activities developed to address multi-hazard and other general goals were determined by the Committee following their review of proposed initiatives. This method of selection was chosen based upon financial, social, and environmental considerations. Individual mitigation activities/proposals submitted by County political subdivisions were selected using this method of evaluation as well.

Prior to their formal evaluation and review, the Planning Committee requested specific mitigation proposals from all political subdivisions within the County. These requests came via established meetings with city administrators, village council representatives, and township trustees. A mitigation proposal form was developed and sent to representatives from each County political subdivision. Subsequent discussions with these representatives provided the appropriate mechanisms for the development and submission of individual proposals. Supportive information was encouraged to lend credence to the proposals during their assessment and evaluation by the Planning Committee.

Individual mitigation proposals submitted by the County political subdivisions were evaluated by the Committee using several factors for consideration. These considerations included cost effectiveness, technical feasibility, and social implications.

Where cost effectiveness was addressed, consideration was given not only to the availability of County funding sources (both incorporated and unincorporated areas), but also on the potential availability of outside sources of funding (State, federal, and other grant-based organizations).

Committee members evaluated the proposed projects prior to the formal discussions held at a scheduled meeting of the Committee. The mitigation activities selected are identified as a part of the Section Five.

Section Five: Mitigation Action Plans

Action Plan Development

The development of action plans is a final stage in setting the direction for the implementation of mitigation activities and the achievement of established goals. An action plan is a composite of a defined goal, mitigation activities identified to achieve the goal, and specific tasks directed to address the mitigation activities.

During a formal meeting of the Mitigation Committee, Action Plans were established that would serve as the guide for Ashland County for the five-year implementation period of the Mitigation Plan. Proposed mitigation activities were discussed with discussions centering on determining whether individual projects warranted inclusion within the Plan. Those in question were considered for their overall cost/benefit as well as their relevance to effective mitigation.

Cost/benefit analysis compares the projected overall costs of the project with the benefits to community citizens, their properties, and their applicability to mitigation. It is an extremely useful tool when making determinations among a variety of projects; particularly where the protection of County residents and properties within the County are concerned. In making these analyses, several proposals were rejected by the Committee based on those parameters. Estimated costs of projects that will involve grant funding requests are included as a part of the Mitigation Proposal Status Sheets found in Appendix E.

Action Plans

The Action Plans described below are those adopted by the Ashland County Mitigation Planning Committee. The Action Plans include an identification of: the specific goals being addressed; the mitigation activity(ies) directed to accomplish each goal; the lead agency(ies)/individual(s) that will assist with the implementation of the particular activity; the projected timeline to complete the activity; and the specific tasks that will be conducted to fulfill the intended purpose of the goal.

The following Action Plans are established for multi-hazard goals and the goals identified specifically for tornado, flood, and severe winter storm.

Action Plans for Multi-Hazard Goals

Goal 1: Implement a Countywide GIS (Geographical Information System) that can be used for the identification of property areas potentially at risk of being impacted by natural disasters. GIS data associated with these properties provide an improved mechanism for mitigating natural disasters

Activity 1: Obtain and incorporate viable GIS programming within the County's property data, utilizing this valuable data to enhance the County's Natural Disaster Mitigation Plan

Lead: Director, Ashland County Office of Emergency Management and Homeland Security (ACOEMHS), County Commissioners

Timeline: July 2009 – January 2011

Task 1: Identify available GIS resources that will provide the necessary data to assist in natural disaster mitigation

Task 2: Identify any necessary sources of funding for GIS programming and utilization

Task 3: Develop appropriate documentation for acquiring GIS programming

Task 4: Incorporate property data within the GIS utilizing internal and external resources

Task 5: Determine projected property losses from natural disasters (primarily flooding) and incorporate within the County's Mitigation Plan

Activity 2: Review local flood damage regulations as a part of map modernization efforts and incorporate higher standards, as appropriate

Lead: Floodplain Administrator and legislative body for each jurisdiction

Timeline: July 2009 – August 2010

Task 1: Review and update current floodplain regulations

Task 2: Identify changes in floodplain mapping

Task 3: Identify possible higher standard that will reduce risk to new and substantially improved structures

Task 4: Draft regulations and submit to the Ohio Department of Natural Resources (ODNR) for review

Task 5: Adopt approved regulations and submit copies to ODNR prior to FIRM map effective date

Goal 2: Provide weather radios for governmental office buildings within Ashland County to enhance warning and monitoring of natural disasters

Activity: Purchase and distribute weather radios to governmental office buildings within Ashland County

Lead: Ashland County Commissioners/Director, ACOEMHS

Timeline: July 2009 – January 2010

Task 1: Determine most feasible mechanisms for the purchasing and distribution to the identified governmental office buildings

Task 2: Obtain cost estimates relevant to the purchase/distribution

Task 3: Identify potential sources of funding

Task 4: Assist in the development and submission of funding requests, as needed

Task 5: Promote use of weather alert radios to the general public and encourage community groups to help fund radios for those economically challenged

Goal 3: Enhance public information and educational programs for pre-disaster and post-disaster situations

Activity: Update and distribute, as necessary, existing public educational materials that relate to the mitigation of natural disasters to include references to the Ashland County Mitigation Plan and public participation in the planning effort. These educational materials include safety and other relevant information specifically directed toward tornado safety tips, safe rooms as shelters, flood-damaged property, precautions during severe winter weather, and others

Lead: Director, Ashland County Office of Emergency Management and Homeland Security (ACOEMHS)

Timeline: July 2009 – July 2010

Task 1: Identify the existing types and distribution methods of natural disaster information

Task 2: Assess the current composition of educational information, updating as necessary, including the implementation of the Ashland County Mitigation Plan

Task 3: Assess the strategies for dissemination of public information and modify, as necessary

Task 4: Identify any necessary sources of funding

Task 5: Implement enhanced public informational releases

Goal 4: Strengthen existing partnerships among all public and private sectors within and beyond Ashland County

Activity: Expand the understanding of existing partnerships to include knowledge of Ashland County Mitigation planning; increasing the potentials for cooperative mitigation initiatives

Lead: Director, ACOEMHS

Timeline: July 2009 – July 2010

Task 1: Identify all existing and potential partnerships with federal, State, and local agencies/organizations/political subdivisions that have some involvement with the issue of natural disaster mitigation

Task 2: Develop strategies to expand those partnerships

Task 3: Initiate and maintain formed partnerships

Goal 5: Integrate, as necessary, mitigation components within existing Ashland County plans whose provisions are influenced by the mitigation of natural disasters

Activity: Modify existing Ashland County plans and integrate needed mitigation considerations

Lead: Director, Ashland County Planning Commission/ Director, ACOEMHS

Timeline: July 2009 – Ongoing

Task 1: Identify all pertinent plans for Ashland County political subdivisions (both incorporated and unincorporated) where mitigation for natural disasters is, or could potentially be, a component

Task 2: Identify and contact primary planning constituents of selected Ashland County planning efforts

Task 3: Cooperatively develop constructive mitigation language for proposed inclusion within applicable plans

Task 4: Submit formal proposals for additions of mitigation language within appropriate Ashland County plans

Task 5: Establish and maintain cooperative relationships with relevant Ashland County planning constituents per Goal 2

Goal 6: Solidify mitigation initiatives for critical facilities (e.g. schools, healthcare facilities, nursing homes, fire departments, and law enforcement agencies) within Ashland County

Activity: Improve natural disaster mitigation impacting Ashland County critical facilities, as necessary

Lead: Director, ACOEMHS

Timeline: July 2009 – December 2010

Task 1: Identify all existing critical facilities within Ashland County

Task 2: Determine existing mitigation initiatives within these facilities

Task 3: Identify potential mitigation initiatives within these facilities

Task 4: Initiate cooperative assessments of potential initiatives with applicable representatives of relevant critical facilities

Task 5: Assist pertinent critical facilities in the development and submission of formal mitigation projects

- Goal 7:** Ensure adequate electrical power is available to operate communications systems during response to natural disasters
- Activity:** Install fuel-powered electrical generators in the following locations:
- Ashland County (for alternate EOC located in Troy Twp.)
 - Village of Bailey Lakes
 - Village of Hayesville
 - Village of Jeromesville (2)
 - Village of Loudonville
 - Village of Mifflin (2)
 - Village of Perrysville
 - Village of Polk
 - Village of Savannah
 - Village of Perrysville and Green Township
 - Lake Township
 - Mohican Township
- Lead:** Mayors of respective Villages/Presidents of Green, Lake, and Mohican Township
Trustees/Director, ACOEMHS
- Timeline:** July 2009 – September 2010
- Task 1:** Identify most feasible location(s) for generator installation
- Task 2:** Obtain cost estimates relevant to the installation
- Task 3:** Identify potential sources of funding
- Task 4:** Assist in the development and submission of funding requests, as needed
- Task 5:** Install generators contingent upon available funding
- Goal 8:** Enhance the sheltering of citizens during a tornado or severe winter storm
- Activity:** Construct shelters/safe rooms in Troy Township
- Lead:** Troy Township Trustees/ Director, ACOEMHS
- Timeline:** July 2009 – July 2012
- Task 1:** Conduct site assessments
- Task 2:** Arrange for and assist in plan development
- Task 2:** Obtain cost estimates through bid process
- Task 3:** Identify potential sources of funding

Task 4: Assist in the development and submission of funding requests, as needed

Task 5: Construct facilities within construction and funding parameters

Action Plans for Tornado Hazard Goals

Goal: Enhance early warning systems to maximize public notification

Activity: Install new or upgraded tornado sirens with battery backup within the following political subdivisions:

- Ashland County (including Ashland City)
- Village of Loudonville
- Orange Township (including Agape Acres & Mapleton Schools) (3)
- Ruggles Township (2)
- Troy Township
- Mohican Township

Lead: Ashland County Commissioners, Mayor of Loudonville and respective Township Trustees/Director, ACOEMHS

Timeline: July 2009 – July 2012

Task 1: Identify most relevant location for siren installations

Task 2: Identify sources of potential funding

Task 3: Assist political subdivisions, as necessary, in the development and submission of funding requests

Task 4: Install warning sirens contingent upon available funding

Action Plans for Flood Hazard Goals

Goal 1: Minimize flood losses to structures and properties within Ashland County

Activity: Mitigate the following areas prone to flooding within Ashland County:

- City of Ashland (areas of Town Creek)
- Troy Township (areas of Buck Creek and a portion of Township Road 1031)
- Perry Township
- Orange Township

Lead: Mayor of Ashland and respective Township Trustees/Director, ACOEMHS

Timeline: July 2009 – July 2012

- Task 1:** Identify all flood prone areas within Ashland County
- Task 2:** Determine specific cause of flooding for each respective area (watercourse flow, inadequate sewer capacity, etc.)
- Task 3:** Assess potential strategies for corrective action (watercourse cleaning, infrastructure improvements, property buy out/demolition of affected structures, relocation, etc.)
- Task 4:** Determine most appropriate corrective action for each repetitive loss structure
- Task 5:** Obtain applicable costs estimates for identified corrective actions
- Task 6:** Identify potential sources of funding
- Task 7:** Assist relevant political subdivisions in the acquisition of available funding, as needed
- Task 8:** Implement corrective measures contingent upon available funding

The subsequent phase of finalizing the Action Plan section was to prioritize those activities that would direct the implementation of specific activities. Committee members again divided the activities into two categories – general and specific. General goals that were initially presented and approved were given high priority. Proposals relating to specific activities within individual political subdivisions were grouped by type (tornado warning devices, generators, etc.) to determine relative priority. Those groupings were prioritized using the evaluations described above. Higher priority was given to the implementation of a County-wide communications system and GIS program as well as the installation of needed tornado warning devices and obtaining and installing gas-powered generators.

During the extent of the five-year implementation period of the Mitigation Plan, there will indeed be other proposed mitigation activities that Mitigation Committee will need to consider. Proposals for additions or modifications to the Action Plan section may result from conditions noted during a particular task(s) performed in conjunction with a specific mitigation activity. Modifications or additions may also be prompted by public responses as a part of their ongoing opportunities to participate in the mitigation planning and implementation process. The Mitigation Committee will evaluate proposed modifications to the Action Plan section and determine their viability for inclusion by using the procedures described in Section Four. Incorporation of any additions or changes to the Plan is also discussed in the Plan Maintenance component of Section Seven.

Section Six: Community Participation

Overview

Community involvement in the planning and implementation of mitigation initiatives is crucial and must be a continual process. The success of the Ashland County Mitigation Plan is contingent upon this premise. It is the obligation of the Planning Committee to inform the community of the Plan's purpose and to consider all public input during the entirety of Plan implementation. The Ashland County Mitigation Plan functions as a means to address community issues and concerns as they relate to the mitigation of natural disasters for it is toward their protection and the protection of their properties that this Mitigation Plan is directed.

Initial Notification

Initial notification of the public was accomplished by releases through news media sources, discussions with community groups by Committee representatives, and through formal and informal meetings with community leaders representing the general populace.

Information presented during these formal and informal notifications centered on the development and passage of the federal Mitigation Act of 2000 and the parameters established by that legislation. Descriptions were provided on the underlying purpose of the Act and how the County, through an established Mitigation Planning Committee, would achieve the goals outlined within the Act.

Preliminary and Continued Involvement

During the developmental stages and eventual completion of the Hazard Analysis Section of the Ashland County Mitigation Plan, public responses were received that provided needed historical data of natural disaster occurrences within the County. These necessary data were obtained primarily from community leaders and others knowledgeable of past natural disasters and their personal and financial impacts upon the County.

Continued public participation efforts will come in several forms. Initially, public input was requested following the completion of the draft Plan. Through various news media sources, Ashland County citizens were apprised of the progress of the Plan as well as being informed of ways to view the draft Plan. Hardcopy versions of the draft Plan were made available for public viewing in the Ashland County Office of Emergency Management and Homeland Security as well as in several other strategic locations throughout the County. Once the final Plan has been accepted by FEMA, copies of the approved Plan will be maintained in locations throughout the County for review by the public. These locations are identified in Section Seven. As a part of this Plan review process, instructions will be provided to citizens who wish to comment or make suggestions on Plan components.

Secondly, citizens, using Mitigation Planning Committee members as points of contact, will also be afforded the opportunity to receive digitized copies of the draft Plan via the Ashland County Office of Emergency Management and Homeland Security web site. They may also print out the draft Plan, if

desired. This resource will be made available on a continual basis, once the draft Plan has been submitted for review and following the approval of the final Plan. Periodic news releases and other community educational efforts, as referenced in Section Five, will continually provide citizens the opportunity to review the Plan and provide comment.

A more formal means of gathering input from the general populace came in the form of an established Open House. The Open House was held on March 18, 2008. It provided an occasion for citizens to meet some of the Mitigation Planning Committee members, review available hard copies of the draft Plan, and hear informal presentations by Committee members on the overall concepts and processes involved in the mitigation of natural disasters. The public was informed on how they could participate in the process by their reviewing the Plan and providing constructive assessments of any Plan component. They were also afforded the opportunity to ask questions about the Plan and the planning process.

An ongoing method of providing information to County citizens will be their ability to access the Plan via a developed and continually updated web page. This web site was developed and included as a component of the Ashland County Emergency Management and Homeland Security's web page. Maintaining and updating of the web page will be the responsibility of the ACOEMHS Director in conjunction with the Ashland County Mitigation Planning Committee. The web site will allow for the viewing any printing of any section of the Plan. It will also provide a means for individuals to comment on the content of the Plan. Citizens will be able to able to comment on the Plan through contact with the Director of the Ashland County Office of Emergency Management and Homeland Security. As necessary, citizen comments/suggestions regarding the web-based Plan will be provided to the Mitigation Planning Committee for their consideration and response. As well, formal meetings of the Planning Committee for review and updating of the Plan will be announced to the general public via news releases and other similar means. This will allow the public the opportunity to attend these formal meetings and provide constructive recommendations for updating of the Plan.

It is through these mechanisms of continued public involvement that Ashland County citizens will be afforded the most effective mitigation initiatives that will protect them and their properties from the impacts of natural disasters.

Section Seven: Plan Development, Adoption, Distribution, Implementation, and Maintenance

Overview

Prior to initiating the mitigation activities designed within the Plan, formal adoption by those County entities served by the Plan must be accomplished. Adoption of the Plan by the political subdivisions within the County, demonstrates their commitment toward the implementation of currently proposed and future mitigation initiatives.

Continued updating of any formal plan is vital to achieving established goals. Without periodic reviews, the entire effort loses its effectiveness and jeopardizes the fulfilling the overall purpose of the Plan. The Ashland County Mitigation Plan is, and will continue to be, a working Plan. Under the time frame outlined by FEMA in the Mitigation Act of 2000, the plan implementation period was set at five years. Within that period of time, additions and revisions must be expected. In order for this Plan to succeed, systematic maintenance will be necessary.

The following presents the methods by which the Ashland County Mitigation Plan was developed and how it will be adopted, distributed, implemented, and maintained.

Plan Development

Throughout the course Mitigation Plan development, Planning Committee members, interested County citizens, and representatives from State and local organizations and agencies took the opportunity to become involved, either directly or indirectly, in the formation of the finished Plan. The Ashland County Mitigation Plan could not have been completed successfully without the diligent efforts of these concerned individuals. Committee members, representing a wide variety of governmental, and other public and private entities, provided needed information and data to produce this valuable document.

The Planning Committee met during formal committee meetings, and discussed specific issues through computer-generated messages, telephone conversations, and informal one-on-one discussions. Information obtained during these activities was shared with all Committee members to gain consensus of all decisions regarding Plan development.

As indicated throughout the Plan, citizens were availed many opportunities to express their views and concerns relating to provisions outlined in the Plan. Individuals representing State and local organizations, agencies, and academia, such as the Ohio Emergency Management Agency, the Ohio Department of Natural Resources, Bowling Green State University, and the National Weather Service, provided valuable information and data needed to address particular planning issues.

It is the compilation of all these voluntary efforts that have resulted in the completion of the Ashland County Mitigation Plan for Natural Disasters – a Plan that will benefit the entirety of Ashland County and the citizens who reside within and adjacent to its boundaries. Descriptions of how the plan was developed are found in a compiled quarterly report submitted to the Ohio Emergency Management Agency (see Appendix D).

Plan Adoption

During the course of this mitigation planning effort, each political subdivision was given the opportunity to participate in all phases of Plan development as described in Section Two. Plan adoption completes this portion of their commitment to mitigate natural disasters.

Formal adoption of the Ashland County Mitigation Plan occurred following the completion of the draft Plan. Formal adoption came in the form of an approved resolution following the procedures and requirements of the political subdivision in question.

The governing bodies of all political subdivisions identified as a part of the Plan were provided copies of the draft Plan for their review. Representing the political subdivisions effected were the Ashland County Commissioners, the city of Ashland, and eight villages within the County (Bailey Lakes, Hayesville, Jeromesville, Loudonville, Mifflin, Perrysville, Polk, and Savannah).

Representatives of the Mitigation Planning Committee solicited the support and full adoption of the Plan by direct contact with the Mayors/Administrators of the City of Ashland and County villages. This contact served to solidify understanding of their responsibilities under the mitigation planning process. It also allowed for any final questions or concerns relating to the provisions outlined in the Plan.

To assist in the timely Plan approvals by the affected political subdivisions, the Committee requested that formal consideration of Plan approval be placed on the meeting agendas of relevant political subdivisions during the spring of 2008. This schedule would allow for the distribution of the draft Plan and the review by the respective political subdivisions at their earliest convenience. The scheduling for final adoption of the Plan by individual political subdivision governing bodies varied. It was anticipated that some political subdivisions would adopt the Plan as an emergency measure; while others would pursue the full course of three separate readings.

Once the individual approvals were completed, copies of the resolutions were submitted to the Mitigation Planning Committee and maintained as a part of the Mitigation Plan within Appendix A. Copies of the resolutions were also be forwarded to the Ohio Emergency Management Agency for their files.

Plan Distribution

The final version of the Ashland County Mitigation Plan for Natural Disasters will be disseminated following the formal approval of the Federal Emergency Management Agency. Plan distribution, initially as well as any subsequent modifications of the Plan, will be the responsibility of the Ashland County Office of Emergency Management and Homeland Security.

Mitigation Plans will be submitted in hard copy or CD format to the following entities:

- Ashland County Commissioners
- All Ashland County Political Subdivisions
- Ashland County Office of Emergency Management and Homeland Security
- All Members – Ashland County Mitigation Planning Committee
- Ashland County Health Department
- Ohio Emergency Management Agency

- Ashland County Planning
- Ashland County Engineer
- Ashland County Library and Library Branches
- Others as requested

Plan Implementation

The Ashland County Mitigation Plan for Natural Disasters will be implemented according to the Action Plans established in Section Five. Responsibility of overseeing the execution of the Action Plans will be a cooperative effort among the Ashland County Office of Emergency Management and Homeland Security, The Ashland County Mitigation Planning Committee, and the various public and private entities identified within the Action Plan Section. The Mitigation Planning Committee will be kept informed of progress of implementation activities through formal and informal contacts by the Ashland County Office of Emergency Management and Homeland Security. Completion of specific mitigation activities will be documented within the Plan as indicated below.

Plan Maintenance

Periodically, throughout the five-year implementation period of the Ashland County Mitigation Plan, additions and other modifications will need to be incorporated within the Plan. These changes include names of individuals who may be added to or removed from membership on the Mitigation Planning Committee, modifications and completion dates of specific mitigation activities, and any other alterations that will maintain the Plan current. The status and completion dates of current mitigation projects will be updated on a Mitigation Project Status Sheets which are provided in Appendix E. As modifications are made, information to that effect will be provided to Planning Committee members. Updated information to previously distributed copies of the Plan will follow procedures as described within this Section.

Plan alterations, other than those considered insignificant, will be reviewed and approved by the Planning Committee prior to being added to or eliminated from the Plan. Proposed changes to the Plan can be made by any Committee member. Suggestions for Plan modification by Ashland County citizens or other individuals not a part of the Planning Committee may be routed through a Planning Committee member or through the governing body of their respective political subdivision. If warranted, the Planning Committee may request clarification or further explanation of the proposal by the individual(s) submitting the modification. Proposed changes will be reviewed by the Committee and accepted only upon their consensus. All approved changes will be incorporated within the web version of the Plan as soon as practical. Changes to the hardcopy versions will be disseminated to those entities identified in the distribution list given above. Modifications will also be sent to all Committee members for inclusion within their respective Plans.

The Ashland County Mitigation Planning Committee will formally evaluate the Ashland County Plan on an annual basis; prior to the yearly anniversary of its approval by FEMA. At that time, any changes made to the Plan will be included within the hardcopy versions or CD format of the Plan distributed throughout the County. All changes will also be sent to the Ohio Emergency Management Agency for their files.