

MIAMI COUNTY HAZARD MITIGATION ~ ACTION ITEMS
Annual Meeting Update - Revised June 6, 2014

Note: Yellow highlighted areas indicate Completed items since 2012 Plan

Action Item Number (New)	Action Item Number (Old)	Completed	Deferred	Deleted	New	Unchanged	Ongoing	City Village Township Countywide	Flooding	Tornados	Severe Winter Storm	Other	Action Item	Coordinating Organization or Service Agency	Timeline	Priority Level	Preventative	Property Protection	Emergency Service Measures	Structural Projects	Natural Resource Protection	Public Information	Reference Note	
		Action Taken							Hazard Type								Plan Goals Addressed							
CW1	1						X	Countywide	X	X	X	X	Provide workshops, promotions, and distribution of natural and manmade disaster & tornado safety flyers & data through school system, public functions to increase people's awareness to their vulnerability during these events.	Miami County EMA Northern Miami Valley, Ohio Red Cross Chapter	Ongoing	High	X						X	
CW2	2						X	Countywide				X	Special Needs Assessment.	Miami County EMA Northern Miami Valley Red Cross Chapter	1-3 Years	High	X					X		
CW3	3						X	Countywide	X	X	X	X	On-going training of Emergency Service Personnel on what to do and how to respond during disaster and hazard events.	Miami County EMA	3-5 Years	Moderate			X					
CW4	4						X	Countywide		X			Recommend code updates to include tornado resistant construction techniques such as hurricane straps, tiedowns, & tornado saferooms within structures.	Miami County Building Regulations	2 - 3 Years	Moderate	X	X						
CW5	5						X	Countywide		X			Promote & expand outdoor warning siren use for all communities & for remote county park areas.	Miami County EMA Miami County Park District	3 - 5 Years	Low	X	X					X	
CW6	6	X						Countywide		X			Set up & perform public building & school building assessment program to establish designated tornado safety areas.	Miami County EMA Northern Miami Valley Red Cross Chapter	2 - 4 Years	Moderate	X		X				X	
CW7	7	X						Countywide	X				Implement plan to collect base flood plain elevations and building inventory throughout county. Updated Preliminary FEMA Flood plain maps have been completed for public comment.	Miami County EMA Miami County Planning & Zoning	1-3Years	High	X	X						

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CW8	8	X						Countywide	X				Preserve floodplain areas as natural areas, wetland protection, bike trails, etc. along river corridors, in & around designated flood plains.	Miami Conservancy District Miami County Commissioners Miami County Park District	Ongoing	High	X	X			X		
CW9	9						X	Countywide	X				Continue to replace bridges & roadways so they are constructed and elevated above base flood elevations.	Miami County Engineer	Ongoing	Low		X		X			
CW10	10	X						Countywide	X				Continued strong participation & maintenance in the Miami Conservancy District structures including protection of existing dams, dikes, floodwalls, levees.	Miami Conservancy District	Ongoing	High	X	X		X	X		
CW11	11						X	Countywide	X	X		X	Identify critical facilities that need emergency backup generator systems.	Miami County EMA	2 - 4 Years	Moderate	X		X				
CW12	12						X	Countywide		X			Continued maintenance & operation of existing tornado warning sirens.	Public Municipalities	Ongoing	Moderate	X		X			X	
CW13	13	X						Countywide	X	X	X		Increase communication, coordination & collaboration between community leaders, property owners, local & county building regulations and zoning authorities to address risk & to provide uniformity & consistency in implementing sound mitigation practices.	Local & City Village Officials Township Zoning & Planning Officials Miami County Hazards Mitigation Planning Committee	Ongoing	High	X					X	
CW14	14						X	Countywide		X			Encourage construction of saferooms at county & community parks, large mobile home parks, campgrounds, fairgrounds.	Miami County EMA Communities Private Park Owners	Ongoing	Moderate	X			X		X	

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CW15	15						X	Countywide	X	X			Continue promotion of NOAA Weather Radio program and text alerts for festivals, fairgrounds, campgrounds, parks, recreation areas, & medical facilities.	Miami County EMA	Ongoing	Moderate	X						X	
CW16	16	X						Countywide	X				Identify and remedy surface water/county tile drainage obstructions for incorporated and unincorporated areas of Miami County.	Miami County Engineer Township Trustees Soil & Water District	2 - 4 Years	Moderate	X	X		X				
CW17	17	X						Countywide		X			Tornado saferoom for Community Parks. (Stillwater Preserve Restroom Completed).	Miami County EMA Miami County Park District	3 - 5 Years	Low	X			X				
CW18	18					X		Countywide			X		Evaluate traffic hazard warning devices/systems.	Miami County EMA	3 - 5 Years	Low	X	X	X		X			A
CW19	18A						X	Countywide	X	X	X	X	Right-of-Way hazardous and dead tree removal including all right-of-way, public lands, parks and easement areas.	EMA County Engineer	2 - 4 Years	Moderate	X	X			X	X		
CW20	18B						X	Countywide	X		X		Sanitary sewer infiltration and inflow for central sewage systems for all municipal and county systems.	City Village Officials County Sanitary	3 - 4 Years	Moderate	X	X			X			
CW21	58						X	Countywide / Miami County Park District	X	X		X	Expand weather warning sirens in the major county parks.	Miami County EMA Miami County Park District	2 - 4 Years	Moderate	X	X					X	
CW22	58A	X						Countywide / Miami County Park District	X	X		X	Expand weather monitor program to outdoor activity sites.	Miami County EMA Miami County Park District	Completed 2012		X	X					X	
CW23	59			X				Countywide / Miami County Park District				X	Provide multi-purpose safe building at the Stillwater Prairie Reserve. New concrete masonry block restroom facility was constructed at the Stillwater Prairie Reserve which affords some safety from storms.	Miami County Park District Miami County Building Regulations	2 - 4 Years	Moderate	X	X						

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																								Action Taken							Hazard Type				Plan Goals Addressed						
1PQ	19						X	City of Piqua	X				Floodproof lower level of floodprone commercial structure along Miami River (St. Rt. 25A, south of Piqua).	Miami County EMA	2 - 4 Years	Moderate	X	X		X																					
2PQ	20					X		City of Piqua	X				Mitigate 3 or 4 houses in the 100 year flood plain below Swift Run at the water plant within the City of Piqua.	Miami County EMA City of Piqua	2 - 4 Years	Moderate	X	X		X			A																		
3PQ	21						X	City of Piqua	X				Mitigate flooding of homes in floodprone area, City of Piqua along Lockington Road area.	Miami County EMA	2 - 4 Years	Moderate	X	X		X																					
4PQ	22	X						City of Piqua				X	Complete Flood Inundation Study and Emergency Action Plan for 3 Class I Dams. (Swift Run, Echo Lake, Franz Pond Dam and Hydraulic Canal Levy)	City of Piqua	Completed	High			X																						
5PQ	23						X	City of Piqua	X				Continued maintenance of the Swift Run Class I Dam (#1) (Public Recreation).	City of Piqua	Ongoing	Moderate	X	X		X	X																				
6PQ	24						X	City of Piqua	X				Continued maintenance of the Swift Run Class I Dam (#2) (Public Recreation).	City of Piqua	Ongoing	Moderate	X	X		X	X																				
7PQ	25						X	City of Piqua	X				Continued maintenance of the Swift Run Class I Dam (Water Supply Dam).	City of Piqua	Ongoing	Moderate	X	X		X	X																				
8PQ		X						City of Piqua	X				Subsurface Exploration & Analysis for Class I Dams.	City of Piqua	Completed	High	X	X																							
9PQ		X						City of Piqua	X				Sour Water Assessment & Protection Plan	City of Piqua	Completed	High	X	X																							
1TC	26						X	City of Tipp City		X			Provide for additional tornado sirens.	Tipp City Officials	2 - 4 Years	Moderate	X				231	X																			

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2TC	27	X					City of Tipp City	X				East Tipp City levee closure (sand bag closure) - North End.	Tipp City Officials Miami Conservancy District	Completed 2012		X	X		X				
3TC	28					X	City of Tipp City	X				Mitigate 3 homes, garages, farm bldgs., a sewer pumping station, 2 well head bldgs., 2 park bldgs., & 1 athletic field on E. Main Street and 1 home, 1 athletic field & 1 parking lot on Wagon Wheel Road all of which are in 100 year flood plain.	Tipp City Officials	2 - 4 Years	Moderate		X		X				
4TC	29	X					City of Tipp City	X				Provide New Storm Sewer Systems associated with Street Projects.	Tipp City Officials	Completed 2013-2014		X	X		X		X		
5TC	66					X	City of Tipp City	X				Protect 2 N. First Street electric substation #1 from high water.	Village Officials	1 -3 Years	Moderate	X	X		X				
6TC							City of Tipp City	X				Levee repairs along Miami River within City of Tipp City (Phase II)	Tipp City Officials Miami Conservancy District	1-3 Years	High				X				
1TR	30					X	City of Troy	X				Phase II: Repair and replace catch basins.	City of Troy Officials	3 - 5 Years	Moderate				X				
2TR	31						City of Troy	X				Phase II: Address flooding of McKaig Ditch and Kidder Ditch systems.	City of Troy Officials	Completed	Moderate		X		X				
3TR					X		City of Troy				X	Development of a long term storm water master plan to identify problem areas.	City of Troy Officials	1 - 3 Years	Moderate	X	X						
4TR					X		City of Troy				X	Design of a storm water pumping station for the Hobart Arena parking lot.	City of Troy Officials	1 - 2 Years	Moderate	X	X						
5TR					X		City of Troy				X	Sanitary sewer flow monitoring and skip lining to prevent ini.	City of Troy Officials	1 - 5 Years	Moderate	X	X						
6TR					X		City of Troy				X	Stanfield Storm water outlet to address limited flooding south of Commerce Drive.	City of Troy Officials	1 - 2 Years	Moderate	X	X						

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1BR	32	X						Village of Bradford	X				Connect outdoor warning siren system to Darke County warning system.	Miami County EMA Village of Bradford	Completed 2013-2014							X					
1CS	33						X	Village of Casstown				X	Perform evaluations of water system.	Miami County Health Department/Village Officials	3 - 5 Years	Low	X	X		X	X	X					
2CS	33A	X						Village of Casstown	X				Install tornado warning siren.	Village Officials	Completed 2011-2012		X		X			X					
1CO	62						X	Village of Covington	X		X		General storm water evaluation for the community.	Village Officials	1 - 3 Years	High	X	X		X							
2CO	63						X	Village of Covington	X		X		Floodplain Assessment for Rocky Branch Creek	Village Officials	2 - 4 Years	Moderate	X	X		X	X						
3CO	64						X	Village of Covington	X		X		Floodproofing of Village WWTP	Village Officials To be Completed 2017	2 - 4 Years	Moderate	X	X									
4CO	65						X	Village of Covington		X			Installed tornado siren on the east end of the Village and constructed two tornado shelters at each of the two main street trailer parks.	Village Officials	2 - 4 Years	Moderate	X		X			X					
5CO							X	Village of Covington			X		Add East Broadway Storm Sewer	Village Officials	2 - 4 Years	Moderate	X	X									
1FL	34							Village of Fletcher	X			X	Storm sewer work.	Village Officials	2 - 4 Years	Moderate	X					X					
1LA	35						X	Village of Laura		X			Construct community tornado saferoom for the Mobile Homes.	Miami County EMA Village Officials	3 - 5 Years	Low	X			X		X					
2LA	36						X	Village of Laura				X	Emergency generator power line from sewer plant to water plant.	Village Officials	1 - 2 Years	High	X	X	X								
3LA	37						X	Village of Laura	X			X	Extend storm sewers for flood prone homes on Pemberton Road.	Village Officials	2 - 3 Years	Moderate	X	X		X	233						

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1PH	38						X	Village of Pleasant Hill	X				Sanitary sewer infiltration protection.	Village Officials	3 - 5 Years	Moderate	X	X				X	X	
1WM	55			X				Village of West Milton		X			Tornado saferoom for Mobile Home Court located west of West Milton on S.R. 571.	Mobile Home Court Owner Miami County EMA	3 - 5 Years	Low	X			X				
2WM	57	X						Village of West Milton		X			Install 3 tornado warning sirens.	Village Officials	Completed 2011-2012		X		X				X	
3WM	57A						X	Village of West Milton	X		X		Extension of sanitary sewer system from West Milton to Ludlow Falls.	Village Officials County Sanitation	2 - 4 Years	Moderate	X	X				X		
1BE Twp	39						X	Bethel Township	X				Phase III - Honey Creek Stream Bank Repair.	Honey Creek Watershed Miami Conservancy District Miami County Park District	2 - 4 Years	Moderate	X	X			X	X		B
1BR Twp	40			X				Brown Township	X				Identify surface water & drainage tile obstructions.	Brown Township Trustees Miami County Engineer Soil & Water District	3 - 5 Years	Low	X	X			X			B
1CO Twp	41					X		Concord Township		X			Evaluate potential tornado saferoom for the Fairgrounds.	Miami County Fair Board Miami County EMA	3 - 5 Years	Moderate	X				X			A
2CO Twp	41A	X						Concord Township	X				Mitchell Property CDBG approved this year.	Concord Township Trustees	Completed 2012			X			X	X		
3CO Twp	42						X	Concord Township	X				Elevate or buy out of flood prone structures in the flood plain along the Miami River north of Troy.	Township Trustees Miami County EMA Miami Conservancy District	Ph. III - 3 - 4 Years	High	X	X			X	X		A
4CO Twp	42A	X						Concord Township	X				Removal of additional Fairground Buildings.	Miami County Fair Board	Completed 2011-2012			X			X			
5CO Twp	43						X	Concord Township	X				Modify flood gate #24 on Morgan Ditch for improved drainage of Fairgrounds.	Miami Conservancy District	3 - 5 Years	Low	X	X			X	X		B

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																								Action Taken						Hazard Type				Plan Goals Addressed					
																								6CO Twp	44						X	Concord Township	X				Improve the Kerns/Alexander ditch along Fenner Road west of Barnhart Road to eliminate flooding of the land around the homes in that area.	Concord Township Trustees Miami County Engineer	1-3 Years
7CO Twp	45						X	Concord Township	X				Mitigate floodprone structures north of Boone Hill, +/- 1/2 mile strip along both sides of C.R. 25A (several businesses, residences).	Concord Township Trustees Miami County EMA	2 - 4 Years	Moderate	X	X		X																			
8CO Twp	46						X	Concord Township	X				Improve the Schauer and Ziegenfelder ditches along St. Rt. 718 (west & east of Washington Road) and McKaig Road to eliminate continued standing surface water issues around homes and on agriculture land & to eliminate periodic flooding of other land in the area.	Concord Township Trustees Miami County EMA	1-3 Years	High	X	X																					
9CO Twp	47	X						Concord Township	X				Camp Troy/Boone Hill ±100 properties Water & Sanitary Sewer System Extension to replace wells and septic systems (under construction).	Concord Township Trustees Miami Co. Sanitary Engineering	Completed 2011-2012		X	X		X		X																	
10CO Twp					X			Concord Township	X				Improve the Clayton ditch in and around Beechwood Drive in the Lakeshore subdivision to eliminate flooding of homes and land in this area.		1-3 Years	High	X	X																					
11CO Twp					X			Concord Township	X				Improve the Boone Creek ditch along Swailes Road west of St. Rt. 25A and east of Swailes Road to eliminate flooding of land around residential housing.		3 - 5 Years	Moderate	X	X																					
1EL Twp	48			X				Elizabeth Township	X				Identify surface water & drainage tile obstructions.	Elizabeth Township Trustees Miami County Engineer	3 - 5 Years	Low	X	X		X			B																
1LC Twp	49			X				Lost Creek Township	X				Identify surface water & drainage tile obstructions.	Lost Creek Township Trustees Miami County Engineer	3 - 5 Years	Low	X	X		X			B																

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1MO Twp	60						X	Monroe Township				X	Water and Sewer extensions to serve township residents.	Monroe Township Water & Sewer District	3-5 Years	Moderate		X				X		A
2MO Twp	60A	X						Monroe Township				X	Water and Sewer extensions to serve township residents.	Monroe Township Trustees, Tipp City Offices	Completed 2013-2014			X				X		
3MO Twp	61	X						Monroe Township					Install 3 tornado warning sirens.	Monroe Township Trustees	Completed 2011		X		X				X	
1NB Twp	50					X		Newberry Township	X				Identify surface water & drainage tile obstructions.	Newton Township Trustees Miami County Engineer Soil & Water District	3 - 5 Years	Low	X	X			X			B
1NW Twp	51						X	Newton Township	X				Owens Road flooding.	Newton Township Trustees Miami County Engineer	2 - 4 Years	Moderate	X	X			X			A
1SC Twp	52			X				Spring Creek Township	X				Identify surface water & drainage tile obstructions.	Spring Creek Township Trustees Miami County Engineer	3 - 5 Years	Low	X	X			X			B
2SC Twp	53					X		Spring Creek Township (or City of Piqua)		X			Tornado saferoom for the Mobile Home Court on 25A.	Mobile Home Court Owner Miami County EMA	3 - 5 Years	Low	X				X			A
1ST Twp	54						X	Staunton Township	X				Identify surface water & drainage tile obstructions.	Staunton Township Trustees Miami County Engineer	3 - 5 Years	Low	X	X			X			B
1WA Twp	56			X				Washington Township	X				Identify surface water & drainage tile obstructions.	Washington Township Trustees Miami County Engineer	3 - 5 Years	Low	X	X			X			B

Reference Note:
A. Not completed due to lack of staffing and funding.
B. No issues identified by township.

3.3 2011 Plan Goals

GOAL #1 Continuation (Property Protection and Natural Resource Protection)

It shall be the goal of the Miami County Hazard Mitigation Committee to promote the continued preservation of open space, floodplains, wetlands, woodlands, and recreation areas along Miami County's stream and river corridors.

Objectives

- Promote and acquire conservation easements to allow for preservation of open space, recreation areas, and recreational trails along the Miami County stream and river corridors.
- Protect Miami County residents from flooding by promoting and utilizing Hazard Mitigation Grant Program funding and alternate source funding initiatives including voluntary buyout or flood proofing of structures within the 100 year floodplains. A priority emphasis will be placed on the current list of repetitive loss structures.
- Relocate critical facilities out of the 100-year floodplain.
- Continue to compile enhanced data regarding floodplain structures and elevations within Miami County and seek funding to alleviate flood prone area problems that exist within the 100-year floodplain.
- Identify funding opportunities and obtain funds from various federal, state, and local entities to implement mitigation activities.
- Obtain public support and seek source funding for the above objectives.

Discussion

Miami County continues to make good progress in preserving green space within the 100-year flood plain areas with acquisition of additional land for that purpose and by the removal of several structures. However, according to the updated FIRM flood plain maps numerous residences and buildings still exist within the 100-year designated floodplains in various areas of Miami County.

Several of these structures are located along the Great Miami River north of Troy. Some of these structures have failing septic systems and these buildings have been damaged numerous times during past major flooding events. With the recent updating of county flood plain maps, several additional repetitive structures in Troy and within the unincorporated areas of the county, have been identified. A new objective has been added to this goal to address these repetitive loss structures. The county has approximately six critical facilities that are within the 100-year floodplain.

GOAL #2: Continuation (Property Protection and Structural Projects)

It shall be the goal of the Miami County Hazard Mitigation team to identify and reduce the impact of urban and small stream flooding and surface drainage problems throughout Miami County and its communities and continue to promote ongoing maintenance and improvement to storm drainage systems and flood control structures.

Objectives

- To protect Miami County residents from flooding.
- To support the programs for the management of surface water and groundwater in Miami County and promote sustainable land design, construction and maintenance practices.
- To develop strategic partnerships with other organizations for opportunities that will reduce flooding.
- To utilize, maintain, and improve storm sewers, county drainage systems, detention and retention basins, flood protection structures, flood walls, levees, dams, and spillway structures in good condition.
- To repair or replace weakened or deteriorating structures in order to maintain safety for the Miami County residents.
- Identify funding opportunities and obtain funds from various federal, state, and local entities to implement mitigation activities.
- Obtain public support and seek source funding for the above objectives.

Discussion

Several areas of Miami County have had past urban and small stream flooding issues and these structures are not located within a designated river line flood plain area. These drainage problems in some cases are a result of poor site selection during the initial construction of these homes or businesses. The sites lack proper drainage and generally were built during the large growth period of the 1950's – 1970's. Progress is being made with enhanced storm management practices which help to address these types of flooding issues. This goal is still valid and the objectives have been modified slightly to address changing conditions. Several of these types of mitigation activities have been addressed as indicated within the completed list of action items.

Having adequately sized drainage structures, storm sewers, detention/retention facilities, and maintaining dams, levees, and flood control structures in good condition is essential to reduce flood damage, injuries, and loss of life during major flooding events. Miami County continues to have good ongoing initiatives to maintain or replace these systems and the Miami County Hazard Mitigation Committee concurred that these goals and objectives shall remain. Several mitigation activities relative to this goal are identified and addressed within the action items.

GOAL #3: Continuation (Public Information)

It shall be the goal of the Miami County Hazard Mitigation Committee to encourage, promote and implement public awareness and education programs of manmade and natural hazards for citizens, private property owners, public agencies, businesses, industry and schools.

Objectives

- Continue curriculum for school programs and public education on reducing risk and implementing mitigation techniques.
- Continue promotional mitigation materials for disbursement to the public.

- Effectively communicate with the public through workshops to raise awareness of various mitigation programs and techniques.

Discussion

The disruptions caused by the loss of use of structures and infrastructure can leave the general population vulnerable and jeopardize the safety and well being of communities' Temporary loss of facilities cause stoppage of goods and services, lost wages, and tax revenue for all sizes of government. Large devastation can result in the interference of the social well being of a community The Miami County Hazard Mitigation Committee with the assistance of such organizations as the Northern Miami Valley of the Red Cross, Calamityville (in association with Wright State University), the Miami County Emergency Management Agency, and the Miami County Local Emergency Planning Committee continues to promote awareness and education of natural and manmade hazards that threaten them. Community representatives, public service announcements, workshops, and printed, electronic, and video materials were disseminated throughout the past 5 years that inform the public about how to stay safe and protect their homes, businesses, and families. The Miami County Hazard Mitigation Committee intends to continue this Community Disaster Education (CDE) Program.

GOAL #5: New (Preventative-Public Information)

Provide improved integration and coordination of hazard mitigation policies and programs throughout the county and with the State of Ohio mitigation policies and procedures.

Objectives

- Work with county municipalities, townships, county agencies and Ohio Emergency Management to better align mitigation policies and programs so they see how all the pieces of the mitigation puzzle fit together.
- Create a "hazard mitigation specialist" program whereby representative(s) from each community or agency can be trained and learn the importance of integrating and coordinating hazard mitigation programs and policies into local planning mechanisms.
- Educate municipalities and county agencies on hazard mitigation funding opportunities available from various federal, state, and local entities for implementation of mitigation activities.
- Obtain public support for the above objectives.

Discussion

Many communities do not fully understand the importance of hazard mitigation planning strategies and how such activities can reduce risk, save lives and make for a better community. Communities must be educated to understand that that the results of being proactive and implementing pre-disaster mitigation activities can lead to results that save lives, reduce risk and lessen hazard event damages.

GOAL #6: Continuation (Public Information-Emergency Service Measures)

It shall be the goal of the Miami County Hazard Mitigation Committee to encourage and promote installation of up-to-date hazard warning and communication systems throughout the county and address proper response for the special needs population of the county.

Objectives

- Evaluate current tornado warning systems to assure effectiveness and efficiency and increase coordination and implementation between local jurisdictions.
- Work with Ohio Department of Transportation on encouraging the installation and use of electronic message boards along the I-75 corridor.
- Encourage adding tornado siren systems with battery backup for remote park system areas and for festival areas.
- Encourage continued use of NOAA weather radios for business, industry, schools, daycare center, hospitals, nursing homes, and private residences.
- Assess the “special needs population” for Miami County.
- Identify funding opportunities and obtain funds from various Federal, State, and Local entities to implement mitigation activities.
- Obtain public support and seek source funding for the above objectives.

Discussion

The Miami County Communications Center telecommuters respond to an average of over 81,000 incoming calls per year. On February 8, 2007, the Miami County Emergency Notification System (MCNS) became fully operational. In the event of a significant emergency, extreme weather event, or other catastrophe citizens can be alerted by telephone with information and instructions.

The Miami County Communications Center provides not only call handling but radio communication services to 49 agencies and data services for 28 agencies in the county. The data services are provided to public service organizations through (CAD) computer aided dispatch and records systems. The Miami County dispatch center and communications center is one of the most technologically advanced in the state and it is the intent of the Miami County Hazard Mitigation Committee to continue to promote the use of the latest technology systems for hazard warning and communication systems for the good of its citizens.

GOAL #7: Continuation (Preventative-Property Protection)

It shall be the goal of the Miami County Hazard Mitigation Committee to establish and implement measures that will reduce damage, risk, and loss of life from earthquake, tornado and high wind events.

Objectives

- To promote the construction of community tornado saferooms for community parks, recreational areas, mobile home parks and other vulnerable areas.
- To promote the benefits of incorporating tornado saferooms into new residential building construction.

- To encourage local building officials to include in building code updates the latest industry and technology which improves seismic and wind design and construction techniques.
- Encourage private and public removal of potentially hazardous tree failure which threatens lives, property and public infrastructure.
- Support and encourage urban forestry recommendations and practices and recommend implementation into planning documents.
- Support and encourage underground utility use.
- Identify funding opportunities and obtain funds from various Federal, State, and Local entities to implement these mitigation activities.
- Obtain public support and seek source funding for the above objectives.

Discussion

It is essential that mitigation planning be incorporated into the local land use initiatives and building code regulations. Strengthening the codes for building design to resist the forces of nature and by locating buildings out of high hazard areas will reduce physical, social, and large economic disruption that accompanies disasters. Damages and loss of lives by falling trees is substantial. Taking advantage of urban forestry programs and policies can pay huge dividends in regards to reducing wind storm losses caused by downed limbs or trees.

GOAL #8: New Goal (Preventative Public Information)

It shall be the goal of the Miami County Hazard Mitigation Committee to reduce risk, loss of lives by promoting preparedness and awareness of Severe Winter Storm events to its county residents.

Objectives

- To better prepare the citizens of Miami County for severe winter storms.
- Educate the public on the safety precautions and procedures for such an event.
- Develop programs to assist the segments of the population that are more vulnerable to the severe winter storm events.

Discussion

It is desirable that mitigation planning for severe winter storms be incorporated into the local planning initiatives. Past severe winter storms have caused some of the most significant property damages and loss of life for county residents. Better education, awareness and preparation for these events can help lessen the impact and reduce risk and loss of life. Because the county is largely rural it is prone to greater risk from such a hazard. A larger elderly population can also make the county more vulnerable for such an event. Taking advantage of better communication systems and pre-disaster planning and public awareness can help reduce risk and loss of life for such an event.

3.4 2017 Plan Goals

Mission Statement

It shall be the mission of the Miami County Hazard Mitigation Committee to promote the public health safety and welfare by pursuing the reduction of Natural Hazard impacts through the following goals and objectives

GOAL #1 Continuation (Property Protection and Natural Resource Protection)

It shall be the goal of the Miami County Hazard Mitigation Committee to promote the continued preservation of open space, floodplains, wetlands, woodlands, and recreation areas along Miami County's stream and river corridors.

Objectives

- Promote and acquire flood prone properties conservation easements to allow for preservation of open space, recreation areas, and recreational trails along the Miami County stream and river corridors.
- Protect Miami County residents from flooding by promoting and utilizing Hazard Mitigation Grant Program funding and alternate source funding initiatives including voluntary buyout or flood proofing of structures within the 100-year floodplains. A priority emphasis will be placed on the current list of repetitive loss structures.
- Relocate critical facilities out of the 100-year floodplain.
- Continue to compile enhanced data regarding floodplain structures and elevations within Miami County and seek funding to alleviate flood prone area problems that exist within the 100-year floodplain.
- Identify funding opportunities and obtain funds from various federal, state, and local entities to implement mitigation activities.
- Obtain public support and seek source funding for the above objectives.

GOAL #2: Continuation (Property Protection and Structural Projects)

It shall be the goal of the Miami County Hazard Mitigation team to identify and reduce the impact of urban and small stream flooding and surface drainage problems throughout Miami County and its communities and continue to promote ongoing maintenance and improvement to storm drainage systems and flood control structures.

Objectives

- To protect Miami County residents from flooding.
- To support the programs for the management of surface water and groundwater in Miami County and promote sustainable land design, construction and maintenance practices.
- To develop strategic partnerships with other organizations for opportunities that will reduce flooding.
- To utilize, maintain, and improve storm sewers, county drainage systems, detention and retention basins, flood protection structures, flood walls, levees, dams, and spillway structures in good condition.
- To repair or replace weakened or deteriorating structures in order to maintain safety for the Miami County residents.
- Identify funding opportunities and obtain funds from various federal, state, and local entities to implement mitigation activities.
- Obtain public support and seek source funding for the above objectives.

GOAL #3: Continuation (Public Information)

It shall be the goal of the Miami County Hazard Mitigation Committee to encourage, promote and implement public awareness and education programs for manmade and natural hazards to citizens, private property owners, public agencies, businesses, industry and schools.

Objectives

- Continue curriculum for school programs and public education for reducing risk and implementing mitigation techniques.
- Continue promotional mitigation materials for disbursement to the public.
- Effectively communicate with the public through workshops to raise awareness of various mitigation programs and techniques.
- Promote Mitigation partnerships with county wide agencies.

GOAL #5: Continuation – Also in 2011 Plan (Preventative-Public Information)

Provide improved coordination and integration of hazard mitigation policies and programs throughout the county and with the State of Ohio mitigation policies and procedures.

Objectives

- Work with municipalities, townships, county agencies and Ohio Emergency Management to better align mitigation policies and programs so they understand how all the pieces of the mitigation puzzle fit together.
- Create a “hazard mitigation specialist” program whereby representative(s) from each community or agency can be trained and learn the importance of integrating and coordinating hazard mitigation programs and policies into local planning mechanisms.
- Educate municipalities and county agencies on hazard mitigation funding opportunities available from various federal, state, and local entities for implementation of mitigation activities.
- Obtain public support for the above objectives.

GOAL #6: Continuation (Public Information-Emergency Service Measures)

It shall be the goal of the Miami County Hazard Mitigation Committee to encourage and promote implementation of up-to-date hazard warning and communication systems throughout the county and address proper response for the special needs population of the county.

Objectives

- Evaluate current tornado warning systems to assure effectiveness and efficiency and increase coordination and implementation between local jurisdictions.
- Encourage use of multiple notification systems.
- Encourage continued use of NOAA weather radios for business, industry, schools, daycare center, hospitals, nursing homes, and private residences.
- Assess and accommodate for Miami County the special needs population for Miami County.
- Identify funding opportunities to obtain funds from various Federal, State, and Local entities to implement mitigation activities.
- Obtain public support and seek source funding for the above objectives.

GOAL #7: Continuation (Preventative-Property Protection – Public Information)

It shall be the goal of the Miami County Hazard Mitigation Committee to establish and implement measures that will reduce loss of life, damage and risk from all natural hazard events.

Objectives

- To promote the construction of community tornado saferooms for community parks, recreational areas, mobile home parks and other vulnerable areas.
- To promote the benefits of incorporating tornado saferooms into new residential building construction and participating in the construction project through Ohio EMA.
- To inform residents of code updates the latest industry and technology which improves seismic and wind design and construction techniques.
- Encourage private and public removal of potentially hazardous tree failure which threatens lives, property and public infrastructure.
- Support and encourage urban forestry recommendations and practices and recommend implementation into planning documents.
- Support and promote underground utility use.
- Identify funding opportunities and obtain funds from various Federal, State, and Local entities to implement these mitigation activities.
- To educate the public on safety precautions and procedures for natural hazard events.
- To develop programs to assist segments of the population that are more vulnerable to natural hazard events.

3.5 Identifying Mitigation Activities

Since the 2006 Miami County Hazard Mitigation Plan approval the Miami County Hazard Mitigation Committee has met yearly and on an “as needed” basis to add, delete, change or reprioritize hazard mitigation activities based on Miami County’s changing needs and conditions. The Committee has made a good faith effort to foster partnerships to address hazard mitigation actions and promote a more resilient and sustainable communities throughout the county. The objective is to reduce the costs associated with disaster response and recovery. The Miami County Hazard Mitigation Committee’s annual review and re-evaluation process has permitted steady progress to occur and allows for good communication with all project stakeholders. The ongoing collaborative effort lets the stakeholders be aware of progress, new funding opportunities (which are crucial to project success) and changes necessary to accomplish the overall plan goals.

Generally, the activity items determined are a result of the following:

- From analyzing the results of the Miami County Hazard Risk Assessment.
- From problem statements developed by the Miami County Hazard Mitigation Committee.
- Public input from public meetings, contributions from County agencies and from County mitigation workshops and good participation from municipalities in the ongoing planning process.
- Continuous coordination of partnerships among all participating communities and agencies.
- Aligned with other county and local planning documents.
- The activities selected are in line with the plans overall goals as established by a consensus of the Miami County Hazard Mitigation Committee.

The research and problem statements tend to show that high winds/tornados, severe winter storms, and flooding events are of primary concern and were the most “probable” and “critical” of the hazards identified within the County. According to the NCDC past losses for these three hazards in the Miami County Hazard Risk Assessment were \$13,835,000 for windstorms/tornados; \$2,131,000 for severe winter storms; and \$3,020,000 for flooding events.

Although many of the action items considered and chosen as priority will reduce risk and losses for all of the potential County hazards identified in the Miami County Hazard Risk Assessment, the Hazard Mitigation Committee considered tornados/high wind events, flooding and winter storm hazard categories the priority hazard activities to mitigate over the next five-year plan period. In addition to the hazard risk assessment severity level, other county planning document goals and citizens input were influential in the committee’s preferences on which mitigation activities should be considered and will offer more resilient and sustainable communities and will reduce costs associated with disaster response and recovery.

The Miami County Hazard Mitigation Committee has continued to use the following criteria in ranking and selection of the general hazard mitigation activities:

- Cost effectiveness.
- Technical feasibility.
- Environmental soundness.

- Social impacts.
- Does the activity address the problem?
- Does the activity meet federal, state and local regulations?
- Is the activity politically acceptable?
- Does the activity reduce the risk?

The Hazard Mitigation Committee then determined a rating scale for each of these activity categories which were as follows:

Excellent	5
Good	4
Fair	3
Bad	2
Unacceptable	1

The general activity categories were originally developed by the Miami County Hazard Mitigation Committee and the members unanimously agreed to these general overall hazard categories. The committee members continue to form a consensus before scoring each category with a one through five ranking. Each general activity is then discussed and the committee members, in consensus, gave each criteria category a ranking. All of the criteria category scores are totaled to see which general hazard activity would be given a priority rating. The Committee concurred for the 2017 Plan Update that the original plan scoring was still valid and the preferred methodology of evaluation.

For the 2017 Planning Sessions the top priority activity categories, by score, have been determined to be as follows (see Table 1 for complete results):

- Activity 1: Provide public information and awareness programs through county agency partnerships.
- Activity 4: Communication system upgrades and rapid technology changes. (911 Center upgrade)
- Activity 5: Promote advanced technology warning system use for all communities. (Alert radios tied to outdoor warning system.)
- Activity 9: Presentation of river and stream corridor areas which are generally floodplain areas, open natural areas which are generally preserved open space, wetlands, woodlands and floodplain areas that may be used for recreation, park land, bike trails, nature and preserve areas.
- Activity 12: Support of dam and levee studies and safety maintenance programs. Continued strong participation in maintenance and replacement of county flood structures such as dams, dikes, floodwalls, levees and floodgates along Miami County's rivers, lakes and streams.
- Activity 13: Improve mitigation activity interface between all county municipalities and agencies
- Activity 15: Facilitate annual Hazard Mitigation Committee planning meetings to monitor and support all agency partnerships towards completing mitigation goals, objectives and action items.

The mid-ranking activities were then assigned a medium priority ranking. The medium priority categories, by score, were determined to be as follows:

- Activity 3: Support building code updates to include the latest in technology and upgraded construction techniques.
- Activity 6: Continued hazard assessment program of public buildings and school buildings for emergency shelter needs as well as occupant safety needs.
- Activity 7: Compile additional building and floodplain elevation data. Tornado safe rooms (due to readiness of available funding)
- Activity 8: Mitigate structures from flood zones and implement dry and wet flood proofing techniques.
- Activity 10: Continued enhancements and updates to storm water management ordinances and regulations and continue studies and improvement activities to the countywide drainage maintenance program, storm drainage improvements and storm sewer maintenance. Create an outreach strategy and coordinate planning efforts between all county agencies.
- Activity 14: Tornado saferoom support since state funding programs for public and residential saferooms are currently available.

The low priority categories, by score, were determined to be as follows:

- Activity 2: On-going training of emergency service personnel on what to do and how to respond during tornado disaster events. (The committee felt this activity was better addressed by the first responder groups)
- Tornado safe rooms (due to readiness of available funding)
- Activity 11: Continue to replace bridges and roadways so they are constructed and elevated above base flood elevations. (lesser degree of anticipated damages and better supported by the County Engineer and Highway Department)

The activities list includes individual activities and projects recommended by the county, cities, villages, townships or other agencies or groups. At least one project activity was established for each community. The Hazard Mitigation Committee included for each action item:

- Identified the name of the community.
- Identified type of hazard.
- Provided a description of the action item.
- Established a coordinating organization or service agency.

Each Action Item includes a priority level of high, medium or low.

Plan goals that are to be addressed use the following six categories of hazard mitigation activities:

1. **Preventative:** Activities that keep problems from getting worse. The use and development of hazard areas are limited through planning or regulations. These activities are usually administered by building, zoning, planning, and/or code enforcement officials.

2. **Property Protection:** This is usually undertaken by property owners on a building-by-building or parcel basis.
3. **Emergency Service Measures:** Measures are taken during disaster events to minimize their impact. These measures are usually the responsibilities of city or county emergency management staff.
4. **Structural Projects:** These projects keep hazards away from an area. They include dams, dikes and levees and are usually long-term actions that have very high up-front costs and on-going maintenance costs.
5. **Natural Resource Protection:** This preserves or restores natural areas or the natural function of hazard areas. A floodplain or wetland area maintained in its natural state is an example of this.
6. **Public Information:** Programs that advise property owners, potential property owners, and visitors to hazard areas, as well as protect people and property from them. Public information can also increase people's awareness to their vulnerability and property risk.

TABLE 1
Miami County Hazard Mitigation Planning
General Mitigation Activities Evaluation Criteria

Proposed Types of Activities		Criteria								Total	Priority Range
		Cost Effective	Technically Feasible	Environmentally Sound	Social Impacts	Activity Addresses The Problem	Meets Federal, State & Local Regulations	Politically Acceptable	Activity Reduces the Risk		
Activity 1	Public Information ~ Distribution of tornado safety flyers and data through school system, public functions. Joint effort by Miami County EMA and Northern Miami Valley Red Cross Chapter to increase people's awareness to their vulnerability and property.	5	5	4	4	3	4	4	3	32	High
Activity 2	On-going training of Emergency Service Personnel on what to do and how to respond during tornado disaster events.	3	4	4	5	3	4	4	2	29	Low
Activity 3	Support code changes to include latest construction technology.	3	4	4	3	5	4	3	5	31	Mid
Activity 4	Communication system upgrades and rapid technology changes.	4	3	5	5	5	4	4	5	35	High
Activity 5	Promote advanced technology warning system use for all communities. (Alert radios tied to outdoor warning system.)	3	4	4	4	3	4	4	4	30	High
Activity 6	Set up and perform public building and school building emergency shelter assessment program.	3	3	5	5	3	4	5	4	32	Mid
Activity 7	Compile additional floodplain building and elevation data.	3	2	4	4	4	4	3	2	26	Mid
Activity 8	Remove structures from flood zones, implement dry and wet floodproofing techniques.	3	3	4	3	4	4	3	5	29	Mid
Activity 9	Preserve floodplain areas as natural areas, wetland protection, recreational trails, etc. along river corridors.	4	4	4	3	4	5	3	5	32	High
Activity 10	Continued implementation of stormwater management, ordinances and regulations. Continue countywide drainage maintenance program, storm drainage improvements, and storm sewer maintenance.	3	4	3	3	4	4	3	4	28	Mid
Activity 11	Continue to replace bridges and roadways so they are constructed and elevated above base flood elevations.	3	3	3	3	4	4	4	3	27	Low
Activity 12	Promote dam and levee safety maintenance programs.	5	4	3	4	5	5	4	5	35	High
Activity 13	Create an outreach strategy to coordinate planning efforts.	5	4	5	4	4	4	4	4	34	High
Activity 14	Promote tornado safe rooms	3	3	4	4	4	4	4	4	30	High
Activity 15	Facilitate annual hazard mitigation planning meeting and activity interface	5	5	4	4	4	4	4	4	34	High

Rating Scale:
 Excellent = 5
 Good = 4
 Fair = 3
 Bad = 2
 Unacceptable = 1

3.6 Re-Evaluating the County's Problems

During the October 2016 – March 2017 monthly planning sessions, the Miami County Hazard Mitigation Committee reviewed the updated Hazard Risk Assessment information provided by the local fire departments and County Auditor's office. The committee re-evaluated the vulnerability analysis and estimate of losses, redefined problem statements, re-examined goals, identified additional mitigation activities, and update action plans necessary for the multi-jurisdictional plan of Miami County. In addition, the Miami County Hazard Mitigation Committee also held open public meetings and invited all of the municipal officials to update the status of current mitigation activities and identify any new or changing mitigation issues experienced in their communities. The annual mitigation activity update process has been ongoing with the Miami County participating communities and agencies since the approval of the initial 2006 plan. By identifying and confronting problems and utilizing a continuous mitigation process the residents have been better informed and have become more educated to understand the threat of future hazards and how they may impact the county.

The Hazard Mitigation Committee re-evaluated ongoing activities and discussed new issues that have come about over the five years since those identified in the last FEMA Approved and Hazard Risk Assessment Update. The Hazard Mitigation Committee reviewed and discussed the many types of hazards that can and will affect Miami County. The largest most recent challenge was the flash flooding that occurred on May 21, 2014 over much of the county and affected the Tipp City, Troy, Covington, Piqua, Bethel Township and New Carlisle. Interstate 75 was closed at State Route 55 to State Route 571. Many of the older residential areas in Tipp City were flooded as was many basements throughout the area. The Committee discussed the Repetitive Flooding issues in Concord Township along the Keans/Alexander Ditch, Schauer/Zigenfelder Ditch along State Route 718 and the Clayton Ditch in and around Beechwood Drive in the Lakeshore Subdivision. The City of Piqua completed studies of the counties Class I Dams and is an example of 3 Complete Action Items that were addressed over the past five years. This will give direction to the ongoing maintenance of these structures and safety for the county residents. Such as the August 1995 flooding in Piqua and the flooding of the Troy Fairgrounds area, progress has been made with several Fairground structures have been removed and new ones constructed that are elevated above the 100-year flood elevations. The City of Piqua was able to address some of the flooding problems by installing larger relief storm sewer systems, some of which were already designed. This is an example of continuous mitigation planning and actions already at work within Miami County communities. Some of the storm sewer projects that various Miami County communities have undertaken have lessened the losses of localized storms. While they will not prevent future major flooding, the new sewer systems will lessen the effects. The Cities of Piqua, Troy, and Tipp City, and the Villages of Covington, Fletcher, Laura, Ludlow Falls, and West Milton are all listed as participating communities within the Federal Emergency Management Agency National Flood Insurance Protection Program (NFIP). The county has been very proactive in recommending homeowners that are in flood prone areas to participate in the NFIP program.

In addition to flooding, the other most likely hazard to significantly affect the county is tornadoes and high wind events. The damaging events of Tropical Storm Ike in 2008 indicated how vulnerable the County can be to a prolonged high wind event. In some cases, power was out for five days causing considerable downtime and loss of revenue for many businesses. The benefits of incorporating mitigation strategies over time can help reduce the impact of future

events such as tropical storm winds. For example, the benefits of an urban tree program can help lessen the impact by having fewer falling limbs and trees fall down on power and utility lines. Having emergency shelters with backup emergency power can be of great assistance to those that must have power for medical equipment needs. During high wind events, the costs for shingle repairs and debris removal can be extensive. Heavier grade, higher wind resistant shingles can reduce the need for future roof repairs. Incorporating increased wind load requirements in to building codes will most likely lessen the damage and impact from future high wind events.

The Miami County Board of Commissioners adopted an updated Emergency Operations Plan on November 24, 2015, so that the County and local government would have a plan to adequately confront the aftermath of natural and manmade disasters. The Miami County Emergency Operations Plan provides a comprehensive framework for countywide emergency management. While the countywide Hazard Mitigation Committee believes the County is well prepared to respond to these manmade and natural disasters, it is this committee's challenge to further identify problems in order to mitigate them. These mitigation activities will also help lessen the burdens experienced by the public officials, emergency operations staff and emergency personnel. The National Center for Medical Readiness at Wright State University in Fairborn, Ohio, is operating the Calamityville Tactical Laboratory Project, a state-of-the-art, innovative, integrated, collaborative training and research facility to provide a one-of-a-kind training opportunity for the world's medical, public health, public safety, and civilian and military disaster response decision. Miami Counties Emergency responders continue to partner nearby. This nearby state-of-the art readiness training facility continues to allow nearby emergency operations personnel and emergency management personnel to improve their skills and to be better prepared to respond to both natural and manmade hazards.

The Miami County Hazard Mitigation Committee decided to continue to utilize the current plan goals with just a few minor modifications to coincide with other goals of the Miami County community. The Committee focused on the main tools available which included the Miami County Emergency Operations Plan, Miami County Zoning, Subdivision and Area Planning Regulations, Miami County Comprehensive Plans, City Comprehensive Plans, Local Township and Village Zoning Regulations, Miami County Economic Planning and area accepted stormwater practices, and the Miami County Park District's open space goals and objectives. Also considered was the agricultural influence in the county and available watershed studies, floodplain studies, and the Miami Conservancy District goals and objectives.

The Miami County Emergency Management Agency is pleased that the Miami County community and its leaders have taken a proactive role with the completion of a good number of the 2006 priority mitigation activities outlines in the plan, along with the modifications to the plan that occurred through a yearly meeting to review progress and make necessary plan adjustments.

Some areas flash flooding and urban and small stream flooding still exist due to the 1960's and 1970's rapid development, and limited inspections for homes built during that time period. As a result of these problems, several countywide flash flooding areas and issues have been identified and are listed as mitigation activity items.

Many of the tools, such as the Miami County zoning and land use ordinances, are in place to prevent similar poor development practices. Over time with good mitigation practices and corrective measures the impact of future hazard events such as flooding should be eventually reduced.

3.7 Updated Action Plan

The Miami County Hazard Mitigation Committee outlined and ranked possible hazard mitigation activities in the preceding Section 3.05 “Identifying Mitigation Activities.” Those activities ranked as a high priority activity were then analyzed and put into an Action Plan format. Some of the activities were chosen by the Hazard Mitigation Committee to fulfill countywide projects and some were selected for each jurisdiction such as a city, village or township entity within Miami County. Some of the projects were unable to be completed in the previous 5-year plan due to funding issues and therefore are still considered high priority projects within this plan update. The Action Plan indicates those program’s policies or resources that can be used to implement the project. It also indicates which primary goal has been met, the implementation timeline, possible funding sources, and the agency or personnel responsible for carry-out actions.

Reference Activity #CW1

Goal #3: It shall be the goal of the Miami County Hazard Mitigation Committee to encourage, promote and implement public awareness and education programs of manmade and natural hazards for citizens, private property owners, public agencies, businesses, industry and schools.

Activity: Promote public awareness of manmade and natural hazards at public events and hold workshops to educate the public. Distribute appropriate mitigation publications.

Reason Chosen: The Mitigation Committee, from group meetings, questionnaires and public workshops, sees the need for increased public awareness, education and integration of hazard mitigation for the communities and its citizens of Miami County. It is imperative to get a system implemented throughout the county whereby hazard mitigation is incorporated into all county planning mechanisms.

Hazard Type: All Hazards

Hazard Category: Public Information

Lead: North Miami Valley Red Cross Chapter
Miami County Emergency Management Agency

Start Date: Ongoing

End Date: Ongoing

Task 1: Determine and obtain available FEMA publications and other promotional publications.

Task 2: Determine type and location of events to attend.

- Task 3:** Establish volunteer base.
- Task 4:** Secure possible funding sources (Red Cross Funding, County General Fund, and Community Funds).
- Task 5:** Organize program.
- Task 6:** Implement program and events.

Reference Activity #CW2

Goal #6: It shall be the goal of the Miami County Hazard Mitigation Committee to encourage and promote installation of up-to-date hazard warning and communication systems throughout the county and address proper response for the special needs population of the county.

Activity: Complete special needs assessment of the county.

Reason Chosen: The Miami County Hazard Risk Assessment identifies the importance of evaluating the special needs population of Miami County. Many individuals have limited mobility, need continuous power to operate medical equipment or may have a language barrier during a hazard event. These individuals must be identified so their priority needs can be met.

Hazard Type: All Hazards

Hazard Category: Preventative and Emergency Service Measures

Lead: Northern Miami Valley Red Cross Chapter
Miami County EMA

Start Date: January 2018

End Date: January 2021

Task 1: Establish special needs reporting criteria and system.

Task 2: Gather data.

Task 3: Summarize data into a reporting document.

Task 4: Release document to first responder agencies.

Reference Activity #CW7

- Goal #1:** It shall be the goal of the Miami County Hazard Mitigation Committee to promote the continued preservation of open space, flood plains, recreation areas, wetlands, woodlands and recreation areas along Miami County's stream and river corridors.
- Activity:** Update and complete an inventory of buildings and building data within the 100-year flood plain boundaries of Miami County. Coordinate with recently completed GIS flood plain maps.
- Reason Chosen:** The Miami County Hazard Risk Assessment identifies the Great Miami River corridor as a source of flooding. Development within this area per the Miami County Comprehensive Plan should be limited to natural open spaces. Numerous structures have been identified to exist within these flood plain boundaries. Having an inventory of these structures, building data, and determined elevations will help to better prioritize the mitigation process for these structures.
- Hazard Type:** Flooding
- Hazard Category:** Natural Resource Protection, Property Protection, Structural
- Lead:** Miami County Board of Commissioners
Miami County Area Planning Department
- Start Date:** January 2018
- End Date:** January 2021
- Task 1:** Identify master list of residential, commercial, industrial and agricultural structures in coordination with the ~~recently updated~~ FEMA 100-year flood plain ~~areas~~ maps currently being updated. Anticipated adoption of updates late 2017 or early 2018.
- Task 2:** Gather data on structures such as construction date, construction type, foundation type, structure type, lowest floor elevation, repetitive loss status.
- Task 3:** Prioritize structures based on repetitive losses and elevations.
- Task 4:** Update risk assessment.

Reference Activity #CW8

Goal #1: It shall be the goal of the Miami County Hazard Mitigation Committee to promote the continued preservation of open space, flood plains, recreation areas, wetlands, woodlands and recreation areas along Miami County's stream and river corridors.

Activity: Preserve floodplain areas along river corridors as natural open space areas. Provide for wetlands and woodlands protection.

Reason Chosen: The Miami County Hazard Risk Assessment identifies the Great Miami River corridor as a source of flooding. Development along this area per the Miami County Comprehensive Plan should be limited to natural open spaces. The Comprehensive Plan further states, "The bike path from Piqua south to the county line is another example of the recreation potential of the River corridor which should be further explored." Another reason this area remains relatively undeveloped is due to Miami Conservancy Flood Easement and 100-year floodplain.

"Fingers of open space/conservation/recreation are designated in parts of the corridor away from the Great Miami River. These are designated to encourage conservation of existing woodlands and drainage capacity of the waterways passing through future urban areas and feeding into the river. A coordinated system of open space and greenways should be built along the waterways as these areas develop. Thus, the four objectives of providing recreation corridors for walking and biking, connecting parks, maintaining water quality, and stormwater management could all be met with one system." (Reference Miami County Comprehensive Plan, Page 21).

Hazard Type: Flooding

Hazard Category: Natural Resource Protection

Lead: Miami County Board of Commissioners
Concord Township Trustees

Start Date: January 2018

End Date: Ongoing

Task 1: Identify possible flood prone structures to be mitigated along this corridor.

Task 2: Establish damaged and frequency relationship for floods.

- Task 3:** Perform a benefit/cost analysis.
- Task 4:** Identify interest in buyouts. Identify and consider voluntary buyouts through the Hazard Mitigation Grant Program.
- Task 5:** Secure possible funding sources (Clean Ohio Funds—local funds; Hazard Mitigation Grant Program—HMGP; local county funds; Ohio Department of Natural Resources funds—ODNR).
- Task 6:** Identify and secure open space Conservation District easements.
- Task 7:** Make offer on applicable structures.
- Task 8:** Bidding and demolition of structures

Reference Activity #CW10

- Goal #2:** It shall be the goal of the Miami County Hazard Mitigation Committee to promote the continued maintenance and improvement of the county flood protection structures such as floodwalls, levees, floodgates, dam and spillway structures, retention/detention basins, storm sewer and county drainage systems.
- Activity:** Ongoing levee system maintenance.
- Reason Chosen:** The levee systems through Miami Counties Cities of Piqua, Troy and Tipp City require continuous maintenance to retain in good condition. Tree removal, groundhog hole filling, ditch obstruction removal procedures and erosion control measures are necessary.
- Hazard Category:** Preventative-Property Protection
- Lead:** Miami Conservancy District
- Start Date:** Ongoing
- End Date:** Ongoing
- Task 1:** Identify Maintenance Issues.
- Task 2:** Secure funding sources for ongoing maintenance projects.
- Task 3:** Make repairs.

Reference Activity #CW13

- Goal #5:** Provide improved integration and coordination of hazard mitigation policies and programs throughout the County and with the State of Ohio mitigation policies and procedures.
- Activity:** Increase communication, coordination, and collaboration between community leaders, property owners, local and county building regulations, floodplain managers and zoning authorities to address risk and to provide uniformity and consistency in implementing sound mitigation practices.
- Reason Chosen:** Because of the challenges with the many levels of government and the numerous types of regulations and codes, it is difficult for communities to understand how all of the mitigation planning requirements and activities fit together. Integration of planning documents and code consistency is one significant way hazard mitigation policies and problems can be interfaced.
- Hazard Type:** All
- Hazard Category:** Public Information
- Lead:** Miami County Board of Commissioners
Miami County EMA
- Start Date:** January 2018
- End Date:** Ongoing
- Task 1:** Miami County EMA shall develop program to encourage inter-agency participation.
- Task 2:** Provide training for local communities and start a “Volunteer Mitigation Specialist” program.
- Task 3:** Coordinate training events and obtain the help of Ohio EMA specialists.
- Task 4:** Create three-year activity plan and schedule of events.
- Task 5:** Implement Action Plan.

Reference Activity #6TC

- Goal:** It shall be the goal of the Miami County Hazard Mitigation Committee to promote the continued maintenance and improvement of the county flood protection structures such as floodwalls, levees, floodgates, dam and spillway structures, retention/detention basins, storm sewer and county drainage systems.
- Activity:** Levee repairs along Miami River within City of Tipp City. (Phase 2)
- Reason Chosen:** In accordance with the Miami County Hazard Risk Assessment profile of riverine flooding, this area has received past flooding and is very likely to be repeated in the future in these areas. The surrounding area is located within the 100-year floodplain. This levee area needs repair as it protects considerable amounts of the eastern portion of the Tipp City area including historic downtown Tipp City and is also identified in the Miami Conservancy District Maintenance Plan.
- Hazard Type:** Flooding
- Hazard Category:** Structural Project
- Lead:** Miami Conservancy District
Village Administrator, City of Tipp City
- Start Date:** June 2018
- End Date:** June 2021
- Task 1:** Establish damage and frequency relationship for floods.
- Task 2:** Perform cost/benefit analysis.
- Task 3:** Provide project description.
- Task 4:** Secure possible funding sources such as Miami Conservancy District funds, City of Tipp City local funds, and Hazard Mitigation Grant Program funds.
- Task 5:** Provide plans and specifications.
- Task 6:** Perform construction work.

Reference Activity #1CO

- Goal #2:** It shall be the goal of the Miami County Mitigation team to identify and reduce the impact of urban and small stream flooding and surface drainage problems throughout Miami County and its communities and continue to promote ongoing maintenance and improvement to storm drainage systems and flood control structures.
- Activity:** General storm water evaluation for the Covington community.
- Reason Chosen:** In accordance with the Miami County Hazard Risk Assessment profile of flash flooding, this area has received past flooding and is very likely to be repeated in the future in these areas. The surrounding area is located within the 100-year floodplain. This levee area needs repair as it protects considerable amounts of the eastern portion of the Tipp City area including historic downtown Tipp City and is also identified in the Miami Conservancy District Maintenance Plan.
- Hazard Type:** Flooding
- Hazard Category:** Preventative
- Lead:** Village Administrator, Village of Covington
- Start Date:** January 2018
- End Date:** June 2021
- Task 1:** Perform damage analysis and frequency relationship for floods.
- Task 2:** Develop and provide project(s) description.
- Task 3:** Perform cost/benefit analysis.
- Task 4:** Secure possible funding sources such as Clean Ohio funds, Village of Covington local funds, and Hazard Mitigation Grant Program funds.
- Task 5:** Develop plans and specifications.
- Task 6:** Bid and perform construction work.

Reference Activity #2LA:

Goal #7: It shall be the goal of the Miami County Hazard Mitigation Team to improve critical facilities so they are located out of the 100-year floodplain, are constructed using tornado resistant construction techniques, have emergency backup power, are secure and afford adequate security for the purposes they serve.

Activity: Provide power line for emergency backup power generator for the Village of Laura from the wastewater treatment facilities to the water treatment facilities

Reason Chosen: The Miami County Hazard Risk Assessment lists Water and Wastewater Treatment Plants as critical facilities. The water and wastewater system is needed to operate at all times to maintain sanitary operations and water supply for the safety of public health. Public water supply is also essential for fire protection systems. An emergency backup power unit is necessary for these facilities during periods of power outages that may occur due to many various hazards.

Hazard Category: Property Protection

Lead: Mayor, Village of Laura

Start Date: June 2018

End Date: June 2021

Task 1: Perform a cost/benefit analysis.

Task 2: Secure possible funding sources (i.e. Village funds, FEMA funds).

Task 3: Develop plans and specifications.

Task 4: Seek bids and provide for installation.

Reference Activity #3CO Twp:

Goal #1: It shall be the goal of the Miami County Hazard Mitigation Committee to promote the continued preservation of open space, flood plains, recreation areas, wetlands, woodlands and recreation areas along Miami County's stream and river corridors.

Activity: Buy out of additional flood prone residences, businesses and structures in Concord Township, north of Troy along scenic Great Miami River.

Reason Chosen: Per the Miami County Hazard Risk Assessment and per historic data available, this area has received flooding in the past. Several homes and structures are located within the 100-year flood plain. Also, the river corridor is part of the County Master Plan to remain as open space/recreation area. Within this corridor are several homes and a business that have already been purchased and removed. The Buyout of additional homes and properties within the area are recommended but would be voluntary through the Hazard Mitigation Grant Program or Clean Ohio Funds.

Hazard Type: Flooding

Hazard Category: Property Protection, Natural Resource Protection

Lead: Concord Township Trustees
Miami County EMA

Start Date: June 2017

End Date: June 2020

Task 1: Identify the structures subject to flood damage and initiate voluntary buy-out process with land owners.

Task 2: Establish damage and frequency relationship for floods.

Task 3: Perform a cost/benefit analysis for each structure.

Task 4: Identify the interest in buy-outs.

Task 5: Secure possible funding sources (Hazard Mitigation Grant Program funds, Clean Ohio funds, and local County and township funds).

Task 6: Negotiate and secure open space conservation easements for the properties with interested property owners.

Task 7: Close on the structures.

Task 8: Demolish the structures.

Task 9: Clean up and maintain the property.

Reference Activity #6CO Twp:

Goal #2: It shall be the goal of the Miami County Hazard Mitigation team to identify and reduce the impact of urban and small stream flooding and surface drainage problems throughout Miami County and its communities and continue to promote ongoing maintenance and improvement to storm drainage systems and flood control structures.

Activity: Improve the Kerns/Alexander ditch along Fenner Road west of Barnhart Road to eliminate flooding of the land around the homes in that area.

Reason Chosen: Per the Miami County Hazard Risk Assessment and per historic data available, this area has received flooding in the past. Several homes and structures have been subject to repetitive flooding.

Hazard Type: Flooding

Hazard Category: Property Protection, Natural Resource Protection

Lead: Concord Township Trustees
Miami County EMA

Start Date: June 2017

End Date: June 2020

Task 1: Perform Flood Drainage Study.

Task 2: Determine what options are available to alleviate flooding.

Task 3: Perform a cost/benefit analysis.

Task 4: Secure possible funding sources (Hazard Mitigation Grant Program funds, local County and township funds, Clean Ohio funds).

Task 5: Establish project scope.

Task 6: Prepare plans and bid documents.

Task 7: Construction of flood control project.

Reference Activity #8CO Twp:

Goal #2: It shall be the goal of the Miami County Hazard Mitigation team to identify and reduce the impact of urban and small stream flooding and surface drainage problems throughout Miami County and its communities

and continue to promote ongoing maintenance and improvement to storm drainage systems and flood control structures.

Activity: Improve the Schaurer and Ziegenfelder ditches along State Route 718 (west and east of Washington Road) and McKaig Road to eliminate continued standing surface water issues around homes and on agriculture land and to eliminate periodic flooding of other land in the area.

Reason Chosen: Per the Miami County Hazard Risk Assessment and per historic data available, this area has received flooding in the past. Several homes and structures are located near the 100-year flood plain.

Hazard Type: Flooding

Hazard Category: Property Protection, Natural Resource Protection

Lead: Concord Township Trustees
Miami County EMA

Start Date: June 2017

End Date: June 2020

Task 1: Perform Flood Drainage Study.

Task 2: Determine what options are available to alleviate flooding.

Task 3: Perform a cost/benefit analysis.

Task 4: Secure possible funding sources (Hazard Mitigation Grant Program funds, local County and township funds, Clean Ohio funds).

Task 5: Establish project scope.

Task 6: Prepare plans and bid documents.

Task 7: Construction of flood control project.

Reference Activity #10CO Twp:

Goal #2: It shall be the goal of the Miami County Hazard Mitigation team to identify and reduce the impact of urban and small stream flooding and surface drainage problems throughout Miami County and its communities and continue to promote ongoing maintenance and improvement to storm drainage systems and flood control structures.

- Activity:** Improve the Clayton ditch in and around Beechwood Drive in the Lakeshore subdivision to eliminate flooding of homes and land in this area.
- Reason Chosen:** Per the Miami County Hazard Risk Assessment and per historic data available, this area has received flooding in the past. Several homes and structures are located near the 100-year flood plain.
- Hazard Type:** Flooding
- Hazard Category:** Property Protection, Natural Resource Protection
- Lead:** Concord Township Trustees
Miami County EMA
- Start Date:** June 2017
- End Date:** June 2020
- Task 1:** Perform Flood Drainage Study.
- Task 2:** Determine what options are available to alleviate flooding.
- Task 3:** Perform a cost/benefit analysis.
- Task 4:** Secure possible funding sources (Hazard Mitigation Grant Program funds, local County and township funds, Clean Ohio funds).
- Task 5:** Establish project scope.
- Task 6:** Prepare plans and bid documents.
- Task 7:** Construction of flood control project.