



# Hazard Mitigation Plan

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Pickaway County, Ohio

***Released 2020***

# **PICKAWAY COUNTY HAZARD MITIGATION PLAN**

**RELEASED 2020**

**FOR THE COUNTY JURISDICTION OF PICKAWAY COUNTY, OHIO AND THE MUNICIPAL  
JURISDICTIONS THEREIN**

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# PICKAWAY COUNTY HAZARD MITIGATION PLAN

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## 1.0 INTRODUCTION

### Purpose

The purpose of the mitigation plan is to identify risks and vulnerabilities from hazards that affect Pickaway County, Ohio, to reduce losses of life, injuries, and to limit future damages by developing methods to mitigate or eliminate damages associated with various hazards.

### Scope

The *Pickaway County Hazard Mitigation Plan* follows a planning methodology that includes public involvement, a risk assessment for various identified hazards, an inventory of critical facilities and at-risk areas, a mitigation strategy for high-risk hazards, and a method to maintain and update the plan.

### Plan Authority

The *Pickaway County Hazard Mitigation Plan* is “multi-jurisdictional,” meaning that it includes several jurisdictions. Pickaway County stakeholders prepared this plan per federal requirements outlined in the Disaster Mitigation Act of 2000 (DMA2K), which requires communities to formulate a hazard mitigation plan to be eligible for mitigation funds made available through the Federal Emergency Management Agency (FEMA). Section 322 of the Robert T. Stafford Act requires that all states and local jurisdictions develop and submit plans meeting the criteria outlined in 44 CFR Parts 201 and 206.

When the content of this plan corresponds to a requirement of 44 CFR 201.6 (the local mitigation planning section), it will include a description of the relevant guidance. The following table lists the requirements of 44 CFR 201.6 and identifies the sections of the plan fulfilling the guidance.

44 CFR 201.6 REQUIREMENTS IN THIS PLAN		
Section	Description	Section in Plan
§ 201.6	Local Mitigation Plans. The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans will also serve as the basis for the state to provide technical assistance and to prioritize project funding.	Section 1.0 Introduction
§ 201.6(a)(4)	Multi-jurisdictional plans may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.	Section 1.1 The Planning Process



<b>44 CFR 201.6 REQUIREMENTS IN THIS PLAN</b>		
<i>Section</i>	<i>Description</i>	<i>Section in Plan</i>
§ 201.6(b)(1)	An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval	Section 1.1 The Planning Process Section 4.3 Continued Public Involvement
§ 201.6(b)(2)	An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process	Section 1.1 The Planning Process
§ 201.6(b)(3)	Review and incorporate, if appropriate, existing plans, studies, reports, and technical information	Section 1.3 Capabilities Section 1.4 Trends & Predictions Section 4.2 Plan Integration
§ 201.6(c)(1)	Documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved	Section 1.1 The Planning Process
§ 201.6(c)(2)	A risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.	Section 2.0 Risk Assessment
§ 201.6(c)(2)(i)	The risk assessment shall include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.	Section 2.3 Profile Hazards Section 2.4 Natural Hazards Section 2.5 Technological Hazards Section 2.6 Intentional Human-Caused Hazards
§ 201.6(c)(2)(ii)	The risk assessment shall include a description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008, must also address NFIP insured structures that have been repetitively damaged by floods.	Section 2.4 Natural Hazards Section 2.5 Technological Hazards Section 2.6 Intentional Human-Caused Hazards
§ 201.6(c)(2)(ii)(A)	The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;	Section 2.4 Natural Hazards Section 2.5 Technological Hazards Section 2.6 Intentional Human-Caused Hazards
§ 201.6(c)(2)(ii)(B)	The plan should describe vulnerability in terms of an estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate;	Section 2.4 Natural Hazards Section 2.5 Technological Hazards Section 2.6 Intentional Human-Caused Hazards
§ 201.6(c)(2)(ii)(c)	The risk assessment shall provide a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.	Section 1.4 Trends and Predictions
§ 201.6(c)(2)(iii)	For multi-jurisdictional plans, the risk assessment section must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.	Section 2.3 Profile Hazards Section 2.4 Natural Hazards Section 2.5 Technological Hazards Section 2.6 Intentional Human-Caused Hazards
§ 201.6(c)(3)	A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.	Section 3.0 Mitigation Strategy
§ 201.6(c)(3)(i)	This section shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.	Section 3.1 Mitigation Goals



<b>44 CFR 201.6 REQUIREMENTS IN THIS PLAN</b>		
<i>Section</i>	<i>Description</i>	<i>Section in Plan</i>
§ 201.6(c)(3)(ii)	This section shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.	Section 3.2 Mitigation Actions
§ 201.6(c)(3)(iii)	This section shall include an action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost-benefit review of the proposed projects and their associated costs.	Section 3.2 Mitigation Actions
§ 201.6(c)(3)(iv)	For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.	Section 3.2 Mitigation Actions
§ 201.6(c)(4)(i)	A plan maintenance process that includes a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.	Section 4.1 Monitoring, Evaluating and Updating the Plan
§ 201.6(c)(4)(ii)	A plan maintenance process that includes a process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.	Section 4.2 Implementation through Existing Programs
§ 201.6(c)(4)(iii)	A plan maintenance process that includes discussion on how the community will continue public participation in the plan maintenance process.	Section 4.3 Continued Public Involvement
§ 201.6(c)(5)	Documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commission, Tribal Council). For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.	Section 5.0 Appendix 6
§ 201.6(d)(1)	Plans must be submitted to the State Hazard Mitigation Officer (SHMO) for initial review and coordination. The State will then send the plan to the appropriate FEMA Regional Office for formal review and approval. Where the State point of contact for the FMA program is different from the SHMO, the SHMO will be responsible for coordinating the local plan reviews between the FMA point of contact and FEMA.	Section 5.0 Appendix 6
§ 201.6(d)(3)	A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within five years in order to continue to be eligible for mitigation project grant funding.	Section 3.1 Mitigation Goals Section 3.2 Mitigation Actions Section 5.0 Appendix 2



## 1.0 INTRODUCTION

### 1.1 Planning Process

§ 201.6(c)(1)	Documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.
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Pickaway County, through the direction of the Pickaway County Emergency Management Agency (PCEMA) began the process to update this plan in September of 2018; the PCEMA contracted the services of JH Consulting, LLC, of West Virginia, (the consultant) to aid in the process. The consultant met with PCEMA to lay out the process and timeline for the update and determine the agency, department, organization, and jurisdictional representatives who would serve as committee members.

#### 1.1.1 Planning Committee

The following table outlines the committee members that actively participated in the update of this plan.

PLANNING COMMITTEE MEMBERS AND AFFILIATIONS		
Agency/Affiliation	Name	Title
Pickaway County Emergency Management Agency	Darrin Flick Tom Swisher	Director Deputy Director
Pickaway County Maintenance	Jon Brown	Supervisor
Pickaway County	April Dengler Harold Hensen Brian Stewart	Administrator Commissioner Commissioner
Pickaway County ESC	Ty Ankrom	Superintendent
Pickaway County GIS	Jason Gillow	Coordinator
Pickaway County Engineer's Office	Anthony Neff	Chief Deputy Engineer
Pickaway County Health Department	Sam Neill	Emergency Response Coordinator
Village of South Bloomfield	Matt Pettibone Ken McCoy	Mayor Police Chief
Pickaway County Park District	Tom Davis	Director
City of Circleville	Brian Thompson Tony Chamberlain Terry Frazier	Fire Chief Safety Director Services Director
Pickaway County Office of Development and Planning	Tim McGinnis	Director



Pickaway County Sheriff's Office	Jon Rhoades	Lieutenant
Ohio State Highway Patrol – Circleville Post	Steve Herron	Lieutenant/Post Commander
Scioto Township	John Maynard Neil Cline	Trustee Fire Chief
RPHF Solid Waste District	Erica Tucker	Director
Pickaway County Engineer's Office	Chris Mullins	County Engineer
Pickaway County Roads Department	Steve Smith	Superintendent
Pickaway County Animal Control	Sherri Rarey	Dog Warden
Pickaway County IT	Robert Adkins	Director
Village of Ashville	Charles Wise Donnie Mayse	Mayor Police Officer
Harrison Township	Chad Noggle	Fire Chief
Box 65	Mark Adkins	Operations Chief
Ohio Christian University	Thad Hicks	Director – Emergency and Disaster Management Programs
Pickaway County	Ellery Elick	Treasurer
Pickaway County	Melissa Betz	Auditor

The committee came together four times throughout the process. Committee meetings 1, 2, and 3 were in person and held at the PCEMA conference room/emergency operations center (EOC). The first meeting was held on October 11, 2019. The second meeting on December 13, 2019. The third meeting and fourth meetings were held on February 10, 2020 March 25, 2020, respectively. Committee meeting 4 was a virtual meeting held via the [www.gotomeeting.com](http://www.gotomeeting.com) platform on May 11, 2020, due to the emerging COVID-19 concern. See Appendix 1 for agendas, meeting minutes, etc.

The following table identifies how various groups of stakeholders participated in the planning process.

<b>STAKEHOLDER PARTICIPATION</b>		
<i>Category<sup>1</sup></i>	<i>Representative Agency</i>	<i>Means of Participation</i>
Elected officials and planning committee members	Pickaway County Commissioners	Membership on the planning committee
	Pickaway County Office of Development and Planning	Membership on the planning committee
	Scioto Township Board of Trustees	Membership on the planning committee
	South Bloomfield Mayor and Council	Membership on the planning committee

<sup>1</sup> Categories taken from FEMA's *Local Mitigation Planning Handbook* (March 2013).



<b>STAKEHOLDER PARTICIPATION</b>		
<i>Category<sup>1</sup></i>	<i>Representative Agency</i>	<i>Means of Participation</i>
Regional, state, and federal agencies	Ohio State Highway Patrol	Membership on the planning committee
	Pickaway County Health Department	Membership on the planning committee
	Neighboring emergency management agencies	Via emails dated 3/2/2020
Cultural institutions	Pickaway County Park District	Membership on the planning committee
Colleges and universities	Ohio Christian University	Membership on the planning committee
Non-profit organizations	Box 65	Membership on the planning committee
Neighborhood groups	Circleville Fire Department	Membership on the planning committee
	Harrison Fire Department	Membership on the planning committee
	Scioto Township Fire Department	Membership on the planning committee

The PCEMA did not receive substantial comments from neighboring emergency management agencies (per the March 2, 2020 request). The only response came from Fairfield County. The director of Fairfield County Emergency Management Agency and Homeland Security provided information on the Scioto River Watershed as a potential hazard affecting both counties.

#### Committee Meeting 1

The first committee meeting was held at the Pickaway County Emergency Management Agency conference room/EOC. The county's consultant facilitated the meeting and began with a brief overview of the hazard mitigation planning process including the roles and responsibilities of the committee members. Next, the committee reviewed hazards in the 2012 plan and discussed hazards to include in the updated plan. Once the committee finalized the hazard list, they moved onto mitigation goals. After reviewing the existing goals, the committee generated the goals list for the update. The final agenda item discussed was the public participation requirement. The committee was provided with a draft public participation survey to review following the meeting and discuss at meeting 2.

#### Committee Meeting 2

The second committee meeting was also held at the PCEMA conference room/EOC. The agenda included reviewing and providing a status on the mitigation actions from the 2012 plan. The consultant recorded the statuses of the projects and would contact representatives from jurisdictions not in attendance for status updates. The committee then discussed the public involvement survey. Committee members approved the survey questions provided for review at the first meeting and agreed to push the survey link out to the community via social media and



other available means. The final item discussed was assets. Committee members are continuing to review assets in their jurisdictions and the county GIS department provided information on resources available for the committee to use compiling the asset list.

### Committee Meeting 3

The third committee meeting was held at the PCEMA conference room/EOC. The meeting agenda included a discussion on the capability survey to be completed by a representative for each jurisdiction. The consultant also reviewed public survey results received and discussed scheduling a public meeting. The committee was presented with draft hazard profiles to review. Copies of the drafts were also emailed to all committee members following the meeting. The final item on the agenda was new projects for this update. The committee discussed areas of concern for specific hazards and possible funding sources to complete projects.

### Committee Meeting 4

The fourth meeting was held via the [www.gotomeeting.com](http://www.gotomeeting.com) platform. The meeting agenda included a discussion of the capability survey, project prioritization, plan maintenance, public involvement (including public survey results and the virtual public workshop), and draft documents and plan submittal. The committee gave final approval on project prioritization criteria (see section 3.2 Mitigation Actions) and scored each project included in this update.

## **1.1.2 Jurisdictional Involvement**

All, except three, of the jurisdictions within Pickaway County participated in the update to this plan. The Villages of Harrisburg and Lockbourne are in both Pickaway and Franklin Counties and participate in Franklin County's plan; and the Village of Tarlton participates in Fairfield Counties plan. All participating cities and villages and the county had the opportunity to provide input for the plan in the following ways.

- Attending meetings
- Completing the online capabilities survey
- Updating their mitigation project lists (which could include updating status of existing projects or adding new projects)
- Providing information for the plan to PCEMA or the consultant via phone or email

The following table identifies what activities jurisdictions completed.



PICKAWAY COUNTY HMP JURISDICTIONAL TASKS							
Community		Capabilities Survey	Projects Update	Added New Projects	Attended Planning Meetings	Promoted Public Involvement	Overall Participation Assessment
Pickaway	County	Yes	Yes	Yes	Yes	Yes	Yes
Ashville	Village	Yes	Yes	Yes			Yes
Circleville	City	Yes	Yes	Yes	Yes	Yes	Yes
Commercial Point	Village	Yes	Yes	Yes			Yes
Darbyville	Village		Yes	Yes			Yes
New Holland	Village	Yes	Yes	Yes			Yes
South Bloomfield	Village	Yes	Yes	Yes	Yes		Yes
Williamsport	Village	Yes	Yes	Yes			Yes

### 1.1.3 Public Involvement

The committee approached the public involvement component in two ways to garner input for the plan: online survey and a virtual workshop. Partners promoted a survey that asked residents about their views on hazards, their support for various mitigation actions, and their level of personal preparedness. The committee and PCEMA began posting the survey January 31, 2020. The final count of survey responses at the time the county closed the survey June 16, 2020, was 72. Appendix 4 contains the summary of responses for the public survey.

The committee utilized the survey data in a number of ways. First, the committee used the results to update the project list based on the respondents concerns. For example, the results led to the addition of several flooding specific projects. The committee also considered the respondents' answers when ranking the projects by considering the ease of implantation based on the population's support and political ramifications. Jurisdictions in Pickaway County can also use the data to inform residents as part of public awareness campaigns (e.g., over 17% of respondents are unsure if they reside in a flood zone).

To garner additional public comment, the PCEMA advertised and conducted a virtual workshop using the [www.gotomeeting.com](http://www.gotomeeting.com) platform. Prior to the date of the meeting, the public had an opportunity to submit questions via email to PCEMA. On the day of the workshop, May 11, 2020, the public was able to dial-in and listen to presentations on hazard mitigation and the hazards profiled in this update. Following the presentations, PCEMA staff and the consultant would review and answer any questions submitted prior to the workshop as well as take questions from those who called in. The workshop was minimally attended and PCEMA received no questions.

To solicit public comment on the completed draft, the PCEMA posted the full draft on its website and publicized its availability. The PCEMA regularly maintains a copy of the county's current mitigation plan on its website. When the county completed the final draft of the 2019





update, the updated document replaced the existing (i.e., 2012) version on the website. At the time of that change, PCEMA staff posted a social media update inviting followers to review the updated plan and to submit comments via email directly to the agency.

#### **1.1.4 Previous Versions**

This section contains descriptions of the processes used to update previous versions of the plan (i.e., 2006 and 2012).

##### *First Update (2012)*

In May 2011 the county's mitigation planning committee notified the municipalities the requirements of the hazard mitigation plan update. Subsequent meetings were held to ensure that all information is correct, and that all agencies, organizations and the public's input were included as presented. In all, the plan update process was conducted over the course of eight months, from May 2011 to December 2011. Throughout the planning update process, the Pickaway County Mitigation Planning Committee reviewed and analyzed each section of the plan. In preparing the updated Plan, documentation indicates that the committee utilized a multi-jurisdictional planning process consistent with the one recommended by FEMA (Publication Series 386).

##### *Original Plan Development (2006)*

The first Pickaway County Hazard Mitigation Plan was adopted on June 16, 2006. In February 2004, the Pickaway County Hazard Mitigation Committee started preparing the Plan to fulfill the requirements of the Disaster Mitigation Act of 2000. Development of the plan was a concerted effort on the part of Pickaway County and its municipalities. The Pickaway County EMA Director invited directors and staff from public agencies, private businesses and organizations, and community representatives to participate in this recent planning committee.

The 2006 Plan addressed six natural hazards and one technological hazard and each of those hazards were assessed by previous occurrences, vulnerability and exposure to county and municipal assets, and potential loss estimates. In addition, the 2006 Plan defined those hazards that were considered to have the highest probability of occurrence.



## 1.0 INTRODUCTION

### 1.2 Description of the Planning Area

The description of the planning area contextualizes the remainder of this document. It provides background information on the areas impacted by various hazards and serves as a foundation for mitigation decisions.

#### 1.2.1 Pickaway County Details

This first sub-section provides demographics and other details for Pickaway County. It includes unincorporated areas as well as municipal areas.

##### Geography

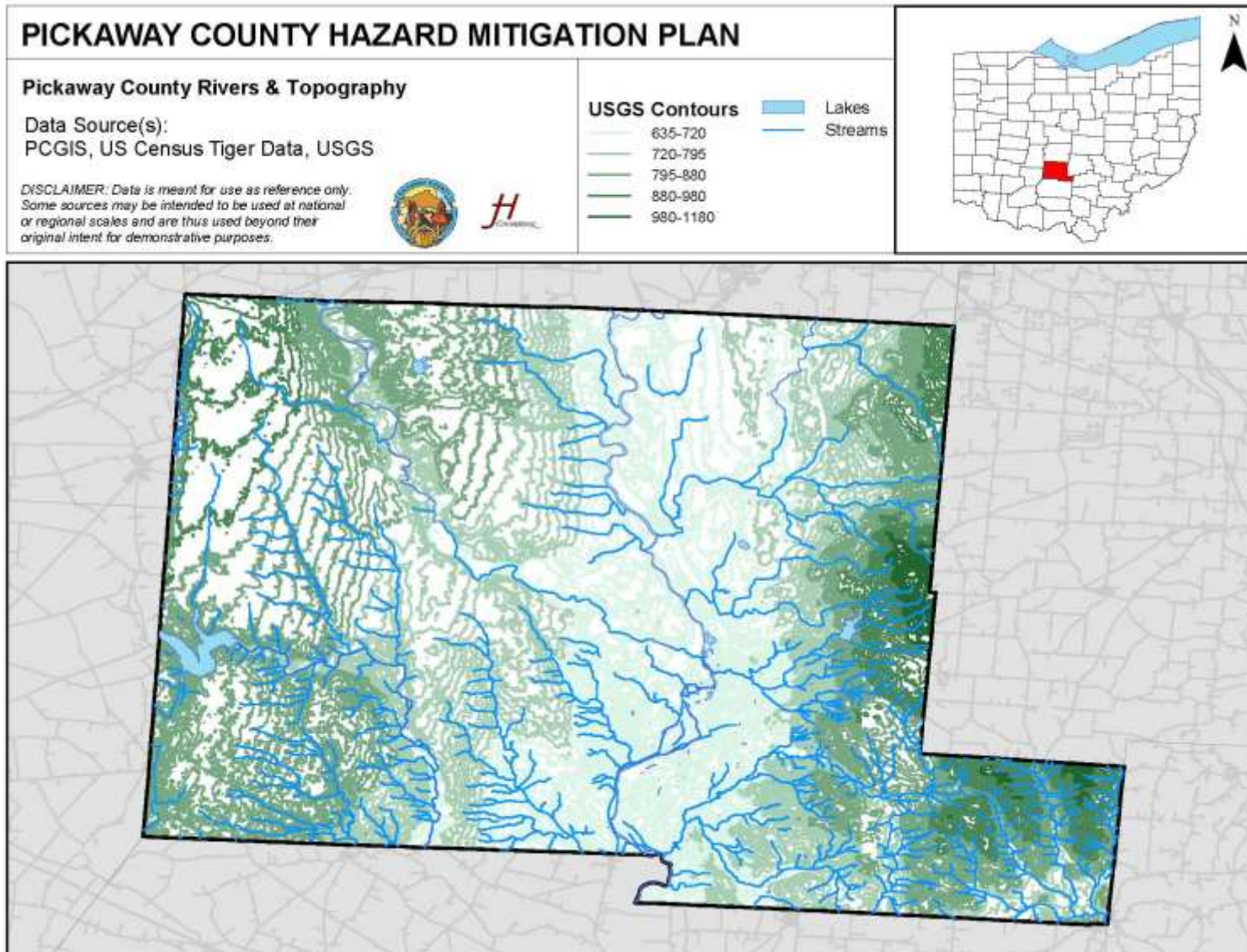
Pickaway County, located in the central Ohio, is one of 88 counties in the state. Pickaway County borders Franklin County to the north, Fairfield and Hocking Counties to the east, Ross County to the south, and Fayette and Madison Counties to the west. The county is part of the Columbus Metropolitan Statistical Area.

The county was established on March 1, 1810. Pickaway comes from the Native American word “piqua” meaning “man risen from the ashes.” Pickaway County has a total area of 507 square miles; approximately 501.32 square miles are land area, and 5.23 square miles are water. Pickaway County’s lowest elevation is 614 feet. Its highest elevation is 1,253 feet.

Pickaway County is part of four watersheds, Big Darby Creek Watershed, Deer Creek Watershed, Scioto River (Lower) Watershed, and Scioto River (Middle) Watershed.

Pickaway County’s topography is flat and open to sloping gently with considerable inland wetland forest, which offers limited protection against tornadoes or strong straight-line winds. The land use in Pickaway County is comprised of cropland (69.69%), pasture (12.91), forest and grassland (8.92%), developed (6.91%), open water (1.13%), wetlands (.35%), and mines (.08%).





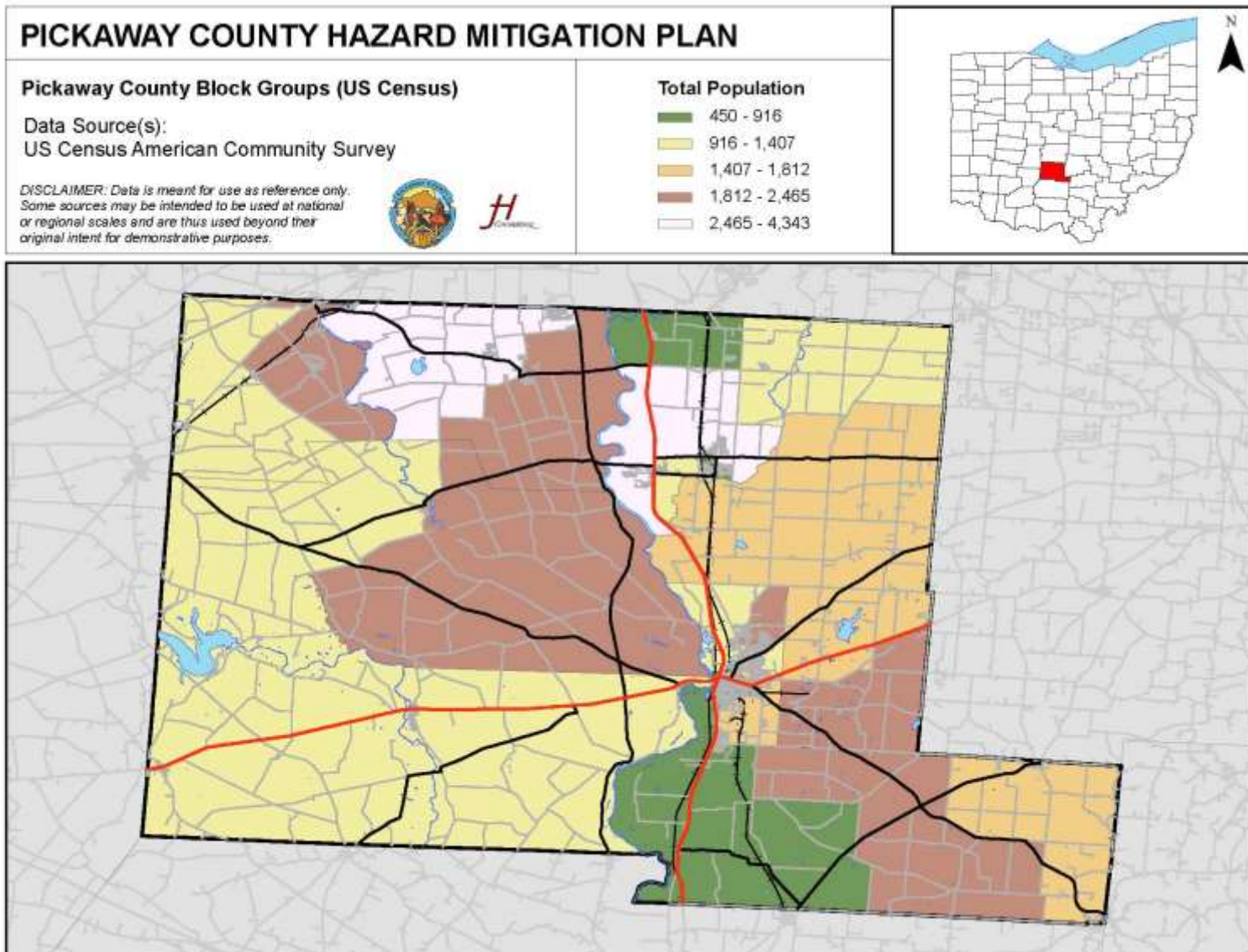
Demographics

The following table presents general demographics for Pickaway County and the municipalities therein.



<b>PICKAWAY COUNTY DEMOGRAPHICS<sup>1</sup></b>								
	<i>Pickaway County (Total)</i>	<i>Ashville Village</i>	<i>Circleville City</i>	<i>Commercial Point Village</i>	<i>Darbyville Village</i>	<i>New Holland Village</i>	<i>South Bloomfield Village</i>	<i>Williamsport Village</i>
Population estimates (2018)	58,086	4,298	13,965	1,813	205	801	2,158	1,134
White alone	93.7%	89.3%	94.7%	93.9%	100.0%	99.4%	97.7%	98.0%
Black or African American	3.9%	0.0%	2.6%	0.1%	0.0%	0.0%	0.7%	0.0%
American Indian and Alaska Native	0.3%	0.4%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%
Asian	0.5%	0.0%	0.1%	2.0%	0.0%	0.0%	0.0%	0.0%
Native Hawaiian and other Pacific Islander	Z	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Two or More Races	1.6%	5.5%	1.8%	3.0%	0.0%	0.5%	1.0%	2.0%
Hispanic or Latino	1.4%	1.8%	1.4%	1.7%	0.0%	1.7%	0.0%	0.85
Veterans, 2013-2017	3,860	253	954	102	14	94	243	56
Foreign born persons	1.2%	0.5%	0.5%	3.3%	0.0%	0.5%	0.4%	0.0%
Housing units (2017)	21,566	1,568	6,101	634	83	404	830	400
Median household income (in 2017 dollars)	\$60,314	\$67,713	\$41,492	\$87,500	\$36,563	\$41,618	\$61,058	\$50,536
Persons in poverty	12.0%	8.0%	21.3%	6.5%	13.7%	15.9%	9.2%	17.7%
Population per square mile (2017)	111	1712	2,004	1604	436	426	504	627
Land area in square miles (2010)	501.32	2.51	6.64	1.13	.47	1.88	4.28	1.81





### Transportation

Pickaway County's transportation infrastructure consists of highways, railways, and air elements. The county contains approximately three miles of interstate highways, 55 miles of U.S. highways, and 143 miles of state highways. Interstate 71, U.S. Routes 22, 23, and 62, and state routes 56, 104, 138, 159, 188, 207, 316, 361, and 752. The county also contains 730 miles of county, township, and municipal roadways.

Rail lines are also a part of the county's transportation infrastructure. Two CSX lines and one Norfolk Southern line traverse the county. Both CSX lines enter northern Pickaway County from Franklin County. One line runs south west into Madison County. The second runs south into Ross County.

Pickaway County is home to one commercial airport, Pickaway County Memorial Airport (KCYO). Two international airports, Rickenbacker International Airport (LCK) and John Glenn Columbus International Airport (CMH) are close to Pickaway County. There are several small private airstrips throughout the county.

The Pickaway Area Rural Transit (PART) system serves the City of Circleville and the surrounding Pickaway County area. PART operates one bus route, on demand service, and out of county transport. The system operates between 8 a.m. and 4:30 p.m., Monday through Friday.





## PICKAWAY COUNTY HAZARD MITIGATION PLAN

### Pickaway County Transportation Network

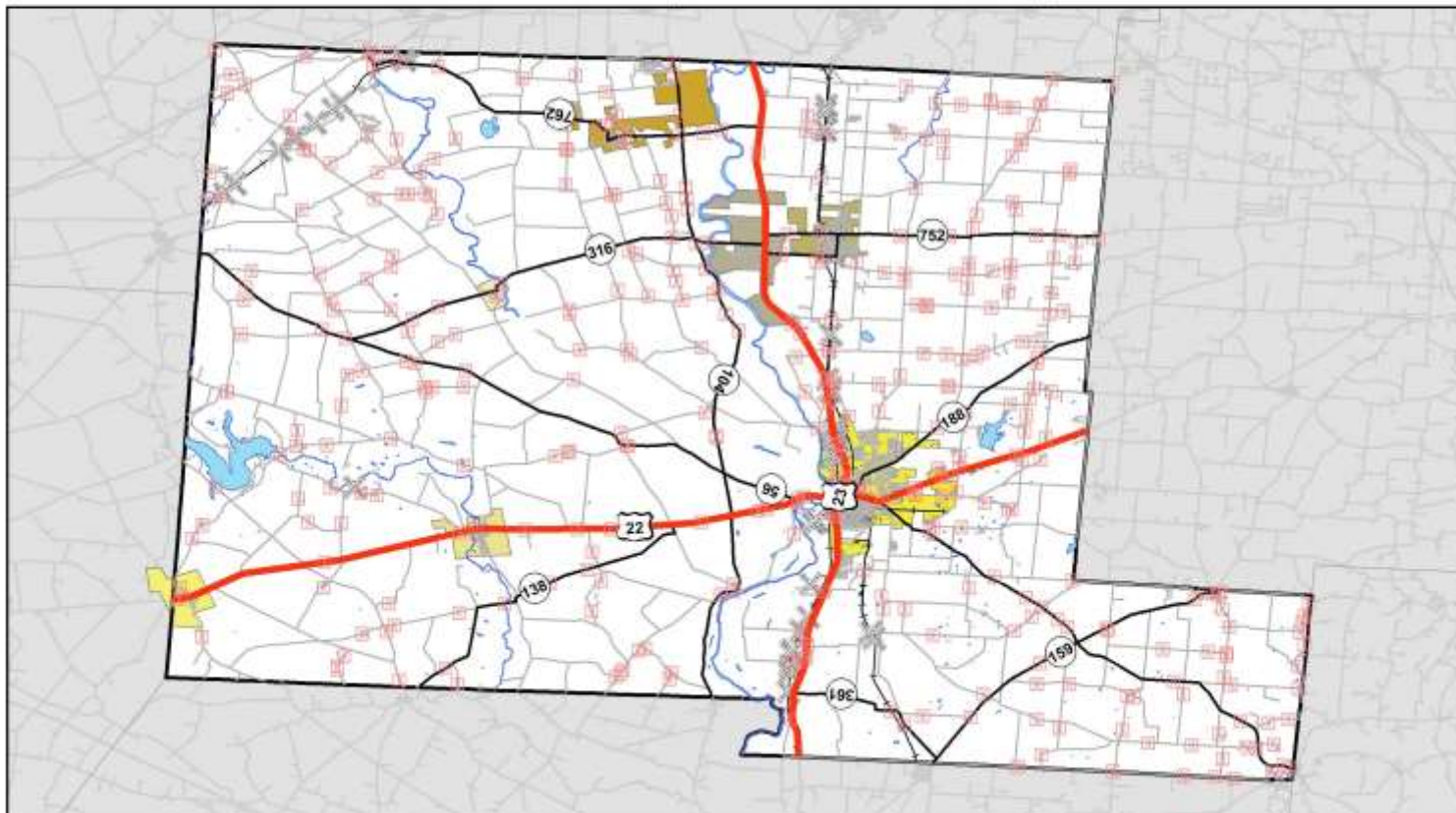
Data Source(s):  
PC GIS, FRA, ODOT, US Census Tiger Data

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                |                  |
|----------------|------------------|
| US Routes      | Ashville         |
| State Routes   | Circleville      |
| Misc. Roads    | Commercial Point |
| Bridges        | Darbyville       |
| Rail Crossings | New Holland      |
| Railroads      | South Bloomfield |
|                | Williamsport     |

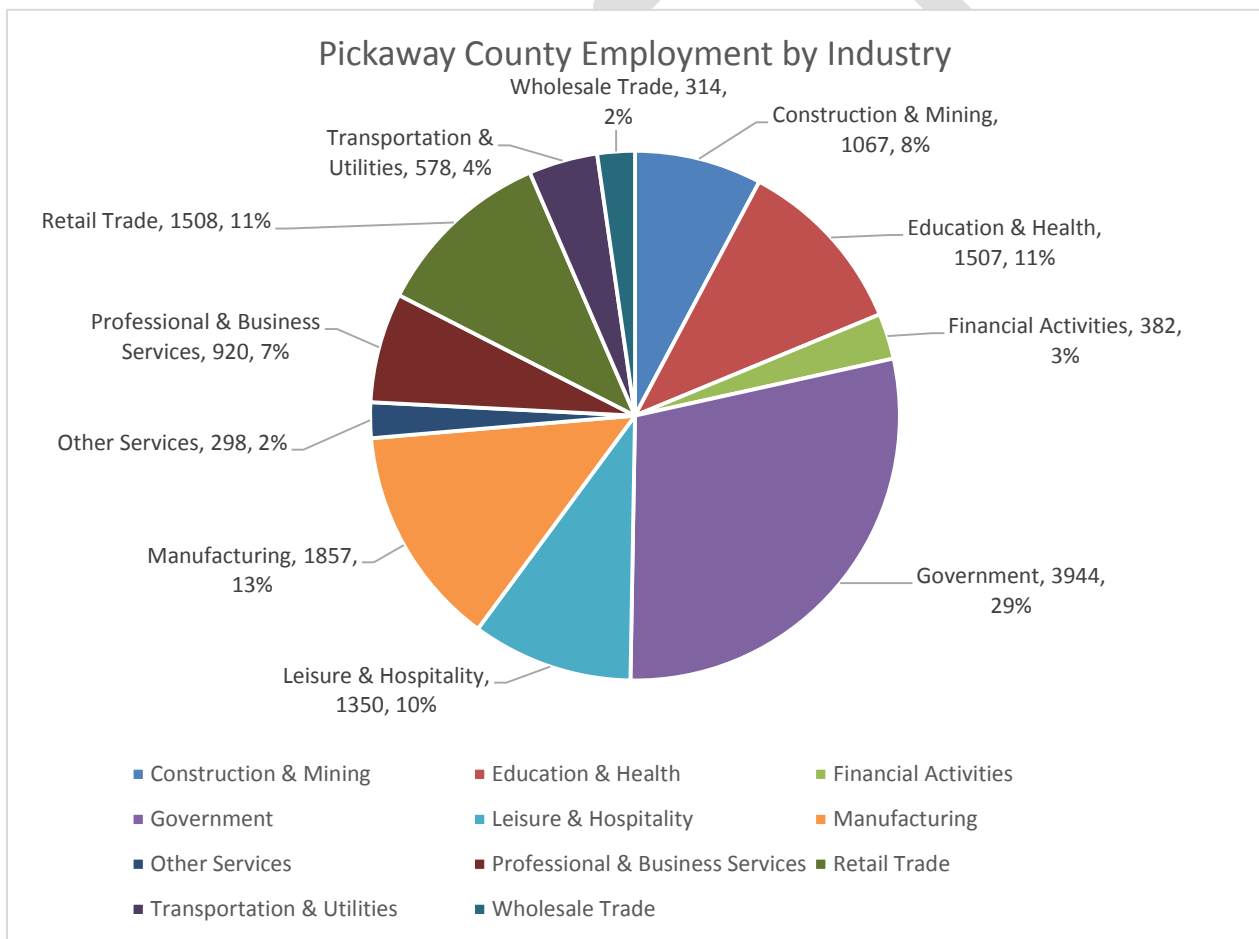
### Municipalities





Economy

Pickaway County has a diverse employment sector. According to 2018 information from the Ohio Department of Development (<https://development.ohio.gov/files/research/C1066.pdf>), the largest areas of employment are government (3,944 employees), manufacturing (1,857 employees), retail trade (1,508 employees), and education and health services (1,507 employees). Total employment is currently 41,700 persons (with an estimated 2,600 persons unemployed). The county's unemployment rate is approximately 5.9%. Between 2011 and 2016, the total number of private sector establishments declined by 3.7%. The largest decreases occurred in the information (-12.0%) and construction (-7.0%) sectors. The leisure and hospitality sector saw an increase of 1.6% while the natural resources and mining sector saw a jump of 10.3%.



Pickaway County contains approximately 805 active farms, with total cash receipts of \$162,649,000. Significantly, though, the average per farm is \$202,049 (United States



Department of Agriculture, 2017). Dairy production, cattle, and grain commodities contribute to the local agriculture economy.

Pickaway County is the home of several tourist attractions, including Canal Park. Many cultural, environmental, and recreational attractions also exist in the county, including its seven golf courses, multiple museums, a living historical farm, and 31 places listed on the National Register of Historic Places (National Park Service, 2019).

### Education

The education system in Pickaway County consists of 18 public schools at which 8,840 students attend and 593 teachers instruct, as well as two non-public schools at which another 276 students attend. There is currently one private university, Ohio Christian University, but no public colleges or universities in Pickaway County.

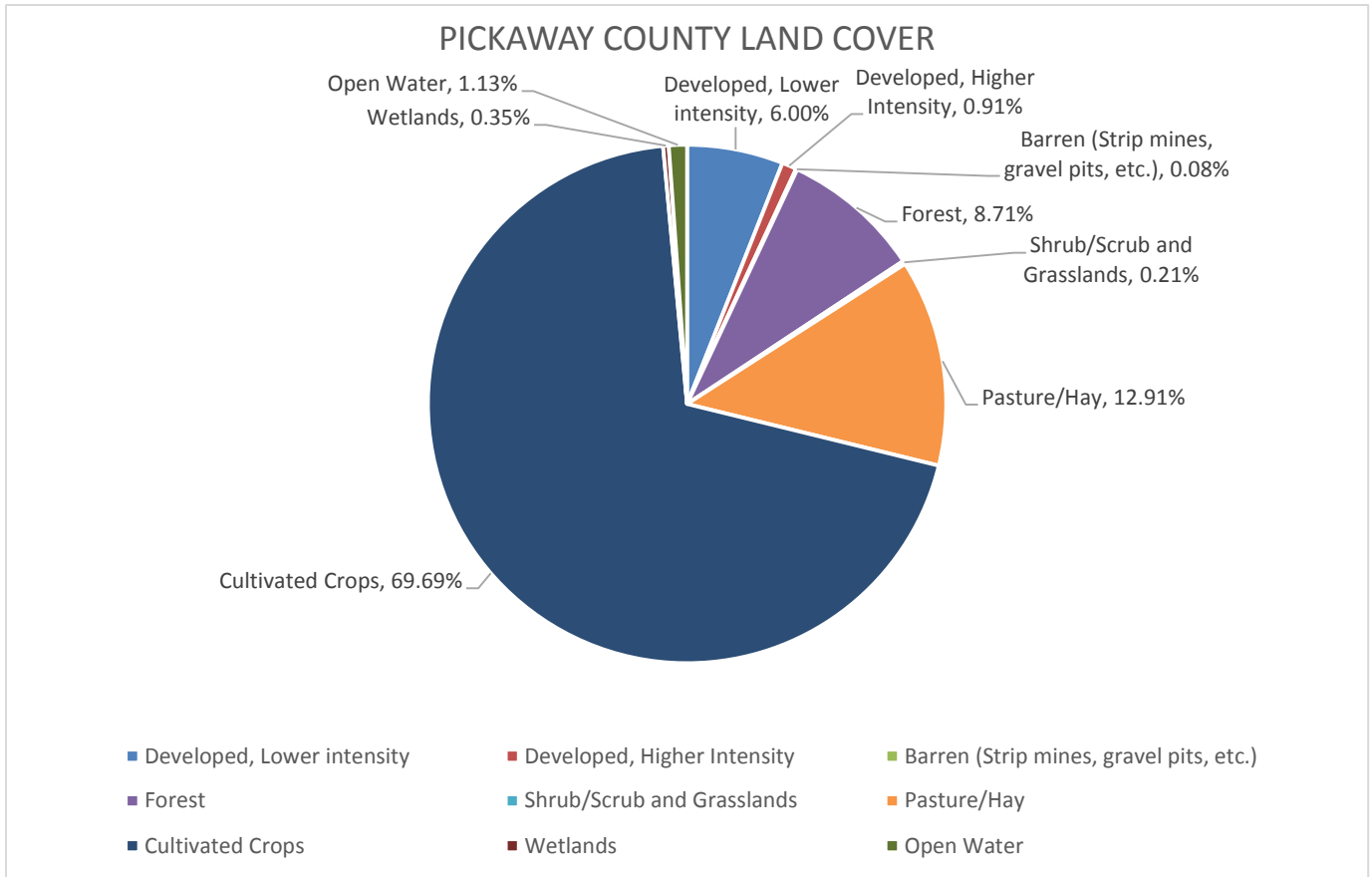
### Healthcare

Several health care facilities serve Pickaway County. Currently, there is one hospital registered, Berger Hospital, with 83 available beds, three licensed residential care facilities with 106 available beds, and four licensed nursing homes with 342 available beds (Ohio Department of Development, n.d.). The Pickaway County Health Department is a public health agency that serves the entire county.

### Land Cover / Climate

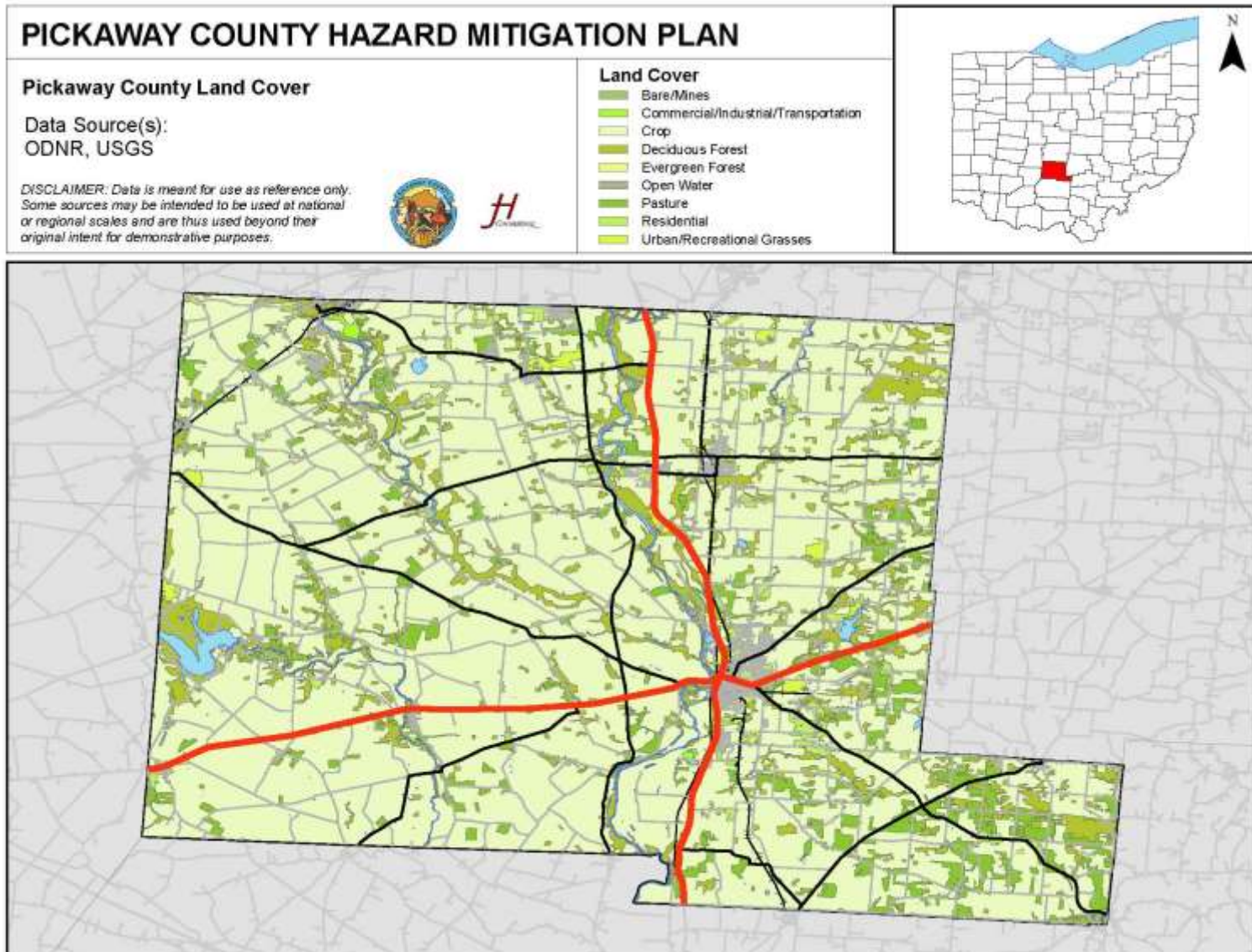
The majority of Pickaway County's land cover is cultivated crops; approximately 69.69% of the total land cover is cropland followed by pasture/hay at 12.91% and forest at 8.71% (Ohio Department of Development, n.d.). Approximately 805 individual farms operate in Pickaway County with an average size of 369 acres per farm. The below chart shows the breakdown of land cover in Pickaway County.





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Pickaway County has a continental-type climate, predominantly influenced by air from the west and north. There is considerable variation in seasonal temperatures, with none of the temperatures being considered severe. The climate of Pickaway County is seasonal, with wet, stormy springs, warm summers, colorful falls, and cold, snowy winters. The average temperature in January is 20°F, and the July average temperature is 85°F. Precipitation occurs throughout the year, with an annual average of 40” of rain and 19” of snow (Bestplaces.net, 2019, <https://www.bestplaces.net/climate/county/ohio/pickaway>).

### **1.2.2. Municipalities**

This section provides demographics and other general details for each of the participating municipalities.

#### *Village of Ashville*

Ashville Village, incorporated in 1882, is located 22 miles south of Columbus, Ohio. It encompasses a land area of 2.51 square miles (Wikipedia, 2019, [https://en.wikipedia.org/wiki/Ashville,\\_Ohio](https://en.wikipedia.org/wiki/Ashville,_Ohio)). It lies east of U.S. Route 23. Ashville’s major transportation is state route 752 running east-west through the village. The village is home to Ashville Elementary School and Teays Valley High School.

According to Census data, the Village of Ashville has a population of 4,097 (2010) with a population density of 1632.27 people per square mile. The village contains 1,568 housing units with an average of 2.78 persons per household with an estimated median income of \$67,713 (U.S. Census Bureau, 2010).

#### *City of Circleville*

The City of Circleville is located along the Scioto River, approximately 25 miles south of Columbus, and is the County Seat of Pickaway. The Circleville City School district is comprised of one elementary school, one middle school, and Circleville High School. Circleville is also home to the Circleville Pumpkin Show, an annual festival held since 1903.

According to 2018 estimates, the City of Circleville has a population of 13,965 with a population density of 2003.9 people per square mile. The city contains 6,101 housing units with an average of 2.36 persons per household and an estimated median income of \$41,492 U.S. Census Bureau, American FactFinder, 2018, <https://www.census.gov/quickfacts/fact/table/circlevillecityohio/HSG010218#HSG010218>.



### Village of Commercial Point

The Village of Commercial Point is located in northern Pickaway County. It encompasses a land area of 1.13 square miles (Wikipedia, 2019, [https://en.wikipedia.org/wiki/commercial\\_point,\\_Ohio](https://en.wikipedia.org/wiki/commercial_point,_Ohio)). It lies west of Ohio Route 104. Commercial Point's major transportation is state route 762, locally named Main Street. The village is home to Teays Valley West Middle School and Scioto Elementary School.

According to Census data, the Village of Commercial Point has an estimated population of 1,582 (2018) with a population density of 1,604 people per square mile. The village contains 634 housing units with an average of 2.52 persons per household with an estimated median income of \$87,500 (U.S. Census Bureau, 2010).

### Village of Darbyville

Darbyville Village is located in Muhlenburg Township and encompasses a land area of .47 square miles ([https://en.wikipedia.org/wiki/Darbyville,\\_Ohio](https://en.wikipedia.org/wiki/Darbyville,_Ohio)). The village is named after Little Darby Creek. Major thoroughfares include Ohio Route 316 and county route 3.

According to Census data, the Village of Darbyville has an estimated population of 234 (2018) with a population density of 498 people per square mile. The village contains 83 housing units with an average of 2.82 persons per household with an estimated median income of \$36,563 (U.S. Census Bureau, 2010).

### Village of New Holland

The Village of New Holland is situated in southwest Pickaway County and eastern Fayette County. The village is named after the native home of the original settlers, Holland. It encompasses 1.88 square miles with just under a mile of U.S. Route 22 running east to west.

According to Census data, the Village of New Holland has an estimated population of 845 (2018) with a population density of 449 people per square mile. The village contains 404 housing units with an average of 2.09 persons per household with an estimated median income of \$41,618 (U.S. Census Bureau, 2019).

### Village of South Bloomfield

South Bloomfield is located in Harrison Township and encompasses a land area of 4.28 square miles. The Village is consistently one of the fastest growing counties in populations and



experienced a 47.9% growth from the 2000 to the 2010 census. U.S. Route 23 runs north and south through the village.

According to the Census data, the village has an estimated population of 1,974 (2018) with a population density of 461 per square mile. South Bloomfield contains 830 housing units with an average of 2.38 persons per household. The median income is \$61,058 (U.S. Census Bureau, 2010).

#### Village of Williamsport

The Village of Williamsport is in Deer Creek Township with Deer Creek running north to south through the village. It encompasses a land area of 1.81 square miles. U.S. route 22 runs east and west through the village and is locally named Mill Street.

According to the Census data, the village has an estimated population of 1,067 (2018) with a population density of 589 per square mile. There are 400 housing units in Williamsport with an average of 2.67 persons per household. The median income is \$50,536 (U.S. Census Bureau, 2010).





## PICKAWAY COUNTY HAZARD MITIGATION PLAN

### Pickaway County Cities, Villages & Townships

Data Source(s):  
PCGIS, US Census Bureau

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



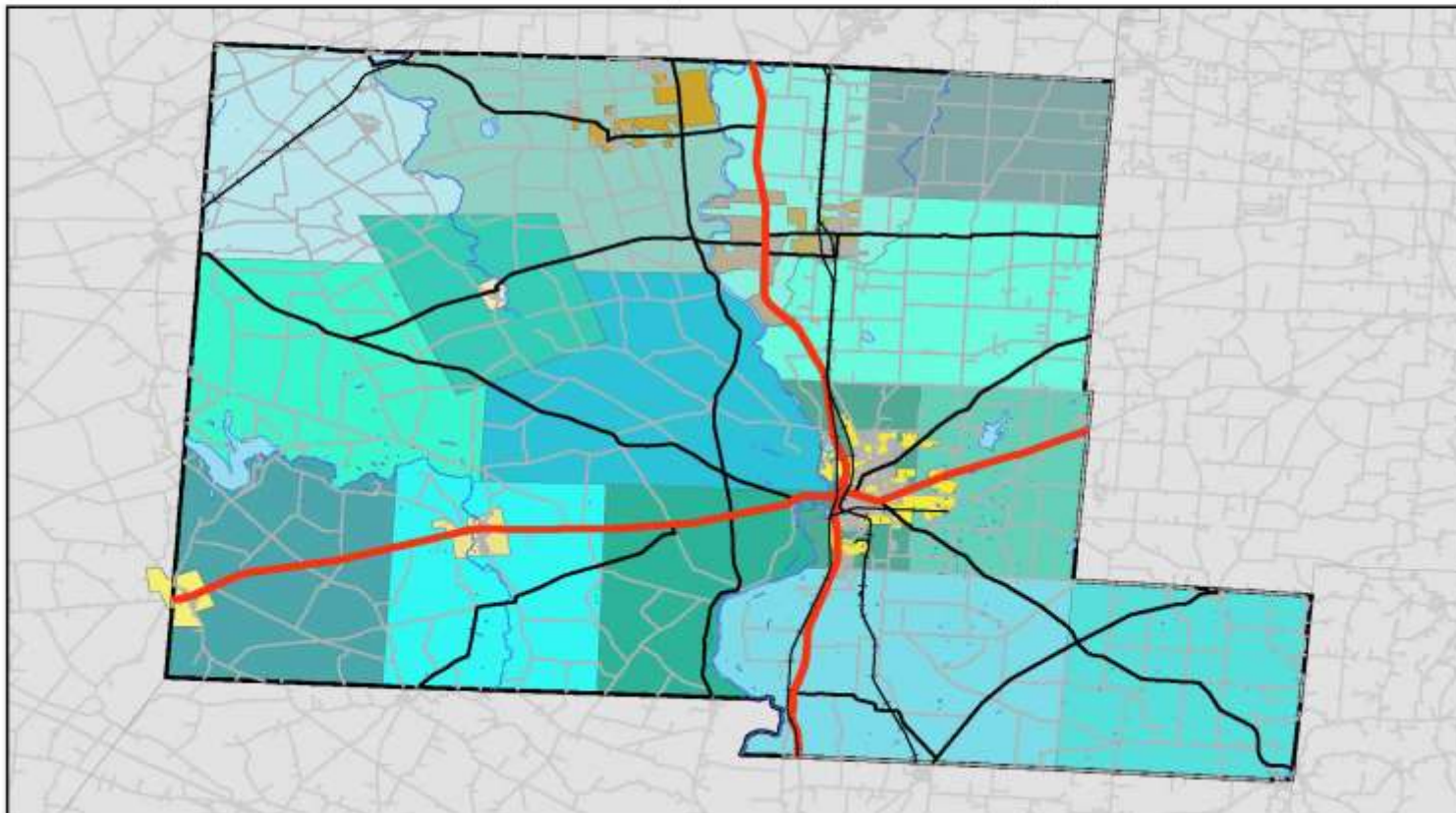
#### Municipalities

- Ashville
- Cardwell
- Commercial Point
- Darbyville
- New Holland
- South Bloomfield
- Williamsport

#### Townships

- Circleville Twp.
- Darby Twp.
- Dear Creek Twp.

- Harrison Twp.
- Jackson Twp.
- Madison Twp.
- Monroe Twp.
- Mufflenberg Twp.
- Parry Twp.
- Pickaway Twp.
- Salt Creek Twp.
- Scioto Twp.
- Walnut Twp.
- Washington Twp.
- Wayne Twp.





### 1.2.3 Asset Inventory

§201.6(c)(2)(ii)	[The risk assessment shall include a] description of the jurisdiction’s vulnerability of the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.
§201.6(c)(2)(ii)(A)	The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.

This plan identifies potentially-vulnerable community assets such as critical facilities, critical infrastructure, historic properties, commercial/industrial facilities, etc. “Assets” contribute directly to the quality of life in the community as well as ensure its continued operation

#### Methodology

The assets on the inventory are types of facilities recommended for consideration in the *Local Hazard Mitigation Planning Handbook* (FEMA, 2013). The following list is the most current version of the asset inventory. Thus, the methodology used to generate this version was simply via emergency management agency review and comment. This plan categorizes “assets” under the following headings (FEMA, 2013).

- **People:** Areas of greater population density as well as populations with unique vulnerabilities or diminished response and recovery capabilities. Examples include areas of concentrated populations, areas catering to tourist (i.e., visiting) populations, facilities housing or serving functional and access needs populations and facilities that provide health or social services.
- **Economy:** Important economic drivers specific to the community. Examples include major employers and commercial centers.
- **Built Environment:** Existing structures, infrastructure systems, critical facilities, and cultural resources. The following table includes examples of built environment categories.

<b>“BUILT ENVIRONMENT” ASSETS</b>			
<i>Existing Structures</i>	<i>Infrastructure</i>	<i>Critical Facilities</i>	<i>Cultural Resources</i>
<ul style="list-style-type: none"> <li>• Commercial buildings</li> <li>• Industrial buildings</li> <li>• Single &amp; multi-family residential buildings</li> </ul>	<ul style="list-style-type: none"> <li>• Water &amp; wastewater</li> <li>• Power utilities</li> <li>• Transportation (roads, railways, waterways)</li> <li>• Communications systems/centers</li> <li>• Energy pipelines &amp; storage</li> </ul>	<ul style="list-style-type: none"> <li>• Hospitals &amp; medical facilities</li> <li>• Police &amp; fire stations</li> <li>• Emergency operations centers</li> <li>• Evacuation shelters</li> <li>• Schools</li> </ul>	<ul style="list-style-type: none"> <li>• Historic assets</li> <li>• Museums</li> <li>• Unique geologic sites</li> <li>• Concert halls</li> <li>• Parks</li> <li>• Stadia</li> </ul>



		<ul style="list-style-type: none"> <li>• Airport/heliports</li> </ul> <p>HIGH POTENTIAL LOSS FACILITIES</p> <ul style="list-style-type: none"> <li>• Nuclear power plants</li> <li>• Dams</li> <li>• Military &amp; civil defense installations</li> <li>• Locations housing hazardous materials</li> </ul>	
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- **Natural Environment:** Resources that are important to community identity and quality of life in the community, as well as those that support the local economy through agriculture, tourism, and recreation. Examples include areas that can provide protective functions that reduce the magnitude of hazard events and critical habitat areas and other environmental features that are important to protect.

Asset Inventory

The following table lists Pickaway County’s community assets, and the following map shows their locations graphically. Hazard profiles in 2.0 Risk Assessment reference the facilities from the table located in various hazard susceptibility areas.

PICKAWAY COUNTY ASSET INVENTORY			
Name or Description	Address	City	Asset Type
William Marshall Anderson House	131 W. Union Street	Circleville	Built Environment Cultural Resource
Adams Archeological Preserve	Off State Route 56 southeast of Circleville	Pickaway Township	Built Environment Cultural Resource
Ashville Depot	Madison Street at Cromley Street	Ashville	Built Environment Cultural Resource
Bazore Mill	State Route 138 south of Williamsport	Deer Creek Township	Built Environment Cultural Resource
Bellevue	State Route 159 north of Kingston	Pickaway Township	Built Environment Cultural Resource
Joseph Black Farmhouse	9862 Heffner Road	Pickaway Township	Built Environment Cultural Resource
Granville M. Bulen House and Farm Complex	10001 Bulen-Pierce Road	Harrison Township	Built Environment Cultural Resource



<b>PICKAWAY COUNTY ASSET INVENTORY</b>			
<b>Name or Description</b>	<b>Address</b>	<b>City</b>	<b>Asset Type</b>
Circleville High School	520 S. Court Street	Circleville	Built Environment Cultural Resource
Circleville Historic District	Main Street and Court Street	Circleville	Built Environment Cultural Resource
W.C. Clemmons Mound	Southern side of Florence Chapel Road	Jackson Township	Built Environment Cultural Resource
Fridley-Oman Farm	In Slate Run Metropolitan Park	Madison Township	Built Environment Cultural Resource
Gill-Morris Farm	10104 Statte Route 56	Salt Creek Township	Built Environment Cultural Resource
Horn Mound	Dead end of Armstrong Road	Salt Creek Township	Built Environment Cultural Resource
Horsey-Barthelmas Farm	State Route 104 west of Circleville	Wayne Township	Built Environment Cultural Resource
Lawndale Farm Complex	26476 Gay Dreisbach Road	Pickaway Township	Built Environment Cultural Resource
Luther List Mound	Kingston Pike, southeast of Circleville	Circleville Township	Built Environment Cultural Resource
Matthew McCrea House	428 E. Main Street	Circleville	Built Environment Cultural Resource
Memorial Hall	165 E. Main Street	Circleville	Built Environment Cultural Resource
Morris House	149 W. Union Street	Circleville	Built Environment Cultural Resource
Perrill-Goodman Farm House	Goodman Road south of Groveport	Madison Township	Built Environment Cultural Resource
Stevenson Peters House	9860 State Route 188	Walnut Township	Built Environment Cultural Resource
Redlands	1960 N. Court Street	Circleville Township	Built Environment Cultural Resource
Renick Farm	U.S. Route 23 north of South Bloomfield	Harrison Township	Built Environment Cultural Resource
Saint Philip's Episcipol Church	129 W. Mound Street	Circleville	Built Environment Cultural Resource
Scioto Township District #2 Schoolhouse	8143 Snyder Road	Scioto Township	Built Environment Cultural Resource
The Shack		Monroe Township	Built Environment Cultural Resource
Tick Ridge Mound District	Deer Creek State Park	Monroe Township	Built Environment Cultural Resource
Ansel T. Walling House	146 W. Union Street	Circleville	Built Environment Cultural Resource
Watt-Groce-Fickhardt House	360 E. Main Street	Circleville	Built Environment Cultural Resource
Teays Valley High School	3887 State Route 752	Ashville	People



<b>PICKAWAY COUNTY ASSET INVENTORY</b>			
<b>Name or Description</b>	<b>Address</b>	<b>City</b>	<b>Asset Type</b>
Teays Valley East Middle School	655 Viking Way	Ashville	People
Teays Valley West Middle School	200 Grove Run Road	Commercial Point	People
Ashville Elementary School	90 Walnut Street	Ashville	People
Scioto Elementary School	20 West Scioto Street	Commercial Point	People
South Bloomfield Elementary School	194 Dowler Drive	South Bloomfield	People
Walnut Elementary School	7150 Ashfield-Fairfield Road	Ashville	People
Teays Valley Digital Academy	385 Viking Way	Ashville	People
Logan Elm High School	9575 Tarlton Road	Circleville	People
McDowell Middle School	9579 Tarlton Road	Circleville	People
Salt Creek Intermediate School	13190 State Route 56	Kingston	People
Laurelville Elementary School	16138 Pike Street	Laurelville	People
Pickaway Elementary School	28158 Kingston Pike	Circleville	People
Washington Elementary School	7990 Stoutsville Pike	Circleville	People
Westfall High School	19463 Pherson Pike	Williamsport	People
Westfall Middle School	19545 Pherson Pike	Williamsport	People
Westfall Elementary School	9391 State Route 56	Williamsport	People
Brooks-Yates School	1005 South Pickaway Street	Circleville	People
Pickaway -Ross Career & Technology Center - Circleville Campus	424 East Mound Street	Circleville	People
Circleville High School	380 Clark Drive	Circleville	People
Circleville Elementary School	100 Tiger Drive	Circleville	People
Circleville Middle School	360 Clark Drive	Circleville	People
Circleville Fire Department and Emergency Services	586 North Court Street	Circleville	Built Environment Critical Infrastructure
Pickaway Township Fire Department	579 Tarlton Road	Circleville	Built Environment Critical Infrastructure
Southwest Pickaway Fire Department	107 Green Street	Williamsport	Built Environment Critical Infrastructure
Scioto Township Fire Department	25 harsh Alley	Commercial Point	Built Environment Critical Infrastructure
Pic-A-Fay Joint fire Department	17 North Church Street	New Holland	Built Environment Critical Infrastructure
Harrison Township Fire Department	3625 State Route 752	Ashville	Built Environment Critical Infrastructure



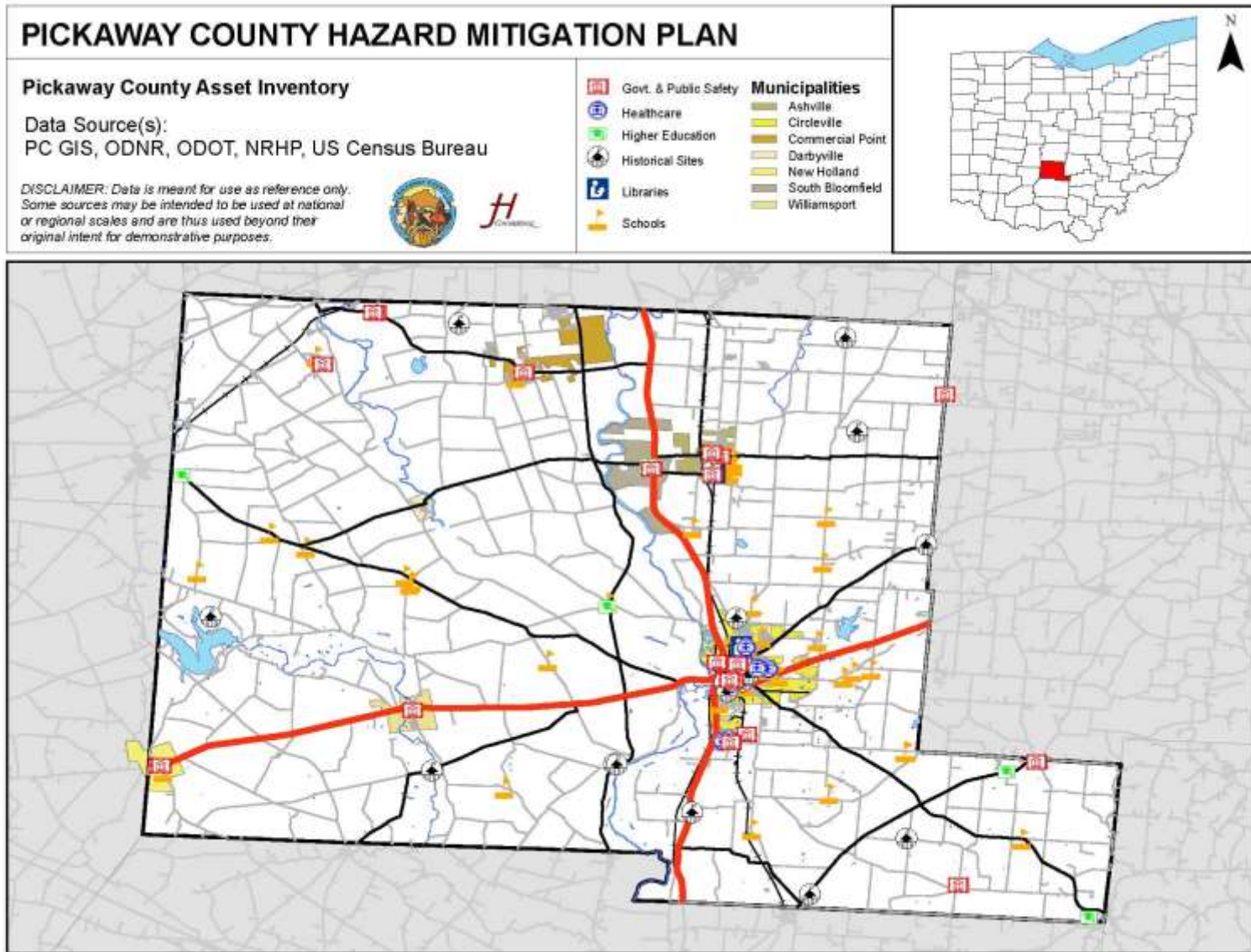
<b>PICKAWAY COUNTY ASSET INVENTORY</b>			
<b>Name or Description</b>	<b>Address</b>	<b>City</b>	<b>Asset Type</b>
Pickaway Plains EMS	1950 Stoneridge Road	Circleville	Built Environment Critical Infrastructure
Pickaway County Emergency Management Agency	139 West Franklin Street	Circleville	Built Environment Critical Infrastructure
Berger Hospital	600 North Pickaway Street	Circleville	Built Environment Critical Infrastructure
Pickaway Terrace	2195 Arapaho Drive	Circleville	
Pickaway Manor Care Center	391 Clark Drive	Circleville	People
Brown Memorial Home	158 East Mound Street	Circleville	Built Environment Existing Structure
Sunbridge Care and Rehab-Circleville	1155 atwater Avenue	Circleville	People
Circleville Long Term Care	370 Tarlton Road	Circleville	People
Victoria Terrace	271 Clark Drive	Circleville	People
Pickaway County District Public Library	1160 North Court Street	Circleville	Built Environment Existing Structure
Floyd E. Younkin Branch Library	51 Long Street	Ashville	Built Environment Existing Structure
New Holland Police Department	18 North Main Street	New Holland	Built Environment Critical Infrastructure
Pickaway County Sheriff	600 Island Road	Circleville	Built Environment Critical Infrastructure
Circleville Police Department	151 East Franklin Street	Circleville	Built Environment Critical Infrastructure
Salt Creek-Tarlton Volunteer Fire Department Station 1	180 West Main Street	Tarlton	Built Environment Critical Infrastructure
Williamsport and Deercreek Emergency Squad	107 Green Street	Williamsport	Built Environment Critical Infrastructure
Tri-County Joint fire District Station 492	12200 Center Drive	Orient	Built Environment Critical Infrastructure
Pickaway County Board of Commissioners	139 West Franklin Street	Circleville	Built Environment Critical Infrastructure
Circleville City Administration Building	104 East Franklin Street	Circleville	Built Environment Critical Infrastructure
Ashville Municipal Building	200 Station Street East	Ashville	Built Environment Critical Infrastructure



<b>PICKAWAY COUNTY ASSET INVENTORY</b>			
<b>Name or Description</b>	<b>Address</b>	<b>City</b>	<b>Asset Type</b>
Ashville Police Department	91 West main Street	Ashville	Built Environment Critical Infrastructure
Commercial Point Municipal Building	10 West Scioto Street	Commercial Point	Built Environment Critical Infrastructure
South Bloomfield Municipal Building	5000 Park Place	South Bloomfield	Built Environment Critical Infrastructure

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## 1.0 INTRODUCTION

### 1.3 Capabilities

§201.6(b)(3)	Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
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This section examines the existing capabilities of Pickaway County and the participating jurisdictions. Specifically, this section looks at those capabilities that can support the implementation of hazard mitigation efforts. The county’s consultant supported an online survey of jurisdictional representatives to complete a “capabilities assessment.” Representatives answered questions about the following plans, codes, and ordinances from the perspectives of their home jurisdictions. The following table summarizes jurisdictional capabilities. The bullet list below the table provides definitions and context for the outlined capabilities.

JURISDICTIONAL CAPABILITIES							
<i>Jurisdiction</i>	<i>Comprehensive Plan</i>	<i>Building Codes</i>	<i>Subdivision or Land Use Ordinance</i>	<i>Zoning Ordinance</i>	<i>Participates in the NFIP</i>	<i>Capital Budget Funds for Mitigation Projects</i>	<i>Public Works Budget for Mitigation projects</i>
Pickaway County	Yes	Yes	Yes	Yes	Yes	Yes	No
Ashville Village	Yes	Yes	Yes	Yes	Yes	No	No
Circleville City	Yes	Yes	N/A	Yes	Yes	N/A	N/A
Commercial Point Village	Yes	No	Yes	Yes	Yes	No	No
Darbyville Village	No	No	No	No	Yes	Yes	No
New Holland Village	No	Yes	Yes	Yes	Yes	No	No
South Bloomfield Village	Unknown	Yes	Yes	Yes	Yes	No	No
Williamsport Village	No	Yes	Unknown	Yes	Yes	No	No

N/A = No Answer Provided

#### 1.3.1 Existing Plans and Ordinances

Pickaway County itself and the municipalities therein have a number of capabilities that can support mitigation efforts including comprehensive plans, building codes, subdivision and land use ordinances, zoning ordinances, and floodplain regulations. In summary, Pickaway County and the municipalities therein appear to have a “high” planning and regulatory capability.





### Comprehensive Plans

Comprehensive plans promote sound land use and regional cooperation among local governments to address planning issues. These plans serve as the official policy guide for influencing the location, type, and extent of future development by establishing the basic decision-making and review processes on zoning matters, subdivision and land development, land uses, public facilities, and housing needs over time.

Several jurisdictions in Pickaway County maintain comprehensive plans of some sort. For example, Commercial Point's plan is a multijurisdictional plan (with Scioto Township), updated in 2011, that discusses conserving and managing greenspace, maintaining and upgrading utilities, etc. Circleville City has a Long Range & Strategic Planning Committee that is tasked with maintaining the comprehensive plan. Circleville's plan includes establishing funding methods for long-term projects, information technology, and planning for municipal needs such as office space and land acquisitions.

### Building Codes

Building codes regulate construction standards for new construction and substantially renovated buildings. Standards can be adopted that require resistant or resilient building design practices to address hazard impacts common to a given community. Most jurisdictions utilize building codes. Some jurisdictions, like Williamsport maintain municipal codes. Other jurisdictions receive support from the county building department regarding building codes.

### Subdivision and Land Use Development Ordinances

Subdivision and land development ordinances (SALDOs) regulate the development of housing, commercial, industrial or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Within these ordinances, guidelines on how to divide land, the placement and size of roads and the location of infrastructure can reduce exposure of development to hazard events. Ashville, Circleville, New Holland, and South Bloomfield all maintain SALDOs as independent ordinances while other jurisdictions have subdivision considerations as part of zoning ordinances.

### Zoning Ordinances

Zoning ordinances allow for local communities to regulate the use of land in order to protect the interests and safety of the general public. Zoning ordinances can address unique conditions or concerns within a given community. They may be used to create buffers between



structures and high-risk areas, limit the type or density of development and/or require land development to consider specific hazard vulnerabilities. All of the jurisdictions in Pickaway County have zoning ordinances.

#### National Flood Insurance Program (NFIP) Participation and Floodplain Management Ordinances

Through administration of floodplain ordinances, local governments can ensure that all new construction or substantial improvements to existing structures located in the floodplain are flood-proofed, dry-flood proofed, or built above anticipated flood elevations. Floodplain ordinances may also prohibit development in certain areas altogether. The NFIP establishes minimum ordinance requirements in order for that community to participate in the program. However, a community is permitted and encouraged to adopt standards which exceed NFIP requirements.

FEMA's *Community Status Book* indicates that the county, the six participating villages and Circleville City participate in the NFIP. Participants manage their participation in the program in similar ways. They maintain access to copies of flood insurance rate maps (FIRMs) by directing residents to websites or to the appropriate local officials (e.g., county GIS department, zoning coordinator, building inspector, etc.) for information. Participants support requests for map updates by forwarding information to the appropriate department (usually the county GIS department). Currently, no jurisdictions in Pickaway County participate in the Community Rating System (CRS).

#### **1.3.2 Capability Assessment**

All jurisdictions in the county (i.e., the county, cities, and villages) had an opportunity to complete a "capability self-assessment" via an online survey. Representative members of six jurisdictions completed a self-assessment for their jurisdiction. In response to the survey questionnaire, local officials classified each of the capabilities as high, moderate, or limited.

#### Administrative and Technical Capability

Administrative capability is an adequacy of departmental and personnel resources for the implementation of mitigation-related activities. Technical capability relates to an adequacy of knowledge and technical expertise of local government employees or the ability to contract outside resources for this expertise to effectively execute mitigation activities.



### Fiscal Capability

The decision and capacity to implement mitigation-related activities is often strongly dependent on the presence of local financial resources. While some mitigation actions are less costly than others, it is important that money is available locally to implement policies and projects. Financial resources are particularly important if communities are trying to take advantage of state or federal mitigation grant funding opportunities that require local-match contributions. Federal programs which may provide financial support for mitigation activities include, but are not limited to:

- Community Development Block Grant (CDBG),
- Disaster Housing Program,
- Emergency Conservation Program,
- Emergency Management Performance Grants (EMPG),
- Emergency Watershed Protection Program,
- Hazard Mitigation Grant Program (HMGP),
- Flood Mitigation Assistance Program,
- Non-Insured Crop Disaster Assistance Program,
- Pre-Disaster Mitigation Program,
- Repetitive Flood Claims Program (RFC),
- Section 108 Loan Guarantee Programs,
- Severe Repetitive Loss (SRL) Program, and
- Weatherization Assistance Program.

State programs that may support mitigation include (but are not limited to):

- Ohio Department of Development (job ready sites and CDBG funds for economic development),
- Ohio Department of Natural Resources (land and water conservation efforts),
- Ohio Environmental Protection Agency (loans and capital improvements), and
- Ohio Emergency Management Agency (funds to support emergency preparedness, response, and overall resilience).

### Political Capability

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to mitigate hazard events. The adoption of hazard mitigation measures may be seen as an impediment to growth and economic development. In many cases, mitigation may not generate interest among local officials when compared with competing priorities. Therefore, the local political climate must be considered when



designing mitigation strategies, as it could be the most difficult hurdle to overcome in accomplishing the adoption or implementation of specific actions.

The following table summarizes the results of the self-assessment survey as a percentage of the responses received.

<b>CAPABILITY SELF-ASSESSMENT</b>			
<i>Capability</i>	<i>High</i>	<i>Moderate</i>	<i>Limited</i>
Administrative & Technical	13.33%	40.00%	46.67%
Fiscal	3.45%	13.79%	82.76%
Political	50.00%	0.00%	50.00%

The 2019 self-assessment also included four questions to gauge community receptiveness to several types of mitigation strategies. The following table details the results.

<b>SELF-ASSESSMENT: PROJECT CONSIDERATIONS</b>					
<i>Sample Mitigation Strategy</i>	<i>Very Willing</i>	<i>Willing</i>	<i>Neutral</i>	<i>Unwilling</i>	<i>Very Much Unwilling</i>
XYZ community guides development away from known hazard areas.	7.41%	55.56%	37.04%	0.00%	0.00%
XYZ community restricts public investments or capital improvements within hazard areas.	7.41%	51.85%	40.74%	0.00%	0.00%
XYZ community enforces local development standards (e.g., building codes, floodplain management ordinances, etc.) that go beyond minimum state or federal requirements.	14.81%	33.33%	48.15%	3.70%	0.00%
XYZ community offers financial incentives (e.g., through property tax credits) to individuals and businesses that employ resilient construction techniques (e.g., voluntarily elevate structures, employ landscape designs that establish buffers, install green infrastructure elements, etc.).	7.41%	33.33%	44.44%	14.81%	0.00%

### 1.3.3 Studies, Reports, and Technical Information

The research conducted for the development of this plan included data from federal, state, and higher education studies, reports and technical information. Specific sources relative to individual hazards appear in Appendix 5: Citations. Pickaway County’s consultant reviewed a number of existing plans and reports to (a) identify any obvious inconsistencies between other development and mitigation efforts, (b) as baseline information for such sections as trends and predictions, and (c) to support discussions surrounding mitigation projects. Those documents included the following.



<b>REFERENCED DOCUMENTS</b>		
<i>Document Type</i>	<i>Document Citation</i>	<i>How Incorporated into Plan</i>
Technical Information	USDHS FEMA. (2013) <i>Mitigation Ideas</i> . Federal Government: Washington, DC	Used as general guidance for stakeholders and jurisdictions on mitigation ideas
Technical Information	USDHS FEMA. (2016). <i>National Mitigation Framework</i> . Federal Government: Washington, DC	Used as general guidance on mitigation planning.
Technical Information	USDHS FEMA. (2005). <i>Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning</i> . Federal Government: Washington, D.C.	Used as general guidance for incorporating historical property and cultural protection.
Technical Information	USDHS FEMA. (2013). <i>Local mitigation planning handbook</i> . Federal Government: Washington, D.C.	Used as general guidance on revised mitigation planning process
Technical Information	USDHS FEMA. (2013). <i>Integrating Hazard Mitigation Into Local Planning</i> . Federal Government: Washington, D.C.	Used as general guidance on existing plan integration for hazard mitigation
Technical Information	USEPA. (2018). <i>Storm smart cities: Integrating green infrastructure into local hazard mitigation plans</i> . Federal Government: Philadelphia, PA.	Outlines ways low-impact development and green infrastructure can support mitigation planning.
Plan	State of Ohio (2019). <i>Enhanced Hazard Mitigation Plan</i> . State Government: Columbus, OH	Used as general guidance on existing plan integration for hazard mitigation
Plan	Pickaway County EMA. <i>Emergency Operations Plan</i> . Local Government: Circleville. OH.	Used as general guidance on existing plan integration for hazard mitigation



## 1.0 INTRODUCTION

### 1.4 Trends and Predictions

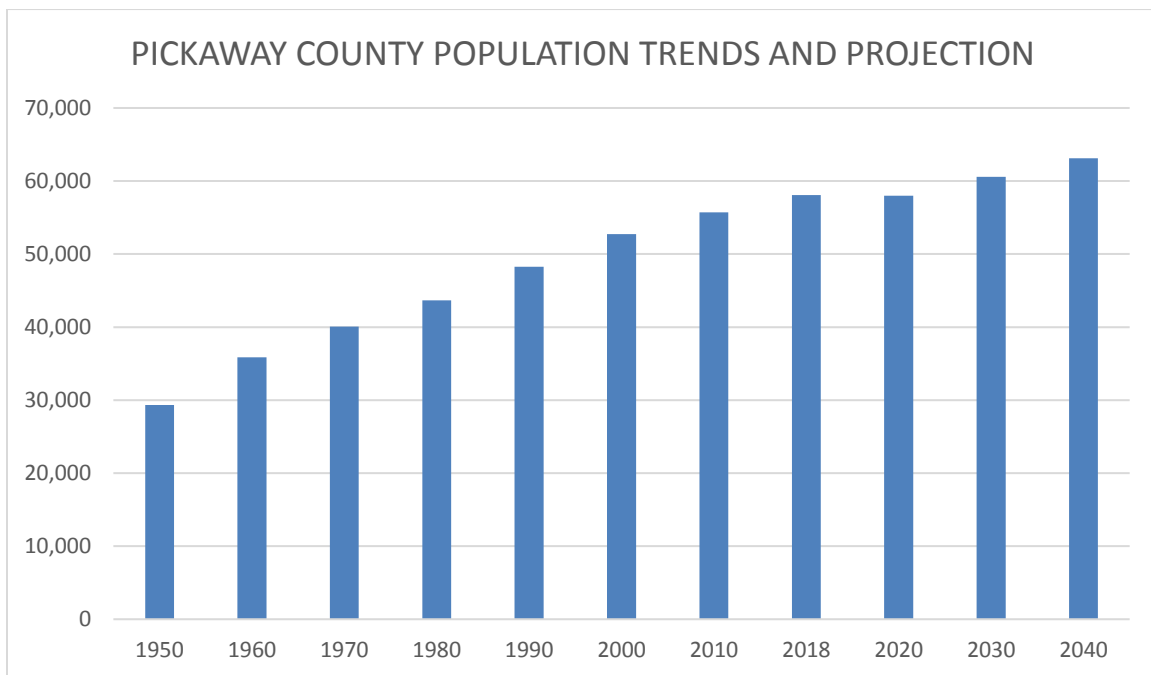
§ 201.6(c)(2)(ii)(c) Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

This section examines various demographic and other development trends in Pickaway County to contextualize future risk to the hazards identified later in this plan.

#### Population

**Hazard Mitigation Relevance:** People are some of the most important assets in a community. Understanding population trends and concentrations assists in describing current and future vulnerability, as well as in the design of outreach and to target preparedness, response, and mitigation actions. Also, understanding where people reside or visit in a community informs the appropriate locations for mitigation projects (FEMA, 2013).

Pickaway County's population has risen since the mid-1900s. As the graphic below indicates, the population grew steadily (per decennial Census data) between 1950 and 2010. Recent population estimates show an increase in population that may continue through 2040.



Source: Pickaway County Profile prepared by the Ohio Development Services Agency, Office of Research, <https://development.ohio.gov/files/research/C1066.pdf>



The following table assigns figures to the bars on the above graph.

<b>PICKAWAY COUNTY POPULATION CHANGE, 1950-2040</b>											
<i>Jurisdiction</i>	1950	1960	1970	1980	1990	2000	2010	2018	2020	2030	2040
Pickaway County	29,352	35,855	40,071	43,662	48,255	52,727	55,698	58,086	58,010	60,560	63,100

It is also helpful to consider population trends in the population clusters throughout Pickaway County. The Ohio Development Services Agency identifies the following as the “largest places” (2018) in Pickaway County.

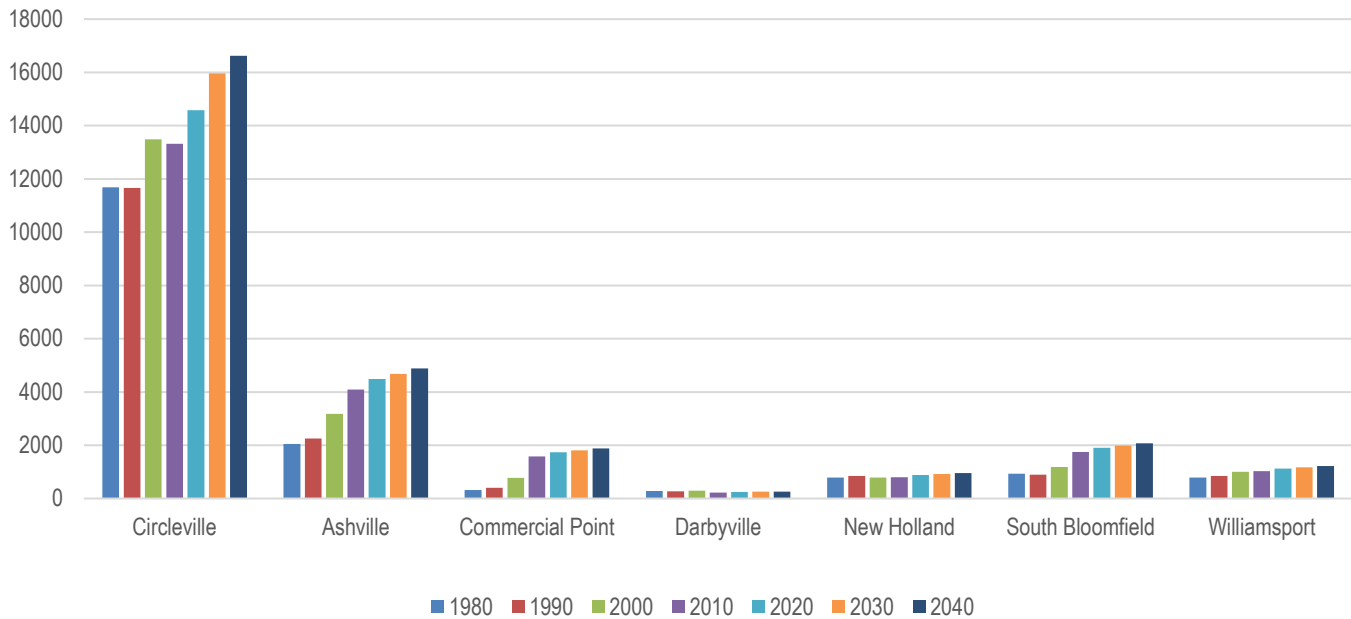
<b>POPULATION CHANGE, LARGEST PLACES</b>			
<i>Place</i>	<i>2010 Pop.</i>	<i>Est. 2018</i>	<i>% Change</i>
Circleville City	13,314	13,965	4.89%
Scioto Township (UB)	8,081	8,711	7.80%
Village of Ashville	4,097	4,298	4.91%
Darby Township (UB)	3,366	3,491	3.71%
Washington Township	3,151	3,082	-2.19%
Walnut Township	2,809	2,937	4.56%
Saltcreek Township (UB)	2,643	2,708	2.46%
Circleville Township	2,389	2,463	3.10%
Pickaway Township	2,041	2,112	3.48%
Village of South Bloomfield	1,744	1,974	13.19%

\*UB: Unincorporated balance

As shown in the above table, the 2018 estimated populations of nine of the 10 places increased from the 2010 Census, which suggests that the majority of the county has seen increases in population.



## POPULATION CHANGE BY MUNICIPALITY, 1980-2040



Sources:

- 1980 Census: [https://www2.census.gov/prod2/decennial/documents/1980/1980censusofpopu8011uns\\_bw.pdf](https://www2.census.gov/prod2/decennial/documents/1980/1980censusofpopu8011uns_bw.pdf)
- 1990 Census: <https://www2.census.gov/library/publications/decennial/1990/cp-1/cp-1-37.pdf?#>
- 2000 & 2010 Census: [https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)

Residential construction has remained largely steady in Pickaway County. According to the Ohio Development Services Agency, residential construction averaged 87.2 units annually between 2013 and 2017. The following table presents the residential construction data.

RESIDENTIAL CONSTRUCTION 2014-2018					
Criterion	2014	2015	2016	2017	2018
<b>Total Units</b>	<b>25</b>	<b>55</b>	<b>84</b>	<b>202</b>	<b>175</b>
<b>Total Valuation (000)</b>	<b>\$4,217</b>	<b>\$7,180</b>	<b>\$14,386</b>	<b>\$33,316</b>	<b>\$40,006</b>
Single-Unit Buildings	22	55	84	162	173
Avg. Cost per Single Unit Building	\$187,153	\$130,545	\$171,258	\$174,799	\$230,529
Multi-Unit Buildings	3	0	0	40	2
Avg. Cost per Multi-Unit Bldg.	\$33,333	\$0	\$0	\$124,976	\$62,500

Understanding trends associated with populations corresponding with various social vulnerability indicators can inform hazard mitigation decision-making. For instance, in areas with a low median household income, households may not be able to afford mitigation measures on their own. Populations living under the poverty line may have difficulty recovering; thus, a





community can lessen the indirect losses those families incur by strengthening capabilities to support those populations (e.g., assisting with access to FEMA and other governmental agencies accepting requests for disaster assistance, considering all options for structural mitigation projects to protect areas where clusters of those populations live, etc.). Phillips, Thomas, Fothergill, and Blinn-Pike (2010) provide a series of social vulnerability indicators. The following indicators<sup>1</sup> correspond to data that are available to the Pickaway County planning committee.

- **Age:** Senior citizens are reluctant to secure aid after a disaster out of concern they may lose their independence. (Proxy Data per Census: Under 18, 65+)
- **Class:** Lower income families and households tend to live in housing that suffers disproportionately during disasters. (Proxy Data per Census: Median household income, Poverty %)
- **Gender:** Women tend to be the ones most likely to secure relief aid for the family, yet they are under-represented and under-used in recovery efforts. (Proxy Data per Census: Female population)
- **Literacy:** Few options exist to inform and prepare people with low reading levels. (Proxy Data per Census: No diploma)
- **Race & Ethnicity:** Warning messages tend to be issued in the dominant language with an expectation that people will take the recommended action immediately. Research indicates that culture influences how people may receive and interpret warnings and how they may respond. (Proxy Data per Census: White, Black/African American, Two or more races, Language other than English spoken in home)

The following table presents some these indicators and the corresponding demographics.

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<sup>1</sup> Definitions are quotes from the Phillips et al. text. See p. 3 of the first edition.



SOCIAL VULNERABILITY INDICATORS, 2000-2019, BY JURISDICTION															
Jurisdiction	Under 18					65+					Female				
	2000	%	2010	%	2019	2000	%	2010	%	2019	2000	%	2010	%	2019
Pickaway County	12,787	-5%	12,157	2%	12,393	5,706	25%	7156	31%	9,353	23,729	12%	26,467	5%	27,767
Circleville	3,605	183%	10,210	71%	2,936	2,166	9%	2,361	15%	2,726	6,922	0%	6,936	-1%	6,901
Ashville	952	26%	1,200	8%	1,295	300	30%	389	-6%	365	1,668	27%	2,111	-3%	2,050
Commercial Point	250	120%	550	-1%	544	63	62%	102	45%	148	418	97%	822	13%	927
Darbyville	92	-36%	59	19%	48	32	3%	33	12%	37	143	-19%	116	8%	125
New Holland	192	-5%	182	-7%	170	126	-8%	116	68%	195	403	-1%	397	11%	441
South Bloomfield	321	53%	490	14%	560	129	37%	177	29%	229	614	45%	892	-12%	788
Williamsport	323	8%	348	-19%	281	93	-3%	90	50%	135	537	-1%	530	-1%	523
Jurisdiction	White					Black					Two or More Races				
	2000	%	2010	%	2019	2000	%	2010	%	2019	2000	%	2010	%	2019
Pickaway County	48,482	13%	55,023	-1%	54,716	3,391	-45%	1,881	21%	2,280	492	37%	675	39%	935
Circleville	12,859	-1%	12,699	5%	13,390	342	-25%	257	75%	450	146	56%	228	-32%	155
Ashville	3,163	25%	3,960	-3%	3,835	6	617%	43	174%	118	45	29%	58	209%	179
Commercial Point	807	85%	1,493	12%	1,671	1	2000%	21	-86%	3	13	115%	28	-4%	27
Darbyville	293	-26%	218	-6%	204	0	XX	1	-100%	0	0	XX	3	100%	0
New Holland	766	2%	782	5%	818	2	50%	3	200%	9	4	225%	13	-69%	4
South Bloomfield	1,187	43%	1,693	20%	2,036	0	XX	16	75%	28	5	380%	24	-46%	13
Williamsport	989	1%	999	-6%	941	7	-57%	3	-100%	0	3	267%	11	27%	14

NOTE: The “%” column under each indicator and proxy figure represents the percent change between the columns to either side.

Economic and Business Development

**Hazard Mitigation Relevance:** Describing economic and business development trends helps to assess dependencies between economic sectors and the infrastructure needed to support them (FEMA, 2013).

The Office of Research within Ohio’s Development Services Agency noted changes in the number of establishments and employment between 2012 and 2017. The following table presents that data.

ESTABLISHMENTS, EMPLOYMENT, AND WAGES BY SECTOR, 2012 AND 2017 COMPARISON								
Sector	Number of Establishments		Average Employment		Total Wages		Average Weekly Wage	
	Since 2012 (%)	2017	Since 2012 (%)	2017	Since 2012 (%)	2017	Since 2012 (%)	2017 (\$)
Private Sector	4.3%	806	0.4%	9,696	13.4%	\$401,326,994	12.9%	\$796
Goods-Producing	4.2%	174	-9.5%	2,899	7.1%	\$178,037,752	18.3%	\$1,181
Natural Resources & Mining	9.7%	34	1.3%	159	12.1%	\$6,317,686	10.6%	\$764
Construction	4.2%	99	49.6%	850	80.4%	\$45,599,418	20.6%	\$1,032
Manufacturing	2.4%	42	-23.7%	1,890	-6.8%	\$126,120,648	22.2%	\$1,283
Service-Producing	4.3%	632	5.4%	6,797	19.0%	\$223,289,242	12.9%	\$632
Trade, Transportation & Utilities	5.4%	215	10.2%	2,341	28.8%	\$88,263,713	16.7%	\$725
Information	100.0%	10	19.5%	49	0.3%	\$1,978,542	-14.8%	\$782
Financial Services	7.9%	80	3.7%	387	18.5%	\$16,652,159	14.4%	\$824
Professional & Business Services	3.1%	100	10.3%	859	22.6%	\$30,883,707	11.3%	\$692
Education & Health Services	2.2%	94	-14.0%	1,469	1.6%	\$58,910,205	18.3%	\$771
Leisure & Hospitality	5.1%	82	23.3%	1,419	43.0%	\$21,702,230	16.2%	\$295
Other Services	-10.9%	49	0.0%	272	1.4%	\$4,892,386	1.2%	\$346



ESTABLISHMENTS, EMPLOYMENT, AND WAGES BY SECTOR, 2012 AND 2017 COMPARISON								
Sector	Number of Establishments		Average Employment		Total Wages		Average Weekly Wage	
	Since 2012 (%)	2017	Since 2012 (%)	2017	Since 2012 (%)	2017	Since 2012 (%)	2017 (\$)
Federal Government	X	X	3.4%	91	7.7%	\$4,712,227	3.9%	\$993
State Government	X	X	1.7%	1,359	19.1%	\$83,287,543	17.1%	\$1,178
Local Government	X	X	1.9%	2,488	12.7%	\$110,243,157	10.5%	\$852

According to the Ohio Development Services Agency (ODSA) several businesses have taken advantage of tax credit programs. Most notably, the Job Creation Tax Credit Program, which rewards companies for creating jobs with higher than average wages, has allowed companies to retain 640 jobs and create 456 new jobs in the county.

Transportation

**Hazard Mitigation Relevance:** The transportation infrastructure is a key community asset, particularly in the response and recovery phases. Ensuring open arterial routes helps with emergency response, the movement of life saving (or sustaining) supplies, etc. Identifying key transportation assets and understanding their potential vulnerabilities can inform projects designed to support their continuity in emergency situations.

The Ohio Department of Transportation has three planned projects for 2020. Those projects include:

- Resurfacing SR 316 in Ashville and SR 752 from U.S. 23 to the Fairfield County line.
- Repairing culverts and slide damage on SR 674.
- Replacing the bridge deck on SR 762 over the Scioto River.

The Pickaway County Coordinated Public Transit Human Services Transportation Plan 2018-2020 seeks to improve access to transportation for senior citizens, people with disabilities, and low income populations by coordinating the resources of public transportation, private taxi, and other service providers. The plan recognizes transportation is a key component of accessing jobs, education, health care, and human services. The plan recognizes that less than five percent of the county’s population do not have access to a personal vehicle. However, some areas of the county, such as Circleville, have over 20% of the population without a personal vehicle. Some of the challenges the plan recognizes include providing coordinated transportation as there are multiple agencies providing similar services, different standards and regulations for vehicles and drivers, and varying appointment and scheduling times causing extra wear on the vehicles do to duplicate or extra trips with unfilled seats.



### Land Use

**Hazard Mitigation Relevance:** Land use descriptions inform discussions of risk and vulnerability. For example, flooding may exist as a high risk, but may not correlate with high vulnerability in open or unpopulated forested areas. Further, understanding land use may identify valuable areas where natural features can provide protective functions that reduce the magnitude of hazard events (FEMA, 2013). Looking forward, *proposed* land uses can inform discussions about the types of assets that future hazard occurrences could impact.

Like many communities, Pickaway County seeks to develop available land for residential, commercial, industrial, infrastructure, and recreation purposes in a responsible manner.

### Planned Development and Hazard Areas

When planning for new development, this plan suggests that it is vital to consider areas where new development avoids damages from future hazardous events. The North Gate Alliance Strategic Land Use Plan (2013) was a joint planning effort that included representation from Pickaway County, the Villages of Ashville and South Bloomfield, and Harrison Township. The map below shows the area of the North Gate Alliance.

In the land use plan, the stakeholders documented 10 principles for smart growth. The key principle in regards to this mitigation plan is to preserve open space, farmland, natural resources, and critical environmental areas. This principle provides guidance on developing (or not developing) areas that offer natural protections from natural hazards and areas that are directly in hazard zones.

The following map identifies the area included in the North Gate Alliance Strategic Land Use Plan.



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

### North Gate Alliance Strategic Land Use Plan Areas

Data Source(s):  
North Gate Alliance, US Census Bureau

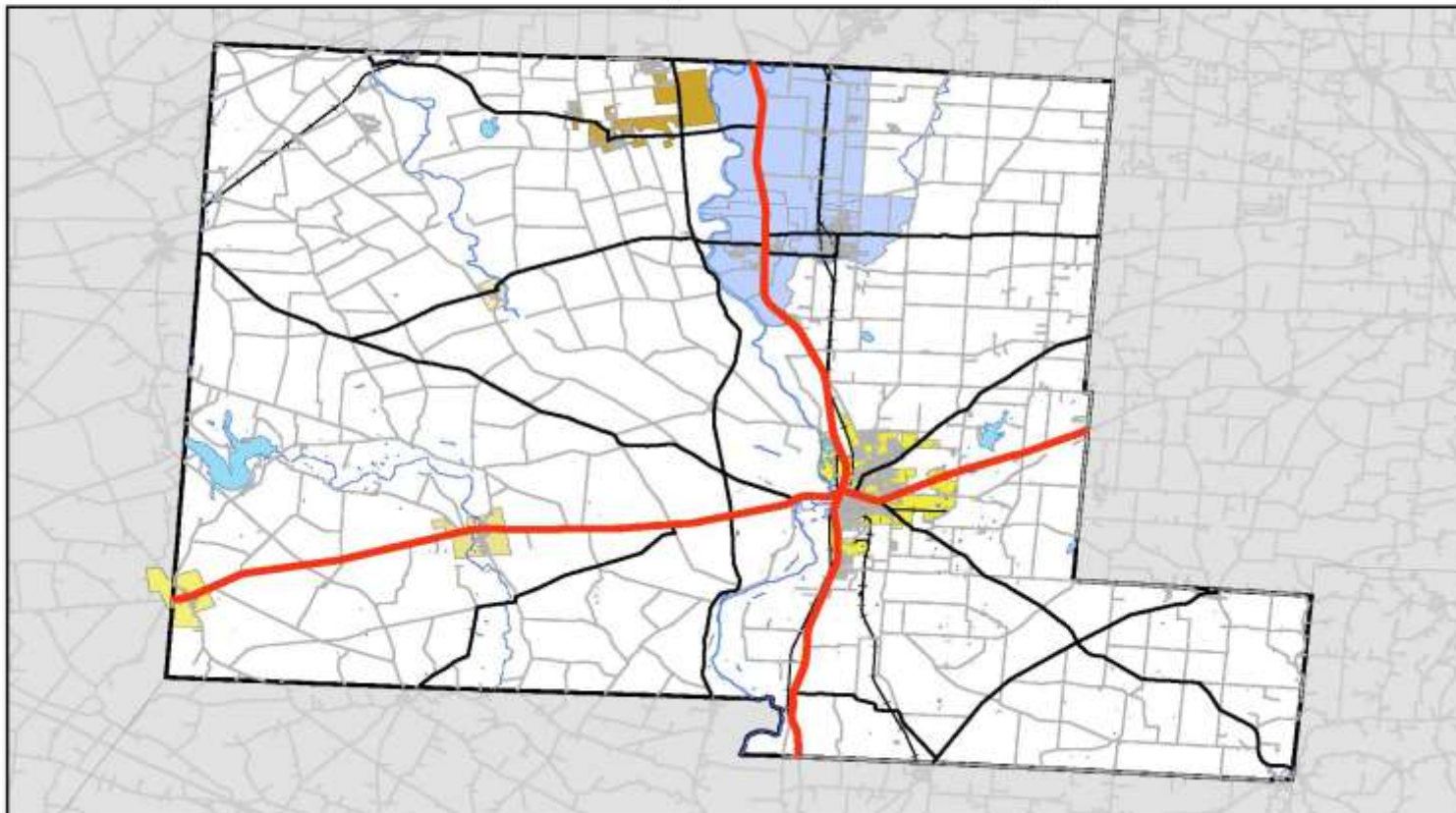
*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



Ashville, S. Bloomfield, & Harrison Twp.

#### Municipalities

- Ashville
- Circleville
- Commercial Point
- Darbyville
- New Holland
- South Bloomfield
- Williamsport



## 2.0 RISK ASSESSMENT

A risk assessment analyzes “the potential for damage, loss, or other impacts created by the interaction of hazards with community assets” (FEMA, 2013). This risk assessment section contains information on identified hazards that threaten Pickaway County and the surrounding region and the vulnerability of the area as it relates to the county’s assets.



## 2.0 RISK ASSESSMENT

### 2.1 Hazards Identification

§201.6(c)(2)(i)	[The risk assessment shall include a] description of the...location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
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During the first planning committee meeting on October 11, 2019, committee members reviewed the hazards from the 2012 plan and had the opportunity to add new hazards, delete hazards that may no longer affect the county or revise existing hazards as necessary. The first revision was to include levees with dams per Ohio Emergency Management Agency’s recommendations. The committee decided to revise severe weather into four sections, High/Strong Winds, Severe Thunderstorms and Hail, Temperature Extremes, Winter Storms.

In an effort to include other planning efforts already taking place throughout the county, the committee added Public Health Emergencies and Subsidence and Land Movements. The committee also discussed and decided to add terrorism, focusing on domestic and cyber, transportation, focusing on “access” rather than potential for accidents, and wildland fires.

The following table lists the hazards considered by the remainder of this risk assessment.

<b>HAZARDS IDENTIFICATION</b>	
<i>Hazard</i>	<i>Description</i>
<b>Natural Hazards</b>	
Drought	Existing
Earthquake	Existing.
Flooding	Existing.
High/Strong Winds	Amended: Formerly part of Severe Weather (2012)
Public Health Emergencies	New.
Severe Thunderstorms and Hail	Amended: Formerly part of Severe Weather (2012)
Subsidence and Land Movements	New
Temperature Extremes	Amended: Formerly part of Severe Weather (2012)
Tornado	Existing.
Wildfire	New
Winter Storms	Amended: Formerly part of Severe Weather (2012)
<b>Technological Hazards</b>	
Dam and Levee Failure	Existing: Revised to include levee failure per Ohio EMA recommendations



Hazardous Materials Incidents	Existing.
Transportation Incidents	New: To include access issues due to trains and major routes.
<b>Intentional Human-Caused Hazards</b>	
Terrorism	New: To include domestic and cyber terrorism

In addition to these fourteen hazards, there exist other potential hazards this plan does not address. The following list presents those hazards.

- **Avalanche:** Avalanches happen mainly in the western United States and Canada. The terrain and geography of Pickaway County are not rugged or severe enough to have avalanches.
- **Coastal Erosion (and other lake hazards):** Pickaway County is not a coastal county and therefore does not experience this hazard.
- **Hurricanes:** The Atlantic east coast, where hurricane paths are nearest, is approximately 435 miles away, and the Pacific west coast is approximately 2,145 miles away. Neither would affect Pickaway County. The county may experience wet weather as the remnants of Atlantic hurricanes pass through the area; however, winds would not likely be near a hurricane or tropical storm levels.
- **Sea Level Rise:** Sea level risk occurs in oceans; the Atlantic east coast is approximately 435 miles away, and the Pacific west coast is approximately 2,145 miles away. Neither would affect Pickaway County.
- **Tsunami:** Tsunamis occur in oceans; the Atlantic east coast is approximately 435 miles away, and the Pacific west coast is approximately 2,145 miles away. Neither would affect Pickaway County. The closest relatable hazards to tsunamis in Ashtabula County would be lake surge and seiche waves, both of which appear briefly in the coastal erosion discussion.
- **Volcano:** The closest monitored volcano is in Yellowstone National Park in Wyoming and is approximately 1,700 miles away. It would not affect Pickaway County.





## 2.0 RISK ASSESSMENT

### 2.2 Complicating Variables

Direct, calculable consequences of disasters can include fatalities, injuries, and damages to humans, animals, or property. However, disasters do not end there; there are several indirect effects, tangible and intangible, associated with disasters. Some examples of these include loss of livelihood and income, loss of community and population, mental and psychosocial impacts, costs of rebuilding, repair or replacement, loss of inventory, wages and tax revenue, etc. (Coppola, 2015). All of these also have a cost associated with them, but it is much more difficult to assign a specific dollar value and quantify them accurately. For this plan, the primary focus of loss estimates will be direct consequences of the given hazard.

Countless situations could occur that could result in a disruption to critical systems throughout Pickaway County. Loosely-related variables often considered *cascading hazards*, can complicate some hazards. For example, high winds may cause sporadic damage, but often do not become a significant countywide concern until a large number of residents are without power. In addition to weather-related power outages, cascading hazards in Pickaway County could include (but not be limited to) the following.

- Damage to infrastructure (i.e., roads, bridges, pipes, utility poles, etc.) and residences following flooding
- Flooding of downstream areas in the event of a dam or levee failure
- Drinking water supply shortages and contamination following severe and prolonged drought conditions or floods
- Power outages, ruptured gas lines, etc. following earthquakes or severe weather
- Public health concerns following flooding conditions
- Population displacement before, during, or after an event that may be temporary or permanent

The complicating variables related to each hazard appear in the hazard profiles. The information presented is based on worst-case scenario events; a single event may not always reach all impacts described. However, it is important to understand that the impacts of hazards go beyond what is seen immediately after the event. The effects of one event can last months or



even years, especially where public health, social, economic, environmental, and infrastructure impacts are concerned.

### Hazards and Climate Change

Many natural hazards are related to the climate or weather such as droughts, severe weather, and floods. There is an important distinction between weather and climate. Weather refers to the atmospheric conditions of a geographical region over a short period, such as days or weeks. Climate, in contrast, refers to the atmospheric conditions of a geographical area over long periods, such as years, or even decades (Keller & Devecchio, 2015, pp. 406-407). According to the U.S. Global Change Research Program, there are weather and climate changes already observed in the United States.

- Since recordkeeping began in 1895, the average U.S. temperature has increased by 1.3°F to 1.9°F with most of the increase happening since 1970. Also, the first decade of the 2000s was the warmest on record.
- The average precipitation across the U.S. has increased since 1900, with some areas experiencing higher than the national average and some lower. Heavy downpours are increasing, especially over the last 30-50 years.
- Drought events have increased in the west. Changes in precipitation and runoff, combined with changes in consumption and withdrawal, have reduced surface and groundwater supplies in many areas.
- Some types of severe weather events have experienced changes. Heat waves are more frequent and intense, and cold waves have become less frequent and intense overall.
- The intensity, frequency, and duration of North Atlantic hurricanes have increased since the early 1980s.

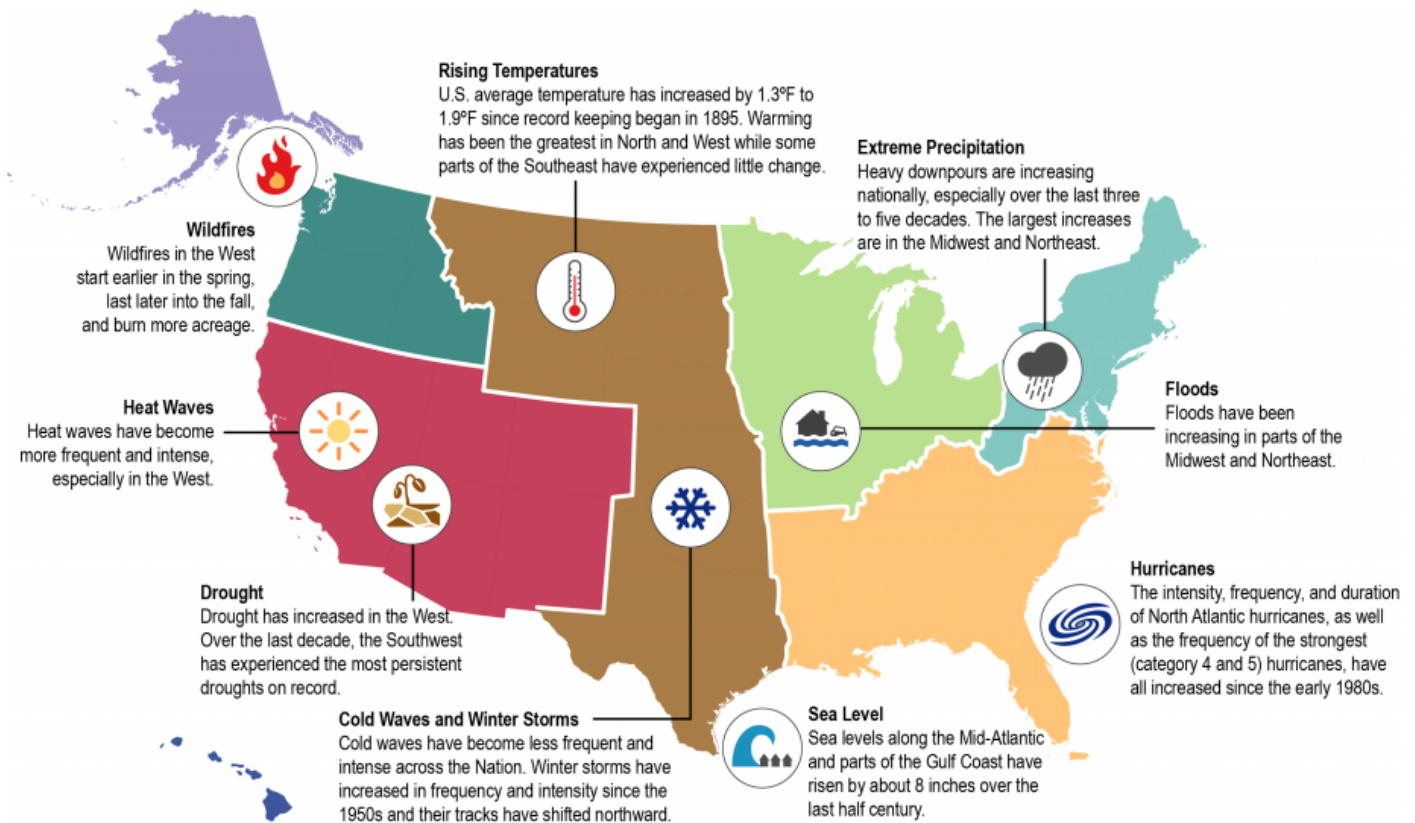
Climate change can have a significant impact on human health and the environment. The changes mentioned above can affect the environment by leading to changes in land use, ecosystems, infrastructure conditions, geography, and agricultural production. Extreme heat, poor air quality, reduced food and water supply and quality, changes in infectious agents, and population displacement can lead to public health concerns such as heat-related illnesses, cardiopulmonary illnesses, food, water and vector-borne diseases and have consequences on mental health and stress (USGCRP, 2016).

The National Climate Assessment (NCA) defined climate trends for national U.S. regions in 2014. The major trends are:



- wildfires and heat waves on the west coast,
- rising temperatures and increased severity and frequency of winter storms in the middle of the country,
- more rain and flooding in the Midwest and northeastern parts of the country, and
- an increase in sea levels in the mid-Atlantic with an increase of hurricane activity in the southeastern states.

The Intergovernmental Panel on Climate Change (IPCC) largely concurs with the above list (IPCC, n.d.). In Ohio, the trend will likely be an increase in flooding, as noted in the graphic below.



### Public Health, Social Vulnerability, and Other General Vulnerability Indicators

Vulnerability is the “measure of the propensity of an object, area, individual, group, community, country, or other entity to incur the consequences of a hazard” (Coppola, 2015, p. 33). Many aspects contribute to the vulnerability of a people; these can include income disparity, class, race or ethnicity, gender, age, disability, health, and literacy (Thomas & Phillips, 2013,



pp. 2-3). See Section 1.4 above for a discussion of potential social vulnerability indicators in Pickaway County. Understanding the overall health status of the community is important in determining the vulnerability of the population to any given hazard; emergencies and disaster situations can exacerbate existing medical conditions. Vulnerable populations, populations of concern, or populations at risk are those individuals or groups of people who are more exposed to the risks of the impacts of a hazard because of their age, gender, income, occupation, disability, physical or mental health, literacy, income, religion, education, or ethnicity.

Some groups face several stressors related to both climate and non-climate factors. For example, people living in impoverished urban or isolated rural areas, floodplains, coastlines, and other at-risk locations are more vulnerable not only to extreme weather and persistent climate change but also to social and economic stressors. Many of these stressors can occur simultaneously or consecutively. Over time, this accumulation of multiple, complex stressors is expected to become more evident as climate impacts interact with stressors associated with existing mental and physical health conditions and with other socioeconomic and demographic factors. Where appropriate (and where information is available), hazard profiles provide further vulnerability details.



## 2.0 RISK ASSESSMENT

### 2.3 Hazard Profiles

The following profiles detail each hazard considered by this plan, which includes discussion on how the hazard impacts the area. Within each profile, research and historical data inform the following elements.

- **Hazard Overview:** Defines the hazard and presents a summary table of the hazard.
- **Location and Extent:** Identifies the physical places in the county that are vulnerable to the hazard and the severity of a hazard in a given location.

§201.6(c)(2)(i)	A description of the type, location, and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
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- **Impact and Vulnerability:** Describes impacts on different topics such as health, the environment, or infrastructure that may result from the hazard as well as specific populations that may be vulnerable.

§201.6(c)(2)(ii)	A description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008, must also address NFIP-insured structures that have been repetitively damaged by floods.
------------------	---

- **Historical Occurrences:** Summarizes significant past events related to the hazard.

§201.6(c)(2)(i)	A description of the type, location, and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
-----------------	--

- **Loss and Damages:** Outlines the methods used for loss amounts (of deaths, injury, and property damage depending on available information) and estimates based on historical information and vulnerable populations, structures, and infrastructure.

§201.6 (c)(2)(ii)(B)	An estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate.
----------------------	--



- **Risk Assessment:** Details methods for calculating the probability and severity of each hazard.
- **Maps and Assets:** Graphically shows the geographic locations or populations in the county that are vulnerable to each hazard. This subsection also identifies the assets that fall under the hazard risk area. Although there is not a defined title for this subsection in the profiles, assets, and maps are located where they are most fitting within the narrative.

§201.6(c)(2)(ii)(A)	The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.
§201.6(c)(2)(iii)	For multi-jurisdictional plans, the risk assessment section must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

Hazard profiles appear categorized by their status as natural, technological, or intentional human-caused.

- **Section 2.4: Natural Hazards**
  - 2.4.1 Drought
  - 2.4.2 Earthquake
  - 2.4.3 Flooding
  - 2.4.4 High/Strong Winds
  - 2.4.5 Public Health Emergencies
  - 2.4.6 Severe Thunderstorms and Hail
  - 2.4.7 Subsidence and Land Movements
  - 2.4.8 Temperature Extremes
  - 2.4.9 Tornado
  - 2.4.10 Wildfire
  - 2.4.11 Winter Storms
  
- **Section 2.5: Technological Hazards**
  - 2.5.1 Dam and Levee Failures
  - 2.5.2 Hazardous Materials Incident
  - 2.5.3 Transportation Incidents
  
- **Section 2.6: Intentional Human-Caused Hazards**
  - 2.6.1 Domestic Terrorism and Cyber Terrorism



## 2.0 RISK ASSESSMENT

### 2.4 Natural Hazards


Natural hazards are naturally-occurring physical phenomena, and they can be rapid or slow-onset events. Natural hazards can be geophysical (e.g., earthquakes, mass movements/landslides, tsunamis, or volcanic activity), hydrological (e.g., avalanches or floods), climatological (e.g., temperature extremes, drought, or wildfires), meteorological (e.g., cyclones or storm/wave surges), or other natural processes (such as biological processes) that pose a threat to human populations (Haddow, Bullock & Coppola, 2017; IFRC, 2016). This subsection includes the following natural hazards.

- Drought
- Earthquake
- Flooding
- High/Strong Winds
- Public Health Emergencies
- Severe Thunderstorms and Hail
- Subsidence and Land Movements
- Temperature Extremes
- Tornado
- Wildfire
- Winter Storms



## 2.0 RISK ASSESSMENT

### 2.4.1 Drought

A drought is a period of abnormally dry weather which persists long enough to produce a serious hydrological imbalance.				
 <p>Vulnerability</p> <p>HIGHEST</p> <p>HIGH</p> <p>MEDIUM</p> <p>LOW</p> <p>LOWEST</p>	<p>Period of Occurrence:</p> <p>At any time, typically after a period of prolonged absence of precipitation</p>	<p>Hazard Index Ranking:</p> <p>Low</p>		
	<p>Warning Time:</p> <p>Over 24 hours</p>	<p>State Risk Ranking:</p> <p>2 – Low</p>		
	<p>Probability:</p> <p>Possible</p>	<p>Severity:</p> <p>Limited</p>		
	<p>Type of Hazard:</p> <p>Natural</p>	<p>Disaster Declarations:</p> <p>USDA FSA S3253 (2) USDA FSA S4038 (2)</p>		

#### HAZARD OVERVIEW

Drought is defined as a period of abnormally dry weather, which persists long enough to produce a serious hydrological imbalance. Drought is a term used in relation to who or what is being affected by the lack of moisture. Drought can be a result of multiple causes, including global weather patterns that produce persistent, upper-level high-pressure systems with warm, dry air, resulting in less precipitation. Droughts develop slowly and are not identified until they are already underway. There are several types of droughts (Sears, 2017, p. 138).

- **Meteorological Drought:** Differences from the normal precipitation amounts. Because not every area receives the same amount of rainfall, a drought in one place might not be considered a drought in another.
- **Agricultural Drought:** Moisture deficiency seriously injurious to crops, livestock, or other agricultural commodities. Parched crops may wither and die. Pastures may become insufficient to support livestock. The effects of agricultural droughts are difficult to measure because many other variables may impact production during the same growing season.
- **Hydrological Drought:** Reduction in streamflow, lake and reservoir levels, depletion of soil moisture, and a lowering of the groundwater table. Consequently, there is a decrease in groundwater discharge to streams and lakes. A prolonged hydrological drought will affect the water supply.
- **Socioeconomic Drought:** A lack of water that begins to affect people's daily lives.





The Palmer Drought Severity Index (PDSI) is a widely used measure of drought to track moisture conditions. The PDSI is “an interval of time, generally in months or years in duration, during which the actual moisture supply at a given place rather consistently falls short of the climatically expected or climatically appropriate moisture supply.” The range of PDSI is from -4.0 (extremely dry) to +4.0 (excessively wet), with the central half (-0.5 to +0.5) representing the normal or near-normal conditions. In the United States, the USDA, National Drought Mitigation Center at the the University of Nebraska-Lincoln, U.S. Department of Commerce, and NOAA developed another measurement of droughts named the U.S. Drought Monitor (USDM). The table to the right shows the two scales and how they compare.

USDM AND PDSI COMPARISON			
U.S. Drought Monitor		Palmer Drought Severity Index	
N/A		> 4.0	Extreme moist spell
		3.0 to 3.99	Very moist spell
		2.0 to 2.99	Unusual moist spell
		1.0 to 1.99	Moist spell
		0.50 to 0.99	Incipient moist spell
		-0.49 to 0.49	Near normal
		-0.5 to -0.99	Incipient dry spell
D0	Abnormally dry	-1.0 to -1.99	Mild drought
D1	Moderate drought	-2.0 to -2.99	Moderate drought
D2	Severe drought	-3.0 to -3.99	Severe drought
D3	Extreme drought	< -4.0	Extreme drought
D4	Exceptional drought	N/A	

## POSSIBLE CAUSES

Precipitation falls in uneven patterns across the country; the amount of precipitation at a particular location varies from year to year, but over a period of years, the average amount is fairly constant. The amount of rain and snow also varies with the seasons. Even if the total amount of rainfall for a year is about average, rainfall shortages can occur during a period when moisture is critically needed for plant growth, such as in the early summer. When little or no rain falls, soils can dry out and plants can die. When rainfall is less than normal for several weeks, months, or years the flow of streams and rivers declines, water levels in lakes and reservoirs fall, and the depth to water in wells increases. If dry weather persists and water-supply problems develop, the dry period can become a drought (USGS, 2016).

## LOCATION AND EXTENT

Droughts are a region-wide hazard that can affect all areas and jurisdictions within the region. Droughts are widespread events that may extend to several states in varying degrees of severity. Within Pickaway County, the extent of a drought would be equal or very similar, given the region’s geography and environmental qualities. A drought can vary in severity throughout



the year; what starts out as a mild drought can reach severe or extreme drought status and then return to a mild drought. This process could take weeks or even months with the effects lasting months after the drought conditions are over.

## IMPACTS AND VULNERABILITY

Droughts can impact drinking water both in terms of availability and demand. According to the U.S. Environmental Protection Agency (EPA), as temperatures rise, people and animals need more water to maintain health. Additionally, a large number of economic activities require abundant water sources such as energy production (hydroelectric and nuclear power generation, for example) and growing food crops. As droughts reduce available water sources, local officials will need to monitor water usage to maintain enough for critical uses closely.

According to the U.S. Drought Monitor, there are possible impacts from each level of drought. The table below describes these impacts.

D0 Abnormally Dry	<p><i>Going into drought:</i></p> <ul style="list-style-type: none"> <li>• Short-term dryness slowing planting, growth of crops or pastures</li> </ul> <p><i>Coming out of drought:</i></p> <ul style="list-style-type: none"> <li>• Some lingering water deficits</li> <li>• Pastures or crops not fully recovered</li> </ul>
D1 Moderate Drought	<ul style="list-style-type: none"> <li>• Some damage to crops, pastures streams, reservoirs, or wells low, some water shortages developing or imminent</li> <li>• Voluntary water-use restrictions requested</li> </ul>
D2 Severe Drought	<ul style="list-style-type: none"> <li>• Crop or pasture losses likely</li> <li>• Water shortages common</li> <li>• Water restrictions imposed</li> </ul>
D3 Extreme Drought	<ul style="list-style-type: none"> <li>• Major crop/pasture losses Widespread water shortages or restrictions</li> </ul>
D4 Exceptional Drought	<ul style="list-style-type: none"> <li>• Exceptional and widespread crop/pasture losses</li> <li>• Shortages of water in reservoirs, streams, and wells creating water emergencies</li> </ul>

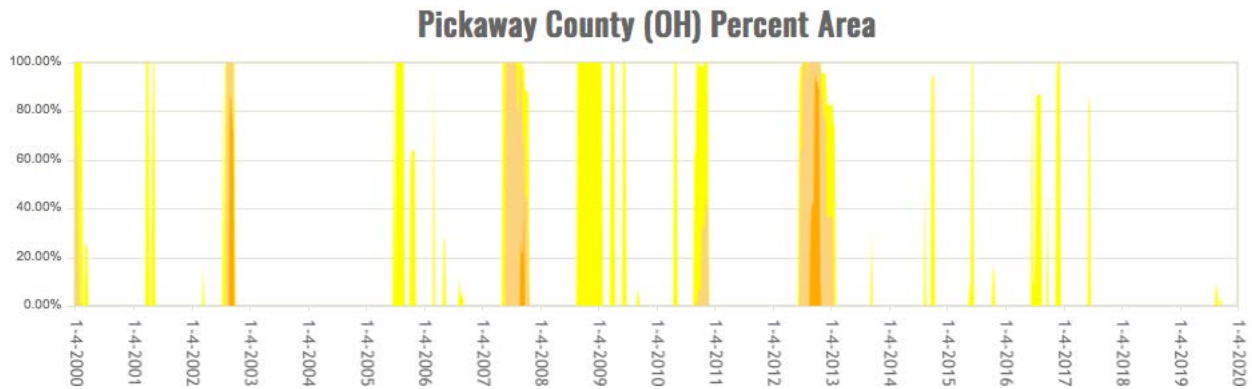
## HISTORICAL OCCURRENCES

According to the National Center for Environmental Information (NCEI) database, there are only two events of drought in Pickaway County, both in the summer months (July and August) of 1999. This suggests that there were not two individual instances of drought, but rather one period of drought that lasted two months, bringing the total amount of drought events down to one.

The U.S. Drought Monitor, kept by the University of Nebraska-Lincoln, provides more detailed information about drought since 2000. The illustration below is a graphical



representation of the time and severity of droughts presented in Pickaway County between 2000 and 2019 (for detailed information on the significance of the colors, see the previous section). The highest drought condition there has been in Pickaway County is D2, Severe Drought.



The following table outlines the total consecutive weeks that Pickaway County has spent in drought conditions. Typically, the levels of severity will overlap, rather than be separate events; this is because droughts begin as abnormally dry conditions, and slowly increase in severity and then drop to abnormally dry conditions before returning to normal. In Pickaway County, there have only been abnormally dry (D0) conditions, moderate drought (D1), and severe drought (D2); there have not been any extreme drought (D3) or exceptional drought (D4) conditions.

CONSECUTIVE DROUGHT WEEKS IN PICKAWAY COUNTY 2000-2019			
<i>Drought Condition</i>	<i>Total Consecutive Weeks</i>	<i>Most Consecutive Weeks</i>	<i>Total Events</i>
D0 – Abnormally Dry	195	33	26
D1 – Moderate Drought	78	30	6
D2 – Severe Drought	18	10	3
D3 – Extreme Drought	0	0	0
D4 – Exceptional Drought	0	0	0

Source: U.S. Drought Monitor

## LOSS AND DAMAGES

The USDA keeps data about agriculture through the 5-year censuses; the following table outlines the number of farms in Pickaway County at every past census year since 1997 as well as the harvested cropland. As depicted in the graph above, there have been moderate or severe droughts in 2002, 2007, and 2012.



USDA CENSUS OF AGRICULTURE HARVESTED CROPLAND AND FARMS					
<i>Census Year</i>	<i>Farms</i>	<i>Land in Farms (acres)</i>	<i>Harvested Cropland (acres)</i>	<i>Average Harvested Cropland Per Farm (acres)</i>	<i>Market Value of Agricultural Products Sold</i>
1997	797	277,738	228,975	287.2	\$81,435,000
2002	791	275,029	232,225	293.5	\$58,583,000
2007	832	288,905	241,562	290.3	\$112,071,000
2012	803	293,684	250,218	311.6	\$172,331,000
2017	805	296,988	258,325	320.9	\$162,649,000

The data indicates that over the years, there has been an increase in farms, cropland, as well as the market value of agricultural products. Due to this, there can be no correlation drawn between the occurrence of drought and the decrease of farmland or harvested acres. Therefore, the agricultural losses related to drought in Pickaway County are \$0.

#### RISK ASSESSMENT

This section summarizes the risk to Pickaway County from drought. The following map image graphically depicts potential risk areas in Pickaway County.



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

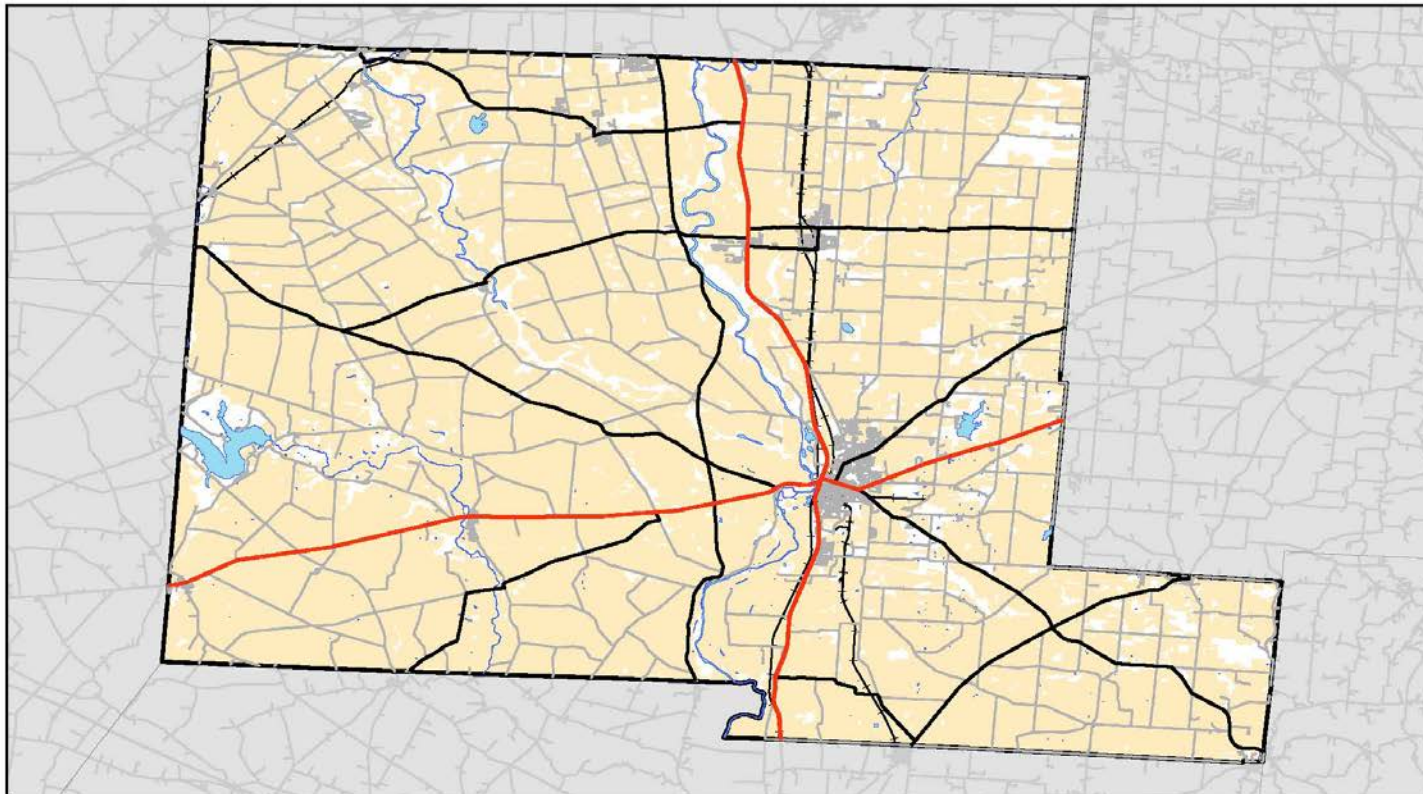
### Drought Risk Areas

Data Source(s):  
ODNR, USGS

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



Drought Risk Areas  
(Land Cover = Crop,  
Pasture)



The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points, and the lowest is 7.

DROUGHT RISK SUMMARY			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Determination Method</i>
Frequency	1		
Response	1	Less than half a day	Though the agricultural response may be extensive and much longer, it is a response that is not as acute as many other emergency responses.
Onset	1	Over 24 hours	Drought conditions occur following an extended period of specific hydrological conditions.
Magnitude	2	Limited (10-25% of land area affected)	
Business	1	Less than 24 hours	Drought is not likely to necessitate business closure.
Human	1	Minimum (minor injuries)	Drought is not likely to result in injuries.
Property	1	Less than 10% of property affected.	Though a significant amount of the land area could be impacted, drought conditions do not affect personal property as severely.
<b>Total</b>	<b>8</b>	<b>Low</b>	





## 2.0 RISK ASSESSMENT

### 2.4.2 Earthquake

An earthquake is the moving or shaking of the Earth's tectonic plates due to built-up pressure.			
	Vulnerability	Period of Occurrence: At any time	Hazard Index Ranking: Low
	HIGHEST	Warning Time: Little to none	State Risk Ranking: 2 - Low
	HIGH	Probability: Low	Severity: Limited
	MEDIUM	Type of Hazard: Natural	Disaster Declarations: None
LOW			
LOWEST			

#### HAZARD OVERVIEW

Earthquakes are one of nature's most damaging hazards and are more widespread than is often realized. The area of greatest seismic activity in the United States is along the Pacific Coast, in the states of California and Alaska; however, as many as 40 states have a moderate earthquake risk. Although most people do not think of Ohio as an earthquake-prone state, at least 170 earthquakes with epicenters in Ohio have been felt since 1776, most were felt in the local region surrounding the epicenter, and 14 of these have caused "minor to moderate" damage in Ohio.

Earthquakes move or shake the earth in three different directions depending on the plate movements: convergent, divergent, and transform generating primary and secondary waves. There are three common ways to measure an earthquake:

- **Richter Scale:** Developed in 1935, the Richter scale measures the scale and severity of an earthquake; the magnitude of an earthquake can range between 0 and 10. The effects of an earthquake can extend far beyond the site of its occurrence.
- **Modified Mercalli Scale:** The modified Mercalli scale measures earthquakes based on their intensity on the surface. This scale uses Roman numerals I through XII to denote detection and damage levels associated with an earthquake.
- **Peak Ground Acceleration (PGA):** PGA is "the maximum ground acceleration that occurred during earthquake shaking at a location. PGA is equal to the amplitude of the largest absolute acceleration recorded on an accelerogram at a site during a particular earthquake" (Douglas, 2003).



The table to the right shows the relation between the Richter scale (magnitude) and the Modified Mercalli Scale.

MODIFIED MERCALLI AND MAGNITUDE SCALE COMPARISON		Magnitude Scale
	Modified Mercalli Scale	
I	Felt by few people under especially favorable conditions.	1.5
II	Felt by few persons at rest, especially on upper floors of buildings.	2.0
III	Felt quite noticeably indoors, especially on upper floors of buildings. Many do not recognize it as an earthquake. Standing vehicles may rock slightly. Vibration feels like passing truck.	2.5
IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation of a heavy truck striking building; standing vehicles rock noticeably.	3.0
V	Felt by nearly everyone; many awakened. Some dishes and windows broken. Unstable objects overturned.	3.5
VI	Felt by all; many frightened. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.	4.0
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by vehicle drivers.	4.5
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse; damage great in poorly built structures; fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. Disturbs	5.0
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations. Underground pipes broken.	5.5
X	Some well-built wooden structures are destroyed; most masonry and frame structures with foundations destroyed; train rails bent.	6.0
XI	Few, if any, masonry structures remain standing. Bridges destroyed. Underground pipelines taken out of service. Train rails bent greatly.	6.5
XII	Damage total. Waves seen on ground surfaces. Lines of sight and level are distorted. Objects thrown into the air.	7.0
		7.5
		8.0
		8.5

### POSSIBLE CAUSES

The Earth is made up of tectonic plates; the boundary lines where these tectonic plates meet are called faults. Friction along the boundaries or faults causes the rocks to stress and strain. “When the stress of the rocks exceed their strength, that is, their ability to withstand the force, the rock rupture and are permanently displaced along the fault plane” (Keller & Devecchio, 2015) causing earthquakes that reach and affect the infrastructure on the surface.

A common misconception is that hydraulic fracturing, or “fracking” is causing all of the induced earthquakes.

In reality, fracking “is directly causing a small percentage of the felt-induced earthquakes observed in the United States...Most induced earthquakes in the United States are a result of the deep disposal of fluids (wastewater) related to oil and gas production” (Rubinstein and Mahani, 2015).

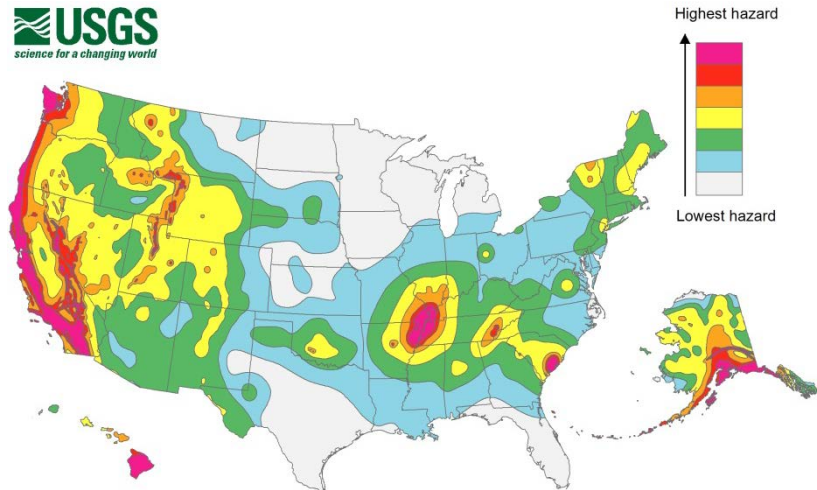
### LOCATION AND EXTENT

The U.S. has areas that are prone to earthquakes; the coasts of California, Oregon, and Washington are more vulnerable to seismic activity due to the presence of the Ballenas, Brothers, and the San Andreas Faults on the west coast. Also of note is the New Madrid Seismic Zone located in Arkansas, Missouri, and Tennessee. On the east coast, there is the Eastern Tennessee Seismic Zone that stretches from Alabama to Virginia.





The USGS (2014) has a map of the US that identifies the highest and lowest hazard zones for earthquakes. In it, it shows the majority of the State of Ohio mostly as low risk; this includes Pickaway County. The southernmost, west, and northeastern-most parts of the state have only a slightly higher risk of earthquake hazards. Pickaway County is considered a low-risk area for natural earthquakes.



## IMPACTS AND VULNERABILITY

The severity of an earthquake is dependent on the amount of energy released from the fault or epicenter. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning, and after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface ruptures, and ground failure. The risk of fire immediately following an earthquake is often high because of broken electrical lines and gas mains. In recent years, officials in most of the world's major cities have installed devices that shut these services down automatically if an earthquake strikes. Other hazards that may result from an earthquake are utility and communications failures.

The impacts to a community from earthquake events include injuries to citizens and public safety officials, damage to property, lost revenue and economic damages, increased demand on public safety, and infrastructure-related services. Ground shaking from earthquakes can collapse buildings and bridges, disrupt gas, electric, and phone service, and sometimes trigger landslides, flash floods, fires, and tsunamis.

## HISTORICAL OCCURRENCES

According to ODNR, there has been one earthquake originating in Pickaway County in the last nine years; "a small earthquake occurred at 7:14 a.m. EDT approximately 3 miles southeast of Darbyville and 8 miles northwest of Circleville, Pickaway County, Ohio. There were



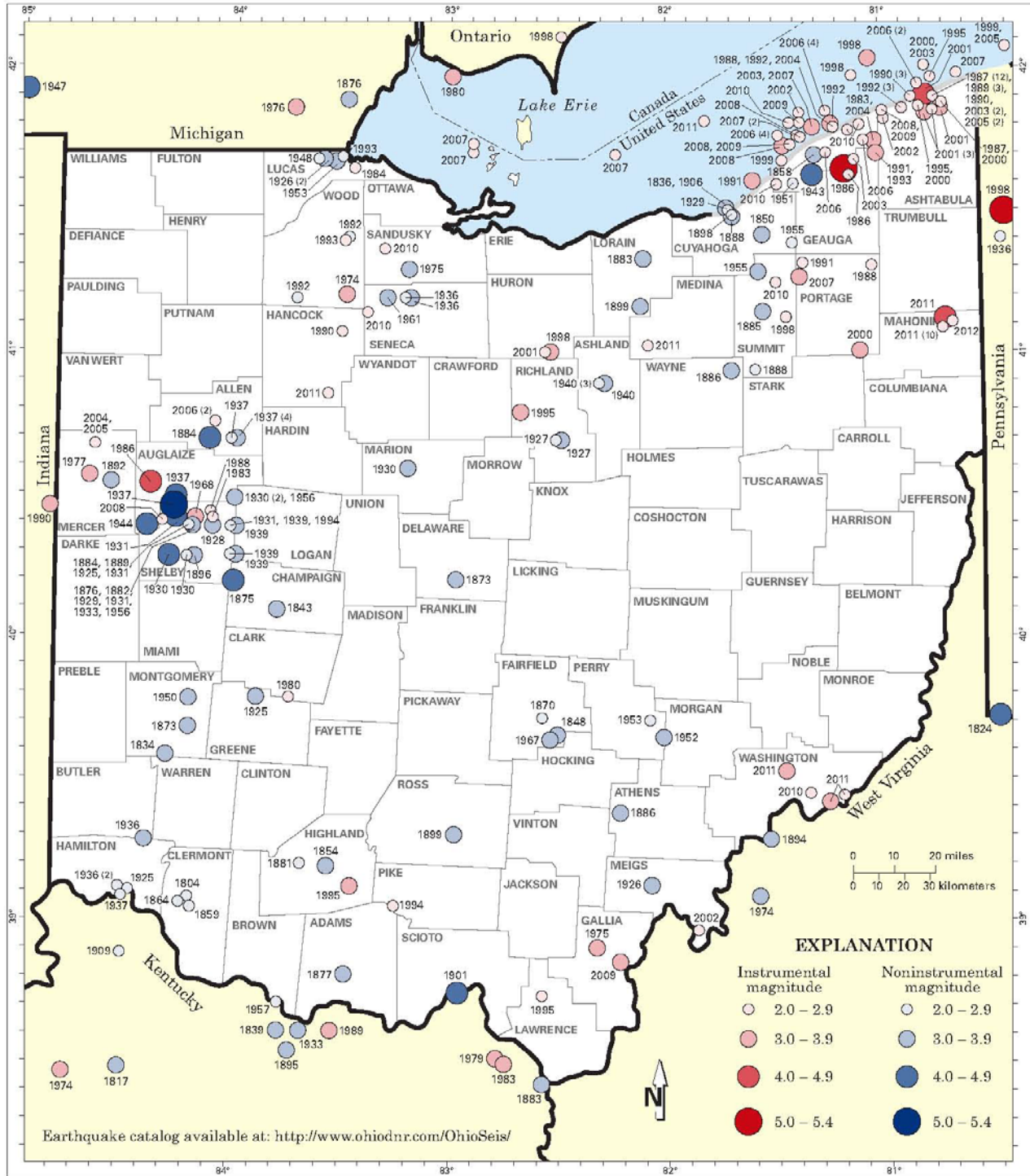
no felt reports. This is the first earthquake in historic times to be recorded in Pickaway County and was comparatively deep for an Ohio earthquake.”

The graphic below from the State of Ohio Department of Natural Resources provides locations and magnitude of earthquakes in Ohio. The Pickaway County earthquake had such a low magnitude, it does not appear on the map.



STATE OF OHIO • DEPARTMENT OF NATURAL RESOURCES • DIVISION OF GEOLOGICAL SURVEY

# EARTHQUAKE EPICENTERS IN OHIO AND ADJACENT AREAS



Recommended citation: Ohio Division of Geological Survey, 2012, Earthquakes epicenters in Ohio and adjacent areas—color version: Ohio Department of Natural Resources, Division of Geological Survey Map EG-2, generalized page-size version, 1 p., scale 1:2,000,000.



## LOSS AND DAMAGES

All USGS and OhioSeis descriptions of earthquakes indicate that there have been no major losses or damages to structures or people, only minor damage such as cracked plaster or glass. The effects of a potential earthquake striking Pickaway County were analyzed using the HAZUS-MH program from the Federal Emergency Management Agency. The scenario depicts a 5.0 earthquake (the lowest possible magnitude to use in the program) located at the county seat. The following tables describe the expected building damages by occupancy type and the building-related economic loss estimates.

PICKAWAY COUNTY EXPECTED BUILDING DAMAGE BY OCCUPANCY (HAZUS)										
	None		Slight		Moderate		Extensive		Complete	
	Count	%	Count	%	Count	%	Count	%	Count	%
Agriculture	106.15	0.83	39.56	0.87	45.94	1.62	24.10	2.47	6.24	2.34
Commercial	398.98	3.11	198.09	4.33	231.98	8.21	116.84	11.99	36.11	13.44
Education	16.39	0.13	7.62	0.17	8.77	0.31	3.96	0.41	1.26	0.47
Government	30.09	0.23	9.21	0.20	10.14	0.36	4.21	0.43	1.34	0.50
Industrial	131.83	1.03	58.48	1.28	71.15	2.52	38.21	3.92	11.33	4.22
Other Residential	1,191.85	9.29	577.92	12.65	649.15	22.96	284.83	29.23	65.24	24.29
Religion	61.16	0.48	24.84	0.54	22.80	0.81	11.61	1.19	3.59	1.33
Single Family	10,897.75	84.91	3,653.87	79.96	1,787.08	63.21	490.78	50.36	143.52	53.43
<b>TOTAL</b>	<b>12,834</b>		<b>4,570</b>		<b>2,8827</b>		<b>975</b>		<b>269</b>	

PICKAWAY COUNTY HAZUS BUILDING-RELATED ECONOMIC LOSS ESTIMATES (MILLIONS OF DOLLARS)							
Category	Area	Single-Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses	Wage	0	1.1	16.13	0.66	1.68	19.58
	Capital Related	0	0.46	13.22	0.41	0.35	14.46
	Rental	5.56	3.15	7.55	0.22	0.61	17.1
	Relocation	19.55	3.37	11.54	1.22	5.55	41.25
	Subtotal	25.11	8.09	48.46	2.53	8.2	92.41
Capital Stock Losses	Structural	32.55	7.34	17.73	3.95	8	69.6
	Non-Structural	127.43	33.02	46.81	12.75	18.53	238.56
	Content	51.72	9.61	26.19	8.71	11.11	107.35
	Inventory	0	0	0.83	1.56	0.52	2.65
	Subtotal	211.71	49.98	91.57	26.99	37.9	418.17
<b>TOTAL</b>		<b>236.84</b>	<b>58.08</b>	<b>140.04</b>	<b>29.53</b>	<b>46.11</b>	<b>510.60</b>



## RISK ASSESSMENT


This section summarizes the risk to Pickaway County from an earthquake. The following table assigns point totals based on the research presented in this profile for each category that appears in Ohio EMA's SHARPP tool.

EARTHQUAKE RISK SUMMARY			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Determination Method</i>
Frequency	2	Low	One occurrence in 9 years, for an average of .11
Response	1	Less than half a day	The only recorded earthquake in Pickaway County was not felt by the residents
Onset	4	Less than 6 hours	Earthquakes occur with little or no warning.
Magnitude	1	Localized (less than 10% of land area affected)	The historical earthquake in Pickaway County was very low magnitude.
Business	1	Less than 24 hours	Historical event caused no damage and did not close businesses.
Human	1	Minimum (minor injury)	There were no reported injuries from the historical earthquake.
Property	1	Less than 10% of property affected	Historical event caused no damage and did not cause property damage.
<b>Total</b>	<b>11</b>	<b>Low</b>	



## 2.0 RISK ASSESSMENT

### 2.4.3 Flood

A general or temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal water or the rapid accumulation of runoff surface waters from any source.			
	<b>Vulnerability</b>	<b>Period of Occurrence:</b>	At any time, typically after prolonged periods of precipitation
		<b>Warning Time:</b>	12-24 hours
		<b>Probability:</b>	Highly likely
		<b>Type of Hazard:</b>	Natural
		<b>Hazard Index Ranking:</b>	Medium
		<b>State Risk Ranking:</b>	4 – High
		<b>Severity:</b>	Critical
		<b>Disaster Declarations:</b>	

#### HAZARD OVERVIEW

Floods are the most prevalent hazard in the United States. Each year, floods cause more property damage in the United States than any other type of natural disaster, killing an average of 150 people a year. Floods are described by their horizontal extents, the depth of the floodwaters, and the probability of occurrence. Unfortunately, the probability of occurrence has historically been expressed in terms such as a “100-year flood”, which the general public logically assumes means a flood that happens once in 100 years. In fact, the probability of occurrence is best interpreted as a percent chance of occurring. So, a 100-year flood is that flood level that has a 1% chance of occurring in any given year. The 100-year, or 1% flood, is often used for planning purposes. Smaller floods are more likely to occur; thus, a 10-year flood has a 10% chance of occurring in any given year.

The NFIP is a governmental program administered through FEMA that “aims to reduce the impact on private and public structures... by providing affordable insurance to property owners and by encouraging communities to adopt and enforce floodplain management regulations” (FEMA). Each jurisdiction participating in the NFIP has a designated NFIP coordinator, sometimes referred to as the floodplain manager. This individual maintains the jurisdiction’s floodplain ordinance and ensures that development is compliant with that ordinance. Each local floodplain manager serves as the point of contact with FEMA regarding floodplain mapping. For more information on how each jurisdiction participates in the NFIP, refer to Appendix 1 Planning Documentation.



JURISDICTIONS PARTICIPATING					
CID	Community	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Regular-Emergency Date
390446#	Ashville, Village of	5/7/1974	9/30/1999	7/22/2010	6/18/1985
390447#	Circleville, City of	4/12/1974	7/22/2010	7/22/2010	12/18/1984
390711#	Commercial Point, Village of	1/31/1975	9/30/1999	NSFHA	2/26/2002
390712#	Darbyville, Village of	2/7/1975	7/22/2010	7/22/2010	8/16/1988
390448#	New Holland, Village of	4/5/1974	7/22/2010	7/22/2010(M)	1/18/1980
390445#	Pickaway County	6/2/1978	7/2/2010	7/22/2010	9/27/1991
390449#	South Bloomfield, Village of	6/28/1974	7/22/2010	7/22/2010	6/15/1978
390866#	Williamsport, Village of	10/20/1978	7/22/2010	7/22/2010(M)	11/23/1984
NSFHA = No Special Flood Hazard Area - All-Zone C; (M) = No elevation determined - All-Zone A, C, and X					

Property owners in NFIP participating jurisdictions are able to purchase subsidized flood insurance. The table below shows the breakdown of policies in force, total coverage, and total written premiums by jurisdiction.

NFIP POLICIES			
Jurisdiction	Policies in Force	Total Coverage	Total Written Premium + FPF
Ashville, Village of	2	\$700,000	\$1,087
Circleville, city of	32	\$4,797,700	\$31,757
Commercial Point, Village of	2	\$392,000	\$620
Darbyville, Village of	1	\$45,100	\$648
Pickaway County	53	\$11,933,700	\$55,728
South Bloomfield, Village of	9	\$1,845,900	\$8,076
Williamsport, Village of	1	\$140,000	\$1,456
<b>Total</b>	<b>100</b>	<b>\$19,854,400</b>	<b>\$99,372</b>

## POSSIBLE CAUSES

According to NOAA, some of the possible causes for flooding include the following.

- **Excessive Rainfall:** This is the most common cause of flooding. Water accumulates quicker than the soil can absorb, resulting in flooding.
- **Snowmelt:** It occurs when the major source of water involved is caused by melting snow. Unlike rainfall that can reach the soil almost immediately, the snowpack can



- store the water for an extended amount of time until temperatures rise above freezing and the snow melts.
- **Ice or Debris Jams:** Common during the winter and spring along rivers, streams and creeks. As ice or debris moves downstream, it may get caught on any sort of obstruction to the water flow. When this occurs, water can be held back, causing upstream flooding. When the jam finally breaks, flash flooding can occur downstream.
  - **Dam Breaks or Levee Failure:** Dams can overtop, have excessive seepage, or have structural failure. For more information on this topic, see Section 2.5.1 Dam and Levee Failure.

#### LOCATION AND EXTENT

The following pages include arial maps of each city and village. The floodway, the the 100-year floodplain, the 500-year floodplain are designated as shown in the legend. Assets are shown.





# PICKAWAY COUNTY HAZARD MITIGATION PLAN

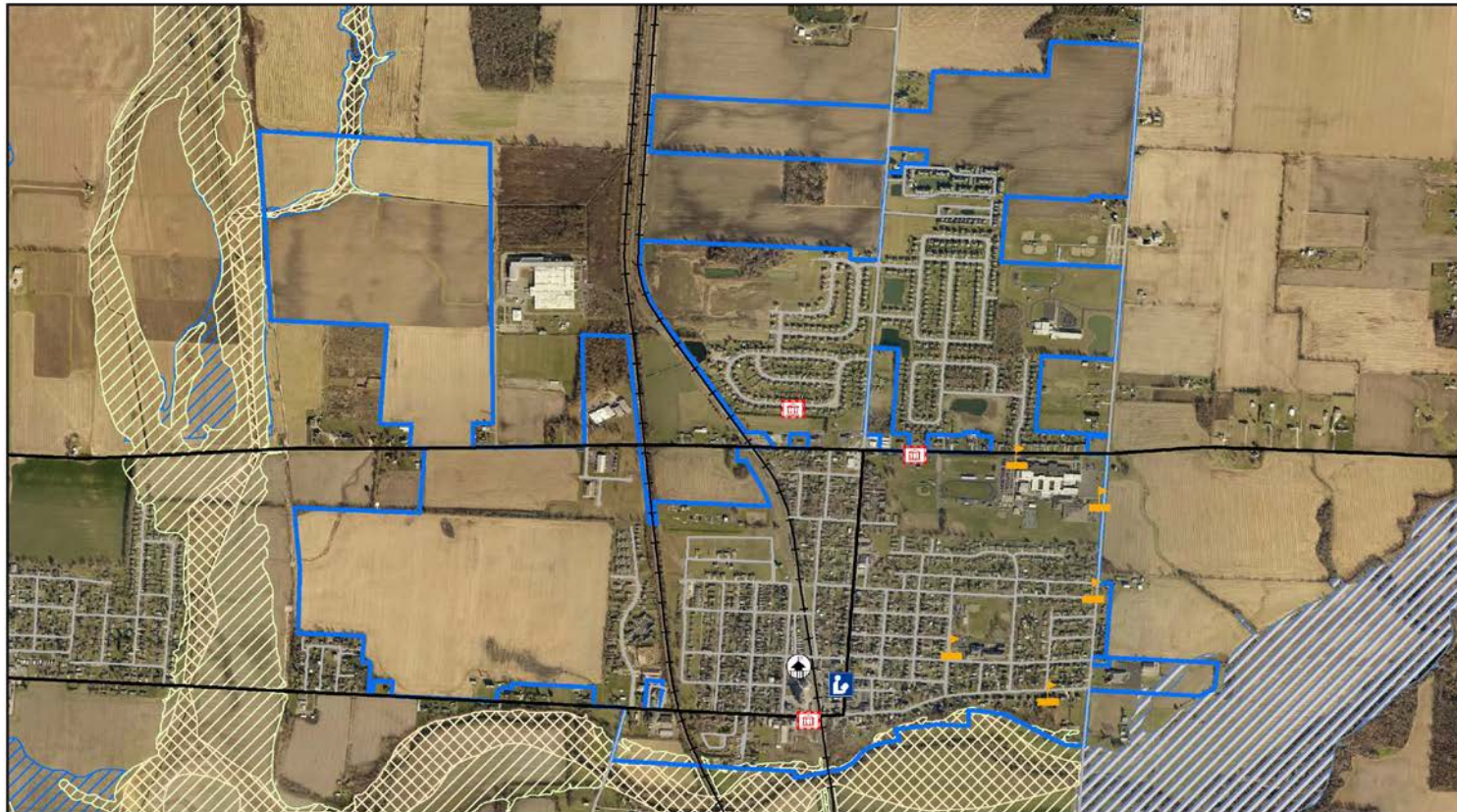
## Flood Risk Areas: Village of Ashville

Data Source(s):  
PC GIS, FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | Ashville           |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |





# PICKAWAY COUNTY HAZARD MITIGATION PLAN

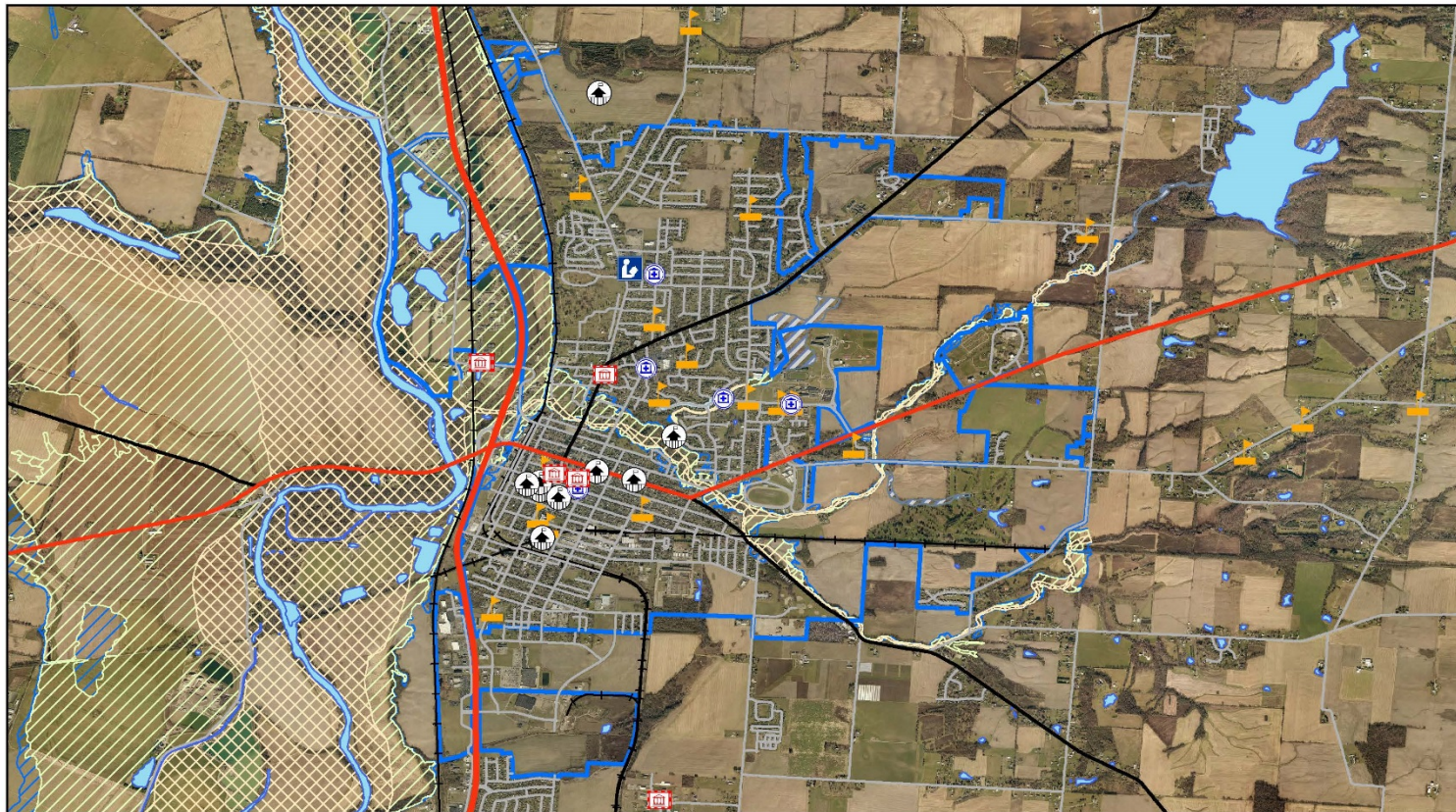
## Flood Risk Areas: City of Circleville

Data Source(s):  
PC GIS, FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | Circleville        |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |





# PICKAWAY COUNTY HAZARD MITIGATION PLAN

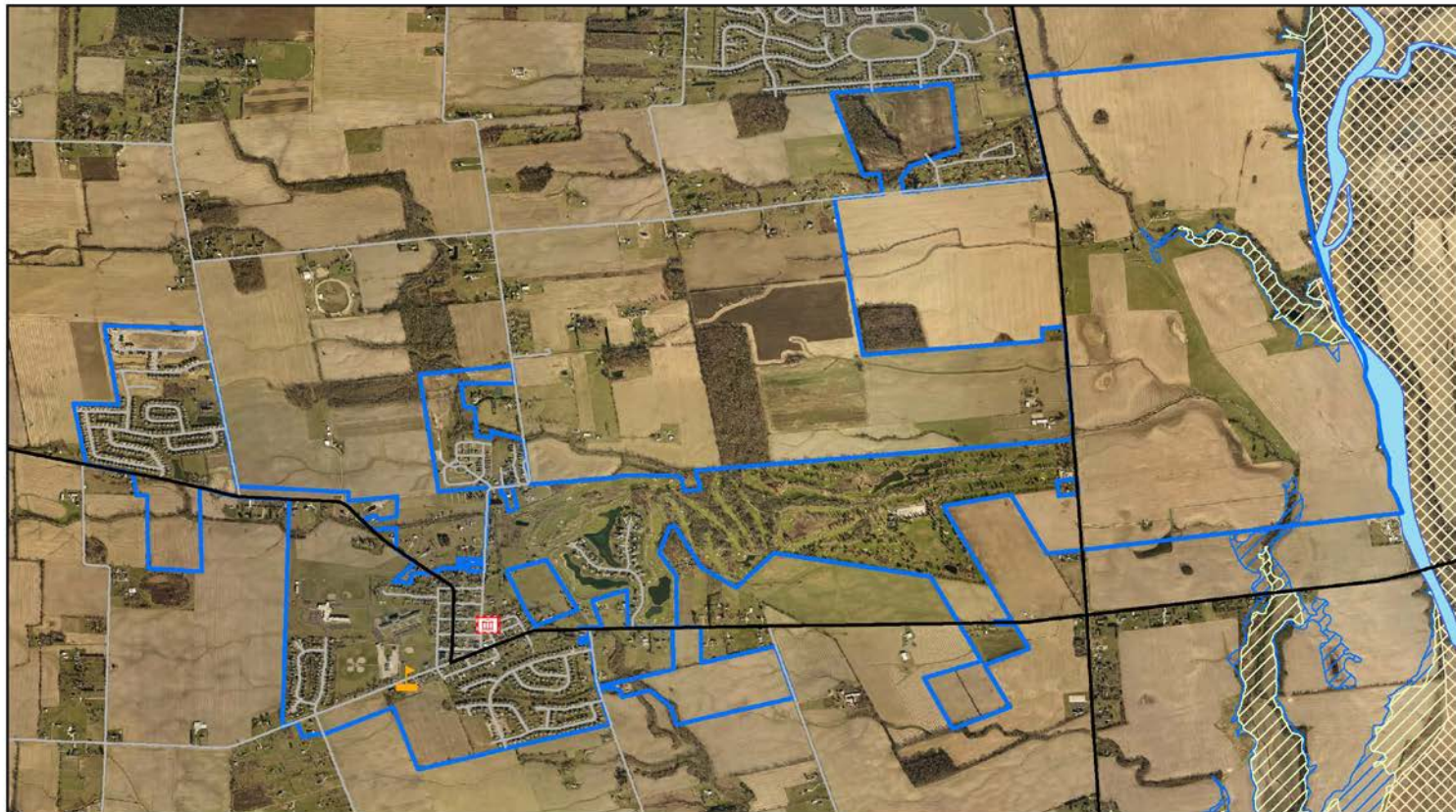
## Flood Risk Areas: Village of Commercial Point

Data Source(s):  
PC GIS, FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



-  Govt. & Public Safety
-  Healthcare
-  Higher Education
-  Historical Sites
-  Libraries
-  Schools
-  Commercial Point
-  Floodway
-  Zone A
-  Zone AE
-  Zone AO
-  0.2% Annual Chance





# PICKAWAY COUNTY HAZARD MITIGATION PLAN

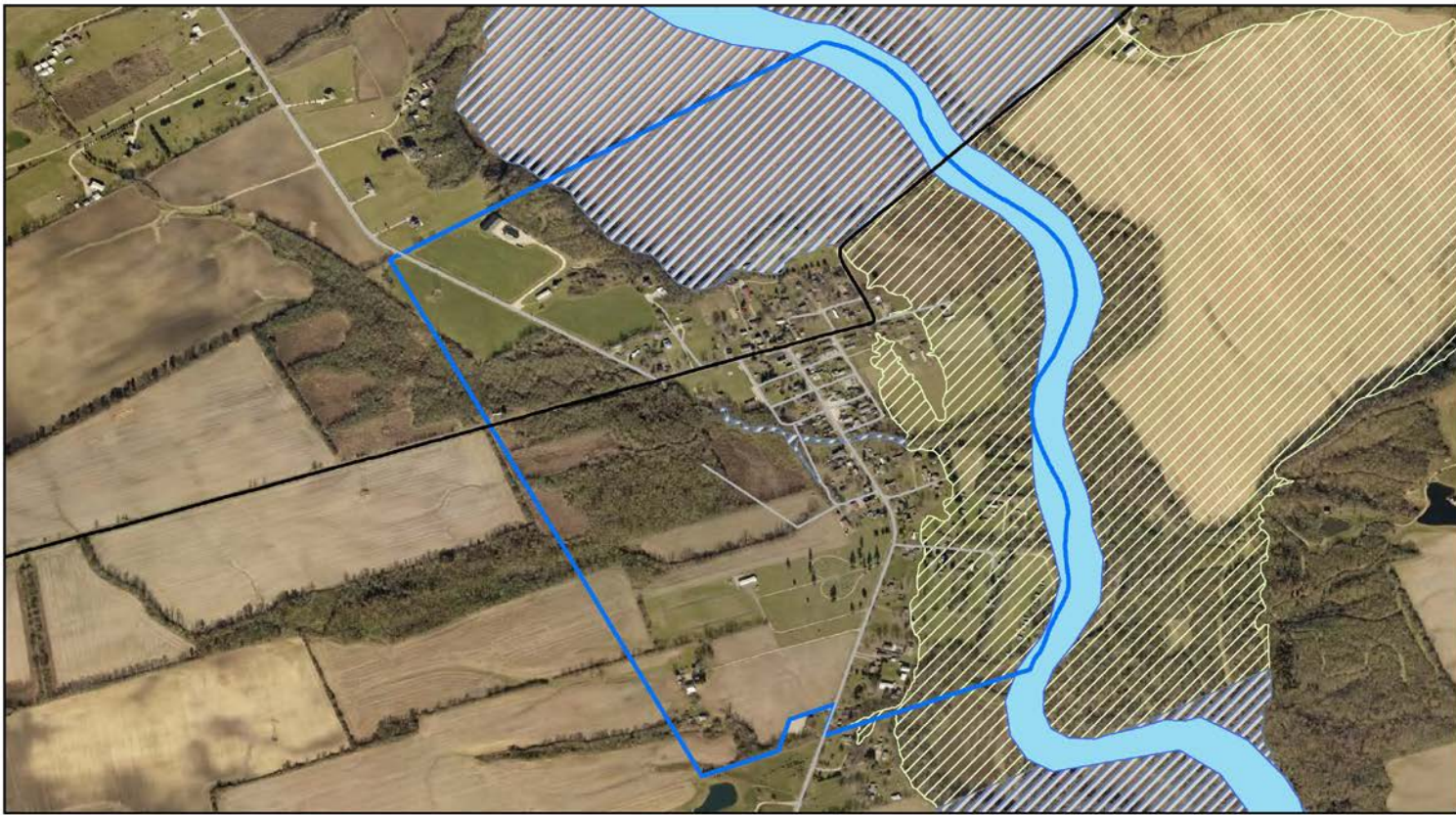
## Flood Risk Areas: Village of Darbyville

Data Source(s):  
PC GIS, FEMA, OEMA

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-  Govt. & Public Safety
-  Healthcare
-  Higher Education
-  Historical Sites
-  Libraries
-  Schools
-  Darbyville
-  Floodway
-  Zone A
-  Zone AE
-  Zone AO
-  0.2% Annual Chance





# PICKAWAY COUNTY HAZARD MITIGATION PLAN

## Flood Risk Areas: Village of New Holland

Data Source(s):  
PC GIS, FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- Govt. & Public Safety
- Healthcare
- Higher Education
- Historical Sites
- Libraries
- Schools
- New Holland
- Floodway
- Zone A
- Zone AE
- Zone AO
- 0.2% Annual Chance





# PICKAWAY COUNTY HAZARD MITIGATION PLAN

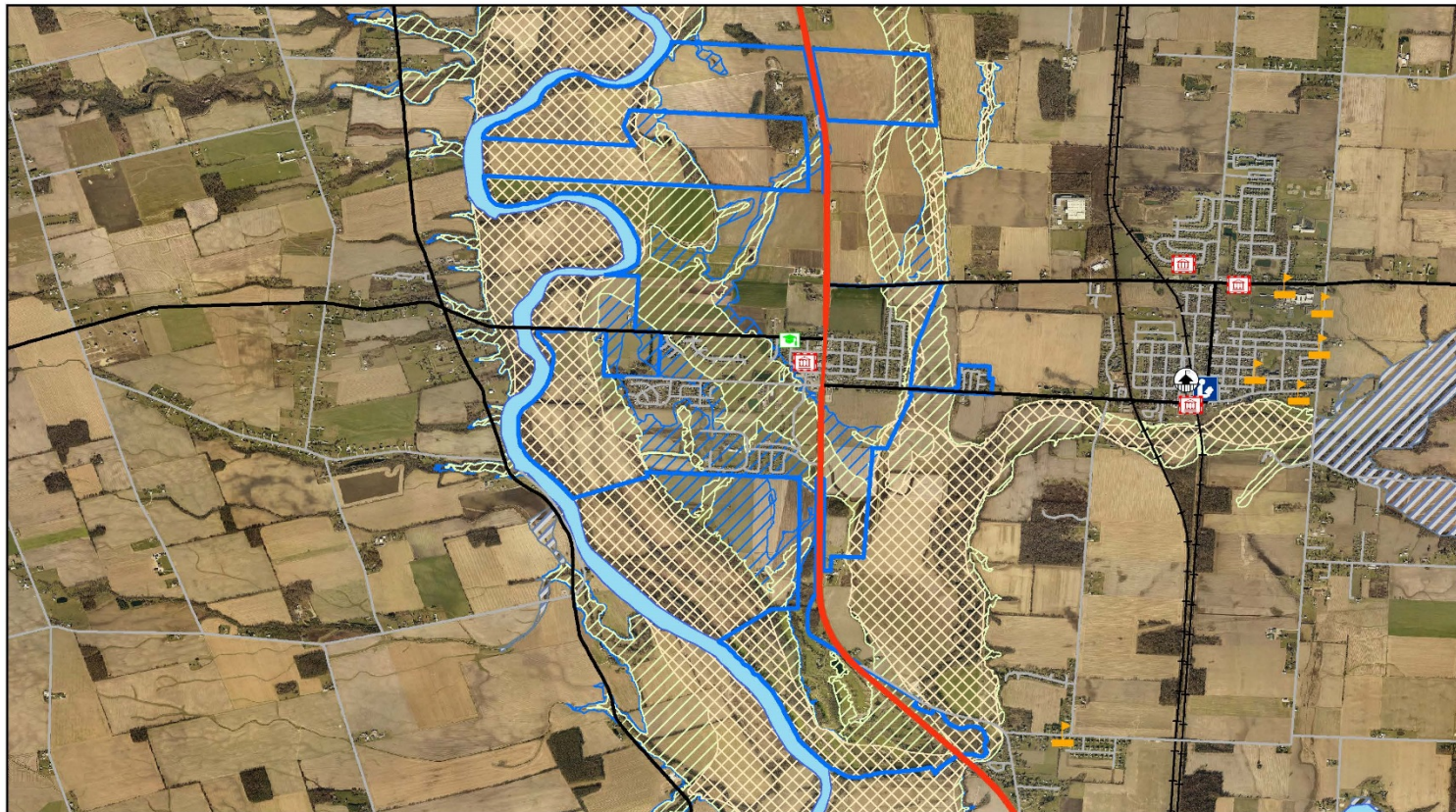
## Flood Risk Areas: Village of South Bloomfield

Data Source(s):  
PC GIS, FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | South Bloomfield   |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |





# PICKAWAY COUNTY HAZARD MITIGATION PLAN

## Flood Risk Areas: Village of Williamsport

Data Source(s):  
PC GIS, FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



-  Govt. & Public Safety
-  Healthcare
-  Higher Education
-  Historical Sites
-  Libraries
-  Schools
-  Williamsport
-  Floodway
-  Zone A
-  Zone AE
-  Zone AO
-  0.2% Annual Chance



## HISTORICAL OCCURRENCES

The NCEI database records 57 flooding events; 14 flash floods and 43 floods. The following table outlines the date, type, and if there was any damage associated with the event.

NCEI HISTORICAL EVENTS		
Event Date	Event Type	Property Damage
1/17/96	Flood	\$5,000
1/23/96	Flood	\$30,000
5/1/96	Flood	\$10,000
3/1/97	Flood	\$-
6/1/97	Flood	\$-
6/29/98	Flash Flood	\$500,000
6/29/98	Flood	\$-
6/29/98	Flood	\$-
1/23/99	Flood	\$-
1/24/99	Flood	\$-
1/3/00	Flash Flood	\$5,000
2/14/00	Flood	\$-
4/9/00	Flood	\$-
4/9/00	Flood	\$-
12/17/00	Flood	\$-
4/12/01	Flood	\$-
5/16/01	Flash Flood	\$-
5/17/01	Flood	\$-
5/18/01	Flash Flood	\$100,000
5/18/01	Flood	\$-
5/29/02	Flood	\$-
7/9/02	Flash Flood	\$-
7/9/02	Flood	\$-
7/1/03	Flood	\$-
7/15/03	Flood	\$-
8/10/03	Flood	\$-
1/4/04	Flood	\$-
1/4/04	Flood	\$-
1/4/04	Flood	\$-
5/18/04	Flash Flood	\$-
5/18/04	Flood	\$-
5/19/04	Flood	\$-
5/21/04	Flood	\$-
6/11/04	Flood	\$-
7/11/04	Flood	\$-
1/5/05	Flood	\$20,000
1/11/05	Flood	\$10,000
7/13/06	Flash Flood	\$-
3/14/07	Flood	\$5,000





NCEI HISTORICAL EVENTS		
Event Date	Event Type	Property Damage
3/4/08	Flood	\$5,000
3/18/08	Flood	\$3,000
5/10/11	Flash Flood	\$2,000
5/13/11	Flash Flood	\$1,000
5/23/11	Flash Flood	\$10,000
5/23/11	Flash Flood	\$2,000
5/23/11	Flood	\$2,000
12/22/13	Flash Flood	\$1,000
9/18/16	Flash Flood	\$-
9/18/16	Flash Flood	\$-
10/19/16	Flood	\$-
7/14/17	Flood	\$-
4/15/18	Flood	\$-
6/8/18	Flood	\$-
6/21/18	Flood	\$-
8/10/18	Flood	\$-
2/6/19	Flood	\$-
2/7/19	Flood	\$-

Notable flood and flash flood events include the following:

- A flash flood on June 29, 1998; over 8 inches of rain fell, of which most fell in less than 6 hours. Area creeks and streams rose out of their banks. Several homes were inundated, causing evacuations and numerous roads were closed. The event caused approximately \$500,000 in damage.
- On May 18, 2001, several roads and a bridge were washed out, causing approximately \$100,000 in damage.

## IMPACTS AND VULNERABILITY

Hazards associated with flooding can be divided into primary hazards that occur due to contact with water, cascading or secondary effects that occur because of the flooding, such as disruption of services and health impacts, and long-term or tertiary effects such as changes in the position of river channels. The following table describes the types of effects of flooding.



EFFECTS OF FLOODING	
Type	Description
Primary Effects	<ul style="list-style-type: none"> <li>• With higher velocities, streams are able to transport larger particles as suspended load. Such large particles include not only rocks and sediment, but, during a flood, such large objects as automobiles, houses, and bridges.</li> <li>• Massive amounts of erosion can be accomplished by floodwaters. Such erosion can undermine bridge structures, levees, and buildings, causing their collapse.</li> <li>• Water entering human-built structures causes damage. Even with minor flooding of homes, furniture is ruined, floors and walls are damaged, and anything that comes in contact with the water is likely to be damaged or lost. Flooding of automobiles usually results in damage that cannot easily be repaired.</li> <li>• The higher velocity of floodwaters allows the water to carry more sediment as suspended load. When the floodwaters retreat, velocity is generally much lower and sediment is deposited. After retreat of the floodwaters, everything is usually covered with a thick layer of stream-deposited mud, including the interior of buildings.</li> <li>• Flooding of farmland usually results in crop loss. Livestock, pets, and other animals are often carried away and drowned.</li> <li>• Humans that get caught in high velocity floodwaters are often drowned.</li> <li>• Floodwaters can concentrate garbage, debris, and toxic pollutants into small areas that can cause the secondary effects of health hazards.</li> </ul>
Cascading or Secondary Effects	<ul style="list-style-type: none"> <li>• Disruption of Services <ul style="list-style-type: none"> <li>○ Drinking water supplies may become polluted, especially if sewerage treatment plants are flooded.</li> <li>○ Gas and electrical service may be disrupted.</li> <li>○ Transportation systems may be disrupted, resulting in shortages of food and cleanup supplies.</li> </ul> </li> </ul>
Long-Term or Tertiary Effects	<ul style="list-style-type: none"> <li>• Location of river channels may change as the result of flooding; new channels develop, leaving the old channels dry.</li> <li>• Sediment deposited by flooding may destroy farmland (although silt deposited by floodwaters could also help to increase agricultural productivity).</li> <li>• Jobs may be lost due to the disruption of services, destruction of business, etc. (although jobs may be gained in the construction industry to help rebuild or repair flood damage).</li> <li>• Destruction of wildlife habitat.</li> </ul>

## LOSS AND DAMAGES

FEMA can estimate losses from flood to buildings in Pickaway County through the HAZUS-MH program (provided by Ohio EMA). The program calculates the expected losses to buildings from a 100-year flood event. The following tables outline the expected building damages by occupancy and type and the building-related economic losses.

According to HAZUS-MH, the majority of buildings damaged would be residential; most of these can expect to receive between 1 and 50% of damage, while the program calculates that only six buildings would be substantially damaged from a 100-year flood event. The following table outlines the expected damages by occupancy.



EXPECTED BUILDING DAMAGE BY OCCUPANCY												
Occupancy	1-10		11-20		21-30		31-40		41-50		Substantially	
	Ct.	%	Ct.	%	Ct.	%	Ct.	%	Ct.	%	Ct.	%
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0	0	0	0
Religion	0	0	0	0	0	0	0	0	0	0	0	0
Residential	88	37	114	47	28	12	7	3	3	1	1	0
<b>Total</b>	<b>88</b>		<b>114</b>		<b>28</b>		<b>7</b>		<b>3</b>		<b>1</b>	

EXPECTED BUILDING DAMAGE BY BUILDING TYPE												
Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Ct.	%	Ct.	%	Ct.	%	Ct.	%	Ct.	%	Ct.	%
Concrete	0	0	0	0	0	0	0	0	0	0	0	0
Manufactured Housing	0	0	0	0	0	0	0	0	0	0	1	100
Masonry	15	34	24	55	5	11	0	0	0	0	0	0
Steel	0	0	0	0	0	0	0	0	0	0	0	0
Wood	73	37	90	46	23	12	7	4	3	2	0	0

BUILDING-RELATED ECONOMIC LOSS ESTIMATES (MILLIONS OF DOLLARS)						
Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss	Building	15.33	2.43	0.68	1.33	19.77
	Content	7.10	7.70	1.25	8.07	24.12
	Inventory	0	0.22	0.17	0.06	0.44
	<b>Subtotal</b>	<b>22.42</b>	<b>10.35</b>	<b>2.10</b>	<b>9.46</b>	<b>44.34</b>
Business Interruption	Income	0.03	5.59	0.03	4.21	9.86
	Relocation	6.56	1.48	0.04	2.21	10.29
	Rental Income	2.26	1.05	0	0.23	3.55
	Wage	0.07	7.11	0.07	14.01	21.25
	<b>Subtotal</b>	<b>8.92</b>	<b>15.23</b>	<b>0.14</b>	<b>20.66</b>	<b>44.95</b>
<b>All</b>	<b>Total</b>	<b>31.34</b>	<b>25.58</b>	<b>2.24</b>	<b>30.12</b>	<b>89.28</b>

When buildings experience more than one loss due to flooding, they can become repetitive or severe repetitive loss properties. There are two accepted definitions of repetitive loss and severe repetitive loss; one from the Flood Mitigation Assistance (FMA) grant and the other from the National Flood Insurance Program (NFIP). The following table outlines the definitions.



REPETITIVE LOSS AND SEVERE REPETITIVE LOSS DEFINITIONS		
Program	Repetitive Loss	Severe Repetitive Loss
Flood Mitigation Assistance (FMA) Grant	A Repetitive Loss (RL) property is a structure covered by a contract for flood insurance made available under the NFIP that: Has incurred flood-related damage on 2 occasions, in which the cost of the repair, on the average, equaled or exceeded 25% of the market value of the time of each such flood event; At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.	(a) Is covered under a contract for flood insurance made available under the NFIP; and (b) Has incurred flood-related damage i. For which 4 or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding \$5,000, and with the cumulative amount of such claim's payments exceeding \$20,000, or ii. For which at least 2 separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.
National Flood Insurance Program (NFIP)	A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.	A single family property (consisting of 1 to 4 residences) that is covered under flood insurance by the NFIP and has incurred flood-related damage for which 4 or more separate claims payments have been paid under flood insurance coverage, with the amount of each claim payment exceeding \$5,000 and with cumulative amount of such claims payments exceeding \$20,000; or for which at least 2 separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.

According to the Ohio Emergency Management Agency, in Pickaway County, there have been six repetitive loss properties and one severe repetitive loss property. The following tables list the city, occupancy type, and payments for the properties.

REPETITIVE LOSS AND SEVERE REPETITIVE LOSS PROPERTIES IN PICKAWAY COUNTY						
Community Name	Occupancy	Zone	Building Payment	Contents Payment	Losses	Total Paid
Pickaway County	Other, Non-Residential	A	\$70,272.37	\$40,000.00	4 (SRL)	\$110,272.37
Circleville	Other, Non-Residential	EMG	\$-	\$17,092.62	2 (RL)	\$17,092.62
Pickaway County	Condo	X	\$78,531.43	\$-	2 (RL)	\$78,531.43
Pickaway County	Single Family	A	\$47,456.84	\$-	2 (RL)	\$47,456.84
Pickaway County	Single Family	AE	\$5,585.69	\$-	2 (RL)	\$5,585.69
Pickaway County	Other, Non-Residential	X	\$38,565.93	\$-	2 (RL)	\$38,565.93
Pickaway County	Other, Non-Residential	X	\$13,929.31	\$-	2 (RL)	\$13,929.31

Another means of calculating losses is via the NFIP records of claims paid. The following table shows the total amount of claims paid in each municipality, according to the NFIP Consumer Insurance Service (CIS).



FLOODING CLAIMS PAID, PICKAWAY COUNTY		
Community	Participation Status	Total Amount of Paid Claims
Pickaway County	Participating	\$370,602
Ashville Village	Participating	\$0
Circleville City	Participating	\$183,893
Commercial Point Village	Participating	\$0
Darbyville Village	Participating	\$0
South Bloomfield Village	Participating	\$0
Williamsport Village	Participating	\$0

## RISK ASSESSMENT

This section summarizes the risk to Pickaway County from flooding. The following map image graphically depicts potential risk areas in Pickaway County.








## PICKAWAY COUNTY HAZARD MITIGATION PLAN

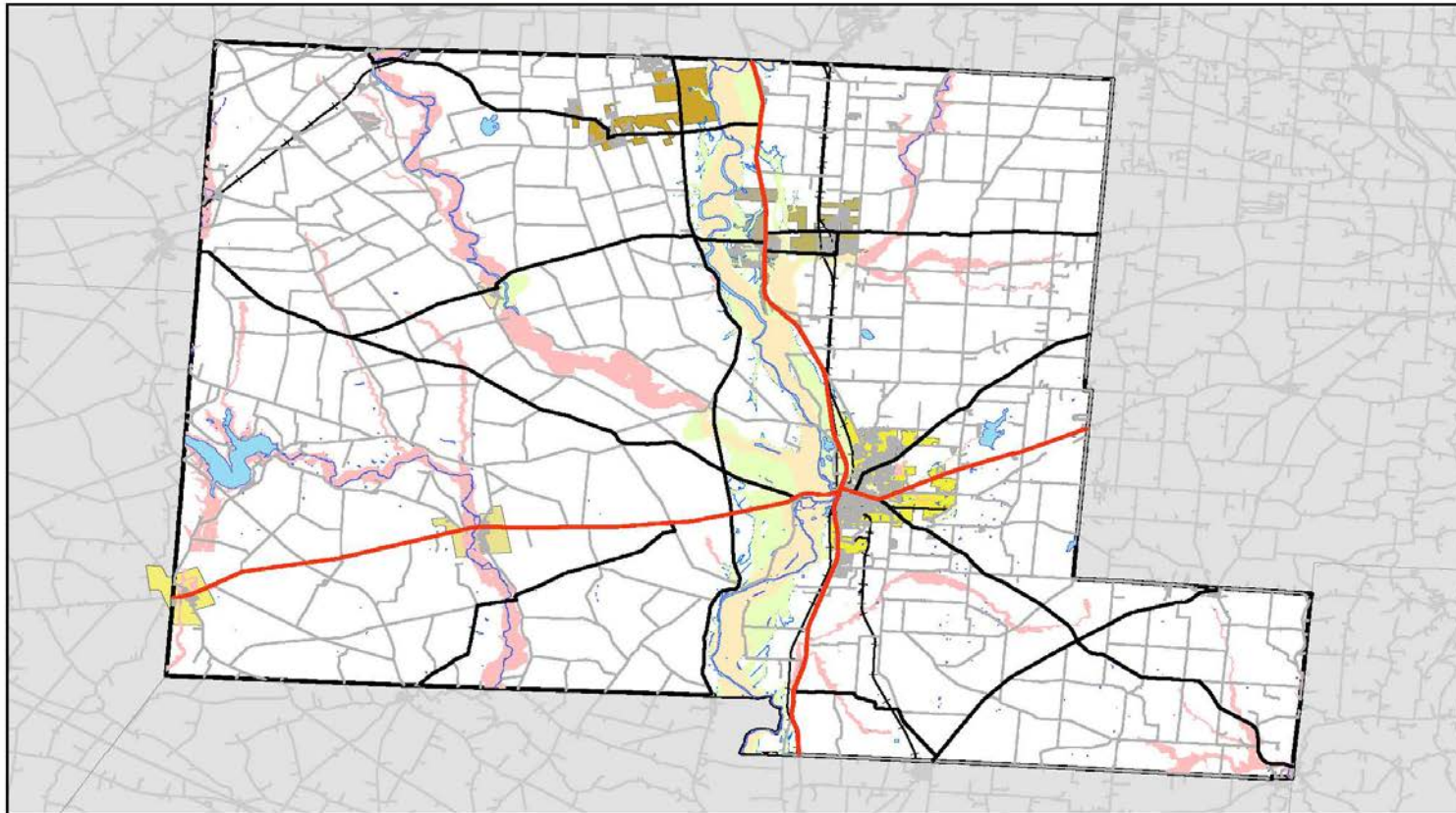
### Pickaway County Special Flood Hazard Areas

Data Source(s):  
FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



-  Floodway
-  Zone A
-  Zone AE
-  Zone AO
-  0.2% Annual Chance



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

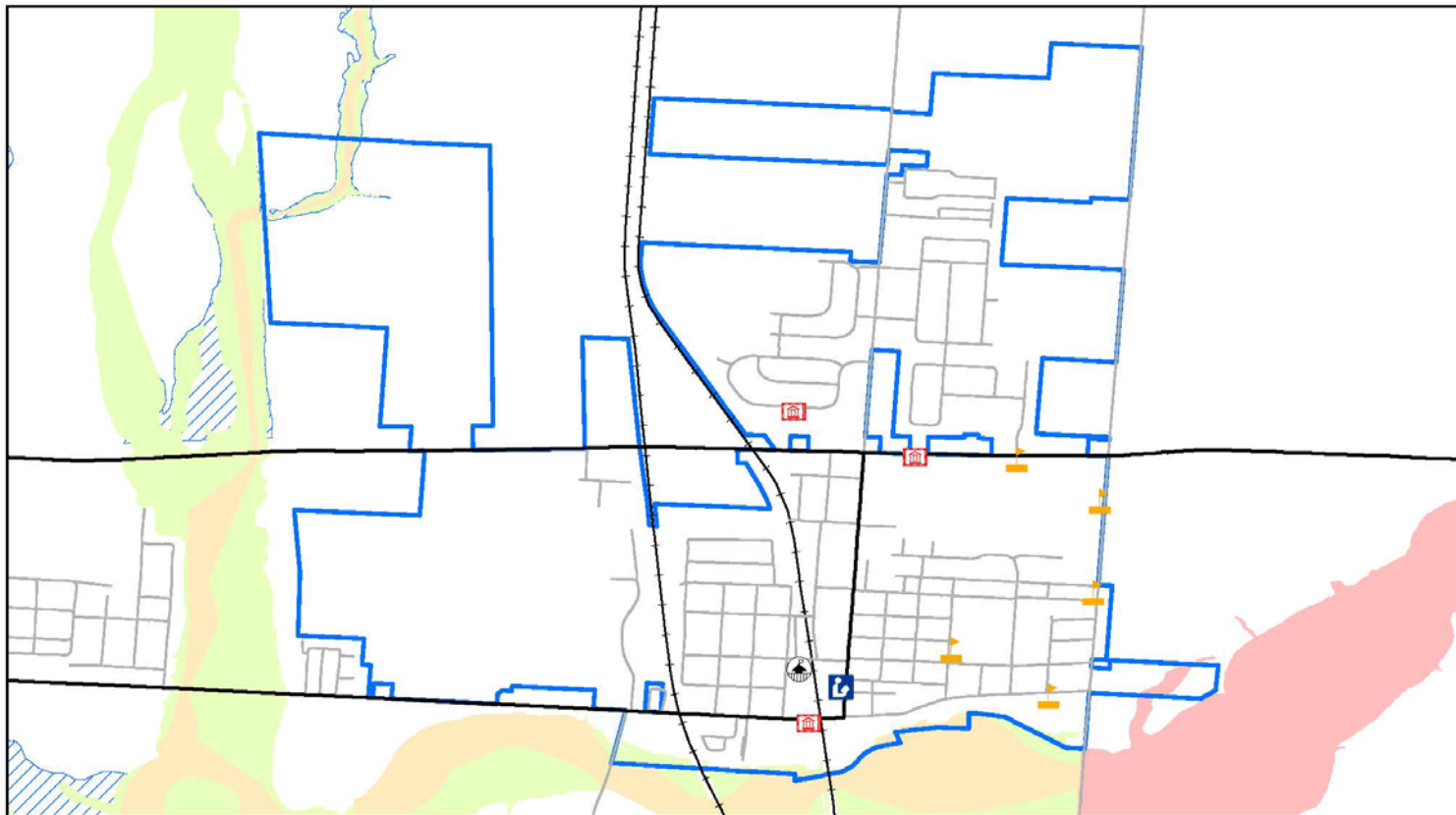
### Flood Risk Areas: Village of Ashville

Data Source(s):  
FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | Ashville           |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |





## PICKAWAY COUNTY HAZARD MITIGATION PLAN

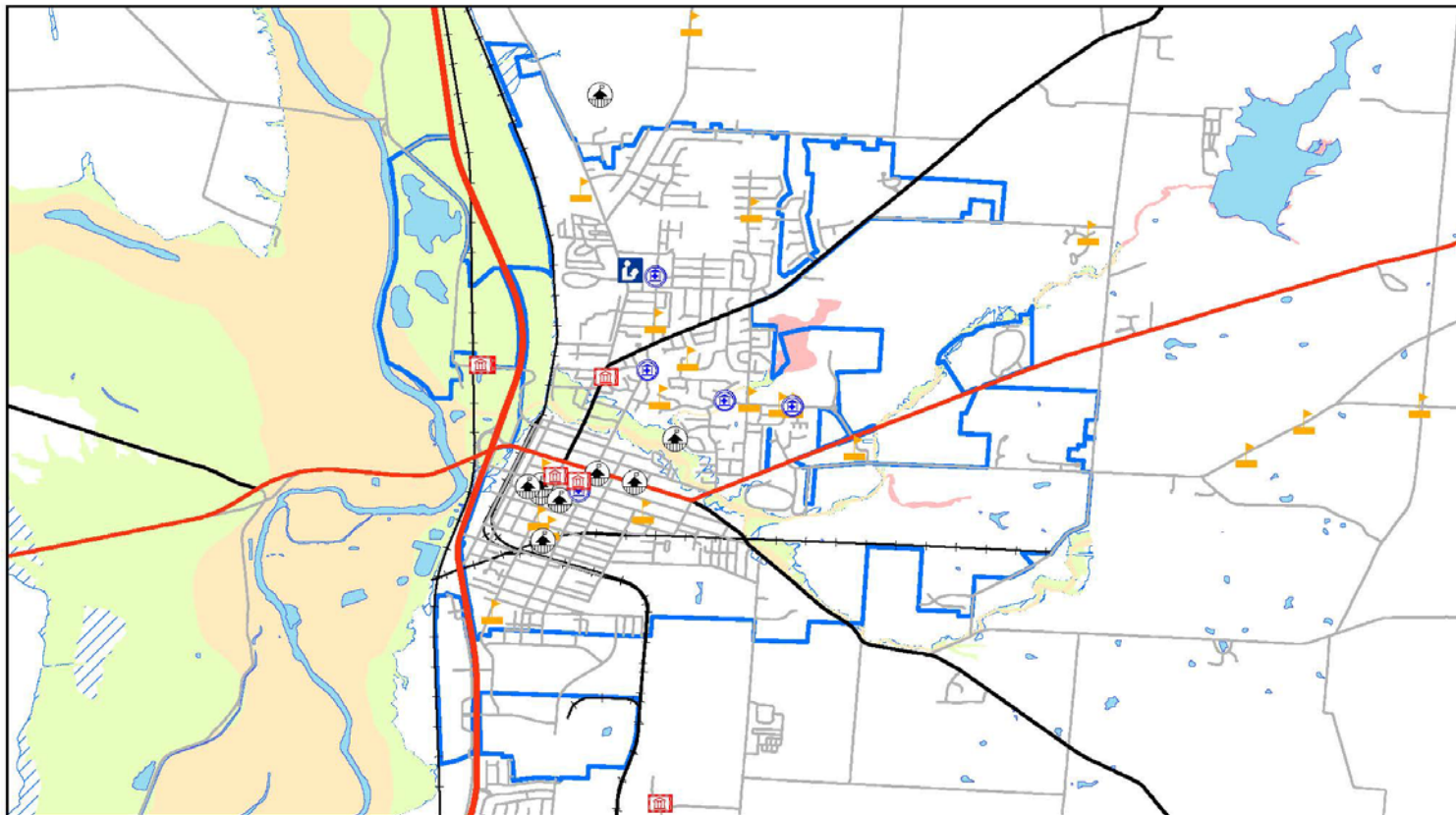
### Flood Risk Areas: City of Circleville

Data Source(s):  
FEMA, OEMA

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- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | Circleville        |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |





## PICKAWAY COUNTY HAZARD MITIGATION PLAN

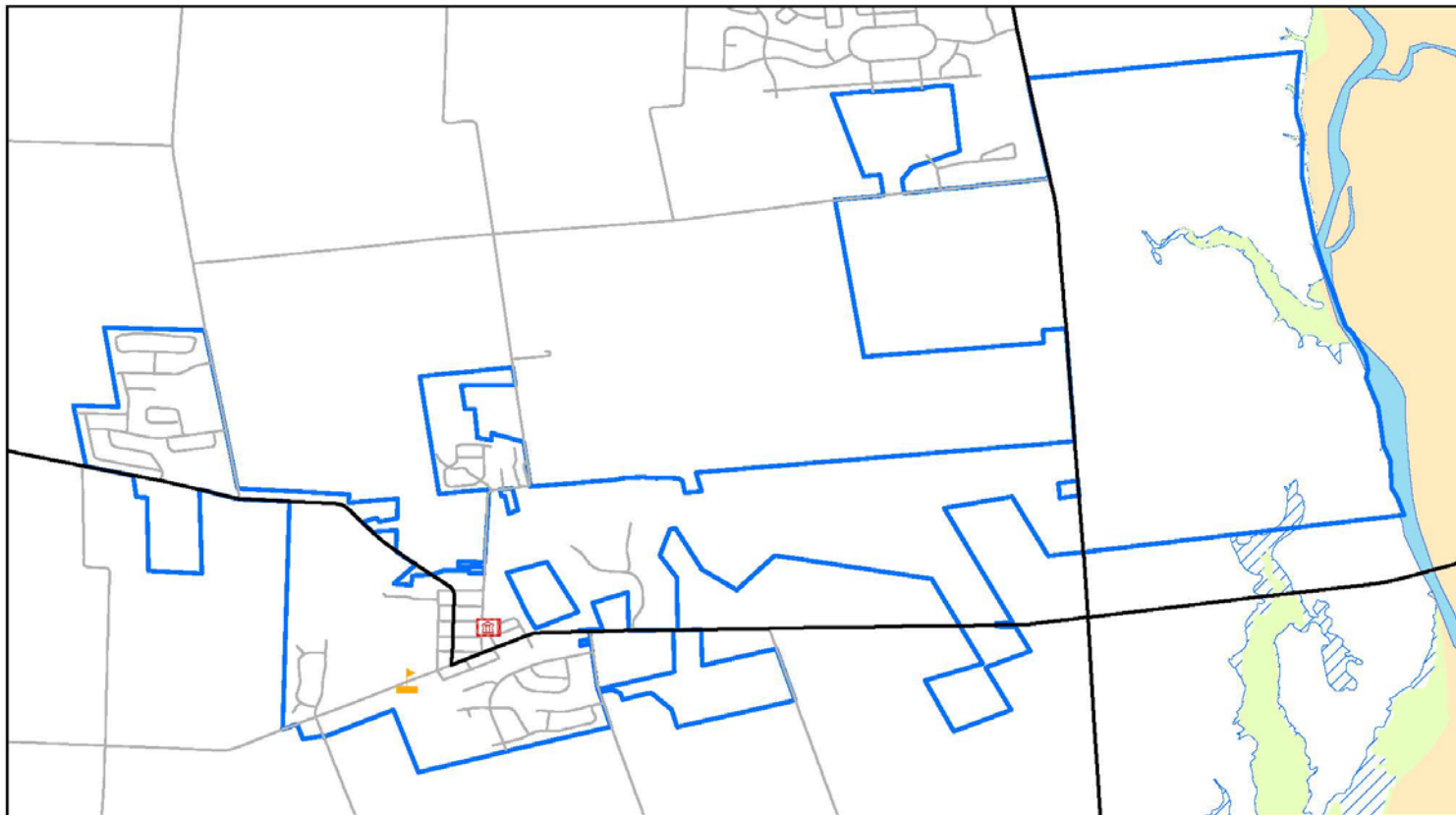
### Flood Risk Areas: Village of Commercial Point

Data Source(s):  
FEMA, OEMA

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- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | Commercial Point   |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

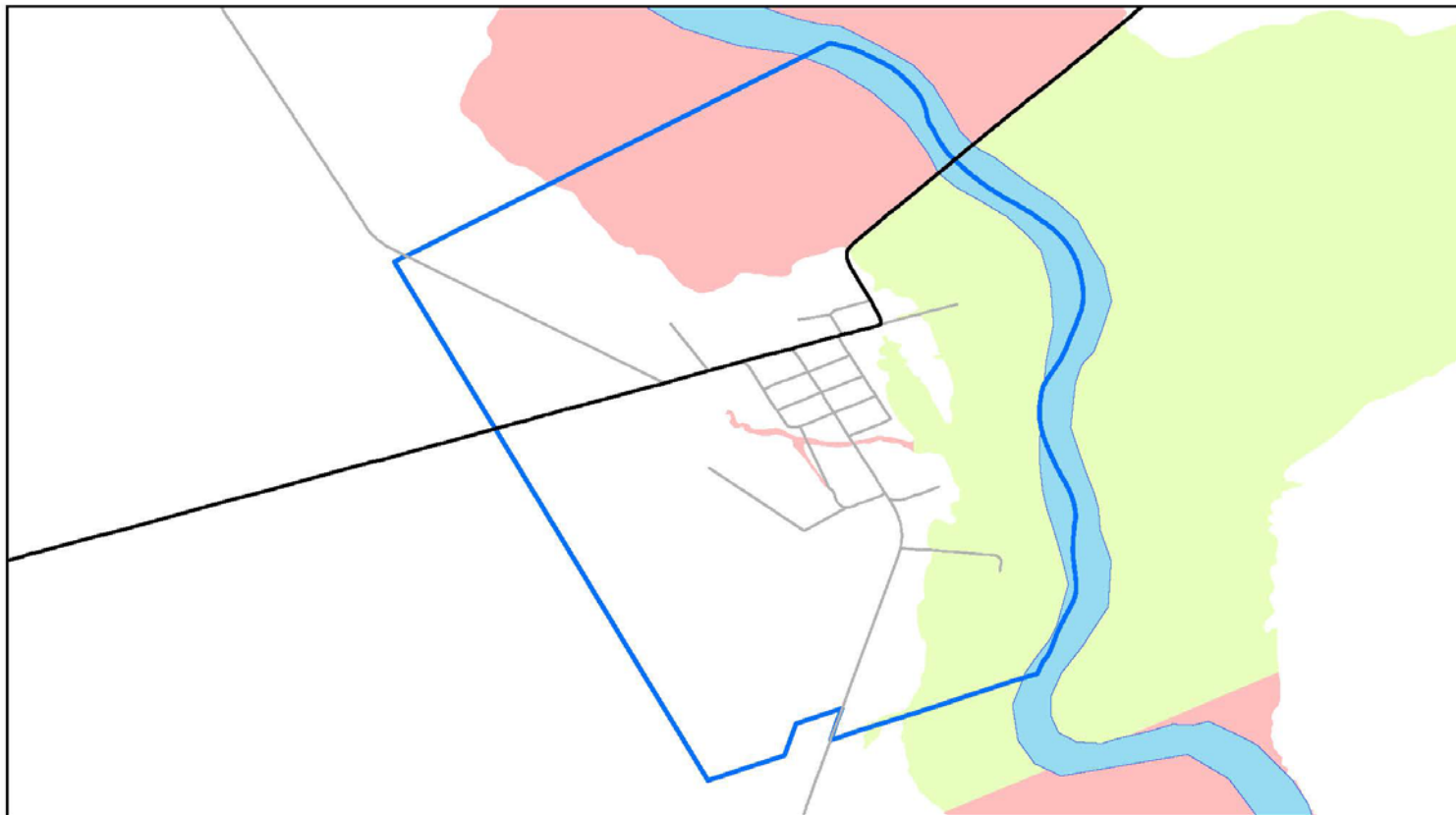
### Flood Risk Areas: Village of Darbyville

Data Source(s):  
FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | Darbyville         |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |



# PICKAWAY COUNTY HAZARD MITIGATION PLAN

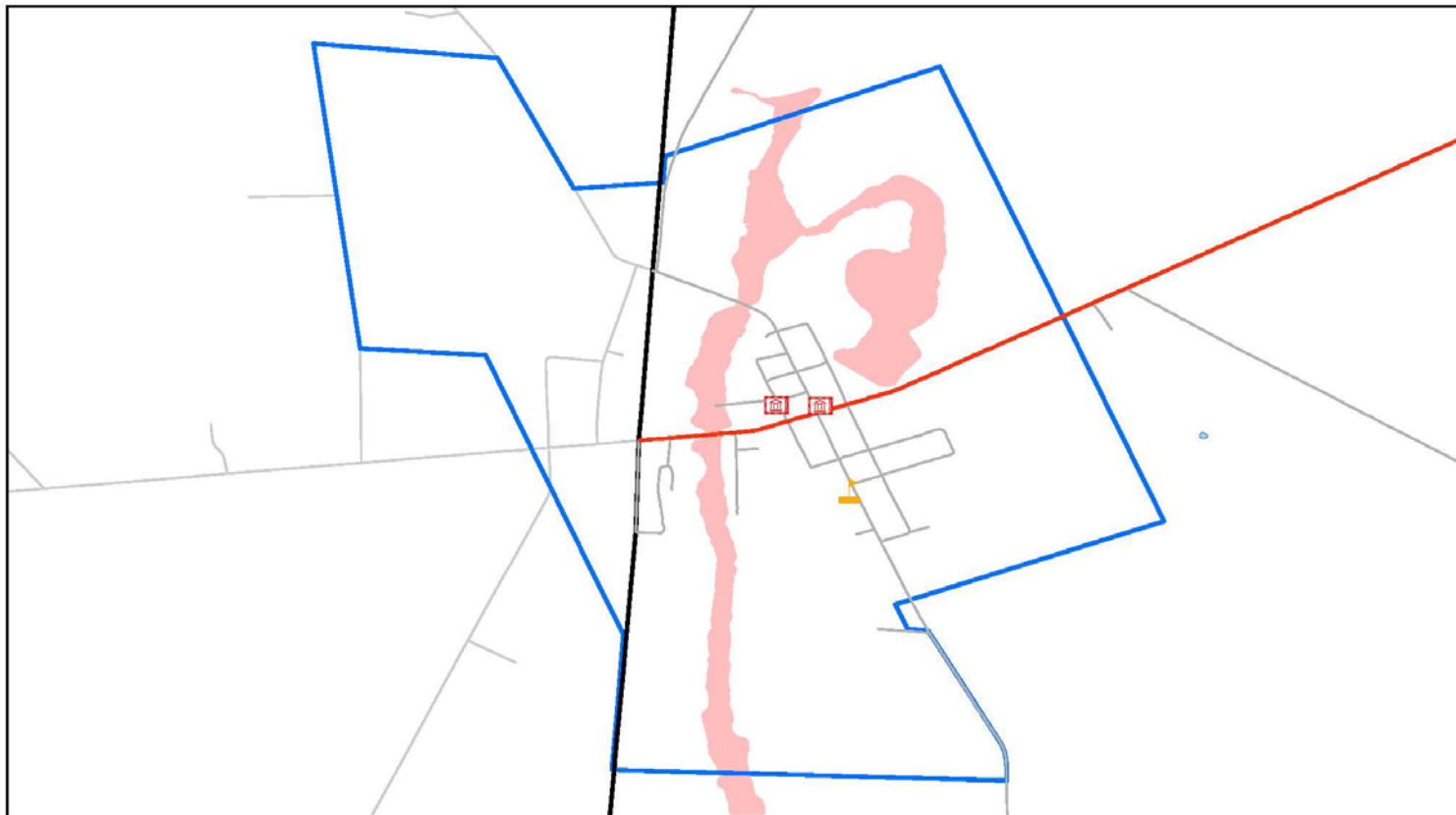
## Flood Risk Areas: Village of New Holland

Data Source(s):  
FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | New Holland        |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

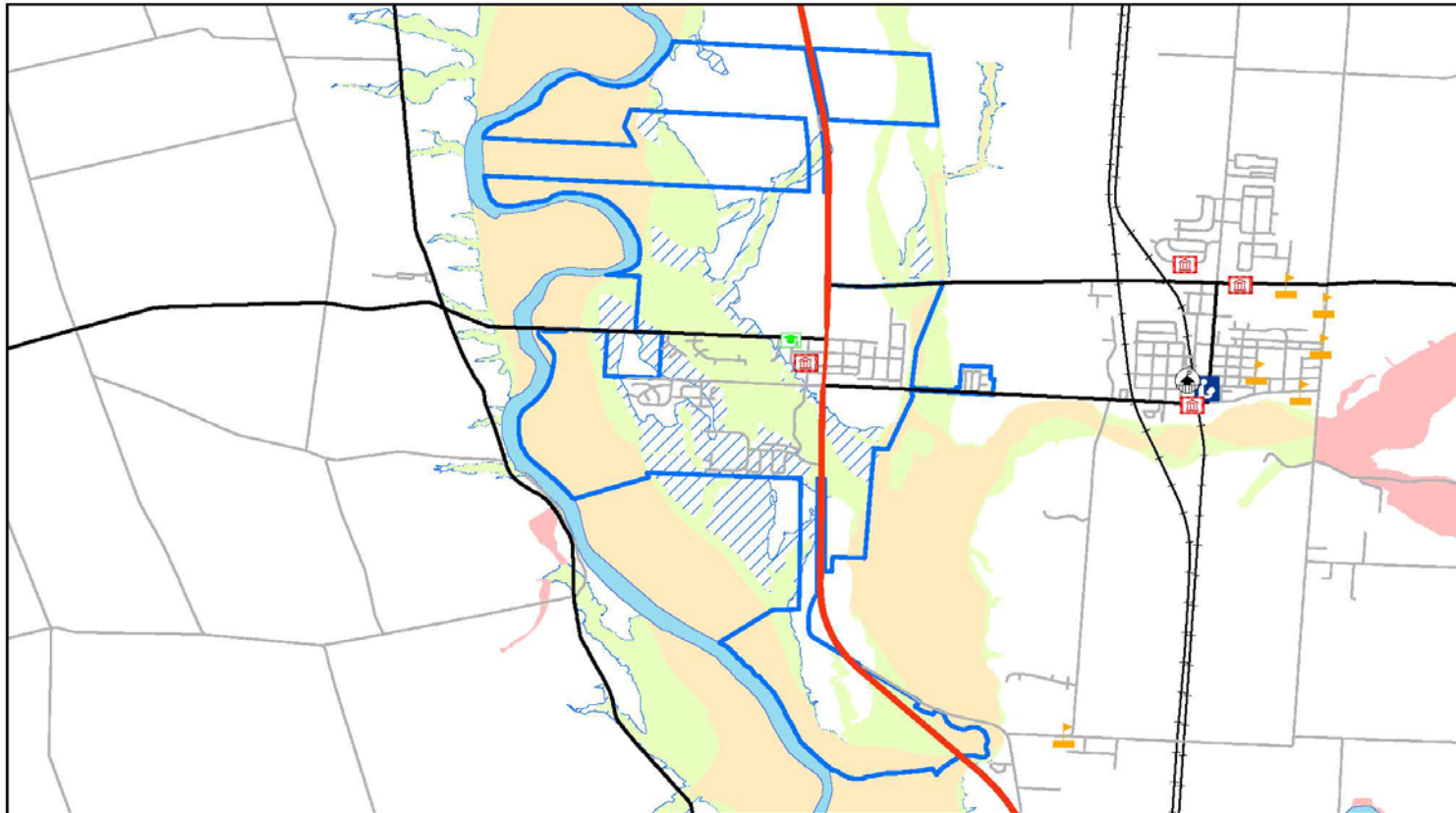
### Flood Risk Areas: Village of South Bloomfield

Data Source(s):  
FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | South Bloomfield   |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

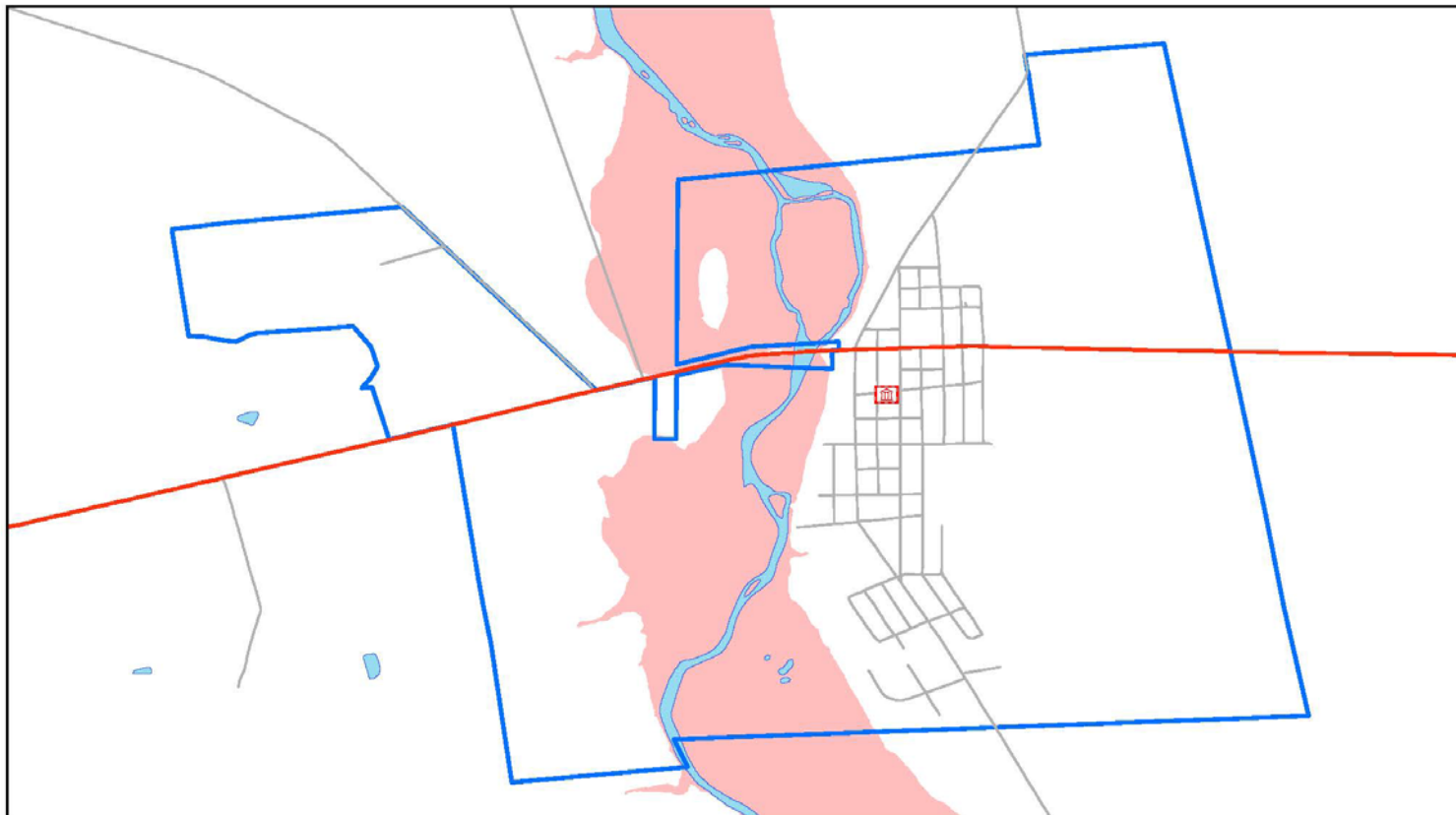
### Flood Risk Areas: Village of Williamsport

Data Source(s):  
FEMA, OEMA

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                    |
|-----------------------|--------------------|
| Govt. & Public Safety | Williamsport       |
| Healthcare            | Floodway           |
| Higher Education      | Zone A             |
| Historical Sites      | Zone AE            |
| Libraries             | Zone AO            |
| Schools               | 0.2% Annual Chance |



The following table assigns point totals based on the research presented in this profile for each category that appears in Ohio EMA's SHARPP tool.

FLOOD RISK SUMMARY			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Notes</i>
Frequency	5	Excessive	Based on historical data, there have been 57 flood-related incidents in 24 years, for an average of 2.37 incidents per year.
Response	3	More than one month	The recovery to large-scale floods can take several weeks.
Onset	2	12-24 hours	The NWS typically issues flood watches and warnings within 12-24 hours.
Magnitude	5	N/A	Flooding is a site-specific hazard; though it may not impact a large area of land, it can devastate the small areas it does impact.
Business	2	One week	The HAZUS-MH analysis indicates that several commercial/industrial structures are vulnerable to flooding conditions; as such, the general economy of the county could feel impacts for up to one week.
Human	2	Low	There have not been any recorded injuries or deaths associated with floods in Pickaway County. However, flooding is capable of producing injury.
Property	1	Less than 10% of property affected.	Historical data depicts an average of \$12,475 property damage per incident (since 1996).
<b>Total</b>	<b>20</b>	<b>MEDIUM</b>	





## 2.0 RISK ASSESSMENT

### 2.4.4 High/Strong Winds

Straight-line winds (derechos), downbursts, microbursts, and gust fronts are all part of severe wind events. Tornadoes are violently-rotating columns of air that touch the ground and are usually attached to the base of a thunderstorm.			
	<b>Vulnerability</b>	<b>Period of Occurrence:</b> At any time, typically when warm and cold air temperatures are present together	<b>Hazard Index Ranking:</b> Medium
	HIGH	<b>Warning Time:</b> 12-24 hours	<b>State Risk Ranking:</b> 4-High
	MEDIUM	<b>Probability:</b> Likely	<b>Severity:</b> Critical
	LOW	<b>Type of Hazard:</b> Natural	<b>Disaster Declarations:</b> DR-266 (1969) DR-738 (1985) DR-1656 (2006)
LOWEST			

#### HAZARD OVERVIEW

Severe wind is non-tornadic, damaging wind from thunderstorms and include four common types (NWS & FEMA, 2001).

- **Straight-Line Winds or Derechos:** Winds having little or no curvature or rotation, capable of affecting a larger geographic area than a tornado.
- **Downbursts:** Localized downward gusts of air from a thunderstorm. These winds can be very damaging on and near the ground and tend to cover areas of just a few miles.
- **Microbursts:** Minimized downbursts affecting areas less than 2.5 miles in diameter. Microbursts induce a strong wind shear and can produce winds over 150 mph.
- **Gust Fronts:** Cool, gusty air that flows out of the base of a thunderstorm and spreads along the ground ahead of the thunderstorm cell.

One of the first scales to estimate wind speeds and the effects was created by Britain's Admiral Sir Francis Beaufort (1774-1857). He developed the scale in 1805 to help sailors estimate the winds via visual observations. The scale starts with 0 and goes to a force of 12. The Beaufort scale is still used today to estimate wind strengths (NOAA, n.d.).



BEAUFORT WIND SCALE					
Force	Wind Speed			Appearance of Wind Effects	
	(mph)	(knots)	Description	On the Water	On Land
0	0-1	0-1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-7	4-6	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	8-12	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	13-18	11-16	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	19-24	17-21	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	25-31	22-27	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	32-38	38-33	Near Gale	Sea heaps up, waves 13-19 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	39-46	34-40	Gale	Moderately high (18-25 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Twigs breaking off trees, generally impedes progress
9	47-54	41-47	Strong Gale	High waves (23-32 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	55-63	48-55	Storm	Very high waves (29-41 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	64-72	56-63	Violent Storm	Exceptionally high (37-52 ft) waves, foam patches cover sea, visibility more reduced	
12	72-83	64-71	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	

## POSSIBLE CAUSES

Cold air molecules are closer to each other and are in low pressure while warm or hot air molecules are further distanced and in high pressure. Air masses move from high pressure areas to low pressure areas, caused by differences in temperature; the larger the difference between the pressure or temperature of two masses of air, the quicker the movement will be and cause wind (NOAA, SciJinks, 2019). Since the Earth is rotating, however, the air does not flow directly from high to low pressure, but it is deflected to the right (in the Northern Hemisphere; to the left in the Southern Hemisphere), so that the wind flows mostly around the high- and low-pressure areas. The closer the high- and low-pressure areas are together, the stronger the "pressure gradient", and the stronger the winds. Wind can be thought of one way that the atmosphere moves excess heat around. Directly or indirectly, wind forms for the primary purpose of helping to transport excess heat either away from the surface of the Earth, where





sunlight causes excess of energy buildup, or from warm regions (usually the tropics) to cooler regions (usually the higher latitudes) (Weather Street, 2013).

## LOCATION AND EXTENT

Wind is a phenomenon that occurs all around the globe. Wind events can encompass several jurisdictions, counties, and states at the same time for varying durations and severity.

## HISTORICAL OCCURRENCES

The NCEI Database provides information on 132 strong wind and high wind events over the past twenty-five years.

### **Hurricane Ike Remnants, September 2008**

High winds associated with the remnants of Hurricane Ike merged with a frontal boundary across the lower Ohio Valley during the morning of September 14, 2008. Winds gusts in excess of 70 mph along with sustained winds of 40 to 50 mph persisted for several hours. The winds caused approximately \$6.3 million in damaged utility lines, and other property damage.

### **Wind Event, September 1988**

On the evening of September 12, 1988, a heavy wind and rain storm moved into the area during extreme drought conditions. The winds blew down trees and damaged a barn roof and several homes near Circleville. There were three recorded injuries when an emergency vehicle was blown off the roadway on U.S. Route 22.

## IMPACTS AND VULNERABILITY

Severe wind events can cause a variety of secondary, or cascading, hazard events. For instance, the wind may blow limbs from trees down knocking out electric power or blocking roadways. Wind often results in damages to roofs and other home finishings (such as siding, etc.). Damage and loss of life could be severe and overwhelm the ability of local responders to address the emergency.

The following table describes the damage that winds can cause, according to the National Weather Service.



DAMAGE FROM WIND	
Wind Speed	Observations
26-38 kts (30-44 mph)	Trees in motion. Lightweight loose objects (e.g., lawn furniture) tossed or toppled.
39-49 kts (45-57 mph)	Large trees bend; twigs, small limbs break, and a few larger dead or weak branches may break. Old/weak structures (e.g., sheds, barns) may sustain minor damage (roof, doors). Building partially under construction may be damaged. A few loose shingles removed from houses. Carports may be uplifted; minor cosmetic damage to mobile homes and pool lanai cages.
50-64 kts (58-74 mph)	Large limbs break; shallow rooted trees pushed over. Semi-trucks overturned. More significant damage to old/weak structures. Shingles, awnings removed from houses; damage to chimneys and antennas; mobile homes, carports incur minor structural damage; large billboard signs may be toppled.
65-77 kts (75-89 mph)	Widespread damage to trees with trees broken/uprooted. Mobile homes may incur more significant structural damage; be pushed off foundations or overturned. Roof may be partially peeled off industrial/commercial/ warehouse buildings. Some minor roof damage to homes. Weak structures (e.g., farm buildings, airplane hangars) may be severely damaged.
78+ kts (90+ mph)	Many large trees broken and uprooted. Mobile homes severely damaged; moderate roof damage to homes. Roofs partially peeled off homes and buildings. Moving automobiles pushed off dry roads. Barns, sheds demolished.

## LOSS AND DAMAGES

Data from NCEI indicates several more events than are outlined herein; the events that did not have any damage associated and a magnitude of the event (wind speed) were eliminated. Mainly, data is complete since 1994 and was therefore taken from that year on.

WIND EVENTS IN PICKAWAY COUNTY 1994-2019			
Event Date	Magnitude (mph)	Injuries	Property Damage
4/13/94	0	0	\$5,000.00
6/20/94	0	0	\$5,000.00
6/21/94	0	0	\$5,000.00
7/2/94	0	0	\$5,000.00
7/2/94	0	0	\$5,000.00
7/21/94	0	0	\$5,000.00
7/25/94	0	0	\$5,000.00
7/25/94	0	0	\$5,000.00
7/25/94	0	0	\$50,000.00
6/20/95	0	0	\$4,000.00
6/26/95	0	0	\$3,000.00
7/13/95	0	0	\$9.00
4/29/96	50	0	\$2,000.00
5/29/96	50	0	\$5,000.00
6/14/96	50	0	\$3,000.00
11/7/96	50	0	\$10,000.00
7/27/97	50	0	\$5,000.00
7/27/97	70	0	\$200,000.00
6/28/98	50	0	\$3,000.00
6/29/98	50	0	\$3,000.00
7/19/98	60	0	\$10,000.00



WIND EVENTS IN PICKAWAY COUNTY 1994-2019			
Event Date	Magnitude (mph)	Injuries	Property Damage
7/19/98	68	0	\$-
8/25/98	50	0	\$5,000.00
11/10/98	50	0	\$5,000.00
5/6/99	50	0	\$3,000.00
6/5/00	50	0	\$2,000.00
6/14/00	50	0	\$1,000.00
8/9/00	50	0	\$10,000.00
8/9/00	60	0	\$50,000.00
9/2/00	50	0	\$25,000.00
9/20/00	50	0	\$5,000.00
11/9/00	50	0	\$15,000.00
6/12/01	50	0	\$3,000.00
7/8/01	50	0	\$3,000.00
10/24/01	50	0	\$3,000.00
5/12/02	50	0	\$2,000.00
4/5/03	50	0	\$3,000.00
4/30/03	50	0	\$3,000.00
6/8/03	50	0	\$3,000.00
7/8/03	52	0	\$5,000.00
8/27/03	50	0	\$5,000.00
5/30/04	50	0	\$2,000.00
6/1/04	50	0	\$2,000.00
7/5/04	50	0	\$3,000.00
5/13/05	50	0	\$3,000.00
6/28/05	50	0	\$3,000.00
8/20/05	50	0	\$2,000.00
11/8/05	50	0	\$3,000.00
8/3/06	50	0	\$6,000.00
3/2/07	35	0	\$2,000.00
8/9/07	50	0	\$5,000.00
8/9/07	50	0	\$5,000.00
8/9/07	50	0	\$3,000.00
2/6/08	50	0	\$8,000.00
7/8/08	50	0	\$2,000.00
7/8/08	50	0	\$2,000.00
2/11/09	50	0	\$7,000.00
2/11/09	50	0	\$3,000.00
6/2/09	70	1	\$45,000.00
8/20/09	50	0	\$2,000.00
8/4/10	50	0	\$1,000.00
8/4/10	50	0	\$2,000.00
8/4/10	50	0	\$1,000.00
8/4/10	50	0	\$2,000.00
8/14/10	50	0	\$5,000.00
10/26/10	60	0	\$75,000.00
10/26/10	60	0	\$1,000.00
10/26/10	61	0	\$30,000.00
4/4/11	60	0	\$25,000.00



WIND EVENTS IN PICKAWAY COUNTY 1994-2019			
Event Date	Magnitude (mph)	Injuries	Property Damage
4/20/11	50	0	\$1,000.00
4/20/11	60	0	\$25,000.00
4/20/11	60	0	\$20,000.00
5/23/11	55	0	\$30,000.00
6/4/11	50	0	\$2,000.00
6/4/11	50	0	\$2,000.00
6/4/11	55	0	\$6,000.00
6/21/11	50	0	\$4,000.00
6/29/12	56	0	\$3,000.00
6/29/12	56	0	\$2,000.00
7/26/12	50	0	\$3,000.00
7/10/13	50	0	\$1,000.00
7/10/13	50	0	\$1,000.00
11/17/13	65	0	\$50,000.00
6/10/14	50	0	\$1,000.00
12/24/14	50	0	\$2,000.00
5/11/15	50	0	\$3,000.00
7/14/15	50	0	\$5,000.00
7/14/15	50	0	\$3,000.00
3/31/16	50	0	\$1,000.00
3/31/16	50	0	\$3,000.00
3/31/16	51	0	\$-
5/29/16	45	0	\$5,000.00
6/26/16	50	0	\$2,000.00
6/26/16	50	0	\$1,000.00
7/6/16	45	0	\$1,000.00
2/24/17	52	0	\$-
3/1/17	50	0	\$3,000.00
4/5/17	50	0	\$2,000.00
5/19/17	50	0	\$3,000.00
5/19/17	50	0	\$-
7/22/17	45	0	\$500.00
7/22/17	45	0	\$1,000.00
6/8/18	50	0	\$3,000.00
6/8/18	50	0	\$5,000.00
6/8/18	60	0	\$30,000.00
8/26/18	50	0	\$10,000.00
8/26/18	50	0	\$10,000.00
8/26/18	50	0	\$1,000.00
8/26/18	52	0	\$45,000.00
3/14/19	50	0	\$2,000.00
3/14/19	50	0	\$-
3/14/19	50	0	\$2,000.00
3/14/19	50	0	\$2,000.00
3/14/19	50	0	\$2,000.00
7/2/19	50	0	\$2,000.00
<b>TOTAL</b>		<b>1</b>	<b>\$1,039,509.00</b>



According to the records, the most damage from winds occurred on July 27, 1997 and caused \$200,000 in damage. Overall, NCEI provided information on 132 events over 26 years with total property damage listed as \$1,039,509.00. This means that Pickaway County has seen an average of \$39,981 of damage per year or \$7,875 of damage per event.

## RISK ASSESSMENT

WIND RISK SUMMARY			
Category	Points	Description	Notes
Frequency	5	Will occur multiple times during a year	Based on historical data, there have been 132 high/strong wind events over 26 years, for an average of 5.07 incidents per year.
Response	3	1 week	The most significant severe wind events cause power outages which can take some time to restore.
Onset	2	12-24 hours	Officials such as the NWS can forecast high wind events with reasonable accuracy more than 12 hours in advance.
Magnitude	4	More than 50% of land area can be affected	Wind events can affect more the entire county or be a regional event
Business	2	1 week	Business impacts may reach one week given power outages.
Human	2	Low (some injuries)	29 injuries occurred in the 82 historical occurrences; no deaths occurred.
Property	1	Less than 10% of property affected	While high and strong wind events may impact properties across the county, the destructive high wind gusts are more localized.
<b>Total</b>	<b>19</b>	<b>Medium</b>	



## 2.0 RISK ASSESSMENT

### 2.4.5 Public Health Emergencies

A health-related emergency occurs when there is a sudden increase in the number of cases of a disease above what is normally expected in a certain area.			
	Vulnerability	Period of Occurrence: At any time	Hazard Index Ranking: Medium
	HIGH	Warning Time: Months to days	State Risk Ranking: Not ranked
	LOW	Probability: Possible	Severity: Critical
	LOWEST	Type of Hazard: Natural	Disaster Declarations: None

#### HAZARD OVERVIEW

According to the Centers for Disease Control and Prevention (CDC), various levels refer to the amount or extent of a disease occurrence (CDC, 2012).

- **Endemic** refers to the constant presence and usual prevalence of a disease or infectious agent in a population within a geographic area; it is the amount of a particular disease that is usually present in a community or baseline.
- **Sporadic** refers to a disease that occurs infrequently and irregularly.
- **Hyperendemic** refers to persistent, high levels of disease occurrence.
- **Cluster** refers to an aggregation of cases grouped in place and time that are suspected to be greater than the number expected, even though the expected number may not be known.
- **Epidemic** refers to an increase, often sudden, in the number of cases of a disease above normal expectations for an area or season. Epidemics occur when an agent and susceptible hosts are present in adequate numbers, and the agent can pass from a source to the susceptible hosts. More specifically, an epidemic may result from:
  - a recent increase in amount or virulence of the agent,
  - the recent introduction of the agent into a setting where it has not been before,
  - an enhanced mode of transmission so that more susceptible persons are exposed,
  - a change in the susceptibility of the host response to the agent, and
  - factors that increase host exposure or involve introduction through new portals of entry.



- **Outbreak** carries the same definition of an epidemic but often for a more limited geographic area.
- **Pandemic** refers to an epidemic that has spread over several countries or continents, usually affecting a large number of people.

Some diseases are so rare in a given population that a single case warrants an epidemiologic investigation (e.g., rabies, plague, polio), other diseases occur more commonly so that only deviations from the norm warrant investigation. Health-related emergencies can develop with little or no warning and quickly erode the capacity of local medical care providers. A fast developing epidemic can last several days and extend into several weeks. In some extreme cases, they can last for several months. An epidemic can occur at any time of the year, but the warm summer months, when bacteria and microorganism growth are at their highest, present the greatest risk.

#### LOCATION AND EXTENT

Health-related emergencies can affect all parts of Pickaway County but are more probable to occur in densely populated areas, such as Circleville City and Scioto Township. Additionally, outbreaks could occur in particularly large, multi-unit residential developments and facilities which employ a large workforce.

#### HISTORICAL OCCURRENCES

During the 2019 update, the planning committee opted to include public health emergencies in the plan to tie the health department's planning efforts into the overall resilience efforts of the county. The following table summarizes recent disease outbreaks declared by the CDC and the Ohio Department of Health (ODH) from 2010-2019. The outbreaks listed below were widespread and had a substantial impact on public health in the U.S. and globally.



FEDERAL AND STATE OUTBREAKS, 2010-2020		
Year(s)	Agent	Reporting Agency
2010	<i>Salmonella</i>	CDC
2011	<i>Listeria monocytogenes</i>	CDC
2012	Meningitis, Fungal	CDC
2012	West Nile Virus	CDC
2012	<i>E. coli</i> O145	CDC
2013	Cyclosporiasis	CDC
2013	MERS (Middle East Respiratory Syndrome)	CDC
2014	Ebola virus	CDC
2014-2015	Enterovirus	CDC
2014-Present	Chikungunya virus	CDC
2016-2017	Zika virus	CDC
2017-Present	Hepatitis A	CDC, ODH
2019	Measles	CDC, ODH
2020	Coronavirus (COVID-19)	CDC, ODH

The table below summarizes data from the Ohio Department of Health (which is an aggregation of data provided by the three health departments in Ashtabula County). This data represents the past ten years. Yellow boxes indicate that there were more cases than the average amount over the years in that year (outbreak). For example, over the nine full years from 2010 to 2018, there has been an average of .2 cases of Listeriosis, so even one case in a year would be considered over the average. Therefore, in 2014, when there were four cases reported, it can be considered that there was an outbreak.

PICKAWAY COUNTY REPORTABLE DISEASE SUMMARY, 2010-2019											
Disease	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*	Avg.
Amebiasis	0	0	0	0	0	0	0	0	0	0	0
Botulism	0	0	0	0	0	0	0	0	0	0	0
Infant	0	0	0	0	0	0	0	0	0	0	0
Wound	0	0	0	0	0	0	0	0	0	0	0
Campylobacteriosis	7	4	3	8	7	3	11	6	7	9	6.5
Cholera	0	0	0	0	0	0	0	0	0	0	0
Coccidioidomycosis	0	0	1	0	0	0	0	6	0	1	0.8
Creutzfeldt-Jakob Disease (CJB)	0	0	0	0	0	0	0	0	0	0	0
Cryptosporidiosis	0	1	0	0	1	1	10	2	3	3	2.1
Cytomegalovirus (CMV) Congenital	0	0	0	0	0	0	0	0	0	0	0
Escherichia coli,	1	1	3	1	0	2	2	1	0	0	1.1
O157:H7	1	1	1	1	0	2	1	1	0	0	0.8
Not O157LH7	0	0	2	0	0	0	1	0	0	0	0.3
Unknown serotype	0	0	0	0	0	0	0	0	0	0	0
Giardiasis	3	0	6	1	0	2	1	1	2	3	1.9





PICKAWAY COUNTY REPORTABLE DISEASE SUMMARY, 2010-2019											
Disease	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*	Avg.
Haemophilus influenza	2	0	1	0	2	0	3	2	1	1	1.2
Hemolytic Uremic	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	3	2	1	1	7	3	5	4	3	3	3.2
Leprosy	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	0	0	0	0	4	0	0	0	0	0	0.4
Meningitis, Aseptic	2	2	2	3	4	0	2	2	2	5	2.4
Meningitis, Other bacterial	0	0	0	0	0	1	2	1	0	1	0.5
Meningococcal disease	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	3	4	10	7	6	7	8	3	7	9	6.4
Shigellosis	0	0	27	0	0	0	12	1	1	0	4.1
Staphylococcus aureus	1	0	0	0	0	0	0	0	0	0	0.1
Streptococcal disease Group A Invasive	1	2	2	5	3	2	1	6	7	5	3.4
Streptococcal disease Group B Newborn	0	1	0	0	0	0	0	0	0	0	0.1
Streptococcal Toxic Shock syndrome (STSS)	0	0	0	0	0	0	0	0	0	0	0
Streptococcus pneumoniae	10	10	5	4	5	6	0	0	6	13	5.9
ages <5 years	0	0	0	1	0	0	0	0	0	0	0.1
Drug resistance ages 5+	1	2	1	2	1	4	1	0	3	3	1.8
Drug susceptible age 5+	9	8	4	1	4	2	4	0	3	10	4.5
Toxic shock syndrome	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	0	0	0	0	0	0	0	0	0	0	0
Vibriosis	0	0	0	0	0	0	0	0	0	0	0
Vibrio parahaemolyticus infection	0	0	0	0	0	0	0	0	0	0	0
other (Not Cholera)	0	0	0	0	0	0	0	0	0	0	0
Yeriniosis	0	0	2	0	0	0	0	1	0	2	0.5
Hepatitis A	0	0	0	0	0	0	0	0	49	30	7.9
Hepatitis B	55	0	0	0	0	1	23	0	0	0	7.9
Acute	0	1	1	2	0	1	1	0	0	0	0.6
Chronic	55	0	0	0	0	0	22	0	0	0	7.7
Perinatal Infection	0	1	0	0	0	0	0	0	0	0	0.1
Hepatitis C	932	0	0	0	0	0	155	0	0	0	108.7
Acute	0	0	0	1	0	1	4	0	0	0	0.6
Past or Present	932	0	0	0	1831	111	151	0	0	0	302.5
Hepatitis E	0	0	0	0	0	0	0	4	0	0	0.4

\*Data for the fourth quarter of 2019 not available.

## IMPACTS AND VULNERABILITY

Major concerns during an epidemic or outbreak include the ability of local health care providers to provide medical attention to everyone who becomes ill, and the ability to identify the source or what is causing the population to become ill. Cascading effects of epidemics can include the following.

- Illness or death



- Civil disturbance
- Distrust of government
- Poor water quality
- Temporary loss of income

#### MARCH 2020, STATE AND FEDERAL DECLERATIONS

During the updating of this plan there was a novel Coronavirus (COVID-19) pandemic. Below is a timeline of events.

- In December 2019, the Chinese Government confirmed they were treating dozens of patients with a pneumonio like illness. During the first week of 2020, medical researchers in China confirmed the illness was not SARS or MERS. By the end of the same week, researchers determined the illness was a novel coronavirus, initially named 201-nCoV by the World Health Organization (WHO).
- January 19, 2020, a 35-year-old resident of Washington sought medical treatment after becoming ill following a trip to China. The following day, the CDC confirmed the patient had contracted 2019-nCoV.
- February 29, 2020 a patient in Washington is the first to die in the U.S.
- On March 9, 2020, the first case of 2019-nCoV is confirmed in Ohio. Governor Mike Dewine signed Executive Order 2020-01D, declaring a state of emergency in Ohio.
- March 11, 2020, WHO declares the outbreak to be a pandemic, the first caused by a coronavirus.
- March 13, 2020 President Trump declared a national emergency (EM-3452, Covid-19).
- March 16, 2020, all K-12 schools in Ohio closed.
- Beginning on March 17, 2020, Pickaway County Public Health, in an abundance of caution, began operating by appointment only to allow minimal gatherings within the building. Ohio issued an amended order limiting and/or prohibiting mass gatherings and closure of venues including, bowling alleys, fitness centers, indoor water parks, all theaters, public recreation centers, and indoor sports facilities.
- On March 21, 2020, the Pickaway County Board of Health declared a county-wide public health emergency. Although at the time there were no active cases in the county, the state of Ohio had confirmed 247 cases with three deaths. At the time of this declaration there were confirmed cases in adjacent counties and persons under investigation in Pickaway County.



- By the date of submission of this plan to Ohio EMA, Pickaway County had confirmed 1,876 cases with 34 deaths.

## LOSS AND DAMAGES

Losses based on historical health-related incidents are difficult to estimate. According to a study by Molinari et al. (2007), seasonal influenza results in a substantial economic impact, estimated, in part, at \$16.3 billion in lost earnings. By population, Pickaway County represents approximately 0.02% of the United States. Since seasonal influenza primarily impacts the human population, using Pickaway County's composition of the U.S. as a multiplier (i.e., 0.0002) and applying it to the potential economic impact, lost earnings in the county could reach \$3,260,000 each year.

Though that number appears high, it equates to approximately \$100 per year for each person listed by the U.S. Census Bureau as "in civilian labor force" for the county. Health-related emergencies rarely affect structures. They may affect people and, at times, the operations of critical facilities, businesses, and other community assets.

## RISK ASSESSMENT

This section summarizes the risk to Pickaway County from public health emergencies. The following table assigns point totals based on the research presented in this profile for each category that appears in the Ohio EMA's SHARPP tool.

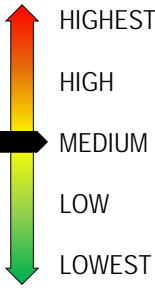


HEALTH-RELATED EMERGENCIES RISK SUMMARY			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Notes</i>
Frequency	2	Low	Although during the planning process, a pandemic occurred, the frequency of such events is low.
Response	5	More than one month	For large outbreaks, public health and other medical officials may remain in response for a substantial period.
Onset	1	Over 24 hours	Health emergencies evolve slowly.
Magnitude	1	Localized (Less than 10% of land area affected)	Health emergencies do not impact land areas; they impact the human population, the patterns of which may spread over the area.
Business	4	More than 30 days	Large outbreaks may diminish economic activity; the loss estimate in this profile consists of impacts to earnings, and cost of government assistance.
Human	4	High (multiple deaths)	Health-related emergencies impact the human population, and by nature, results in illness or injury. Although most health-related emergencies result in illnesses rather than deaths, multiple deaths can occur.
Property	1	Less than 10% of property affected	Health-related emergencies do not impact structures and property.
<b>Total</b>	<b>18</b>	<b>Medium</b>	



## 2.0 RISK ASSESSMENT

### 2.4.6 Severe Thunderstorms and Hail

A severe thunderstorm is one that produces a tornado, winds in excess of 58 miles per hour, or hail or one inch in diameter or larger.				
	<b>Vulnerability</b>	<b>Period of Occurrence:</b>	At any time, typically during the summer months	<b>Hazard Index Ranking:</b> Medium
	HIGHEST	<b>Warning Time:</b>	12-24 hours	<b>State Risk Ranking:</b> 4-High
	HIGH	<b>Probability:</b>	Highly likely	<b>Severity:</b> Limited
	MEDIUM	<b>Type of Hazard:</b>	Natural	<b>Disaster Declarations:</b> DR-266 (1969) DR-345 (1972, Hurricane Agnes) DR-377 (1973) DR-738 (1985) DR-1556 (2004) DR-1656 (2006) DR-3346 (2012) DR-4098
LOW				
LOWEST				

#### HAZARD OVERVIEW

A thunderstorm is a local storm that is produced by a cumulonimbus cloud, accompanied by lightning and thunder, often accompanied by gusty winds, heavy rain, and occasionally by hail, and sometimes is violent at the surface (NWS, FEMA, 2001).

TYPES OF THUNDERSTORMS				
Type	Description	Duration	Wind Speeds	Associated Hazards
Single Cell	Uncommon	20 - 30 minutes		<ul style="list-style-type: none"> <li>• Non-damaging hail</li> <li>• Microbursts</li> <li>• Weak tornadoes</li> </ul>
Multi Cell	Common, organized cluster of two or more single cells.	Each cell lasts approximately 20 minutes	Downbursts of up to 80 mph	<ul style="list-style-type: none"> <li>• Heavy rainfall</li> <li>• Downbursts</li> <li>• Hail</li> <li>• Weak tornadoes</li> </ul>
Mesoscale Convective System (MCS)	Well organized system of thunderstorms	Up to 12 hours or more	55 mph or more	<ul style="list-style-type: none"> <li>• Torrential rainfalls</li> <li>• Derechos</li> <li>• Tornadoes</li> </ul>
Squall Lines	May extend over 250 to 500 miles and 10 to 20 miles wide	Individual cells last from 30 to 60 minutes		<ul style="list-style-type: none"> <li>• Significant rain after the storm</li> <li>• Derechos</li> </ul>
Super Cells	Most dangerous storms, visible with Doppler radars	1 - 6 hours	Updrafts and downdrafts of more than 100 mph	<ul style="list-style-type: none"> <li>• Tornadoes</li> <li>• Hail</li> </ul>



Sources: IS-271 *Anticipating Hazardous Weather and Community Risk*  
Keller & DeVecchio, 2015  
National Weather Service, 2009

A thunderstorm that produces a tornado, winds of at least 58 mph (50knots), and/or hail at least 1" in diameter is a severe thunderstorm (NWS, 2009). Thunderstorm-associated natural hazards include lightning, hail, heavy rain, damaging winds, and tornadoes. This profile includes descriptions on lightning and hail; [sections 2.4.1 and 2.4.15](#) describe tornadoes and severe winds associated with thunderstorms. Because the potential damage severe winds and tornadoes cause and the difference in mitigation actions relating to the hazard, this profile does not include a detailed description of them. Furthermore, the IS-271 FEMA course *Anticipating Hazardous Weather and Community Risk* describes thunderstorms and tornadoes separately.

- **Lightning:** Lightning is a giant spark of electricity between the atmosphere and the ground. In the initial stages of development, air acts as an insulator between the positive and negative charges in the cloud and between the cloud and the ground; however, when the differences in the charges becomes too great, this insulating capacity of the air breaks down, and there is a rapid discharge of electricity known as lightning (NWS). Individual lightning strikes occur with no warning and kill between 75 and 100 Americans every year (Haddow, Bullock, & Coppola, 2014, p.51.) Lighting can reach a significant distance from a storm, up to 25 miles according to the National Severe Storms Library (NSSL). While lightning is a common occurrence and can be seen in most thunderstorms, only about 20% of the lightning observed in a storm will strike the ground.
- **Hail:** Hail is a form of precipitation that occurs when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere where they freeze into balls of ice; the drops of ice can move upwards and downwards within the draft and become larger. When the hailstone is heavy enough, it will fall to the ground (NSSL, n.d.). In 1986, Jonathan Webb, a member of the Tornado and Storm Research Organization (TORRO) in England, developed the TORRO Hailstorm Intensity Scale as a way to measure and categorize hailstorms (Voss Law Firm, n.d.).





TORRO HAILSTORM INTENSITY SCALE					
Intensity		Hail Diameter (mm)	Hail Diameter (in)	Typical Damage	Example Size Description
H0	Hard Hail	5	Up to 0.33	No damage.	Pea
H1	Potentially Damaging	5-15	0.33 – 0.60	Slight general damage to plants, crops.	Mothball
H2	Significant	10-20	0.60 – 0.80	Significant damage to fruit, crops, vegetation.	Marble, Grape, Dime
H3	Severe	20-30	0.80 – 1.2	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored.	Walnut, Nickel to Quarter
H4	Severe	25-40	1.2 – 1.6	Widespread glass damage, vehicle bodywork damage.	Pigeon's egg > squash ball
H5	Destructive	30-50	1.6 – 2.0	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries.	Golf ball > Pullet's egg
H6	Destructive	40-60	2.0 – 2.4	Bodywork of grounded aircraft dented, brick walls pitted.	Hen's egg
H7	Destructive	50-75	2.4 – 3.0	Severe roof damage, risk of serious injuries.	Tennis ball > Cricket ball
H8	Destructive	60-90	3.0 – 3.5	(Severest recorded in the British Isles) Severe damage to aircraft bodywork.	Large orange > Soft ball
H9	Super Hailstorms	75-100	3.5 – 4.0	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open.	Grapefruit
H10	Super Hailstorms	>100	4.0+	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open.	Melon

## POSSIBLE CAUSES

Hail forms when water droplets are carried upward into extremely cold areas of the atmosphere. Hailstones grow by colliding with super cooled water drops. Super cooled water will freeze on contact with ice crystals, frozen raindrops, or dust. Thunderstorms that have a strong updraft keep lifting hailstones up toward the top of the cloud where they continue to grow. The hail eventually falls when the updraft can no longer lift the weight of the hailstone. Hail cannot form without an extremely cold upper atmosphere (NSSL, 2018).

Lightning is an electrical currents that start from the clouds. When the ground is hot, it heats the air above it; as the warm air rises, water vapor cools and forms into a cloud. When the warm air continues to rise, the cloud will grow. The top of the cloud has a temperature below freezing, which means water vapor turns to ice. As the water vapor freezes, the cloud becomes a thundercloud, and the frozen particles collide with each other creating an electric charge. Positively charged particles will rise to the upper part of the cloud, and the negatively charged



particle will sink to the lower portion of the cloud. When the charges grow large enough, a spark or lightning will occur. This process may vary. Cloud-to-ground lightning occurs where the cloud is negatively charged, and the ground is positively charged, thus making a spark (Plant-science.com, 2018).

## LOCATION AND EXTENT

Severe weather is a hazard that can affect all areas and jurisdictions of the county. Pickaway, as well as surrounding counties and states, is at similar risk of exposure to these types of severe summer weather events. Severe summer weather events have the potential of lasting seconds (i.e., lightning), a few minutes (i.e., tornadoes), several hours (i.e., thunderstorms, hailstorms, etc.), or even days (i.e., high winds).

## HISTORICAL OCCURRENCES

The following table outlines the 65 hail (0.75" in diameter or larger) events related to severe thunderstorms. On occasion, there is more than one event in one day, possibly as well, in different locations around the county. The second column notes the number of events NCEI recorded for the day. If there was more than one hail event in one day, the sizes are noted in the last column for each event recorded.

HAIL EVENTS IN PICKAWAY COUNTY			
Date	Number of Events on the Event Date	Hail Size (in)	Damage to Property
6/22/60	1	1	None Reported
5/18/62	1	0.75	None Reported
8/8/66	1	1	None Reported
4/23/68	1	0.75	None Reported
5/11/80	1	2.75	None Reported
5/2/83	2	1.75 / 1.75	None Reported
3/26/91	1	0.75	None Reported
6/16/94	1	0.75	None Reported
6/18/94	2	0.75 / 0.75	None Reported
6/23/94	1	0.75	None Reported
6/29/94	1	0.75	None Reported
7/25/94	1	1	None Reported
7/29/94	1	0.85	None Reported
8/27/94	1	1	None Reported
4/8/95	1	1	None Reported
5/5/96	1	0.75	None Reported
5/14/97	1	0.75	None Reported



HAIL EVENTS IN PICKAWAY COUNTY			
Date	Number of Events on the Event Date	Hail Size (in)	Damage to Property
5/4/98	1	0.75	None Reported
6/16/98	1	0.75	None Reported
4/9/01	3	0.75 / 0.75 / 1/75	None Reported
2/20/02	1	0.75	\$3,000
4/28/02	1	1.75	\$2,5000
4/30/03	1	0.75	None Reported
5/9/03	1	1	None Reported
4/7/06	1	0.75	None Reported
5/17/06	1	0.75	None Reported
4/11/07	1	0.75	\$2,000
7/13/07	1	0.75	\$1,000
11/5/07	1	1	\$2,000
6/16/08	4	0.75 / 0.88 / 1 / 1/75	\$27,000
6/2/09	2	1 / 2	None Reported
5/10/11	1	0.88	None Reported
6/4/11	1	1.75	None Reported
6/5/11	1	1.5	None Reported
3/18/12	6	0.88 / 1 / 1 / 1 / 1 / 1.75	None Reported
4/26/12	1	0.88	None Reported
5/1/12	1	0.75	None Reported
5/14/14	1	0.88	None Reported
5/29/16	1	0.88	None Reported
7/10/17	2	0.75 / 1.25	None Reported
4/3/18	1	0.75	None Reported
4/3/18	1	0.88	None Reported
<b>Total Events</b>	<b>56</b>	<b>Total Damages</b>	<b>\$60,000</b>

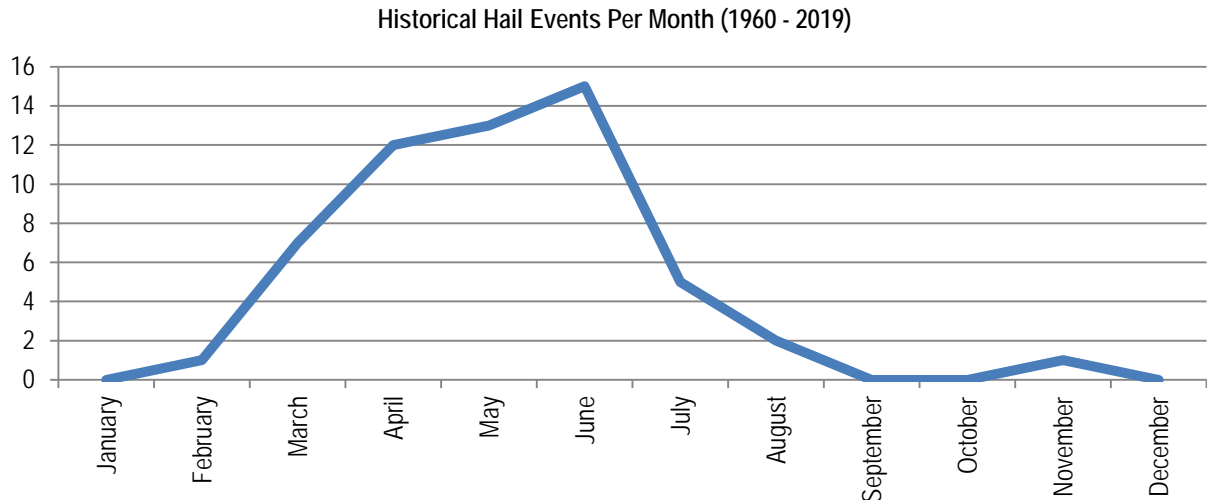
On July 27, 1997, a thunderstorm in Whistler resulted in \$200,000 worth of damage. Several barns were destroyed, a roof was blown off a garage, and numerous trees were down. Some of the trees fell across homes and barns. Over 400 homes received damage from the combined severe thunderstorms and flooding event. Another significant thunderstorm event occurred on August 9, 2000, in the Ashville area. There was over \$50,000 of damage from the wind, hail, and flooding that occurred.

On April 28, 2002, the NCEI reported hail of 1.75 inches in diameter, the size of a golf ball (a destructive H5 on the Torro Scale), in Pickaway County near South Bloomfield. The NCEI reported approximately \$25,000 of damage but no injuries or fatalities.

On June 16, 2008, the NCEI reported hail of 1.5 inches in diameter over Circleville causing \$15,000 in damages to property but no injuries or fatalities.



According to the data NCEI presents, there is a surge of hail events in the spring months in Pickaway County. Between 1960 and 2019 there were 56 hail events; the majority of them happened in June. The graph below illustrates this data.



Lightning is a common occurrence during a severe thunderstorm; however, NCEI does not always have records of this data. According to the database, there has only been one recorded lightning strike since 1950 and it was on May 16, 2001 causing \$50,000 of property damage – this was to one house. Only this event was recorded because NCEI only includes data when fatalities and injuries are directly related to lightning strikes or if reliable estimates of lightning-related damages are available; if damage, injuries, or fatalities cannot be attributed to lightning, they are not recorded (NWS, 2016). For this reason, there is only one event presented in the database for Pickaway County.

## IMPACTS AND VULNERABILITY

There are many impacts of severe summer weather. Here are a few listed under each category. The tornadoes and wind profiles include more detailed effects.

- **Lightning:** Can cause injury and even death. In some cases, lightning is known to cause fires in structures and open land or forests.
- **Hailstorms:** Can cause injury to humans and animals if directly exposed, damage to vegetation and infrastructure.
- **Tornadoes:** Cause damage to trees, property; they can also cause severe injury and death.
- **Wind:** Causes respiratory illnesses, damage to the vegetation (fallen trees), and can cause damage to infrastructure due to flying debris.



- **Thunderstorms:** Include all of the above-mentioned impacts.

As with all hazards, severe summer weather hazards can also affect the mental health of the population causing anxiety, panic attacks, and post-traumatic stress. Vulnerable populations can include those who are unable to evacuate during a severe weather event, those with health issues that may be exacerbated, as well as children and elderly adults. If poor populations are unable to obtain necessary shelter during an event, they will be at higher risk and may be more vulnerable to the effects of that event.

#### LOSS AND DAMAGES

As the *Historical Occurrences* section above details, the total damages hail has caused in Pickaway County is approximately \$60,000; lightning events have caused \$50,000 in damages. Combined, lightning and hail events related to severe thunderstorms have caused \$110,000 in damages. This does not include insurance claims, as data is not available. However, in his article, Larsen (2013) reported that due to a growing number of severe storms related insurance claims over the past five years, some Ohio companies are starting to ask homeowners to pay a separate deductible for wind and hail damage. This suggests that there has been a lot more damage than is actually reported in NCEI.

#### RISK ASSESSMENT

The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points and the lowest is 7.



RISK CALCULATION			
Category	Points	Description	Determination Method
Frequency	5	Excessive	There have been 147 severe thunderstorms and hailstorms since 1956, a 63-year period, for an average of 2.3 incident per year.
Response	1	Less than half a day	The average loss for each type of incident is less than \$10,000, suggesting minimal damage and minimal need for response.
Onset	2	12-24 hours	NWS officials forecast severe weather events at least 12 hours in advance.
Magnitude	5	N/A	The entire county is susceptible to severe thunderstorms and hailstorms; the hazard can occur anywhere.
Business	1	Less than 24 hours	Average losses from these events are minimal, suggesting low impacts.
Human	1	Minimum (minor injuries)	Over the 143 incidents, a total of five injuries and no direct fatalities occurred.
Property	1	Less than 10% of property affected	The average losses from each incident type are far less than 1% of the potential exposed building stock.
<b>Total</b>	<b>16</b>	<b>Medium</b>	





## 2.0 RISK ASSESSMENT

### 2.4.7 Subsidence and Land Movements

Landslides are the movement of a mass of rock down a slope. Erosion is the wearing away of earthen materials.			
	<b>Vulnerability</b> HIGHEST HIGH MEDIUM LOW LOWEST	<b>Period of Occurrence:</b> Land movement can occur at any time	<b>Hazard Index Ranking:</b>
	<b>Warning Time:</b>	Some slides are rapid and occur in seconds, while others take hours to weeks to develop.	<b>State Risk Ranking:</b> 9
	<b>Probability:</b>	Highly Likely	<b>Severity:</b> Localized
	<b>Type of Hazard:</b>	Natural	<b>Disaster Declarations:</b> N/A

#### HAZARD OVERVIEW

Landslides cause damage and loss of life through several processes including pushing, crushing or burying objects in their path and the damming of rivers and waterways (Haddow, Bullock, & Coppola, 2014, pg.46). This section will profile the following: landslides, mudflows, and rockfalls.

- **Landslides:** Landslides occur when areas of relatively dry rock, soil or debris move uncontrollably down a slope. Landslides may be localized or massive in size and can move at high rates of speed.
- **Mudflows:** Mudflows are water saturated rivers of earth, rock, and debris. Mudflows develop when water rapidly accumulates in the material, such as during heavy rainfall or rapid snowmelt. Mudflows can develop and move quickly, giving little to no warning.
- **Rockfalls:** Rockfalls occur when rocks or other materials detach from a slope or cliff and descend in a freefall, rolling or bouncing manner. Rockfalls can occur naturally, through faults and seismic activity, or as a product of human activity, such as blasting.

#### POSSIBLE CAUSES

Land movements can be secondary effects of heavy rainfall and earthquakes (WHO). Some of the causes attributed to land movements can include:

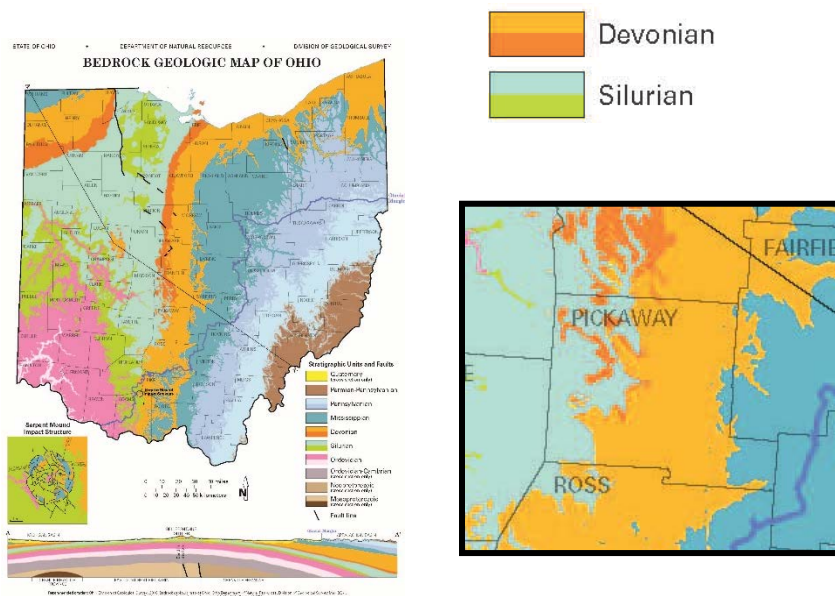
- intense deforestation and soil erosion,



- construction of human settlement in landslide-prone areas,
- roads or communications lines in mountain areas,
- building with weak foundations,
- buried pipelines,
- mining, and
- lack of understanding of landslide hazards, and lack of warning systems.

## LOCATION AND EXTENT

Pickaway County has two different types of bedrock, Devonian and Silurian. The Silurian is mainly in the western part of the county and is characterized by having mainly shale and siltstone with some sandstone and limestone and dolomite; the Silurian is in the central and eastern part of the county and has dolomite, anhydrite, gypsum, salt, and shale with some limestone. There was a period of widespread erosion between the Devonian (about 359 to 407 million years ago) and the Silurian (about 416 to 435 million years ago).



Because there is little historical data on landslides, the way to plan for the avoidance of these is to identify the areas that could potentially be vulnerable to landslides. These vulnerable locations include areas near rivers with steeper slopes, and in the area where the type of soil is unstable. Comparing the map above to the map on the next page, the medium risk of land subsidence corresponds mainly to where there is Devonian geology.



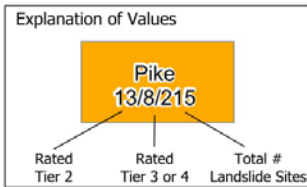
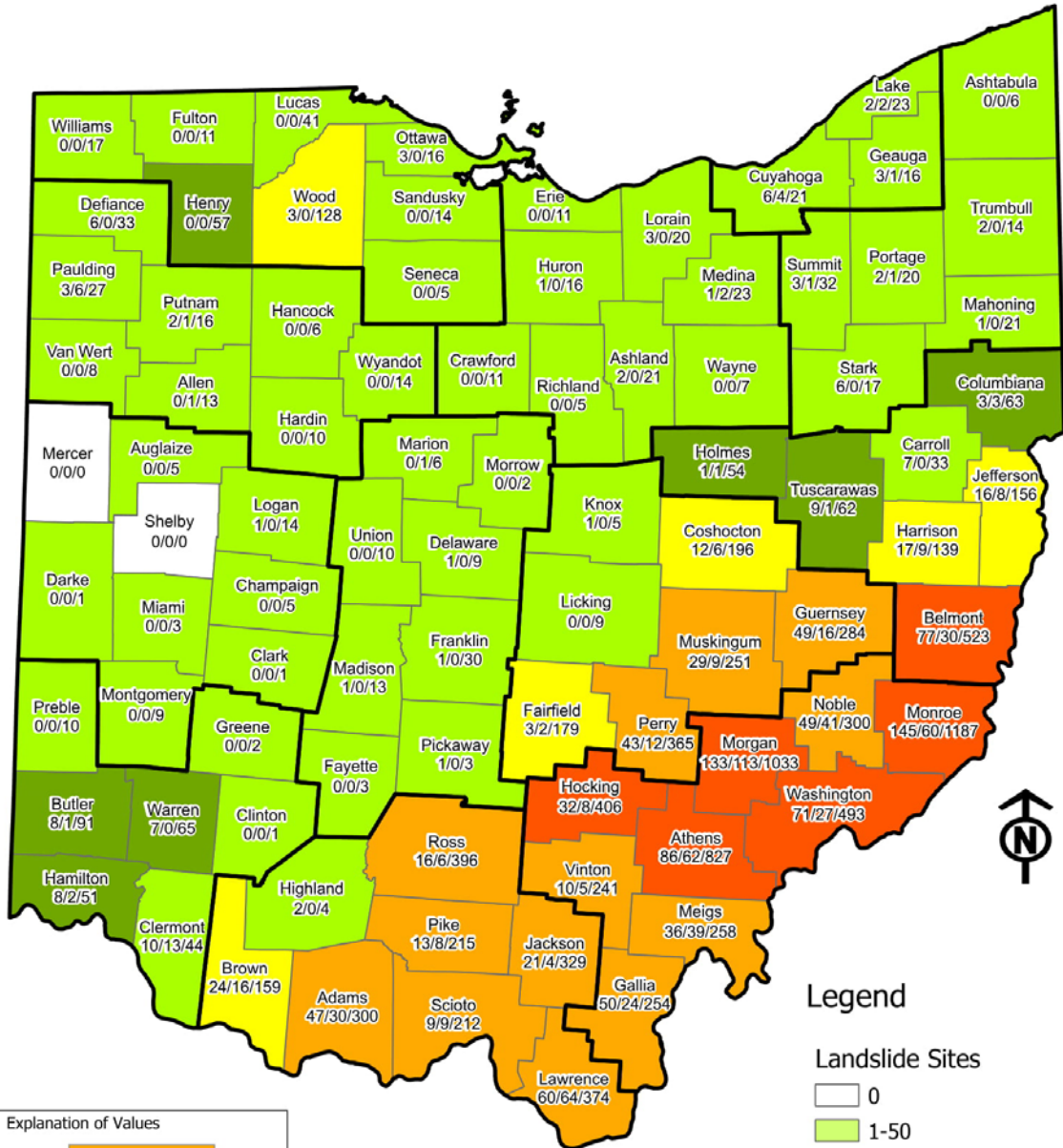
## HISTORICAL OCCURRENCES

Maps such as the one in the *State of Ohio Enhanced Hazard Mitigation Plan (2019)* show Pickaway County as having a low landslide incidence - only one and two rockslides. The maps below are from The State of Ohio Department of transportation Office of Geotechnical Engineering. The first map provides an inventory of landslides and the second an inventory of rock falls (ODOT, 2020).





Total Geohazards:  
Landslide Inventory



Legend

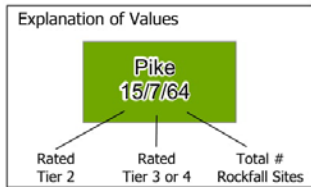
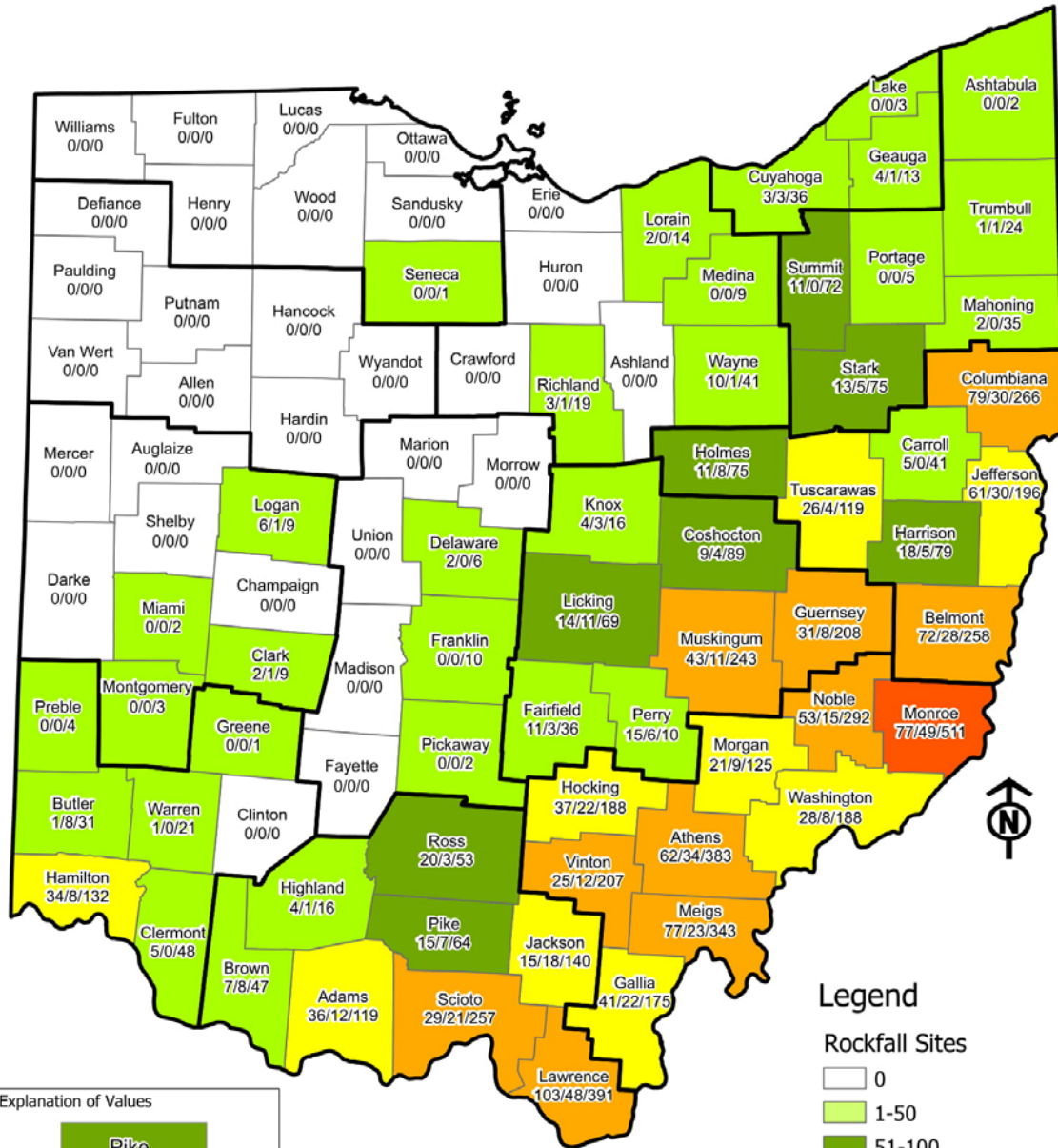
- Landslide Sites
- 0
  - 1-50
  - 51-100
  - 101-200
  - 201-400
  - Greater than 400

Created: 2/21/2020





Total Geohazards:  
Rockfall Inventory



- Legend
- Rockfall Sites
- 0
  - 1-50
  - 51-100
  - 101-200
  - 201-400
  - Greater than 400

Created: 2/21/2020



## IMPACTS AND VULNERABILITY

Direct impact of landslides includes trauma and suffocation by entrapment. Landslides usually have high mortality and few injuries. Short and long-term mental health effects are also not uncommon (WHO, 2017). Landslide morbidity is associated with untreated wounds, traumatic injuries, and disruption of water, sanitation shelter, and food supply. Those with chronic medical conditions are also of concern as loss of healthcare infrastructure, in the path of the slide, means patients will go untreated (Luber & Lemery, 2015). Although there have not been any instances of large, catastrophic landslides in Pickaway County, the potential for damage is present. Landslides can cause death, injuries, trauma, and suffocation from entrapment. Short and long-term mental health have been observed. Depending on the location, these events could cause loss or damage to homes, infrastructure, and critical facilities and block whole communities off. There is a potential for loss of property value, livestock and crops (WHO).

## LOSS AND DAMAGES

There is no data that indicates cost incurred or injuries sustained from damages caused by prior landslide or land subsidence event.

## RISK ASSESSMENT


SUBSIDENCE RISK SUMMARY			
Category	Points	Description	Notes
Frequency	2	Low	Although minor slides may occur, there are very few reports of landslides in the county.
Response	2	1 Day	There is no reports of costs incurred from slides
Onset	3	6-12 hours	Although areas with potential for landslides can be identified, due to heavy rains or flooding, a slide may occur with little warning.
Magnitude	1	Localized (Less than 10% of land area affected)	A landslide only effects the immediate area
Business	1	Less than 24 hours	There are no reports of business closures do to landslides.
Human	1	Minimum (minor injuries)	There are no reports of injuries or fatalities.
Property	1	Less than 10% of property affected	There are no reported losses from landslides in the county.
<b>Total</b>	<b>11</b>	<b>Low</b>	





## 2.0 RISK ASSESSMENT

### 2.4.8 Temperature Extremes

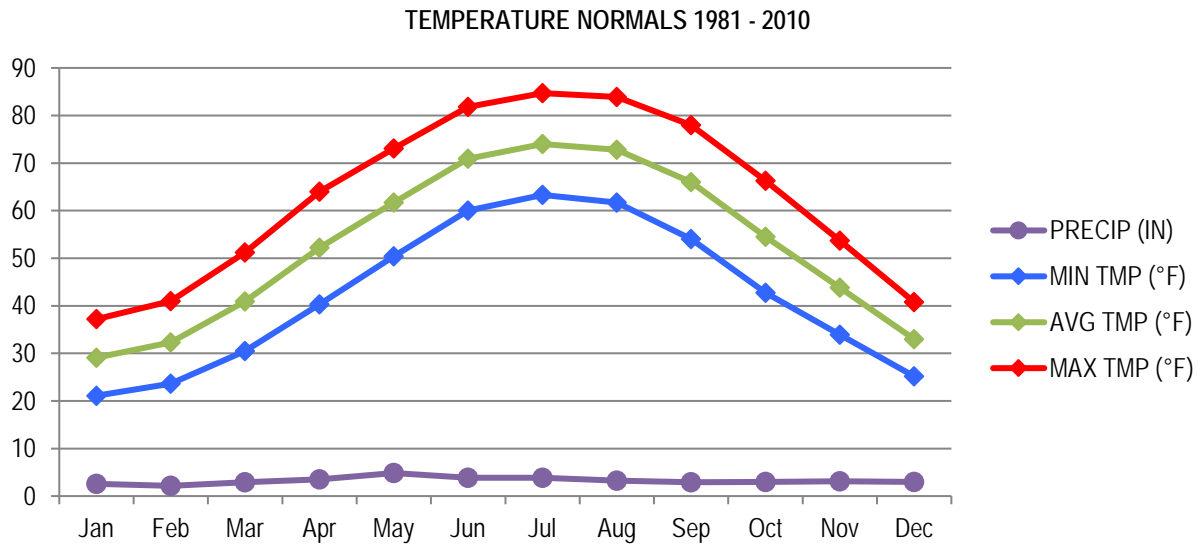
Extreme temperatures are those that are significantly (more than ten degrees Fahrenheit) higher or lower than the average temperature for a given location and time.			
 <p>Vulnerability</p> <p>HIGHEST</p> <p>HIGH</p> <p>MEDIUM</p> <p>LOW</p> <p>LOWEST</p>	Period of Occurrence:	June-September (Heat) December-February (Cold)	Hazard Index Ranking: Lowest
	Warning Time:	12-24 Hours	State Risk Ranking: Not ranked
	Probability:	Possible	Severity: Limited
	Type of Hazard:	Natural	Disaster Declarations: N/A

#### HAZARD OVERVIEW

For this profile, temperature extremes will include both hot and cold. To know what range of temperature is considered extreme for the region, it is necessary to know what the average temperatures are throughout any given year. The National Oceanic and Atmospheric Administration (NOAA) can generate reports of monthly “normals” at its different stations. The data chosen for the region is from the Circleville station. The following graphic shows the average ranges of temperature and precipitation from 1981 to 2010. Every month has a high and low average temperature in degrees Fahrenheit. Extreme temperatures would be those either 10 degrees above or below the average high or low temperatures.







### Heat

Temperatures vary widely over the course of a year, but each season has average temperature ranges associated with them. Summer and winter have, generally, the highest and lowest range of temperatures, respectively. When the temperature is consistently greater than the normal in summer, meteorologists refer to it as a heatwave, which means, “temperatures of ten or more degrees above the average high temperature persist across the geographic region for several days or weeks” (Haddow, Bullock, & Coppola, 2014, p.51). These conditions can be a contributor to drought conditions when combined with a lack of rainfall. Excessive heat has a history of being deadly. In the United States, “more than 1,500 die from exposure to excessive heat” (Haddow, Bullock, & Coppola, 2014, p.52). These conditions can also have serious impacts on crops, causing below-average harvests. Repeated years of extreme temperatures can easily cause significant economic impacts on agricultural industries.

The National Centers for Environmental Information (NCEI) tracks two types of extreme heat temperatures.

- **Heat:** A period of heat resulting from the combination of high temperatures (above normal) and relative humidity. A heat event occurs whenever heat index values meet or exceed locally/regionally established advisory thresholds, or a directly-related fatality occurs due to the heat event.
- **Excessive Heat:** Excessive heat results from a combination of high temperatures (well above normal) and high humidity. An excessive heat event occurs when heat index values meet or exceed locally/regionally established excessive heat warning thresholds



on a widespread or localized basis (National Weather Service Instruction 10-1605, 2007).

### Cold

While there is no widely accepted definition of extremely cold temperatures, periods of colder than average conditions can cause an array of negative consequences depending on their duration (Haddow, Bullock, & Coppola, 2014, p.51). Extremely cold temperatures are immediately dangerous to both humans and livestock by causing frostbite and hypothermia, which can lead to permanent injury and death. The chart on the next page shows how quickly frostbite can occur at different temperatures and wind speeds. In unprotected structures, cold temperatures can freeze water pipes causing them to burst upon thawing, leading to significant damage. Cold snaps during typically warmer weather during the growing season can damage and destroy some crops, depending on their sensitivity to temperature.

NCEI tracks two types of extreme cold temperatures.

- **Cold/Wind Chill:** Period of low temperatures or wind chill temperatures reaching or exceeding locally/regionally defined advisory (typical value is -18° F or colder) conditions, on a widespread or localized basis. There can be situations where advisory criteria are not met, but the combination of seasonably cold temperatures and low wind chill values (roughly 15° F below normal) may result in a fatality.
- **Extreme Cold/Wind Chill:** A period of extremely low temperatures or wind chill temperatures reaching or exceeding locally/regionally defined warning criteria (typical value around -35° F or colder), on a widespread or localized basis. Normally these conditions should cause significant human and/or economic impact. The polar vortex is a large area of low pressure and cold air surrounding both of the Earth's poles. It always exists near the poles, but weakens in summer and strengthens in winter. The term "vortex" refers to the counter-clockwise flow of air that helps keep the colder air near the Poles. Many times during winter in the northern hemisphere, the polar vortex will expand, sending cold air southward with the jet stream. This occurs fairly regularly during wintertime and is often associated with large outbreaks of Arctic air in the United States.

### POSSIBLE CAUSES

Weather patterns throughout the year naturally cause temperatures to rise and fall in the summer and winter months due to the inclination of the Earth towards the sun. However, the



extreme temperatures that have been experienced in the last decade are attributable to climate change.

## HISTORICAL OCCURRENCES

A search of the NCEI database from 1950 to 2019 only yielded seven events of temperature extremes as described above. Of the seven events, five have been related to heat and two to cold temperatures; these are outlined in the table below.

EXTREME TEMPERATURE EVENTS	
Event Date	Event Type
2/1/96	Cold/Wind Chill
7/20/99	Heat
6/28/12	Heat
7/1/12	Heat
1/30/19	Extreme Cold/Wind Chill
7/19/19	Excessive Heat
7/20/19	Excessive Heat

## IMPACTS & VULNERABILITY

The majority of the impacts of extreme temperatures affect the population's health rather than damage buildings. Some of the effects extreme temperatures could have on structures are minor compared to other hazards. Effects on buildings and infrastructure could include broken pipes, cracks in roads or bridges due to expansion and contraction, and power outages. In addition to impacts on health, extreme temperatures can also cause damages to transportation infrastructure, agriculture, energy, and water resources.

Extreme heat can cause a wide range of health problems or even make existing health problems worse. Some of the more mild symptoms include discomfort, skin eruptions, and heat fatigue which can lead to heat cramps, heat exhaustion, and heatstroke. Occasionally some people may require medical attention. Prolonged exposure to extreme heat can even cause death (CDC). Problems arising from prolonged exposure to the cold can include hypothermia, frostbite and non-freezing cold injuries such as chilblains and trench/immersion foot. Sunburn is also possible during extremely cold weather events (Army Public Health Center).

Although extreme temperatures affect everyone in the region, some people may be more vulnerable to their effects. For example, the homeless population could be more at risk simply for being exposed to the elements; children and the elderly population may be more susceptible to



changes in temperature as well as the poor if they cannot afford to keep cool during an extreme heat event or to stay warm during an extreme cold event.

Approximately 400 people die each year from exposure to heat, according to the Centers for Disease Control and Prevention (CDC). Our bodies dissipate heat by varying the rate and depth of blood circulation, by losing water through the skin and sweat glands, and as a last resort, by panting, when blood is heated above 98.6°F.

Sweating cools the body through evaporation. However, high relative humidity retards evaporation, robbing the body of its ability to cool itself. When heat gain exceeds the level the body can remove, body temperature begins to rise, and heat-related illnesses and disorders may develop.

The tables below describe the risks to human health relating to extreme heat and cold temperatures. Every few degrees up or down can have a great impact on health.

HEAT RISKS	
Heat Index	Possible heat disorders for people in higher-risk groups
130°F or higher	Heatstroke/sunstroke is highly likely with continued exposure.
105-130°F	Sunstroke, heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity.
90-105°F	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity.
80-90°F	Fatigue possible with prolonged exposure and/or physical activity.

COLD RISKS		
Stage	Core Temperature	Signs and Symptoms
Mild Hypothermia	99-97°F	Normal, shivering may begin.
	97-95°F	Cold sensation, goosebumps, unable to perform complex tasks with hands, shivering can be mild to severe, hands numb.
Moderate Hypothermia	95-93°F	Shivering, intense, muscles incoordination becomes apparent, movements slow and labored, stumbling pace, mild confusion, may appear alert. Use sobriety test, if unable to walk a 9 meter (30 foot) straight line, the person is hypothermic.
	93-90°F	Violent shivering persists, difficulty speaking, sluggish thinking, amnesia starts to appear, gross muscle movements sluggish, unable to use hands, frequently stumbles, difficulty speaking, signs of depression, withdrawn.
Severe Hypothermia	90-86°F	Shivering stops, exposed skin blue or puffy, muscle coordination very poor, inability to walk, confusion, incoherent/irrational behavior, but may be able to maintain posture and appearance of awareness
	86-82°F	Muscle rigidity, semiconscious, stupor, loss of awareness of others, pulse and respiration rate decrease, possible heart fibrillation.
	82-78°F	Unconscious, a heartbeat, and respiration erratic, a pulse may not be obvious.
	78-75°F	Pulmonary edema, cardiac and respiratory failure, death. Death may occur before this temperature is reached.

Source: Canadian Centre for Occupational Health and Safety



## LOCATION & EXTENT

Extreme temperatures, hot and cold, affect each jurisdiction within Pickaway County equally. Though the temperatures may vary slightly from day to day, the overall average of all the county's temperatures and susceptibility to extremes is very similar.

## LOSS & DAMAGES

NCEI does not report any damages or injuries as a result of extreme temperatures.

## RISK ASSESSMENT

The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points, and the lowest is 7.

TEMPERATURE EXTREMES RISK SUMMARY			
Category	Points	Description	Determination Method
Frequency	2	Low	Based on historical data, there have been 7 extreme temperature events over 69 years, for an average of .10 incidents per year or 1 every ten years
Response	1	Less than half a day	Extreme temperatures likely will not result in a large-scale mobilized community response.
Onset	1	Over 24 hours	Extreme temperatures are forecasted more than a day in advance and can onset slowly (over days or weeks).
Magnitude	1	Less than 10% of land area affected	Though 100% of the county's population would feel the extreme temperatures, the impacts would likely be in pockets.
Business	1	Less than 24 hours	Businesses and critical facilities would not typically be interrupted during an extreme temperature event.
Human	2	Some Injuries	As mentioned above, extreme temperatures can have adverse impacts on human health. Injuries/illnesses from extreme temperatures will be minimal.
Property	1	Less than 10% of property affected	Extreme temperatures would not adversely impact property.
<b>Total</b>	<b>9</b>	<b>Lowest</b>	



## 2.0 RISK ASSESSMENT

### 2.4.9 Tornado

Tornadoes are violently-rotating columns of air that touch the ground and are usually attached to the base of a thunderstorm.			
	<b>Vulnerability</b>	<b>Period of Occurrence:</b> At any time, typically when warm and cold air temperatures are present together	<b>Hazard Index Ranking:</b> Medium
	HIGH	<b>Warning Time:</b> Less than 6 hours	<b>State Risk Ranking:</b> 4-High
	MEDIUM	<b>Probability:</b> Likely	<b>Severity:</b> Critical
	LOW	<b>Type of Hazard:</b> Natural	<b>Disaster Declarations:</b> DR-266 (1969) DR-738 (1985) DR-1656 (2006)
LOWEST			

#### HAZARD OVERVIEW

A tornado is a violently rotating column of air extending from a thunderstorm to the ground. Normally thunderstorms and associated tornadoes develop in warm, moist air in advance of strong eastward-moving cold fronts in late winter and early spring. Tornadoes can also occur along a “dryline” which separates very warm, moist air to the east from hot, dry air to the west. Both of these scenarios are common in the Central Plains. Another way that tornadoes can be created occurs when warm moist air flows upslope. Under the right temperature and moisture conditions, intense thunderstorms can produce tornadoes in higher terrain. Tornadoes can occur in every state, although the mid-west states have by far the greatest potential for this type of event. Tornadoes are ranked by intensity using the Enhanced Fujita (designated with ‘EF’) Scale, replacing the original Fujita Scale (designated with ‘F’) devised by Dr. Theodore Fujita at the University of Chicago in 1971.

ENHANCED FUJITA SCALE		
#	3-Second Gust (mph)	Examples of Possible Damage
EF-0	45-78	<b>Light Damage.</b> Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage to signboards.
EF-1	79-117	<b>Moderate Damage.</b> Surface peeled off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off roads.
EF-2	118-161	<b>Considerable Damage.</b> Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
EF-3	162-209	<b>Severe Damage.</b> Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; cars lifted off the ground and thrown.



ENHANCED FUJITA SCALE		
#	3-Second Gust (mph)	Examples of Possible Damage
EF-4	210-261	Devastating Damage. Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
EF-5	262-317	Incredible Damage. Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100-yards; trees debarked; incredible phenomena will occur.
Fujita Scale: F0: 40-72 mph, F1: 73-112 mph, F2: 113-157 mph, F3: 158-206 mph, F4: 207-260 mph, F5: 261-318 mph		

FEMA’s wind zone map of the United States classifies the territory into wind zones. As seen in the graphic to the right, the whole state of Ohio, and consequently Pickaway County, are in Zone IV, which means that buildings should be designed for 3-second gusts of up to 250 mph.



### POSSIBLE CAUSES

The causes of thunderstorm strength winds and tornadoes are thunderstorms. Wind is caused by differences in atmospheric pressure; when there is a difference in pressure, air moves higher, resulting in wind. See [Section 2.4.6 Severe Thunderstorms](#) for more information.

### LOCATION AND EXTENT

In general, all areas in the county are equally at risk of tornadoes even though they are localized events. Wind events typically span several counties and states at the same time, for varying durations.

### HISTORICAL OCCURRENCES

The table below outlines the tornadoes that have occurred in Pickaway County since 1958, according to the NCEI database. There have been 22 tornadoes ranging from F0 to F4 magnitude and EF0 to EF1, more recently.





TORNADO EVENTS IN PICKAWAY COUNTY			
Event Date	Magnitude	Direct Injuries	Property Damage
5/22/58	F2	3	\$250,000.00
4/19/63	F1	1	\$25,000.00
6/5/63	F2	0	\$25,000.00
4/11/65	F1	9	\$250,000.00
9/3/70	F3	1	\$25,000.00
4/3/74	F1	7	\$25,000.00
7/12/80	F1	0	\$250,000.00
5/2/83	F1	0	\$250,000.00
6/30/83	F1	0	\$2,500.00
3/10/86	F2	10	\$2,500,000.00
7/12/89	F0	0	\$-
10/13/99	F3	6	\$4,000,000.00
9/23/00	F0	0	\$-
6/2/01	F0	0	\$50,000.00
8/28/06	F0	0	\$250,000.00
8/28/06	F0	0	\$1,000.00
10/11/06	F2	0	\$60,000.00
9/16/10	EF1	0	\$30,000.00
10/26/10	EF0	0	\$75,000.00
4/20/11	EF1	0	\$75,000.00
5/27/19	EF1	0	\$1,000,000.00
5/28/19	EF1	0	\$1,500,000.00
<b>Total</b>		<b>37</b>	<b>\$10,643,500.00</b>

The map below shows areas of historical tornado touchdowns and tornado paths.






## PICKAWAY COUNTY HAZARD MITIGATION PLAN

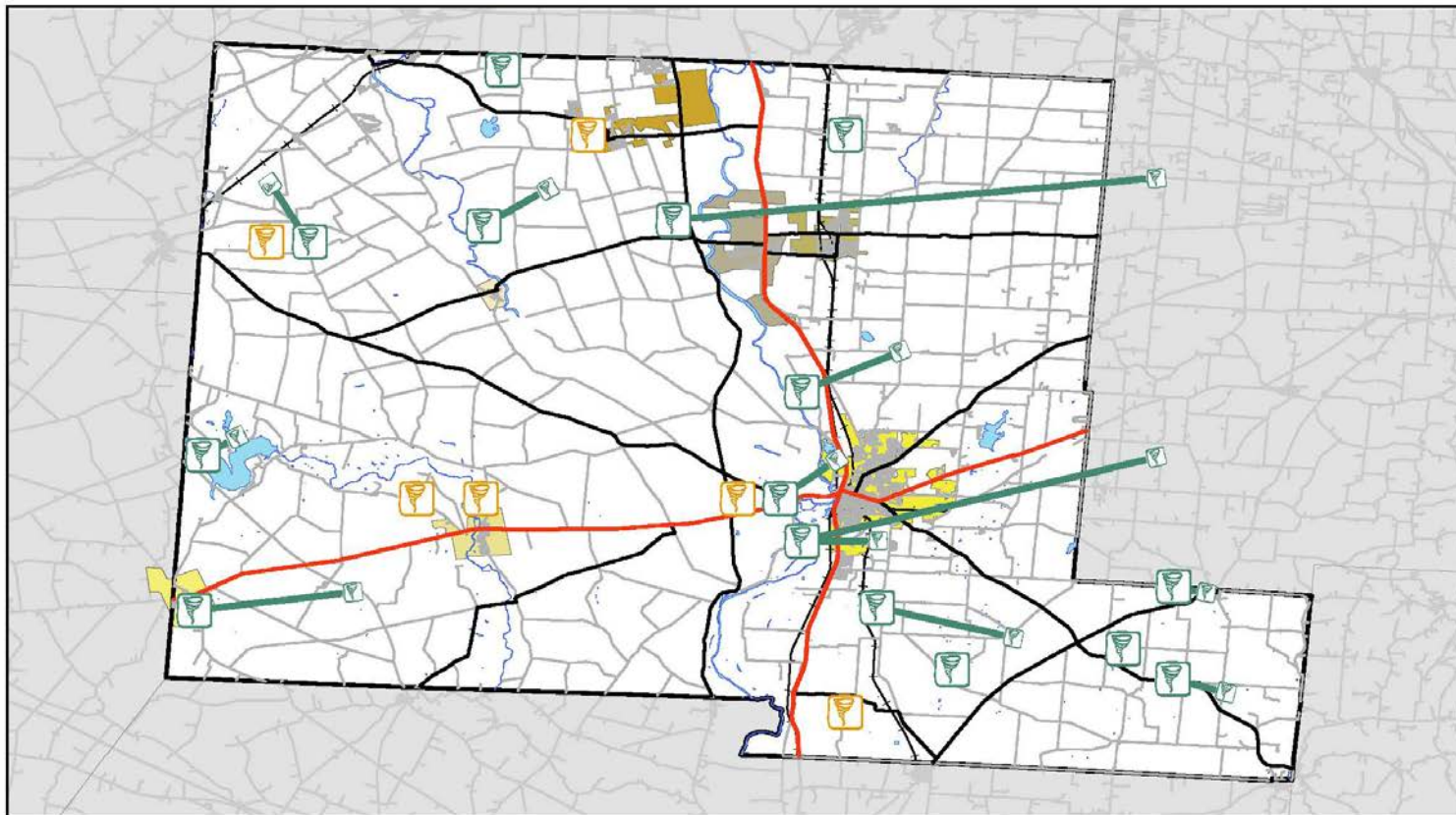
### Pickaway County Historic Tornado Events

Data Source(s):  
NOAA NCEI Storm Events Database

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



-  Tornado
-  Tornado Path (Where Applicable)
-  Tornado (Touchdowns Only)



## IMPACTS AND VULNERABILITY

While tornadoes are relatively short-lived in duration, they are intensely focused, making them one of the most destructive forces in nature. As previously discussed above, Pickaway County is located in the “Zone IV” wind zone. This wind zone places Pickaway County in a category that could experience severe tornadoes. Such winds would cause significant damage to structures, such as roofs torn off frame houses, mobile homes demolished, and boxcars pushed over.

Tornado winds can cause a variety of secondary, or cascading, hazard events. For instance, the wind may blow limbs from trees down, knocking out electric power or blocking roadways. Wind often results in damages to roofs and other home finishings (such as siding, etc.). Damage and loss of life could be severe and overwhelm the ability of local responders to address the emergency.

It is impossible to predict where tornadoes will touch down in the future or what path they will take. Therefore, all assets in the county are at risk of a potential tornado. For a full list of assets, refer to section [1.2.12 Asset Inventory](#).

## LOSS AND DAMAGES

The NCEI database keeps records of the losses and damages due to tornado events; according to the data, there has been \$10,643,500.00 in damages from the 22 tornadoes in Pickaway County. The costliest was in October of 1999; this one cost \$4 million. The tornado that caused the most injuries (10) was in March of 1986. On average, the 22 tornados have caused approximately \$484,000 in damage per event.

## RISK ASSESSMENT

The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points, and the lowest is 7.



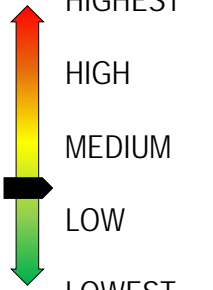
RISK CALCULATION			
Category	Points	Description	Determination Method
Frequency	4	High	NOAA has listed 22 tornado 1956 or approximately .58 incidents per year.
Response	3	One week	Regular county operations would likely resume within the week.
Onset	4	Less than 6 hours	Tornadoes are sporadic and cannot be predicted effectively.
Magnitude	1	Limited	Less than 10% of land area affected. Though destructive, a tornado would not affect a significant portion of the county. Planners utilized the tornado scenario for this category because it typically results in the most damage.
Business	2	One week	Typical business activity should resume within the week for those affected by tornadoes.
Human	3	Multipile injuries	While most historical tornadoes did not have injuries, of those that did several had multiple injuries.
Property	1	Less than 10% of property affected	Tornadoes are localized events, and a single event would not affect more than 10% of property in the county.
<b>Total</b>	<b>18</b>	<b>Medium</b>	

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## 2.0 RISK ASSESSMENT

### 2.4.10 Wildfire

A wildfire is an uncontrolled fire that burns an area of combustible vegetation.			
	<b>Vulnerability</b> HIGHEST HIGH MEDIUM LOW LOWEST	<b>Period of Occurrence:</b> Wildfires can occur at any time but are most prevalent in spring and fall months	<b>Hazard Index Ranking:</b> Low
	<b>Warning Time:</b>	None	<b>State Risk Ranking:</b> 11
	<b>Probability:</b>	Likely	<b>Severity:</b> Limited
	<b>Type of Hazard:</b>	Natural	<b>Disaster Declarations:</b> N/A

#### HAZARD OVERVIEW

A wildfire is an unplanned, unwanted fire burning in a natural area, such as a forest, grassland, or prairie. As building development expands, homes and businesses may encroach areas susceptible to wildfires. Wildfires can cause death or injury to people and animals, damage or destroy structures, and disrupt community services, including transportation, natural gas, power, communications, etc. (USDHS, n.d.). There are three main types of wildfires listed below (Borealforest.org, n.d.).

- **Smoldering Fire:** Fire that emits smoke but has no flame and is rarely self-sustained.
- **Flaming Combustion:** Flames are present, and charcoal forms in the absence of oxygen.
- **Glowing Combustion:** A later stage of fire with a slower rate of combustion and blue flame.

Officials may also classify wildfires by the part of the forest in which they occur as listed below.

- **Ground Fires:** Fires that occur on the ground, often below the leaves.
- **Surface Fires:** Fires that occur on the surface of the forest up to 1.3 meters high.
- **Crown Fires:** The most dangerous fire that can spread the fastest. They occur in the tops of trees. This type of fire can depend on surface fires to burn the crowns, be active



in which they occur at the same rate as a surface fire, or be the most destructive, independent fire that can jump from crown to crown.

According to the National Park Service, humans cause approximately 90% of wildfires in the U.S. Human-caused fires result from unattended campfires, burning debris or trash, not adequately extinguishing and discarding cigarettes, and intentional arson. Carelessness by individuals can quickly ignite a wooded area and spread before the fire dies. Nature can also impact forested regions; lightning is notorious for creating wildfires. Lightning can come in two forms: hot and cold. Cold lightning is an intense electrical current that has a short duration. Hot lightning has less electrical current but occurs for an extended period. Hot lightning bolts usually start wildfires due to the length of the flash that occurs. The flash connects with dry areas long enough to ignite available fuel (USDHS, n.d.).

Wildfires need three elements to occur: fuel, oxygen, and heat. Wildfires require flammable material to fuel flame. These materials come in different forms such as trees, grasses, brush, and sometimes structures (i.e., homes or buildings). Air supplies the oxygen that fire requires to burn. Heat sources help ignite wildfires when fuel temperatures rise to a hot enough state that it ignites (National Geographic, 2018).

#### LOCATION AND EXTENT

Each year in Ohio, an average of 1,000 wildfires burn 4,000 to 6,000 acres of forest and grassland. Ohio's wildfire seasons are primarily in the spring (March, April, and May) before vegetation has "greened up" and in the fall (October and November) when leaf drop occurs. During these times, cured vegetation is susceptible to burning, particularly when conditions are warm and windy, and humidity is low.

The National Fire Danger Rating System is a system that allows fire officials to estimate current fire danger for a given area based on available fuels, weather, topography, and risks.

- **Low:** When the fire danger is "low," fuels do not ignite easily, and a more intense heat source is needed to start fires. Dry grasslands may burn easily, but wood fires will spread slowly, and control of fires is typically not difficult.
- **Moderate:** When the fire danger is "moderate," fires can start from accidental causes, but the number of fire starts is generally low. If a fire does start on open, dry grassland, it can spread quickly on windy days. Most wood fires spread slowly or moderately.



Average fire intensity will be moderate, except in heavy concentrations of fuel. Fires are still not likely to become serious and are typically easy to control.

- **High:** When fire danger is “high,” fires can start easily from most fuel sources. Unattended campfires and brush fires are likely to escape and can spread easily. Fires can become serious and difficult to control unless extinguished when they are still small.
- **Very High:** When fire danger is “very high,” fires will start easily from most fuel sources, spread rapidly, and quickly increase in intensity following ignition. These fires can be difficult to control and will often become much larger and longer-lasting than fires in lower categories.
- **Extreme:** When fire danger reaches “extreme,” fires of all types can start quickly and burn intensely. All fires are potentially serious and can spread quickly with intense burning. Small fires become larger much faster than at the “very high” level. Long-distance fire spotting is likely. These fires can become dangerous and often last for several days.

#### HISTORICAL OCCURRENCES

Although county-level data is not available for wildfires, data is available for the State of Ohio. The following table summarizes the data presented in the historical year-end fire statistics from the National Interagency Fire Center (2019). As the numbers indicate, even though there are more wildland fires, fewer acres burn compared to prescribed-burn acreage.

OHIO WILDLAND AND PRESCRIBED FIRES, 2009-2018				
Year	Wildland		Prescribed	
	Fires	Acres	Fires	Acres
2009	1,164	10,962	15	4,487
2010	571	4,218	16	1,927
2011	246	1,203	4	1,476
2012	309	1,250	11	1,617
2013	31	152	3	1,789
2014	63	684	7	3,031
2015	69	548	5	2,328
2016	410	1,116	218	4,652
2017	68	733	70	2,308
2018	67	337	N/A	N/A
<b>TOTALS</b>	<b>2,998</b>	<b>21,203</b>	<b>349</b>	<b>23,615</b>





## IMPACTS AND VULNERABILITY

Wildfires can cause severe damage to land, property, and human health. Secondary effects of wildfires include erosion, landslides, the introduction of invasive species, and changes in water quality. Additionally, smoke and other emissions contain pollutants that can cause significant health problems.

Wildfires' effects on climate and air quality can be significant. Fires release large amounts of carbon dioxide, black carbon, brown carbon, and ozone precursors into the atmosphere. These affect radiation, clouds, and climate on regional and global scales. Wildfires also release substantial amounts of volatile and semi-volatile organic materials and nitrogen dioxide that form ozone and organic particulate matter. Direct emission of these pollutants affects first responders and residents, and as air travels, harmful exposure can reach populations far from the wildfires.

## LOSS AND DAMAGES

For every acre burned nationally, firefighters incur an average of \$203 worth of suppression costs (based on federal agency expenditures- i.e., forest service, department of interior agencies, etc.) per acre burned (National Interagency Fire Center, 2019).

## RISK ASSESSMENT

This section summarizes the risk to Pickaway County from wildfire. The following map image graphically depicts potential risk areas in Pickaway County.



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

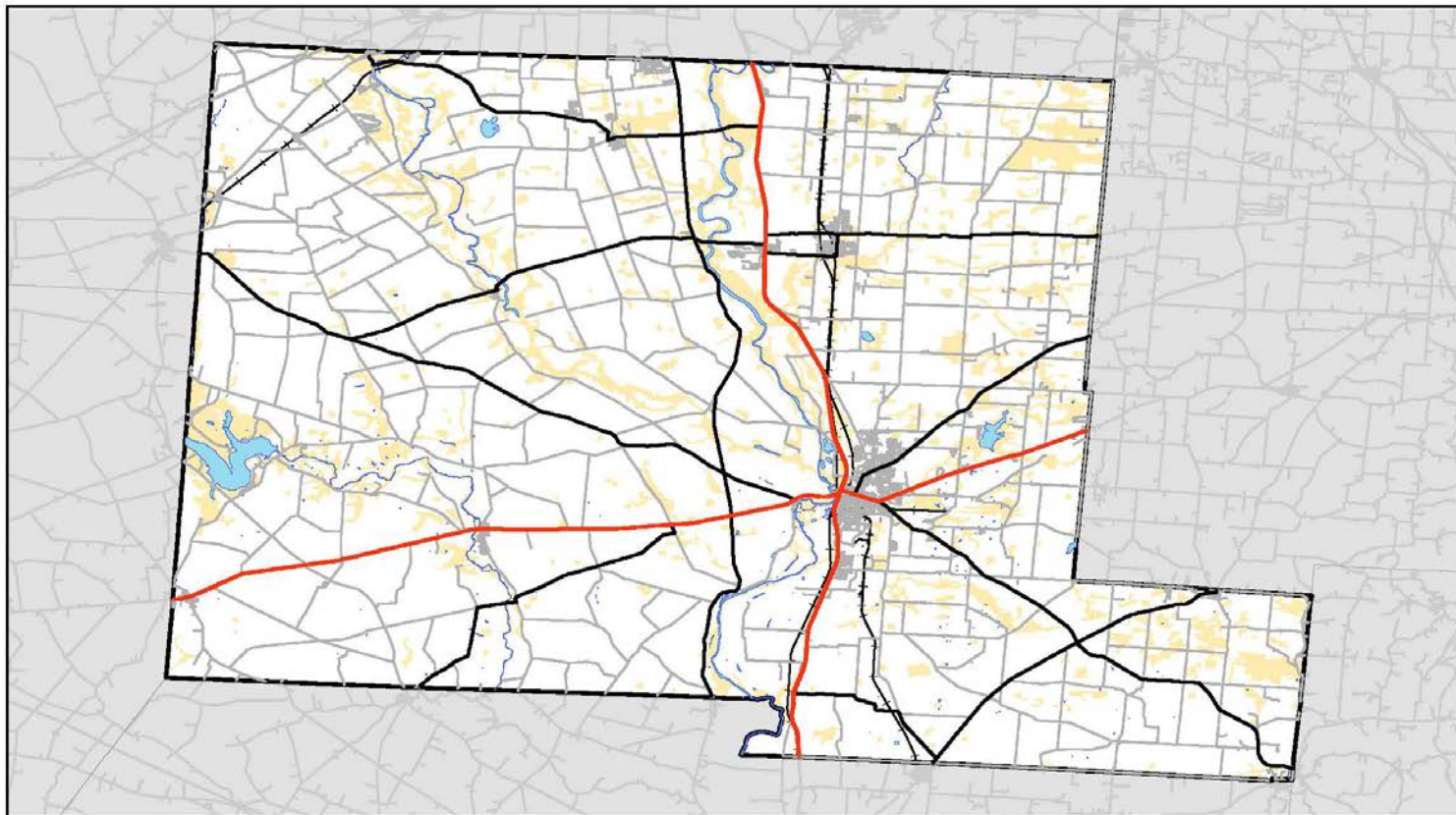
### Wildfire Risk Areas

Data Source(s):  
ODNR, USGS

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



Wildfire Risk Areas  
(Land Cover =  
Deciduous Forest,  
Evergreen Forest,  
Urban/Rec  
Grasses)



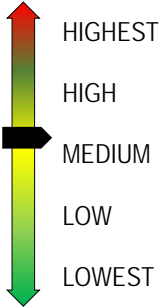
The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points, and the lowest is 7.

WILDFIRE RISK SUMMARY			
Category	Points	Description	Determination Method
Frequency	2	Low	Wildfires in Pickaway County are rare. There is precedent for them, though none have reached a significant level since 1997.
Response	2	One day	Wildfires in the region are typically small and easily-contained.
Onset	4	Less than 6 hours	Officials can easily predict wildfire conditions, but fires themselves occur with no notice.
Magnitude	1	Less than 10% of land area affected	The average wildfire burns 3.27 acres, which is substantially less than 10% of Pickaway County's land area.
Business	1	Less than 24 hours	Most wildfires in Pickaway County are small and would not affect the local economy.
Human	1	Minor injuries	Generally, the risk of injury or death due to wildfire is low. First responders to the event may experience adverse health effects.
Property	1	Less than 10% of property affected	The average wildfire in Pickaway County would burn less than 10% of the county's land area. By proxy, wildfires would impact less than 10% of the property in the county.
<b>Total</b>	<b>12</b>	<b>Low</b>	



## 2.0 RISK ASSESSMENT

### 2.4.11 Winter Storm

	Winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation, and can range from moderate snowfall or ice events to blizzards that last for several days.			
	Period of Occurrence:	Winter storms occur during cold months, typically November to February	Hazard Index Ranking:	Medium
	Warning Time:	More than 24 hours	State Risk Ranking:	3.1- High
	Type of Hazard:	Natural	Disaster Declarations:	

#### HAZARD OVERVIEW

During the winter, there are many instances of cold weather, snow, and storms. The NCEI database records events that relate to winter such as blizzards, heavy snow, ice storms, winter storms, and winter weather. However, this profile considers only those winter storms that are damaging enough to be considered *severe*; these include blizzards, ice storms, and winter storms.

- Blizzards:** Blizzards are severe winter storms that have low visibilities, also known as whiteouts, for an extended period of time due to high winds blowing falling snow or snow on the ground (ground blizzards) (Keller, DeVecchio, 2015). Ground blizzards are preceded by unseasonably warm air, which can cause people to let their guard down. People may venture outside without proper winter clothing. This relatively warm weather does not last long. The ground blizzard occurs when an Arctic cold front moves through the region, causing temperatures to drop and winds to increase, often reaching gusts of 50 to 60 mph. If there are several inches of deep fresh snow on the ground, this strong wind will quickly pick up the snow and create whiteout conditions (NWS, n.d.). In the U.S. storms that produce blizzards typically come from the North Pacific and come onto land along the west coast. The different routes these storms can take are called storm tracks; storm tracks are named for geographic origin or the direction of the prevailing winds (e.g., Alberta Clipper, and Nor'easter). Sustained wind or frequent gusts to 35 mpg or greater and considerable



- falling and/or blowing snow, reducing visibility to less than ¼ mile are the conditions for defining a blizzard (NWS & FEMA, 2001).
- **Alberta Clippers:** Alberta Clippers are winter “storms that often form over the providence of Alberta, Canada, east of the Rocky Mountains” (Rice, 2015). Typically, this type of storm moves quickly to the southeast across the northern Plains and finally to the Atlantic Coast. These storms usually are drier and have less snow but extremely cold temperatures.
  - **Nor’easter:** A Nor’easter is a storm along the East Coast of the U.S., so-called because the winds over the coastal area are generally progressing northeastward and typically attain maximum intensity near New England and the Maritime Provinces of Canada. These storms may occur at any time of year but are most frequent and most violent between September and April. They nearly always bring precipitation in the form of heavy rain or snow, as well as winds of gale force, rough seas, and, occasionally, coastal flooding to the affected regions. The warm waters of the Gulf Stream help keep the coastal waters relatively mild during the winter, which in turn helps warm the cold winter air over the water. This difference in temperature between the warm air over the water and cold Arctic air over the land is the fuel that feeds Nor’easters (NWS, n.d.).
  - **Ice Storms:** Ice storms are prolonged periods of freezing rain where ice can accumulate on cold surfaces (Keller, DeVecchio, 2015). The NWS records these events when ice accretion meets or exceeds locally/regionally defined warning criteria (typical value is 1/4 or 1/2 inch or more) (NWS, 2016).
  - **Winter Storms:** The NWS (2016) considers a winter storm a winter weather event that has more than one significant hazard (i.e., heavy snow and blowing snow; snow and ice; snow and sleet; sleet and ice; or snow, sleet, and ice) and meets or exceeds locally/regionally defined 12 and/or 24-hour warning criteria for at least one of the precipitation elements.

The Weather Channel (TWC) has named some severe winter storms, similar to the naming of hurricanes, since 2012. However, the National Weather Service (NWS) does not officially name winter storms and issued a statement requesting their offices and other news channels to refrain from naming storms (Panovich, 2012). The naming of hurricanes makes sense because they are well-defined storms, which follow a path that can be tracked and



predicted. Hurricanes affect a specific area of impact in all four quadrants, located around the eye. By contrast, winter storms are often erratic, affecting different areas unevenly; they often develop, dissipate, and reform with two to three centers, often delivering snow in only one quadrant, while places not too far away from a blizzard may experience rain or fog, or nothing at all. As a result, the public will not know what action to take when there is a "named" storm or may take the wrong action (AccuWeather, 2012).

NORTHEAST SNOWFALL IMPACT SCALE (NESIS)		
Category	NESIS Value	Description
1	1-2.499	Notable
2	2.5-3.99	Significant
3	4-5.99	Major
4	6-9.99	Crippling
5	10.0+	Extreme

While the Fujita and Saffir-Simpson Scales characterize tornadoes and hurricanes, respectively, there is no widely used scale to classify snowstorms. Paul

Kocin and Louis Uccellini of the National Weather Service developed the Northeast Snowfall Impact Scale (NESIS) that characterizes and ranks high-impact Northeast snowstorms. These storms have large areas of 10-inch snowfall accumulations and greater. The index differs from other meteorological indices in that it uses population information in addition to meteorological measurements. Thus, NESIS indicates a storm's societal impacts. This scale was developed because of the impact Northeast snowstorms can have on the rest of the country in terms of transportation and economic impact.

NESIS scores are a function of the area affected by the snowstorm, the amount of snow, and the number of people living in the path of the storm. The aerial distribution of snowfall and population information are combined in an equation that calculates a NESIS score, which varies from around one for smaller storms to over ten for extreme storms. The raw score is then converted into one of the five NESIS categories (NOAA, n.d.).

## POSSIBLE CAUSES

In the winter months, weather patterns continue throughout the area; these can generate storms. However, three elements must be present to generate a winter storm (NSSL, n.d.).

- **Cold Air:** Below freezing temperatures in the clouds and near the ground are necessary to make snow and/or ice.
- **Lift:** Something to raise the moist air to form clouds and cause precipitation. An example of lift is warm air colliding with cold air and being forced to rise over the cold dome. The boundary between the warm and cold air masses is called a front. Another example of lift is air flowing up a mountainside.



- **Moisture:** To form clouds and precipitation. Air blowing across a body of water, such as a large lake or the ocean, is an excellent source of moisture.

## LOCATION AND EXTENT

Generally, severe winter weather will affect all counties across the region very similarly. Winter weather can encompass several jurisdictions, counties, and states at the same time for varying durations and severity.

## HISTORICAL OCCURRENCES

The NCEI database does not list winter events prior to 1996. However, since 1996, there have been 35 occurrences of ice storms and winter storms in Pickaway County. No blizzard events were recorded.

WINTER EVENTS (1996 – 2019)			
Event Date	Event Type	Event Date	Event Type
1/6/96	Winter Storm	1/20/12	Winter Storm
3/6/96	Ice Storm	12/28/12	Winter Storm
3/19/96	Winter Storm	3/5/13	Winter Storm
1/24/97	Ice Storm	12/6/13	Winter Storm
1/1/99	Winter Storm	1/2/14	Winter Storm
1/7/99	Winter Storm	2/4/14	Winter Storm
1/13/99	Winter Storm	2/14/14	Winter Storm
12/13/00	Ice Storm	11/16/14	Winter Storm
2/15/03	Winter Storm	1/5/15	Winter Storm
1/25/04	Winter Storm	2/21/15	Winter Storm
3/16/04	Winter Storm	3/4/15	Winter Storm
12/22/04	Winter Storm	2/8/16	Winter Storm
1/22/05	Winter Storm	1/12/18	Winter Storm
2/13/07	Ice Storm	2/6/18	Winter Storm
2/12/08	Winter Storm	11/14/18	Ice Storm
2/21/08	Winter Storm	1/12/19	Winter Storm
3/7/08	Winter Storm	1/19/19	Winter Storm
12/16/10	Winter Storm		

## IMPACTS AND VULNERABILITY

According to the NSSL (n.d.), most deaths from winter storms are not directly related to the storm itself; people die in traffic accidents on icy roads, of heart attacks while shoveling snow, or of hypothermia from prolonged exposure to cold. During severe winter storms, everyone is potentially at risk; the actual threat depends on specific situations. Recent observations show that of injuries related to ice and snow, about 70% occur in automobiles, about 25% are people caught out in the storm, and the majority of victims are males over 40





years old. Of injuries related to exposure to cold, 50% are people over 60 years old, over 75% are males, and about 20% occur in the home.

Another reason these blizzards are dangerous is the cold temperatures that follow behind the Arctic front. Anyone stranded in their vehicle or forced to walk outside is at risk of frostbite or hypothermia (NWS, n.d.).

Heavy accumulations of ice can bring down trees and topple utility poles and communication towers. Ice can disrupt communications and power for days, while utility companies repair extensive damage. Even small accumulations of ice can be extremely dangerous to motorists and pedestrians. Bridges and overpasses are particularly dangerous because they freeze before other surfaces (NWS, n.d.).

#### LOSS AND DAMAGES

According to NCEI data, the storms described in the historical occurrences have caused damage of \$500,000; however, data is only available for one event, which does not give an accurate depiction of the possible costs, loss, or damage that winter events can incur. The database does not report any injuries or fatalities directly related to any of the events. The State of Ohio Enhanced Hazard Mitigation Plan (2019), estimates that Pickaway County has a countywide annual damage of \$73,330.58.

#### RISK ASSESSMENT

The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points, and the lowest is 7.



<b>DROUGHT RISK SUMMARY</b>			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Determination Method</i>
Frequency	5	Excessive	NOAA has listed 35 severe winter storms since 1996, for an average of 1.52 events per year. On any given year, severe winter weather is likely
Response	3	One week	Clearing snow and ice from infrastructures, such as roads and power lines, could take up to a week.
Onset	2	12-24 hours	Winter storms can be predicted 24 hours or more in advance, leaving ample time to prepare; however, most include accurate warnings between 12 and 24 hours before a storm.
Magnitude	4	More than 50% of land area	Winter weather is not an isolated event, and would likely affect most of Pickaway County and surrounding counties.
Business	1	Less than 24 hours	Businesses would likely remain open during winter weather. Early closures or late openings due to ice or snow could occur.
Human	1	Minimum	Winter weather hasn't caused any injuries or deaths in Pickaway County.
Property	4	More than 50% affected	More than 50% of the property in the county could be affected by severe winter weather. As stated in the magnitude section, severe winter weather is not an isolated event and would affect the better part of Pickaway and surrounding counties.
<b>Total</b>	<b>20</b>	<b>Medium</b>	



## 2.0 RISK ASSESSMENT

### 2.5 Technological Hazards

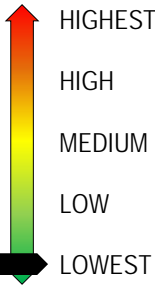
“Technological hazards are an inevitable product of technological innovation and human development. These hazards, which can occur after the failure of existing technology, tend to be much less understood than their natural counterparts and are increasing in number as the scope and dependence on technology expand” (Haddow, Bullock & Coppola, 2017). This subsection includes the following technological hazards.

- Dam or Levee Failure
- Hazardous Materials Incident
- Transportation Incidents



## 2.0 RISK ASSESSMENT

### 2.5.1 Dam and Levee Failure

A dam is a barrier built across a waterway to control the flow or raise the water level. A dam failure occurs when the barrier constructed does not obstruct or restrain water as designed, which can rapidly result in a large area of completely inundated land.			
	<b>Vulnerability</b>	<b>Period of Occurrence:</b>	At any time, typically after a period of prolonged precipitation causing damages or a prolonged period of drought causing erosion
	<b>Hazard Index Ranking:</b>	<b>Warning Time:</b>	Over 24 hours
	<b>State Risk Ranking:</b>	<b>Probability:</b>	Highly unlikely
	<b>Severity:</b>	<b>Type of Hazard:</b>	Technological
		<b>Hazard Index Ranking:</b>	Lowest
		<b>State Risk Ranking:</b>	3-Medium
		<b>Severity:</b>	Limited
		<b>Disaster Declarations:</b>	None

#### HAZARD OVERVIEW

There are approximately 90,580 dams in the United States, the majority of which are privately owned, state and local authorities, public utilities, and federal agencies own others. Currently, the average age of the dams in the country is 56 years. The American Society of Civil Engineers calculates the status of these dams and generates a grade; the grade of the U.S. dams is 'D,' and 17% of all dams are classified as high-hazard (ASCE, 2017).

The benefits of dams and levees are numerous: they provide water for drinking, navigation, and agricultural irrigation, and save lives by preventing or reducing floods. Dams and levees are human-made structures designed to obstruct or restrain waters that may cause flooding downstream. These structures are generally made with concrete or earthen materials.

In terms of emergency management, dam failures are categorized as either *sunny day failures* or *rainy-day failures*. *Sunny day failures* occur during a non-flooding situation with the reservoir near normal pool level. *Rainy day failures* usually involve periods of rainfall and flooding and can exacerbate inadequate spillway capacity. Improper design of a spillway or operation of gates during high flows can lead to excessive water pressure and subsequent failure as well. Even though both types of failures can be disastrous, it can be assumed that a *sunny day failure* would be more catastrophic due to its unanticipated occurrence and the lack of time to warn residents downstream (State of Ohio, 2014 p3 184).



According to Ohio Administrative Code Rule 1501:21-13-01, dams fall under one of four classes (ODNR, n.d.). For impacts from each dam class, see the impacts and vulnerability section below.

- **Class I:** Dams having a total storage volume greater than 5,000 acre-feet or a height of greater than 60 feet.
- **Class II:** Dams having a total storage volume greater than 500 acre-feet or a height of greater than 40 feet.
- **Class III:** Dams having a total storage volume greater than 50 acre-feet or a height of greater than 25 feet.
- **Class IV (also noted as ‘Other’):** Dams having a total storage volume of 50 acre-feet or less or a height of 25 feet or less. Class IV dams are exempt from permit requirements.

FEMA (2004) classifies dams according to their hazard potential into low, significant, and high.

- **Low Hazard Potential:** Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner’s property
- **Significant Hazard Potential:** Dams assigned the significant hazard potential classification are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.
- **High Hazard Potential:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

## POSSIBLE CAUSES

There are three types of failures of earthen dams: overtopping, seepage or piping, and structural failure (ODNR, n.d.).

- **Overtopping** failures result from the erosive action of water on the embankment. Erosion is due to uncontrolled flow of water over, around, and adjacent to the dam. Earthen embankments are not designed to be overtopped and therefore are



- particularly susceptible to erosion. Once erosion has begun during overtopping, it is almost impossible to stop. Overtopping causes 34% of dam failures.
- **Structural** failures can occur in either the embankment or the appurtenances. Structural failure of a spillway, lake drain, or other appurtenance may lead to failure of the embankment. Cracking, settlement, and slides are the more common signs of structural failure of embankments. Large cracks in an appurtenance or the embankment, major settlement, and major slides will require emergency measures to ensure safety, especially if the problems occur suddenly. Foundation defects and slope instability are the cause of 30% of dam failures.
  - All earthen dams have **seepage** resulting from water percolating slowly through the dam and its foundation. Seepage must, however, in both velocity and quantity. If uncontrolled, it can progressively erode soil from the embankment or its foundation, resulting in the rapid failure of the dam. Erosion of the soil begins at the downstream side of the embankment, either in the dam proper or the foundation, progressively works toward the reservoir, and eventually develops a “pipe” or direct conduit into the reservoir. Seepage can cause slope failure by creating high pressures in the soil pores or by saturating the slope. Seepage or piping causes 20% of dam failures.

The three types of failures are often interrelated in a complex manner. For example, uncontrolled seepage may weaken the soil and lead to a structural failure. A structural failure may shorten the seepage path and lead to a piping failure. Surface erosion may result in structural failure, and so on.

Minor defects such as cracks in the embankment may be the first visual sign of a major problem, which could lead to failure of the structure. Someone experienced in dam design and construction should evaluate the seriousness of all deficiencies as soon as they are detected.

## LOCATION AND EXTENT

Federal and State databases differ in the exact number of dams there are in Pickaway County; for the most part, they are consistent, but ODNR lists an additional four dams (only considered Class I, II, and II dams). In summary, Pickaway County has two Class I dams, four Class II dams, seven Class III dams. The *State of Ohio Hazard Mitigation Plan (2019)* lists a total of 43 dams in Pickaway County, half of them classified as ‘other,’ not falling under the Class designation. The table below lists dams classified as I-III by the ODNR.



LIST OF CLASS I-III DAMS IN PICKAWAY COUNTY (Source: ODNR)						
Dam Name	ODNR Class	Owner Type	Height (ft.)	Storage (acre-ft.)	EAP (Y/N)	Also in NID (Y/N)
Christal Lake Dam	Significant (2)	Private	22.2	16.1	No	Yes
Clark Lake No. 2 Dam	Low (3)	Private	39.9	13	No	Yes
Clark Run WWT Lagoon	Significant (2)	Federal	30.5	5.7		No
Deer Creek Lake Dam	High (1)	Federal	93	727	Yes	Yes
Fortney Lake Dam	Low (3)	Private	15.4	9	No	Yes
Foxlair Farms Lake Dam	Low (3)	Private	27	12.4	No	Yes
Hargus Lake Dam	High (1)	State	66	130	Yes	Yes
Large Lake Dam	Low (3)	Private	18.4	4.3	No	No
Morse Pond Dam	Low (3)	Private	22.3	4.2	No	No
Picway Station Ash Pond	Significant (2)	Utility	24	25	Yes	Yes
Slate Run Metro Park Dam	Low (3)	Public, Local	15	14.8	Yes	Yes
Terry Thompson Dam	Significant (2)	Private	27.4	8	Yes	Yes
Westfall Levee	Low (3)	Private	12	Null	No	No

The identification of an emergency action plan (EAP) for the dams listed in the above table came from the U.S. ACE's National Inventory of Dams (NID). The site indicated that of the 13 dams, six have an EAP, five of which were last updated in 2017 or 2018. The NID does not make EAPs available. The county has added a project to this update to collect updated EAPs for updated Class I and II dams and create a GIS layer for inundation areas.

According to the National Levee Database from the USACE, there are no levees in Pickaway County. There is one levee at the extreme southeast corner of the county in the Village of Laurelville, but the area affected if it were to fail, would be toward the east, away from the Pickaway County line. However, ODNR lists one levee, Westfall Levee, as a Class II levee, and the National Inventory of Dams lists Deer Creek Lake – New Holland Dike as a dam.

#### IMPACTS AND VULNERABILITY

The potential downstream hazards are the resultant downstream damage should the dam fail, including probable future development. The potential downstream hazards are broken into four classes, which coincide with the class of dam defined by height and storage as discussed above.





POTENTIAL DOWNSTREAM HAZARDS	
Class	Description
Class I	<ul style="list-style-type: none"> <li>• Probable loss of life</li> <li>• Structural damage to high-value property (i.e., homes, industries, major public utilities).</li> </ul>
Class II	<ul style="list-style-type: none"> <li>• Disruption of a public water supply or wastewater treatment facility, release of health hazardous industrial or commercial waste, or other health hazards</li> <li>• Flooding of residential, commercial, industrial, or publicly owned structures</li> <li>• Flooding of high-value property</li> <li>• Damage or disruption to major roads including but not limited to interstate and state highways, and the only access to residential or other critical areas such as hospitals, nursing homes, or correctional facilities as determined by the chief</li> <li>• Damage or disruption to railroads or public utilities</li> <li>• Damage to downstream class I, II or III dams or levees, or other dams or levees of high value. Damage to dams or levees can include but is not limited to, overtopping of the structure</li> </ul>
Class III	<ul style="list-style-type: none"> <li>• Property losses including but not limited to rural buildings not otherwise described, and class IV dams and levees not otherwise listed as high-value property. At the request of the dam owner, the chief may exempt dams from the criterion of this paragraph if the dam owner owns the potentially affected property</li> <li>• Damage or disruption to local roads including but not limited to roads not otherwise listed as major roads.</li> </ul>
Class IV	<ul style="list-style-type: none"> <li>• Losses restricted mainly to the dam.</li> </ul>

Uncontrolled floodwaters are one of the most powerful and destructive forces in nature. Dams that are not designed to withstand major storms or are in a state of disrepair may be destroyed, increasing flood damage downstream. The potential for damage due to dam failure is increasing along with the increased amount of residential and commercial development within the hydraulic shadow of dams. In many cases, existing dams will need to be modified to keep downstream areas safe from catastrophic flooding.

#### HISTORICAL OCCURRENCES

Research conducted indicates that there have been no recent dam or levee failures in Pickaway County.

#### LOSS AND DAMAGES

According to the Ohio Division of Natural Resources, there have been seven notable dam failure events nationwide since 1889, the latest one occurring in 2006. The damages ranged from \$17 million to \$400 million, with an average per-event damage of 139 million dollars. Fatalities range from 3 to 2,209; however, there has been a significant decrease in the number of deaths since the first reported failure. None of these notable events occurred in Ohio. The *State of Ohio Enhanced Hazard Mitigation Plan (2019)* outlines the dam incidents and failures in Ohio from 1852 to 2014. The state is divided into three regions; Pickaway County falls under Region 2. According to the data, there have been 42 incidents or failures within the



region, none within Pickaway County; consequently, the average loss to be expected based on past occurrences would be \$0. However, if a dam or levee failed, the damages would amount to the sum of the cost to replace the dam or levee and losses of property from the failure.

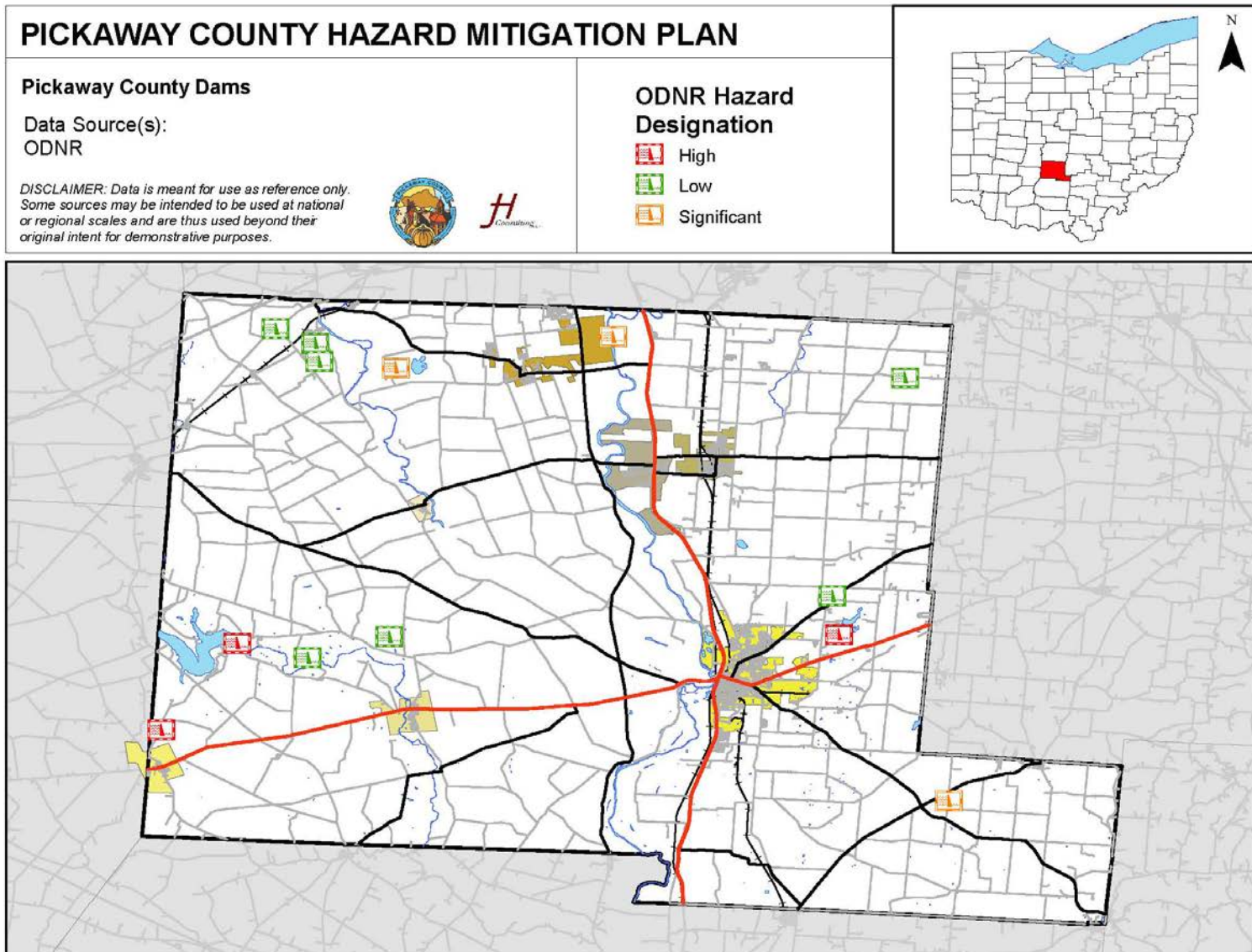
Although there is no additional data supporting evidence of losses or damages from past failures, it is safe to estimate that there could be an incident in a Pickaway County dam due to the presence of Class I dams. The typical 'dam failure' brings images of large dams' walls bursting and flooding everything in its path downstream, causing catastrophic destruction. However, the more plausible event is one that occurs on a daily basis; there are animals that can begin to dig through embankments in the lagoons and cause some damage.

The *State of Ohio Hazard Mitigation Plan (2019)*, lists Pickaway County as having six structures with dam/levee protection equaling a total property value at risk of \$2,140,011.

## RISK ASSESSMENT

This section summarizes the risk to Pickaway County from a dam or levee failure. The following map image identifies the dams in Pickaway County.





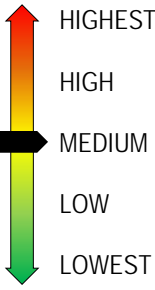
The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points, and the lowest is 7.

DAM RISK CALCULATION			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Determination Method</i>
Frequency	1	None	
Response	1	Less than half a day	The minimal probability, lack of historical catastrophic failures, and frequent inspections at dams in Pickaway County suggest that responses would be minimal.
Onset	1	Over 24 hours	Frequent inspections suggest that warning would occur.
Magnitude	2	Limited (10-25% of land area affected).	Cascading effects include flooding downstream and damage to downstream dams causing the flooded areas to expand.
Business	2	1 Week	Over 50% of the dams are Level I or II and could cause substantial damage to critical infrastructure or flood commercial and populated areas.
Human	1	Minimum	Due to inspections and monitoring, residents should receive warning to evacuate minimizing injuries.
Property	2	10-25% of property affected	Over 50% of the dams are Level I or II and could cause substantial damage to critical infrastructure, flood commercial, populated areas, and damage other downstream dams and levees.
<b>Total</b>	<b>10</b>	<b>Lowest</b>	



## 2.0 RISK ASSESSMENT

### 2.5.2 Hazardous Materials Incident

A hazardous material is a chemical or biological material that may pose a threat to life, health, property, or the environment. For this profile, the hazardous materials incidents include only those that are not intentional.			
	Vulnerability	Period of Occurrence: At any time	Hazard Index Ranking: Medium
	HIGHEST	Warning Time: Less than 6 hours	State Risk Ranking: Not ranked
	HIGH	Probability: Likely	Severity: Limited
	MEDIUM	Type of Hazard: Technological	Disaster Declarations: None
LOW			
LOWEST			

#### HAZARD OVERVIEW

A hazardous material is a substance or material which, because of its chemical, physical or biological nature, poses a threat to life, health, or property if released from a confined setting. A release may occur by spilling, leaking, emitting toxic vapors, or any other process that enables the material to escape its container, enter the environment, and create a potential hazard. Several common hazardous materials include those that are explosive, flammable or combustible, poisonous or radioactive. Related combustible hazardous materials include oxidizers and reactive materials, while toxins produced by etiological (biological) agents are types of poison that can cause disease.

A hazmat release while in transit is of great concern to the U. S. Department of Transportation. While most hazardous materials are stored and used at fixed sites, these materials are usually produced elsewhere and shipped to the fixed facility by rail car, truck, or onboard ships or barges. Signs or placards denoting the hazard identify the vehicles carrying hazardous materials. However, the possibility of release is present at any time. Hazardous materials are constantly moved in Ohio on interstate highways, the rail system and on shipping lanes in rivers and tributaries.

Two major agencies collect data as they relate to hazardous materials incidents, the Pipeline and Hazardous Materials Safety Administration (PHMSA) governed by the U.S. Department of Transportation (DOT) and the National Response Center (NRC), governed by the U.S. Coast Guard (USCG).



The types of materials that can cause a hazmat release are wide-ranging and may include chlorine, sodium hydroxide, sulfuric acid, radioactive isotopes, anhydrous ammonia, gasoline, and other hydrocarbons, as well as medical/biological waste from hospitals or clinics. Hazardous materials subject to reporting under the Emergency Planning and Community Right-to-Know Act (EPCRA) or Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) include these four groups:

- **Extremely Hazardous Substances (EHS):** These are materials with acutely toxic properties that may do irreversible damage or cause death to people or harm the environment when released or used outside their intended use. Examples include ammonia, chlorine, and sulfuric acid.
- **Hazardous Substances:** These are any materials posing a threat to human health and/or the environment, or any substance designated by the Environmental Protection Agency (EPA) to be reported if a designated quantity of the substance is spilled into the waters of the United States or otherwise released into the environment.
- **Hazardous Chemicals:** If present at a chemical facility in certain amounts, these substances require a Material Safety Data Sheet (MSDS) under the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard. Such substances are capable of producing fires and explosions or adverse health effects such as cancer, burns, or dermatitis.
- **Toxic Chemicals:** Chemicals or chemical categories that appear on the list because of their chronic or long-term toxicity.

## POSSIBLE CAUSES

The hauling, storage, and use of hazardous materials play a vital role in the economy of our nation. These materials are stored and handled at fixed facilities and are transported over highway, railway, and water transportation systems, as well as pipelines. It is estimated that over four billion tons of hazardous materials are transported annually and that 100,000 trucks haul hazardous materials on the country's highways each day. Almost half of all freight trains carry hazardous materials. The majority of the transportation infrastructure utilized to move hazardous materials through Pickaway County is located in the central portion of the county; this is also the most populated area of the county, and the location for the majority of the high hazard areas for natural hazards, thus increasing the chance of a release. An incident causing the accidental release of a hazardous material is spontaneous, with little time of warning.



Further, the recovery and clean-up activities involved in a hazmat incident may require several hours, days, or even weeks to complete.

Hazardous materials can be released as a secondary result of a natural disaster like an earthquake or flood. In either case, buildings or vehicles can release their hazardous materials inventories when structurally compromised or involved in traffic accidents. Additional potential causes of hazardous material releases may include terrorist incidents and illegal drug labs or dumping. Illegal drug labs present a special concern because each must be treated as a chemical hazard site and decontaminated before the property can be used again. Illegal drug labs can be set up in homes, apartments, vacant buildings, shacks in the forest or even in a van parked on the street.

#### LOCATION AND EXTENT

Hazardous materials spills, leaks, or accidents can occur anywhere in Pickaway County. More specifically, they are more likely to happen on transportation pathways such as roads and railways, and at facilities that routinely handle hazardous materials such as gas stations, chemical companies, and other Tier II reporting or Toxic Release Inventory (TRI) facilities. There are also gas transmission and hazardous liquid pipelines throughout Pickaway County. There is currently one brownfield site (former industrial or commercial sites where future use is affected by real or perceived environmental contamination) in Pickaway County, according to the Ohio Environmental Protection Agency's brownfield inventory database; it is located in Circleville. In 2014, according to the latest available EPA report, there are four reporting facilities, down from seven in 2002.

The extent of the damage from hazmat can be localized to just a cleanup on the road, or widespread, to include hazardous materials reaching source water via storm drains, and the rivers and streams.

#### HISTORICAL OCCURRENCES

The source of information for these incidents are the National Response Center (NRC) and the Pipeline and Hazardous Materials Safety Administration (PHMSA). The following outlines the findings; In total, the NRC reported a total of 117 incidents at fixed facilities, highway or mobile incidents, rail incidents, and pipeline incidents that involved hazardous materials. The total number of incidents PHMSA reports is 15.

- **Fixed Facilities:** According to the National Response Center (NRC) (run by the U.S. Coast Guard), there have been 47 incidents reported at fixed facilities between 2000





and 2018. The majority of these incidents are due to equipment failure, natural phenomenon, operator errors, over-pressuring, intentional dumping, or are unknown or have other causes (not specified). Of those 47, eight were from storage tank incidents in Pickaway County in the same time period.

- **Transportation:** Ohio was the fourth state with the highest number of incidents in the ten-year reporting period (2009-2018), with a total of 10,401 incidents (PHMSA, 2018).
  - Highway: According to PHMSA, there have been 15 highway incidents in Pickaway County between 2000 and 2018. The following table describes the incident location and date, material, and quantity released total damages and causes of failure.

PHMSA HIGHWAY-RELATED HAZMAT INCIDENTS (2000-2018)						
Incident City	Date Of Incident	Quantity Released	Unit Of Measure	Commodity Long Name	Total Damages	Causes of Failure
Circleville	7/11/00	2	LGA	LIQUID, N.O.S.	\$0	Not Reported
Circleville	9/12/00	10	LGA	TETRAHYDROFURAN	\$0	Impact with Sharp or Protruding Object
Circleville	5/4/01	10	LGA	COMBUSTIBLE LIQUID, N.O.S.	\$130.00	Inadequate Blocking and Bracing
Circleville	11/22/04	5	LGA	RESIN SOLUTION, FLAMMABLE	\$150.00	Loose Closure, Component, or Device
Circleville	12/15/04	0.5	LGA	RESIN SOLUTION, FLAMMABLE	\$0	Overfilled
Circleville	2/23/05	0.03125	LGA	FLAMMABLE LIQUIDS, TOXIC, N.O.S.	\$0	Abrasion
Circleville	10/10/05	1	LGA	AMINES, LIQUID, CORROSIVE, N.O.S.	\$2,000.00	Inadequate Preparation for Transportation
Circleville	8/25/06	0	LGA	PAINT RELATED MATERIAL	\$0	Improper Preparation for Transportation
Circleville	1/12/14	3000	LGA	GASOHOL GASOLINE MIXED WITH ETHYL ALCOHOL	\$673,500.00	Rollover Accident
Circleville	6/26/15	0.125	LGA	PAINT OR PAINT RELATED MATERIAL	\$3,500.00	Improper Preparation for Transportation
Circleville	10/12/15	1	LGA	RESIN SOLUTION, FLAMMABLE	\$0	Not Reported
Circleville	7/7/16	0.007812	LGA	HYPOCHLORITE SOLUTIONS	\$3,500.00	Defective Component or Device
South Bloomfield	11/30/16	7	LGA	RESIN SOLUTION, FLAMMABLE	\$1,075.00	Deterioration or Aging
New Holland	4/14/17	100.26	GCF	AMMONIA ANHYDROUS	\$18,870.00	Not Reported
Circleville	1/22/18	5	LGA	METHYL ISOBUTYL KETONE	\$3,505.00	Not Reported



- According to the NRC, there were 40 mobile incidents (indicating that they are related to transportation, including water and highway incidents) in Pickaway County between 2000 and 2018. The main causes were due to equipment failure, operator error, or transportation accident.

NRC MOBILE INCIDENTS (2000 – 2018)		
Incident Date	Cause	Nearest City
3/3/00	Operator Error	
5/16/02	Transport Accident	Mt. Sterling
12/14/02	Other	Circleville
10/13/04	Unknown	Circleville
8/25/06	Transport Accident	Circleville
3/7/07	Dumping	Lockbourne
3/26/09	Equipment Failure	Columbus
04/12/11	Equipment Failure	Columbus
05/31/11	Equipment Failure	Columbus
06/29/11	Natural Phenomenon	Columbus
07/26/11	Transport Accident	Orient
08/31/11	Equipment Failure	Columbus
09/21/11	Other	Columbus
1/14/12	Equipment Failure	Columbus
1/26/12	Unknown	Columbus
3/8/12	Equipment Failure	Columbus
5/30/12	Equipment Failure	Columbus
8/17/12	Equipment Failure	Columbus
9/10/12	Unknown	Columbus
9/29/12	Equipment Failure	Columbus
10/24/12	Equipment Failure	Columbus
2/7/13	Equipment Failure	Columbus
2/20/13	Equipment Failure	Columbus
4/16/13	Equipment Failure	Columbus
4/17/13	Equipment Failure	Columbus
5/21/13	Equipment Failure	Columbus
7/23/13	Equipment Failure	Columbus
9/10/13	Equipment Failure	Columbus
10/9/13	Equipment Failure	Lockbourne
11/20/13	Equipment Failure	Lockbourne
11/20/13	Equipment Failure	Lockbourne
12/3/13	Equipment Failure	Columbus
12/7/13	Equipment Failure	Columbus
1/26/14	Equipment Failure	Lockbourne
2/12/14	Equipment Failure	Circleville
4/18/14	Equipment Failure	Ashville
6/25/14	Equipment Failure	Columbus
10/14/14	Equipment Failure	Columbus



NRC MOBILE INCIDENTS (2000 – 2018)		
Incident Date	Cause	Nearest City
4/18/16	Equipment Failure	Columbus
12/17/18	Other	Circleville

- Waterway: According to the NRC, there have been four incidents of unknown sheen in waterways between 2008 and 2012. All causes are unknown
- Air: According to PHMSA and the NRC, there have been no air-related hazmat incidents in Pickaway County.
- Rail: The NRC reports 22 rail incidents between 2000 and 2018. The causes of the incidents are mainly due to equipment failure, unknown or other (not specified), derailment, operator error, or transportation accident.

NRC RAIL INCIDENTS (2000 – 2018)		
Incident Date	Cause	Nearest City
10/10/01	Other	Columbus
3/10/09	Natural Phenomenon	Columbus
3/28/09	Equipment Failure	Columbus
7/8/09	Equipment Failure	Lockbourne
8/22/09	Other	Circleville
8/25/09	Equipment Failure	Columbus
2/19/10	Unknown	Columbus
10/5/10	Equipment Failure	Columbus
1/16/12	Derailment	Circleville
1/17/13	Unknown	Columbus
8/22/13	Derailment	Columbus
9/3/13	Equipment Failure	Not Reported
11/21/13	Operator Error	Columbus
1/15/14	Other	Dorney
3/25/14	Equipment Failure	Columbus
3/30/14	Unknown	Columbus
3/25/15	Equipment Failure	Circleville
6/13/15	Equipment Failure	Lockbourne
3/4/16	Trespasser	Circleville
6/25/16	Equipment Failure	Not Reported
7/16/16	Equipment Failure	Lockbourne
2/24/17	Unknown	Columbus

- **Pipeline:** According to the NRC, there have been two incidents involving pipelines between 2000 and 2018; these took place in April of 2013 and June of 2017. The causes are unknown.



## IMPACTS AND VULNERABILITY

Due to the wide variety of substances that are used, transported, and stored in the area, it is difficult to assign an overall impact of these substances to public health, the environment, the economy and the infrastructure. Some spills cause minor if any damage to the area. For example, spilling a few gallons of gasoline on concrete during transfer causes minimal economic impact; rarely does the spilled substance cause any environmental impacts. This is not to say that all spills are minor, some can be very harmful to human health and the environment and costs thousands, if not millions of dollars to clean up.

Spills into waterways and those that reach the groundwater are of particular concern due to the threat they impose to drinking water and, subsequently, public health, the environment, and fauna in the area.

Additionally, transportation-based hazard incidents have the potential to result in cascading impacts. For example, a rail-based incident could isolate a community in Pickaway County as well as several other communities in the region. Officials from such operators as CSX Transportation concur. In a recent interview, the company's hazmat manager out of Pittsburgh noted that a significant problem associated with rail incidents, particularly those involving hazardous materials, is that a stopped train can block several roadway intersections, essentially cutting some areas off. These blocks not only hinder evacuation from those areas but also emergency services access to those areas.

Hazardous materials incidents can occur rapidly over a large area. The chemical, physical, and biological properties of hazardous materials pose a potential risk to life, health, the environment, and property when not properly contained.

Many factors determine the impact of a potential incident, including quick and solid decision-making by emergency officials, location and type of release, evacuation and shelter-in-place needs, public health concerns, and relevant economic considerations. Additionally, while most incidents are generally brief, the resulting recovery and cleanup may take time to exact.

If evacuation is necessary due to a chemical emergency, road closures and traffic jams may result. If a large-scale evacuation is deemed necessary, it can pose serious long-term economic consequences to the involved population area. A delay in the resumption of industry commerce may cause economic losses for both business owners and employees. In addition, an evacuation ordered on short-notice could cause serious problems for businesses requiring time to shut down specialized equipment.



There is also the monetary impact borne by responding public or private emergency response organizations. These agencies may be challenged by the expenses dictated by a hazardous material release and may need to wait an uncomfortable length of time for the responsible party to reimburse any outstanding costs, further straining the economic resources of the region.

A major incident involving significant injuries may severely tax regional medical services, as medical facilities aren't generally designed to handle mass amounts of victims on short notice. Consequently, in the event of a major incident, hospitals and other medical facilities must still be able to provide their customary level of service to all patients, regardless of whether they were incident victims or not.

The areas shown are buffers around the TRI facilities (1/2 mile) and along highways and railways (800 feet). The following list of assets fall within the buffer zones of the TRI facilities, highways, and railways; there are more assets on this list than may actually be vulnerable. Because the contents of the TRI facilities are unknown, and because these buffers touch the property of the assets, it is difficult to assess the vulnerability of each asset accurately; a site-specific vulnerability analysis would be needed. TRI Facilities are not included in this list.

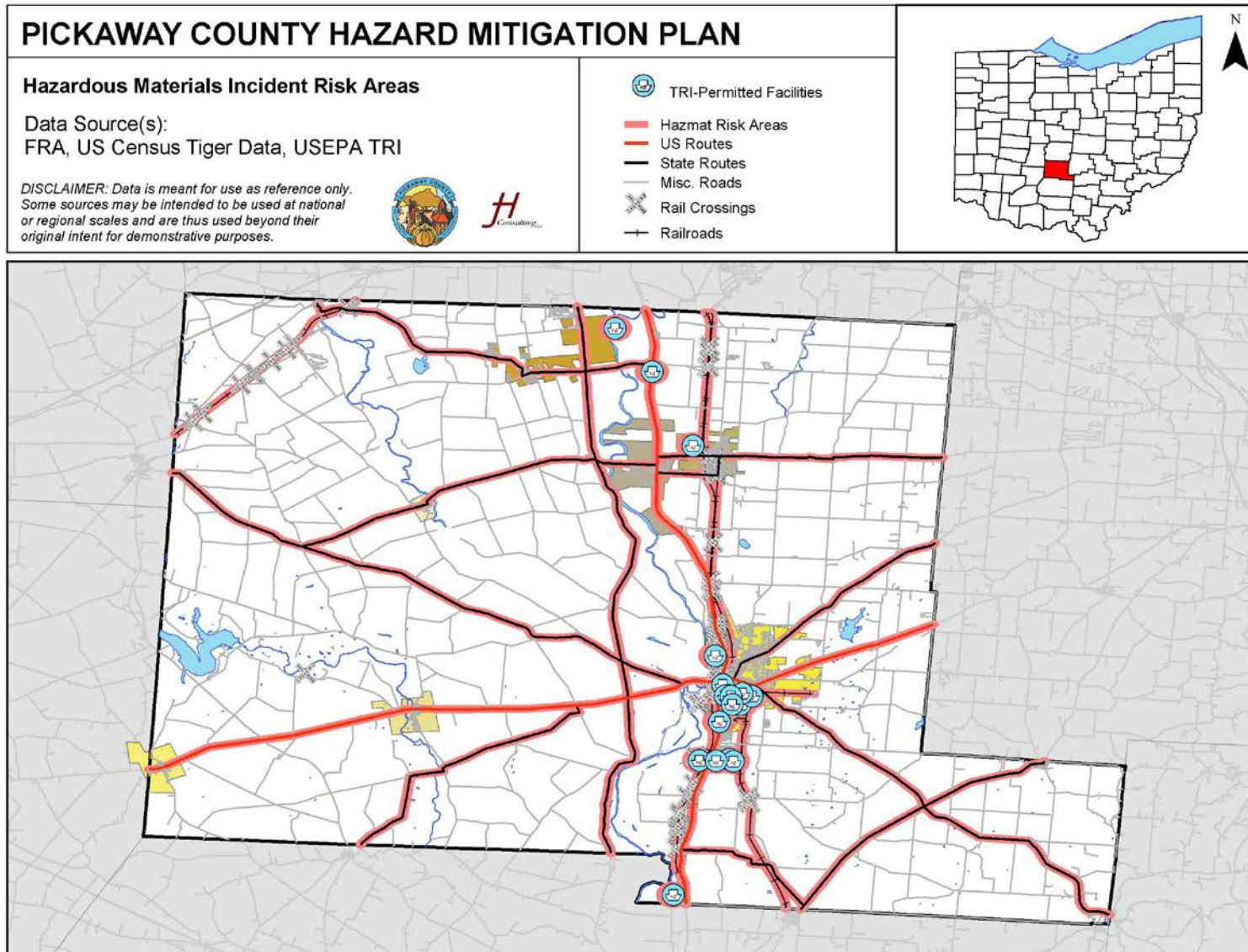
## LOSS AND DAMAGES

The NRC does not provide losses or damages; PHMSA reports a total cost of \$706,230 at the county level for incidents reported between 2000 and 2018.

## RISK ASSESSMENT

This section summarizes the risk to Pickaway County from hazardous materials incidents. The following map image graphically depicts buffers around the TRI facilities (1/2 mile) and along highways and railways (800 feet), mainly along highways and railways in transportation and around TRI facilities.





The following table assigns point totals based on the research presented in this profile for each category that appears in Ohio EMA's SHARPP tool.

HAZARDOUS MATERIALS INCIDENT RISK SUMMARY			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Notes</i>
Frequency	5	Excessive	77 incidents occurred over 18 years, which averages 4.28 incidents per year
Response	2	1 day	A full day serves as a conservative estimated duration of hazmat response.
Onset	4	Less than 6 hours	Hazmat incidents typically occur with no warning.
Magnitude	1	Localized (Less than 10% of land area affected)	Hazmat incidents are site-specific, and thus highly localized.
Business	1	Less than 24 hours	Hazmat incidents in Ashtabula County rarely disrupt an area for longer than 24 hours.
Human	2	Low (some injuries)	There is a potential for a minor injury.
Property	1	Less than 10% of property affected	Again, as a site-specific hazard, hazmat impacts are highly localized.
<b>Total</b>	<b>16</b>	<b>MEDIUM</b>	

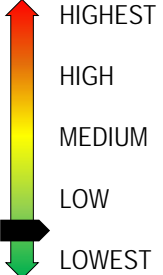
DRAFT





## 2.0 RISK ASSESSMENT

### 2.5.3 Transportation

No railroad company shall obstruct, or permit or cause to be obstructed a public street, road, or highway, by permitting a railroad car, locomotive, or other obstruction to remain upon or across it for longer than five minutes, to the hindrance or inconvenience of travelers or a person passing along or upon such street, road, or highway.				
 <p>Vulnerability</p> <p>HIGHEST</p> <p>HIGH</p> <p>MEDIUM</p> <p>LOW</p> <p>LOWEST</p>	<p>Period of Occurrence:</p> <p>At any time.</p>	<p>Hazard Index Ranking:</p> <p>Low</p>		
	<p>Warning Time:</p> <p>Less than 6 hours</p>	<p>State Risk Ranking:</p> <p>N/A</p>		
	<p>Probability:</p> <p>Likely</p>	<p>Severity:</p>		
	<p>Type of Hazard:</p> <p>Technological</p>	<p>Disaster Declarations:</p>		

#### HAZARD OVERVIEW

Ohio Law prohibits railroad companies from obstructing public streets, roads, or highways by a railroad car, locomotive, or other obstruction for longer than five minutes (Ohio Rev. Code Ann. § 5589.21.A), otherwise, they are subject to a fine (§ 5589.24.A). However, even though this law applies, it may not always be possible to not block an intersection with a train if an incident occurs.

Furthermore, the United States District Court for the Northern District of Ohio determined that regulation of Railroads falls under the U.S. Constitution's commerce clause (CSX Transportation Inc. v. Williams, 2016). The commerce clause does not define the location or time trains can sit. Therefore, summonses issued to train operators may not be enforceable in court.

#### POSSIBLE CAUSES

The cause for trains to stop can range from emergencies such as a vehicle or pedestrian being struck by a train to safety issues due to the crew nearing or reaching the maximum hours they are allowed to operate in a day. Trains also stop to allow other trains pass areas where tracks merge and to connect and disconnect from cars and tankers.



## LOCATION AND EXTENT

All the cities and towns that railroads traverse are vulnerable to this type of hazard. The map below shows the railroads and major thoroughfare crossings in Pickaway County.



## PICKAWAY COUNTY HAZARD MITIGATION PLAN

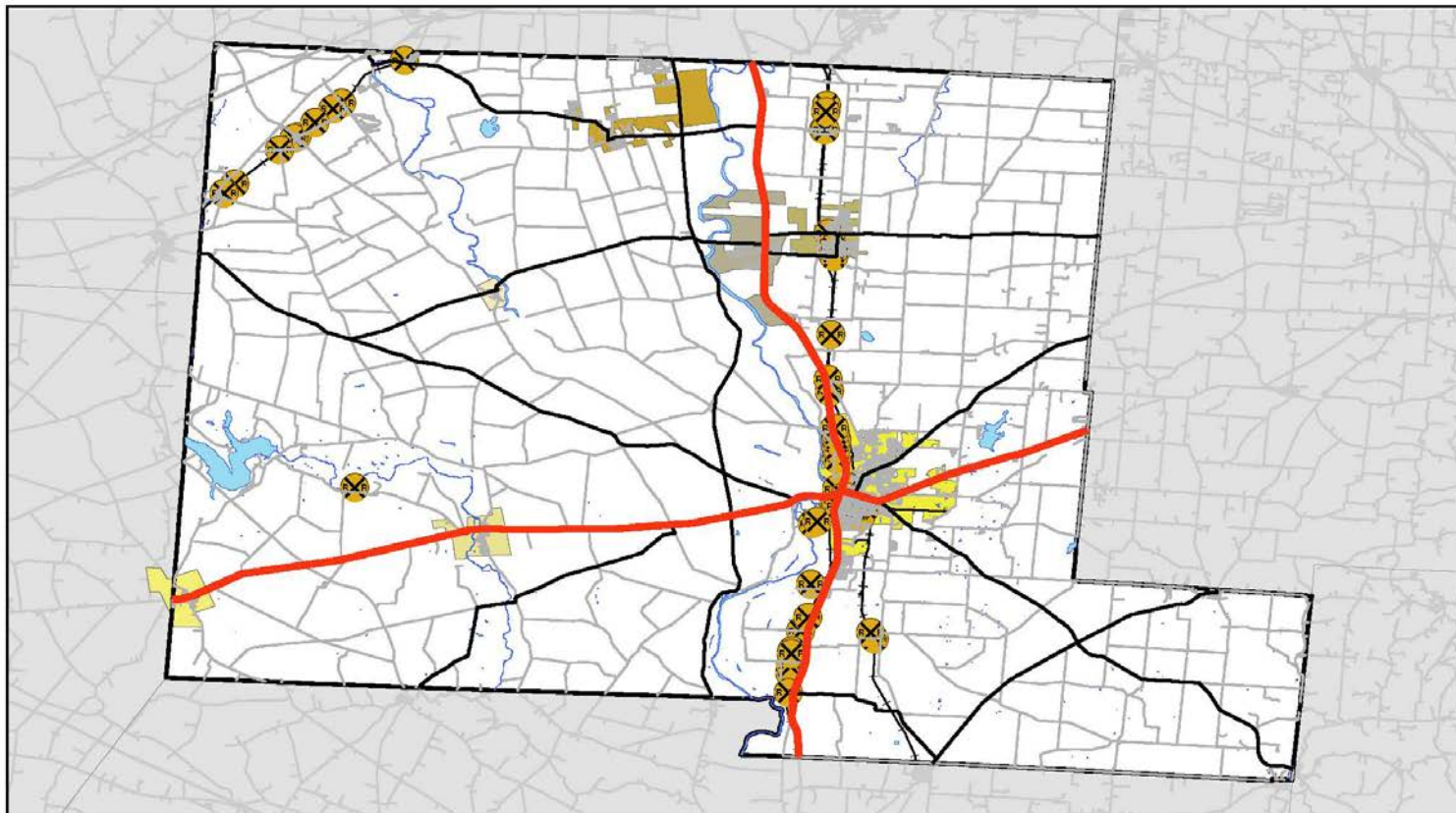
### Railroad-Roadway Crossings

Data Source(s):  
FRA, ODOT, US Census Tiger Data

*DISCLAIMER: Data is meant for use as reference only. Some sources may be intended to be used at national or regional scales and are thus used beyond their original intent for demonstrative purposes.*



- |                       |                  |
|-----------------------|------------------|
| Rail Crossings        | Circleville      |
| Railroads             | Commercial Point |
| <b>Municipalities</b> | Darbyville       |
| Ashville              | New Holland      |
|                       | South Bloomfield |
|                       | Williamsport     |



## HISTORICAL OCCURRENCES

The Public Utilities Commission of Ohio (PUCO) provides a link to the Federal Railroad Administration's blocked crossing reporting tool and encourages residents to report blocked crossing. However, the reporting tool has only been active since December 2019 and therefore cannot provide historical data at this time.

Local newspapers, industry journals, and other reference material provide articles on provide information on some of the historical events. A 2016 story highlights the Circleville Fire Department stopped at a railroad crossing while firefighters in the truck could see flames coming from a house just on the other side. The same article also presented an incident of an officer calling for immediate assistance, however all other Circleville officers were unable to cross the tracks due to a stopped train (EMS1, 2016).

## IMPACTS AND VULNERABILITY

When railroad crossings become blocked parts of the community are cut off from services such as emergency responders on the other side of the crossing. Blocked crossings make people late for work, school, and appointments, and contribute to congestion. Drivers, frustrated by the delays, may try to clear the crossing before a train arrived and pedestrians may try to crawl between cars putting themselves at risk.

## LOSS AND DAMAGES

There is no historical records of losses as a result of blocked railroad crossings.

## RISK ASSESSMENT

This section summarizes the risk to Pickaway County from transportation incidents. The following table gives one to five or one to four points (see [Section 2.2 Risk and Vulnerability](#) for description and ranking of categories) for each category, based on research presented in this hazard profile. At the end, it adds the total points for all the categories, which informs the overall hazard ranking for the county. The highest amount of points the hazard can reach is 30 points, and the lowest is 7.



TRANSPORTATION RISK SUMMARY			
<i>Category</i>	<i>Points</i>	<i>Description</i>	<i>Notes</i>
Frequency	5	Excessive	Committee members emphasized that this was a frequent occurrence.
Response	1	Less than half a day	Most trains will begin to move in under 12 hours unless waiting on a new crew to arrive for longer.
Onset	4	Less than 6 hours	There is usually no warning when a train will stop in the area.
Magnitude	1	Localized	Stopped trains usually block one or a few crossings cutting off small sections of the community.
Business	1	Less than 24 hours	Businesses, especially foot traffic, may be affected for the duration of the train being stopped.
Human	1	Minimum	There are no reports of injuries from stopped trains.
Property	1	Less than 10% of property affected	There are no reports of property damage from stopped trains.
<b>Total</b>	<b>14</b>	<b>Low</b>	



## 2.0 RISK ASSESSMENT


### 2.6 Intentional Human-Caused Hazards

Intentional human-caused hazards can be technological, but do not occur by accident. Rather, they are intentional acts to cause harm to people, property, or the environment. This subsection profiles “Domestic Terrorism and Cyber Terrorism.”



## 2.0 RISK ASSESSMENT

### 2.6.1 Domestic Terrorism and Cyber Terrorism

Terrorism is the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.				
 <p>Vulnerability</p> <p>HIGHEST</p> <p>HIGH</p> <p>MEDIUM</p> <p>LOW</p> <p>LOWEST</p>	<p>Period of Occurrence:</p> <p>At any time.</p>	<p>Hazard Index Ranking:</p> <p>Low</p>		
	<p>Warning Time:</p> <p>Varies.</p>	<p>State Risk Ranking:</p> <p>Not ranked</p>		
	<p>Probability:</p> <p>Possible</p>	<p>Severity:</p> <p>Limited</p>		
	<p>Type of Hazard:</p> <p>Intentional human-caused</p>	<p>Disaster Declarations:</p> <p>None</p>		

#### HAZARD OVERVIEW

This profile will define domestic terrorism and cyber terrorism the following way based on definitions from the USA PATRIOT Act and the Center for Strategic and International Studies (CSIS). For the purpose of this profile, due to the nature of the types of attacks, domestic terrorism and cyber terrorism are kept separate even though cyber terrorism could be considered as an act of domestic terrorism.

- **Domestic Terrorism:** An act dangerous to human life that is a violation of the criminal law of a state or the United States, if the act appears to be intended to:
  - i. intimidate or coerce a civilian population;
  - ii. influence the policy of a government by intimidation or coercion; or
  - iii. to affect the conduct of a government by mass destruction, assassination or kidnapping.

Additionally, the acts have to occur primarily within the territorial jurisdiction of the United States

- **Cyber Terrorism:** The use of computer network tools to shut down critical national infrastructures (e.g., energy, transportation, government operations) or to coerce or intimidate a government or civilian population.





**This profile is intentionally generalized. The Pickaway County Emergency Management Agency has identified several potential terrorist-related targets throughout the county and maintains files of such information separately from this document.**

Potential terrorist targets tend to be located in urban areas such as the Columbus, OH metro area. Contrary to this, there is some evidence that terrorist organizations prefer rural safe houses from which to operate that are similar to that of Pickaway County. The rural environment offers an environment for the terrorists that are more difficult to observe. Some potential targets could include the following.

- Government facilities and/or personnel
- Stadiums
- Public meeting places
- Railroad facilities
- Dams
- Water and wastewater treatment facilities

There are a variety of methods to utilize to carry out a domestic terrorist attack. The following explains the different types of terrorism.

- **Biological** terrorist incidents have a somewhat low probability of occurring in Pickaway County. These incidents include the release of diseases such as smallpox into the general population for destructive purposes. Biological events have an extremely high risk associated with them, as the effects of such an event can exceed the capabilities of the healthcare facilities located in Pickaway County, and the loss of human life can be disastrous. While preparedness is improving, Pickaway County, as many other rural counties, is not equipped on the local level to cope with a large-scale terrorist incident.
- **Chemical** terrorist incidents are comparable to biological incidents in that they have a relatively low probability of occurring, yet are associated with an extremely high risk. Chemical incidents include the use of weapons that subject the general population to toxic chemicals similar to those that could be released during a hazardous materials incident. Chemical incidents are capable of subsequent losses to large percentages of the population. Pickaway County does contain public water systems, which makes the threat of small-scale biological and chemical attacks plausible.
- Events involving explosive **Weapons of Mass Destruction (WMDs)** also have a relatively low probability of occurring in Pickaway County. However, if a nuclear or other large explosive device was to discharge in or near the county, the inherent loss of life



could be catastrophic. A WMD threat is ever-present, and the reduction of such threat is dependent upon the actions of other countries, which are unpredictable. As long as there are weapons and the capability to deliver those weapons, the threat will remain.

As there are different ways to carry out domestic terrorist attacks, so, too, there are different types of carrying out cyber terrorism or attacks. "In August 1999, the Center for the Study of Terrorism and Irregular Warfare at the Naval Postgraduate School in Monterey, California, issued a report titled "Cyberterrorism: Prospects and Implications." Their objective was to articulate the demand side of terrorism. Specifically, they assessed the prospects of terrorist organizations pursuing cyberterrorism. They concluded that the barrier to entry for anything beyond annoying hacks is quite high and that terrorists generally lack the wherewithal and human capital needed to mount a meaningful operation. Cyberterrorism, they argued, was a thing of the future, although it might be pursued as an ancillary tool. The Monterey group defined three levels of cyberterror capability" (Denning, 2000).

- **Simple-Unstructured:** The capability to conduct basic hacks against individual systems using tools created by someone else. The organization possesses little target analysis, command and control, or learning capability.
- **Advanced-Structured:** The capability to conduct more sophisticated attacks against multiple systems or networks and possibly, to modify or create basic hacking tools. The organization possesses an elementary target analysis, command and control, and learning capability.
- **Complex-Coordinated:** The capability for coordinated attacks capable of causing mass-disruption against integrated, heterogeneous defenses (including cryptography). Ability to create sophisticated hacking tools. Highly capable target analysis, command and control, and organizational learning capability.

## POSSIBLE CAUSES

There is no single cause of acts of violence; it is typically a non-rational, complicated, intertwined, series of reasons that have the outcome of violence. In his article *Causes of Terrorism*, Nick Grothaus lays out the most common causes cited by leaders in the field of counterterrorism. These categories may apply to other types of violence not related to terrorism.

- **Ethno-Nationalism:** The desire of a population to break away from a government or ruling power and create a state of their own.



- **Alienation/Discrimination:** Individuals or groups face discrimination leading to further feelings of isolation. These people may become jaded towards society and feel excluded.
- **Religion:** Religion as a part of terrorism has been mainly attributed to Islamic fundamentalism, although other religions have also had involvement in terrorist activities. For example, Christian Fundamentalists target abortion clinics, the Aryan Nation and the Church of Christ; Christians target the Jews and minorities (Post, 2007, pp. 211-212).
- **Socio-Economic Status:** Individuals and groups may be driven by a sense of relative deprivation and lack of upward mobility within society.
- **Political Grievances:** A lack of political inclusiveness or grievances against a certain political order may cause individuals to join or create terrorist groups.

## HISTORICAL OCCURRENCES

The U.S. population has largely been spared the impacts of international terrorism until recently. The devastation which occurred at the World Trade Center in New York City and the Alfred P. Murrah Building in Oklahoma City illustrates the need to plan for potential threats within our own communities. Domestically, the distribution of anthrax spores using the United States Postal System as a delivery mechanism caused concern nationwide for several weeks. The bomb detonated at the Atlanta Olympics in 1996 resulted in an investigation/manhunt that lasted years. Richard Reid (a.k.a., the shoe bomber) disrupted air travel and changed security measures in airports.

There have been no domestic terrorism attacks in Pickaway County.

Ransomware attacks, a type of cyber-attack, have hit at least 170 county, city, or state government systems since 2013, and 22 of those attacks occurred in the first half of 2019, according to The U.S. Conference of Mayors (Panettieri, 2019).

- June 26, 2019: Lake City, Florida agrees to pay ransomware
- June 20, 2019: Riviera Beach, Florida, discloses ransomware attack and payment
- June 13, 2019, Harrison County, West Virginia, suffered a ransomware attack. Officials paid an initial \$1,500 but were not provided the encryption key to restore systems.
- May 7, 2019: the City of Baltimore hit with a ransomware attack
- April 2019: Cleveland Hopkins International Airport suffered a ransomware attack
- April 2019: Augusta, Maine, suffered a highly targeted malware attack that froze the city's entire network and forced the city center to close
- April 2019: Hackers stole roughly \$498,000 from the city of Tallahassee



- March 2019: Albany, New York, suffered a ransomware attack
- March 2019: Jackson County, Georgia officials paid cybercriminals \$400,000 after a cyberattack shut down the county's computer systems
- March 2018: Atlanta, Georgia suffered a major ransomware attack.
- February 2018: Colorado Department of Transportation (CDOT) employee computers temporarily were shut down due to a SamSam ransomware virus cyberattack.

## IMPACTS & VULNERABILITY

Some individuals may experience severe stress symptoms following a violent incident. Individuals experiencing the following are at a higher risk for posttraumatic stress disorder:

- **Intrusive Re-Experiencing:** Terrifying memories, nightmares, and flashbacks.
- **Extreme Emotional Numbing:** Inability to feel emotions, feeling empty.
- **Extreme Attempts to Avoid Disturbing Memories:** Such as through substance abuse.
- **Hyper Arousal:** Panic attacks, rage, extreme irritability, intense agitation, acting out with violence.
- **Severe Anxiety:** Debilitating worry, extreme helplessness, compulsions or obsessions.
- **Severe Depression:** Loss of ability to feel hope, pleasure, or interest; feeling worthless, suicidal ideations or intent.
- **Dissociation:** Fragmented thoughts, spaced out, unaware of surroundings, amnesia (Nation Center for PTSD, 2010).

Treatment and support are critical to recovery. For most, the memories will not go away, but survivors can learn to manage responses to their memories. There are several methods that can be used to help survivors cope including, psychotherapy, medication, support groups and self-care (Riggs, 2017).

Cyber attacks bring different kinds of effects; according to Demrovsky (2019), some of these include the following for local governments who have suffered from ransomware attacks.

- **Budget Concerns:** For local governments, paying ransomware is an expensive endeavor that strains budgets designed for primary spending areas, including public welfare and education. Too often, there is not enough money to fund preventive measures, which may be perceived as a waste of precious resources or be tabled to allocate resources for more immediate issues.
- **Data availability:** Organizations, like most modern entities, cannot function smoothly without access to their data and systems. Every organization needs to maintain data



backups that are not accessible via the Internet and understand how to restore data efficiently. Local governments are less likely than the average organization to pay the ransomware according to the available information.

- **Data integrity:** Paying the ransomware may seem like a simpler solution, and many organizations do pay. However, cybercriminals may have tampered with the information, kept a copy for future use, or could repeat their ask in some way. Moreover, payouts incentivize the perpetrators of these crimes to continue and expand their efforts.
- **Privacy:** Governments have access to a tremendous amount of sensitive data about their citizens. They are also collecting an unprecedented amount of data about their citizens through the Internet of Things to power smart city technology and make other types of decisions.

#### LOCATION & EXTENT

Due to the high unpredictability of terrorist acts and cyber-attacks, any location, organization, or entity could be a target of an attack. The extent of damages or impact from an attack is also unpredictable.

#### LOSS & DAMAGES

A terrorist event would, at a minimum, cripple the region. The effects of a terrorist incident are not only monetary; they are often emotional and symbolic. The communities throughout the region are rural and small. Any mass loss of life would take an emotional toll on the affected and nearby communities.

#### RISK ASSESSMENT

This section summarizes the risk to Pickaway County from domestic terrorism and cyber-terrorism. The following table assigns point totals based on the research presented in this profile for each category that appears in Ohio EMA's SHARPP tool.



TERRORISM RISK SUMMARY			
Category	Points	Description	Determination Method
Frequency	1	None	There is no history of terrorist attacks in Pickaway County.
Response	2	One day	Based on the threats received in Pickaway County, the necessary responses have been short duration. Planners recognize, though, that a more substantial incident could necessitate a much larger response.
Onset	4	Less than 6 hours	Terrorism incidents cannot be predicted or forecasted, like many natural hazards.
Magnitude	1	Less than 10% of land area affected	Acts of terrorism typically target specific places or events. While significant, an event would affect a small land area.
Business	1	Less than 24 hours	As noted above, evidence provided by historical threats indicates a significant business closure would not be likely.
Human	4	Multiple deaths	In the event of a terrorist incident, there could be numerous severe injuries or fatalities.
Property	1	Less than 10% of property affected	Again, acts of terrorism are specific to a set target and would not cause widespread property damage.
<b>Total</b>	<b>14</b>	<b>Low</b>	



## 2.0 RISK ASSESSMENT

### 2.7 Hazard Rankings

One of the components of the risk assessment is to determine the risk of and vulnerability to hazards, determined by the probability of occurrence and the potential severity of hazard events. This process helps identify which hazards pose the most significant concerns to Pickaway County and its municipalities. The probability of an event derives from the number of historical events within a certain timeframe. Timeframes vary based on information available from different sources (and they can vary widely).

The Ohio State Hazard Analysis Resource and Planning Portal (SHARPP) supports an overall ranking for the hazards considered in the state’s mitigation plans. Like the SHARPP tool, this plan recognizes the value of implementing several categories to determine the overall risk and vulnerability. The following narrative and tables describe the categories utilized by this plan and how they relate to the available data.

Historical occurrences inform all calculations, not worst-case scenarios. In cases with zero occurrences, determinations derive from other available data (which varies across the hazards and is outlined in each profile).

“Frequency” refers to the number of times a hazard occurs in a specific period (based on available historical data). In most instances, the total occurrences (e.g., three occurrences), are divided by the length of time (in years) that data is available (e.g., ten years).

Thus three occurrences divided by ten years equals 0.3. The table above translates the resultant numeric values into a narrative description of frequency (that corresponds to SHARPP categories). In the example described here, the hazard would have a ‘low’ frequency. At times, no historical data is available; in these cases, the hazard receives the lowest possible points for

FREQUENCY			
<i>Value</i>	<i>Score</i>	<i>Description</i>	<i>Definition</i>
.76 - >1.0	5	Excessive	Will occur during a year (SHARPP: hazard or event resulted in nine or more declarations)
.51 - .75	4	High	Likely to occur in a year (SHARPP: hazard or event resulted in six to eight declarations)
.26 - .50	3	Medium	May or may not occur in a year (SHARPP: hazard or event resulted in three to five declarations)
0 - .25	2	Low	Unlikely to occur in a year (SHARPP: hazard or event resulted in one to two declarations)
0	1	None	So unlikely that it can be assumed it will not occur in a year (SHARPP: hazards or events result in no local disaster declarations)





the category (i.e., one). The table below presents the remainder of the categories (including “frequency”).

SHARPP CATEGORIES							
	<i>Frequency</i>	<i>Response</i>	<i>Onset</i>	<i>Magnitude</i>	<i>Business</i>	<i>Human</i>	<i>Property</i>
1	None	Less than half a day	Over 24 hours	Localized (Less than 10% of land area affected)	Less than 24 hours	Minimum (minor injuries)	Less than 10% of property affected
2	Low	1 day	12-24 hours	Limited (10-25% of land area affected)	1 week	Low (some injuries)	10-25% of property affected
3	Medium	1 week	6-12 hours	Critical (25-50% of land area affected)	At least 2 weeks	Medium (multiple severe injuries)	25-50% of property affected
4	High	1 month	Less than 6 hours	Catastrophic (More than 50% of land area affected)	More than 30 days	High (multiple deaths)	More than 50% of property affected
5	Excessive	More than one month	N/A	N/A	N/A	N/A	N/A

Each hazard receives a score for each category that corresponds to the number in the far left column. Hazards receive scores of between 7 (i.e., all seven categories receive a value of one) and 30 points (i.e., all seven categories receive a value of four or five). The list below represents an overall range by which planners ranked all of the hazards in this plan.

<u>Range of Points (Score)</u>	<u>Hazard Ranking</u>
7 - 10	Lowest
11 - 15	Low
16 - 20	Medium
21 - 25	High
26 - 30	Highest

The following table summarizes risk and vulnerability rankings for all of the hazards included in the plan. It outlines the points each hazard received per the above methodology.



SUMMARY OF HAZARD RANKINGS									
Hazard	Risk	Frequency	Response	Onset	Magnitude	Business	Human	Property	Total
<b>Natural Hazards</b>									
Drought	Low	1	1	1	2	1	1	1	8
Earthquake	Low	2	1	4	1	1	1	1	11
Flood	Medium	5	3	2	5	2	2	1	20
High/Strong Winds	Medium	5	3	2	4	2	2	1	19
Public Health Emergencies	Medium	2	5	1	1	4	4	1	18
Severe Thunderstorms and Hail	Medium	5	1	2	5	1	1	1	16
Subsidence and Land Movement	Low	2	2	3	1	1	1	1	11
Temperature Extremes	Lowest	2	1	1	1	1	2	1	9
Tornados	Medium	4	3	4	1	2	3	1	18
Wildfire	Low	2	2	4	1	1	1	1	12
Winter Storm	Medium	5	3	2	4	1	1	4	20
<b>Technological Hazards</b>									
Dam and Levee Failure	Lowest	1	1	1	2	2	1	2	10
Hazardous Materials Incident	Medium	5	2	4	1	1	2	1	16
Transportation	Low	5	1	4	1	1	1	1	14
<b>Intentional Human-Caused Hazards</b>									
Domestic Terrorism and Cyber Terrorism	Low	1	2	4	1	1	4	1	14



### 3.0 MITIGATION STRATEGY

§ 201.6(c)(3)	A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.
§ 201.6(c)(3)	A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

According to FEMA (2013), “the mitigation strategy is made up of three main required components: mitigation goals, mitigation actions, and action plan for implementation. These provide the framework to identify, prioritize, and implement actions to reduce risk to hazards.” This section contains the aforementioned items; it describes the updated goals and objectives for this mitigation plan, it outlines the action items or projects for each participating jurisdiction within Pickaway County, and each project identifies the agency responsible for completing the project as well as a general timeline for completion.



## 3.0 MITIGATION STRATEGY

### 3.1 Mitigation Goals

At the first plan update meeting, the committee members discussed the previous goals for the plan. In the 2012 plan, each hazard had a corresponding goal. For the 2019 plan, the committee created wide-ranging goals to subsume hazard mitigation and other emergency preparedness initiatives that contribute to the community's resilience. The committee generated the following four goals.

1. Eliminate all loss of life and property resulting from hazards.
2. Construct an infrastructure that is resilient to all hazards, thereby ensuring service delivery during hazard events.
3. Use a "whole of government" approach to support the social services needs of the community in the aftermath of hazards.
4. Ensure all future economic development represents resilient construction.



### 3.0 MITIGATION STRATEGY

§ 201.6(c)(3)(ii)	A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.
§ 201.6(c)(3)(iii)	An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

### 3.2 Mitigation Actions

This section serves as a mitigation action plan to reduce the losses and other impacts Pickaway County may suffer from the hazards included in the risk assessment. “A mitigation action is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan’s mission and goals. The actions to reduce vulnerability to threats and hazards form the core of the plan and are a key outcome of the planning process” (FEMA, 2013).

#### Types of Mitigation Actions

There are five primary types of mitigation actions that can work to reduce long-term vulnerability: local plans and regulations, structure and infrastructure projects, natural systems protection, education programs, and preparedness and response activities (Coastal Hazards Research Center & Center for Sustainable Community Design, n.d.).

- **Local Plans and Regulations:** Local land use or comprehensive plans embody the goals, values, and aspirations of the community, as expressed through a process of community engagement. Local ordinances and review processes influence land development and building construction. In some cases, plans and regulations can work at cross-purposes. For example, a capital improvement plan may call for extending water and sewer lines to an area that is vulnerable to natural hazards. Examples include the following.
  - Comprehensive plans
  - Land use ordinances
  - Subdivision regulations
  - Development review



- Building codes and enforcement
  - NFIP Community Rating System
  - Capital improvement programs
  - Open space preservation
  - Stormwater management regulations and master plans
- 
- **Structure and Infrastructure Projects:** These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. These projects could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct human-made structures to reduce the impact of hazards. Examples include the following.
    - Acquisitions and elevations of structures in flood-prone areas
    - Utility undergrounding
    - Structural retrofits.
    - Floodwalls and retaining walls
    - Detention and retention structures
    - Culverts
    - Safe rooms
- 
- **Natural Systems Protection:** These are actions that minimize damage and losses while preserving or restoring the functions of natural systems. Examples include the following.
    - Sediment and erosion control
    - Stream corridor restoration
    - Forest management
    - Conservation easements
    - Wetland restoration and preservation
- 
- **Education Programs:** These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Although this type of mitigation reduces risk less directly than structural projects or regulations, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public can lead to direct actions. Examples include the following.
    - Radio or television spots



- Websites with maps and information
  - Real estate disclosure
  - Presentations to school groups or neighborhood organizations
  - Mailings to residents in hazard-prone areas.
  - StormReady
  - Firewise Communities
- **Preparedness and Response Activities:** Mitigation actions that reduce or eliminate long-term risk and are different from actions taken to prepare for or respond to hazard events. Mitigation activities lessen or eliminate the need for preparedness or response resources in the future. When analyzing risks and identifying mitigation actions, the planning team may also identify emergency response or operational preparedness actions.

For some hazards such as tornadoes, including preparedness actions in the mitigation plan may be necessary and practical. The mitigation plan may be the best place for your community to capture and justify the need for these actions. However, these will not supplant or meet the federal requirements for identifying mitigation actions. It is important that the planning team understands the difference and can distinguish between mitigation and other emergency management activities.

Examples include the following.

- Mutual aid agreements with neighboring communities to meet emergency response needs
- Purchasing radio communications equipment for emergency responders
- Notifying citizens of available shelter locations

### Prioritization

The prioritization process occurred over three planning meetings. During Meeting 3, committee members determined ten criteria by which to score projects for prioritization. During Meeting 4, committee members weighted each of the ten criteria. The criteria weights correlated to the points assigned to each project. Finally, during Meeting 5, the consultant displayed each project on a projector screen, and committee members confirmed each project's adherence to the criteria. In the tables below, projects with the same priority received the same prioritization





score. See Appendix 2 for weighting calculations and project scoring matrices. Criteria were as follows.

- **Criterion 1 (10 points):** The project attempts to reduce the negative impacts of frequent hazards.
- **Criterion 2 (9 points):** The project attempts to reduce the negative impacts of severe hazards.
- **Criterion 3 (8 points):** The project addresses more than one hazard at once.
- **Criterion 4 (7 points):** The project aims to protect the most vulnerable populations.
- **Criterion 5 (6 points):** The project is easily funded with local funds or attainable grants.
- **Criterion 6 (5 points):** The project promotes partnerships within the county.
- **Criterion 7 (4 points):** The project is easy to implement (i.e., most of the population agrees with the project, and it doesn't have negative political ramifications).
- **Criterion 8 (3 points):** The project directly aligns with one or more of the goals set by the committee.
- **Criterion 9 (2 points):** The project protects the environment.
- **Criterion 10 (1 point):** The project is already scheduled to start or is in progress.

#### Jurisdictional Mitigation Actions

The following table lists the active hazard mitigation actions for Pickaway County and the villages and cities that participated in this plan update. These actions have broad applicability and benefit multiple jurisdictions or unincorporated areas. In some instances, county agencies, villages, or cities included specific mitigation projects that support the broader actions, and those also appear in the table.



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
1	1.1.15 2.2.1 2.2.2 3.1.1 3.2.1 3.2.2 4.1.1 5.1.1 7.1.2	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards</p> <p><b>Action Type:</b> Education programs</p> <p>Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b>(a) Pickaway County LEPC, (b) Emergency Response Organizations (including public health departments, hospitals, school systems, and other preparedness partners), and (c) Administrators from the Applicable Jurisdictions  <b>2019 Status:</b> The planning committee consolidated several actions from the previous plan into a single education action. These actions include both awareness campaigns and direct information provided by agencies such as building departments and zoning offices. Organizations such as emergency responder agencies, the Pickaway County EMA, and the local emergency planning committee regularly disseminate information; thus, this action has been completed, but on-going.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	Local Funding	9



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
2	1.1.2 1.1.3	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards</p> <p><b>Action Type:</b></p> <p>Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> Administrators from the Applicable Jurisdictions</p> <p><b>2019 Status:</b> The committee consolidated two actions from the previous plan as the goal of both actions overlapped. The committee and applicable jurisdictions will continue to research possible properties and funding resources.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	HMGP, Local Funding, PDM	17
3	1.1.5	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Local plans &amp; regulations</p> <p>Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> Administrators from applicable jurisdictions.</p> <p><b>2019 Status:</b> Local permitting and zoning require updates to meet the required standards.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	Local Funding	6



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS					
Number	Old Number	Action	Applicable Jurisdictions	Potential Funding Source	Priority
4	1.1.7	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Structures and Infrastructure Projects</p> <p>Evaluate the feasibility of both traditional and non-traditional mitigation techniques to address overland flooding near CR 511, SR 752, Haggerty Road, and Island Road.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b> Administrators from applicable jurisdictions.  <b>2019 Status:</b> After considering several possible mitigation actions, the committee will evaluate the feasibility of installing a drainage system to stop flooding near the railroad crossings.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> </ul>	HMGP, Local Funding, PDM	20
5	1.1.9	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Local plans &amp; regulations</p> <p>Create stream buffer ordinances for each incorporated municipality.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b> Administrators from applicable jurisdictions.  <b>2019 Status:</b> Several municipalities have created and passed stream buffer ordinances. Pickaway EMA will continue to work with and support municipalities efforts.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> <li>Commercial Point Village</li> <li>Darbyville Village</li> <li>New Holland Village</li> <li>South Bloomfield Village</li> <li>Williamsport Village</li> <li>Circleville Twp.</li> <li>Darby Twp.</li> <li>Deer Creek Twp.</li> <li>Harrison Twp.</li> <li>Jackson Twp.</li> <li>Madison Twp.</li> <li>Monroe Twp.</li> <li>Muhlenberg Twp.</li> <li>Perry Twp.</li> <li>Pickaway Twp.</li> <li>Salt Creek Twp.</li> <li>Scioto Twp.</li> <li>Walnut Twp.</li> <li>Washington Twp.</li> <li>Wayne Twp.</li> </ul>	Local Funding	11



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
6	1.1.8 1.1.10	<p><b>Goal Alignment:</b> N/A <b>Action Type:</b> Local plans &amp; regulations</p> <p>Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA <b>Support Agency(ies):</b>(a) Pickaway County LEPC, (b) Pickaway County Engineer's Office, (c) Administrators from applicable jurisdictions. <b>2019 Status:</b> This is an on-going project. Pickaway County EMA will support jurisdictions entering the CRS.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> <li>Commercial Point Village</li> </ul>	<ul style="list-style-type: none"> <li>Darbyville Village</li> <li>New Holland Village</li> <li>South Bloomfield Village</li> <li>Williamsport Village</li> </ul>	N/A	23
7	1.1.12	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards, <b>Action Type:</b> Structures and Infrastructure Projects</p> <p>Evaluate risk and develop mitigation alternatives for low lying areas that result in pooling and flooding.</p> <p><b>Coordinating Agency:</b> Darbyville Village Administrators <b>Support Agency(ies):</b>(a) Pickaway County EMA <b>2019 Status:</b> This is an on-going project. Administrators consider these factors when building or repairing areas of the community.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> </ul>	<ul style="list-style-type: none"> <li>Darbyville Village</li> </ul>	HMGP, Local Funding, PDM	5
8	1.1.11 1.1.13	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards, <b>Action Type:</b> Structures and Infrastructure Projects</p> <p>Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA <b>Support Agency(ies):</b>(a) Administrators, (b) ODOT <b>2019 Status:</b> This is an on-going project. Committee members combined multiple actions from previous plans that would require</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> <li>Commercial Point Village</li> </ul>	<ul style="list-style-type: none"> <li>Darbyville Village</li> <li>New Holland Village</li> <li>South Bloomfield Village</li> <li>Williamsport Village</li> </ul>	HMGP, Local Funding, PDM	12



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
9	1.1.14	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards,  <b>Action Type:</b> Natural Systems Protection</p> <p>Explore stream bank erosion mitigation alternatives such as soil bioengineering practices, native material revetments, and in-stream structures to further prevent and repair streambank erosion.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b>(a) Administrators from applicable jurisdictions.  <b>2019 Status:</b> This is an on-going project. The committee will consider actions if funding becomes available.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Darbyville Village</li> </ul>		OPWC	12
10	1.1.15	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards,  <b>Action Type:</b> (a) Education programs, (b) Natural systems protection</p> <p>Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA,  <b>Support Agency(ies):</b> (a) Pickaway County Engineer's Office, (b) Pickaway County Soil and Water Office, (c) Administrators from applicable jurisdictions.  <b>2019 Status:</b> This is an on-going project. Committee members opted to continue this project as a way of educating the agricultural community on how maintain stream banks leads to more efficient water flow during weather events.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> <li>Commercial Point Village</li> <li>Darbyville Village</li> <li>New Holland Village</li> <li>South Bloomfield Village</li> <li>Williamsport Village</li> <li>Circleville Twp.</li> <li>Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>Deer Creek Twp.</li> <li>Harrison Twp.</li> <li>Jackson Twp.</li> <li>Madison Twp.</li> <li>Monroe Twp.</li> <li>Muhlenberg Twp.</li> <li>Perry Twp.</li> <li>Pickaway Twp.</li> <li>Salt Creek Twp.</li> <li>Scioto Twp.</li> <li>Walnut Twp.</li> <li>Washington Twp.</li> <li>Wayne Twp.</li> </ul>	Local Funding	8



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
11	2.3.1	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards,  <b>Action Type:</b> Preparedness and response activities</p> <p>Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b> (a) Utility companies, (b) Administrators from applicable jurisdictions  <b>2019 Status:</b> The committee opted to continue this project to help reduce the loss of utilities due to line damage from limb breakage. By trimming limbs away from the utility lines and poles helps mitigate loss of power, phone, and internet service from a myriad of hazards including high winds, winter storms, and hail.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	N/A	1
12	3.2.1	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards  <b>Action Type:</b> Structure and infrastructure projects</p> <p>Promote enhanced anchoring of manufactured homes.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b> (a) Pickaway County Building Department, (b) Pickaway County Planning and Development, (Administrators from applicable jurisdictions, (d) local building departments.  <b>2019 Status:</b> This project appeared in previous version of the plan. The committee will continue this project and research new means of encouraging residents of the county to anchor their manufactured homes especially in light of damage during a 2019 tornado event.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	Local Funding	21



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
13	3.1.2	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards, 2. Construct an infrastructure that is resilient to all hazard events.</p> <p><b>Action Type:</b> Structure and infrastructure projects</p> <p>Build a community safe room/tornado shelter at the county fairgrounds</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b> (a) Pickaway County Fair Board, (b) Circleville City council,  <b>2019 Status:</b> Jurisdictions and agencies evaluated several locations and chose the fairgrounds to build this structure.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> </ul>	<ul style="list-style-type: none"> <li>Circleville City</li> </ul>	HMGP, Local Funding, PDM	15
14	2.2.4	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Preparedness and response activities.</p> <p>Maintain and replace current warning sirens as needed.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b> Administrators from applicable jurisdictions  <b>2019 Status:</b> Pickaway County tests the tornado sirens</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> <li>Commercial Point Village</li> <li>Darbyville Village</li> <li>New Holland Village</li> <li>South Bloomfield Village</li> <li>Williamsport Village</li> <li>Circleville Twp.</li> <li>Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>Deer Creek Twp.</li> <li>Harrison Twp.</li> <li>Jackson Twp.</li> <li>Madison Twp.</li> <li>Monroe Twp.</li> <li>Muhlenberg Twp.</li> <li>Perry Twp.</li> <li>Pickaway Twp.</li> <li>Salt Creek Twp.</li> <li>Scioto Twp.</li> <li>Walnut Twp.</li> <li>Washington Twp.</li> <li>Wayne Twp.</li> </ul>	HMPG PMF Local funding	19





PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
15	2.2.4	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Preparedness and response activities</p> <p>Install sirens for early warning capability.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> Administrators from applicable jurisdictions</p> <p><b>2019 Status:</b> The committee decided to continue evaluating other areas of the county to install warning sirens to increase this capability.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	HMGP, PDM, Local funding	2
16	6.1.2	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Local plans &amp; regulations</p> <p>Develop land use strategies to promote the safe use of land downstream from dams.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> Administrators from applicable jurisdictions</p> <p><b>2019 Status:</b> The committee decided to continue this action for consideration as jurisdictions update strategic plans.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> </ul>	<ul style="list-style-type: none"> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> </ul>	N/A	6



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS					
Number	Old Number	Action	Applicable Jurisdictions	Potential Funding Source	Priority
17	N/A	<p><b>Goal Alignment:</b> 3. Use a “whole of government” approach to support the social services needs of the community in the aftermath of hazards.</p> <p><b>Action Type:</b> Structure and infrastructure projects</p> <p>Evaluate the feasibility of renovating an area of the fairgrounds to facilitate a drive-through point of distribution site.</p> <p><b>Coordinating Agency:</b> Pickaway County Health Department  <b>Support Agency(ies):</b> (a) Pickaway County EMA, Pickaway County Fair Board</p> <p><b>2019 Status:</b> The committee added this action during 2020 update. This project was originally proposed by the health department as a means to provide a central POD that could handle a large quantity of drive through residents in the event of a pandemic type incident. The committee further discussed other possible uses such as distributing meals, water, and other goods following other types of disasters.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Circleville City</li> </ul>	HMGP, Local funding	9
18	N/A	<p><b>Goal Alignment:</b> Eliminate all loss of life and property resulting from hazards</p> <p><b>Action Type:</b> Natural systems protection</p> <p>Remove part of defunct dam from canal park.</p> <p><b>Coordinating Agency:</b> Pickaway Count Park District  <b>Support Agency(ies):</b> Pickaway County EMA</p> <p><b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> </ul>	HHPD	12



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
19	N/A	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Structure and infrastructure projects.</p> <p>Approach ODNR to make necessary repairs to dams.</p> <p><b>Coordinating Agency:</b> Pickaway County OEM  <b>Support Agency(ies):</b> ODNR  <b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> </ul>	<ul style="list-style-type: none"> <li>Darbyville Village</li> <li>New Holland Village</li> <li>Williamsport Village</li> </ul>	HHPD PDM	18
20	N/A	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Structure and infrastructure projects</p> <p>Create an agreement with ODNR to maintain and repair dams with the county and local jurisdictions.</p> <p><b>Coordinating Agency:</b> Pickaway County OEM  <b>Support Agency(ies):</b> ODNR  <b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> </ul>	<ul style="list-style-type: none"> <li>Darbyville Village</li> <li>New Holland Village</li> <li>Williamsport Village</li> </ul>	HHPD PDM	2
21	N/A	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Preparedness and response activities</p> <p>Evaluate the feasibility of installing warning capabilities for dams.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA  <b>Support Agency(ies):</b>  <b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>Pickaway County</li> <li>Ashville Village</li> <li>Circleville City</li> </ul>	<ul style="list-style-type: none"> <li>Darbyville Village</li> <li>New Holland Village</li> <li>Williamsport Village</li> </ul>	HHPD PDM	25



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS					
Number	Old Number	Action	Applicable Jurisdictions	Potential Funding Source	Priority
22	N/A	<p><b>Goal Alignment:</b> <b>Action Type:</b></p> <p>Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</p> <p><b>Coordinating Agency:</b> Pickaway County LEPC <b>Support Agency(ies):</b> (a) Pickaway County EMA, (b) Local response agencies <b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	HMEP PDM HMGP	16
23	N/A	<p><b>Goal Alignment:</b> <b>Action Type:</b></p> <p>Install rain water detection systems at railroad crossings</p> <p><b>Coordinating Agency:</b> Pickaway County EMA <b>Support Agency(ies):</b> (a) Administrators from applicable jurisdictions, (b) railroad companies <b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	HMGP, PDM Local funding	2



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
24	N/A	<p><b>Goal Alignment:</b> 2. Construct an infrastructure that is resilient to all hazards, thereby ensuring service delivery during hazard events, 4. Ensure all future economic development represents resilient construction.</p> <p><b>Action Type:</b></p> <p>Support efforts to increase broadband capabilities in the county.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> (a) Pickaway County Commissioners, (b) Administrators from applicable jurisdictions</p> <p><b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	CDBG	23
25	N/A	<p><b>Goal Alignment:</b> 2. Construct an infrastructure that is resilient to all hazards, thereby ensuring service delivery during hazard events.</p> <p><b>Action Type:</b></p> <p>Evaluate the feasibility of hardening election security including mail-in and electronic voting.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> (a) Pickaway County Board of Elections, (b) Pickaway County Commissioners, (c) Administrators from applicable jurisdictions</p> <p><b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> </ul>	<ul style="list-style-type: none"> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> </ul>	CDBG HMGP, Local Funding, PDM, HSGP	26



PICKAWAY COUNTY HAZARD MITIGATION ACTIONS						
Number	Old Number	Action	Applicable Jurisdictions		Potential Funding Source	Priority
26	N/A	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Structure and infrastructure projects.</p> <p>Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> (a) Pickaway County Sheriff's Office, (b) Local police agencies, (c) Pickaway County Fair Board</p> <p><b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> <li>• Commercial Point Village</li> <li>• Darbyville Village</li> <li>• New Holland Village</li> <li>• South Bloomfield Village</li> <li>• Williamsport Village</li> <li>• Circleville Twp.</li> <li>• Darby Twp.</li> </ul>	<ul style="list-style-type: none"> <li>• Deer Creek Twp.</li> <li>• Harrison Twp.</li> <li>• Jackson Twp.</li> <li>• Madison Twp.</li> <li>• Monroe Twp.</li> <li>• Muhlenberg Twp.</li> <li>• Perry Twp.</li> <li>• Pickaway Twp.</li> <li>• Salt Creek Twp.</li> <li>• Scioto Twp.</li> <li>• Walnut Twp.</li> <li>• Washington Twp.</li> <li>• Wayne Twp.</li> </ul>	HMGP, Local Funding, PDM, HSGP	26
27	N/A	<p><b>Goal Alignment:</b> 1. Eliminate all loss of life and property resulting from hazards.</p> <p><b>Action Type:</b> Preparedness and response activities</p> <p>Collect updated emergency action plans (EAPs) for Class I/II structures and create a GIS layer of inundation areas that appear in EAPs. Include downstream structures in the layer to support calculation of loss estimates.</p> <p><b>Coordinating Agency:</b> Pickaway County EMA</p> <p><b>Support Agency(ies):</b> (a) ODNR (b) Administrators from applicable jurisdictions (c) Pickaway County GIS</p> <p><b>2019 Status:</b> The committee added this action during 2020 update.</p>	<ul style="list-style-type: none"> <li>• Pickaway County</li> <li>• Ashville Village</li> <li>• Circleville City</li> </ul>	<ul style="list-style-type: none"> <li>• Darbyville Village</li> <li>• Williamsport Village</li> </ul>	HHPD Local Funding	21



Since this plan is multi-jurisdictional in scope, the following table lists which of the above projects apply to the municipal jurisdictions that will formally adopt this plan. It is significant to note that the projects that appear in the following table *also appear in the table above*. This table is for clarity only.

MITIGATION PROJECTS BY PARTICIPATING JURISDICTIONS	
<i>Jurisdiction</i>	<i>Project</i>
City of Circleville	<ul style="list-style-type: none"> <li>• Project 1: Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</li> <li>• Project 2: Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</li> <li>• Project 3: Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain.</li> <li>• Project 5: Create stream buffer ordinances for each incorporated municipality.</li> <li>• Project 6: Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</li> <li>• Project 8: Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</li> <li>• Project 10: Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</li> <li>• Project 5: Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</li> <li>• Project 12: Promote enhanced anchoring of manufactured homes.</li> <li>• Project 13: Build a community safe room/tornado shelter at the county fairgrounds</li> <li>• Project 14: Maintain and replace current warning sirens as needed.</li> <li>• Project 15: Install sirens for early warning capability</li> <li>• Project 16: Develop land use strategies to promote the safe use of land downstream from dams.</li> <li>• Project 17: Evaluate the feasibility of renovating an area of the fairgrounds to facilitate a drive-through point of distribution site.</li> <li>• Project 19: Approach ODNR to make necessary repairs to dams.</li> <li>• Project 20: Create an agreement with ODNR to maintain and repair dams with the county and local jurisdictions.</li> <li>• Project 21: Evaluate the feasibility of installing warning capabilities for dams.</li> <li>• Project 22: Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</li> <li>• Project 23: Install rain water detection systems at railroad crossings</li> <li>• Project 24: Support efforts to increase broadband capabilities in the county.</li> <li>• Project 25: Evaluate the feasibility of hardening election security including mail-in and electronic voting.</li> <li>• Project 26: Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</li> <li>• Project 27: Collect updated emergency action plans (EAPs) for Class I/II structures and create a GIS layer of inundation areas that appear in EAPs. Include downstream structures in the layer to support calculation of loss estimates.</li> </ul>



MITIGATION PROJECTS BY PARTICIPATING JURISDICTIONS	
<i>Jurisdiction</i>	<i>Project</i>
Village of Ashville	<ul style="list-style-type: none"> <li>• Project 1: Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</li> <li>• Project 2: Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</li> <li>• Project 3: Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain.</li> <li>• Project 5: Create stream buffer ordinances for each incorporated municipality.</li> <li>• Project 6: Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</li> <li>• Project 8: Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</li> <li>• Project 10: Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</li> <li>• Project 11: Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</li> <li>• Project 12: Promote enhanced anchoring of manufactured homes.</li> <li>• Project 14: Maintain and replace current warning sirens as needed.</li> <li>• Project 15: Install sirens for early warning capability</li> <li>• Project 16: Develop land use strategies to promote the safe use of land downstream from dams.</li> <li>• Project 19: Approach ODNR to make necessary repairs to dams.</li> <li>• Project 20: Create an agreement with ODNR to maintain and repair dams with the county and local jurisdictions</li> <li>• Project 21: Evaluate the feasibility of installing warning capabilities for dams.</li> <li>• Project 22: Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</li> <li>• Project 23: Install rain water detection systems at railroad crossings</li> <li>• Project 24: Support efforts to increase broadband capabilities in the county.</li> <li>• Project 25: Evaluate the feasibility of hardening election security including mail-in and electronic voting.</li> <li>• Project 26: Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</li> <li>• Project 27: Collect updated emergency action plans (EAPs) for Class I/II structures and create a GIS layer of inundation areas that appear in EAPs. Include downstream structures in the layer to support calculation of loss estimates.</li> </ul>





MITIGATION PROJECTS BY PARTICIPATING JURISDICTIONS	
<i>Jurisdiction</i>	<i>Project</i>
Village of Commercial Point	<ul style="list-style-type: none"> <li>• Project 1: Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</li> <li>• Project 2: Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</li> <li>• Project 3: Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain.</li> <li>• Project 5: Create stream buffer ordinances for each incorporated municipality.</li> <li>• Project 6: Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</li> <li>• Project 8: Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</li> <li>• Project 10: Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</li> <li>• Project 11: Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</li> <li>• Project 12: Promote enhanced anchoring of manufactured homes.</li> <li>• Project 14: Maintain and replace current warning sirens as needed.</li> <li>• Project 15: Install sirens for early warning capability</li> <li>• Project 16: Develop land use strategies to promote the safe use of land downstream from dams.</li> <li>• Project 22: Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</li> <li>• Project 23: Install rain water detection systems at railroad crossings</li> <li>• Project 24: Support efforts to increase broadband capabilities in the county.</li> <li>• Project 25: Evaluate the feasibility of hardening election security including mail-in and electronic voting.</li> <li>• Project 26: Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</li> </ul>



MITIGATION PROJECTS BY PARTICIPATING JURISDICTIONS	
<i>Jurisdiction</i>	<i>Project</i>
Village of Darbyville	<ul style="list-style-type: none"> <li>• Project 1: Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</li> <li>• Project 2: Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</li> <li>• Project 3: Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain.</li> <li>• Project 5: Create stream buffer ordinances for each incorporated municipality.</li> <li>• Project 6: Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</li> <li>• Project 7: Evaluate risk and develop mitigation alternatives for low lying areas that result in pooling and flooding.</li> <li>• Project 8: Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</li> <li>• Project 9: Explore stream bank erosion mitigation alternatives such as soil bioengineering practices, native material revetments, and in-stream structures to further prevent and repair streambank erosion.</li> <li>• Project 10: Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</li> <li>• Project 11: Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</li> <li>• Project 12: Promote enhanced anchoring of manufactured homes.</li> <li>• Project 14: Maintain and replace current warning sirens as needed.</li> <li>• Project 15: Install sirens for early warning capability</li> <li>• Project 16: Develop land use strategies to promote the safe use of land downstream from dams.</li> <li>• Project 19: Approach ODNR to make necessary repairs to dams</li> <li>• Project 20: Create an agreement with ODNR to maintain and repair dams with the county and local jurisdictions</li> <li>• Project 21: Evaluate the feasibility of installing warning capabilities for dams.</li> <li>• Project 22: Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</li> <li>• Project 23: Install rain water detection systems at railroad crossings</li> <li>• Project 24: Support efforts to increase broadband capabilities in the county.</li> <li>• Project 25: Evaluate the feasibility of hardening election security including mail-in and electronic voting.</li> <li>• Project 26: Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</li> <li>• Project 27: Collect updated emergency action plans (EAPs) for Class I/II structures and create a GIS layer of inundation areas that appear in EAPs. Include downstream structures in the layer to support calculation of loss estimates.</li> </ul>



MITIGATION PROJECTS BY PARTICIPATING JURISDICTIONS	
<i>Jurisdiction</i>	<i>Project</i>
Village of New Holland	<ul style="list-style-type: none"> <li>• Project 1: Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</li> <li>• Project 2: Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</li> <li>• Project 3: Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain.</li> <li>• Project 5: Create stream buffer ordinances for each incorporated municipality.</li> <li>• Project 6: Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</li> <li>• Project 8: Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</li> <li>• Project 10: Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</li> <li>• Project 11: Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</li> <li>• Project 12: Promote enhanced anchoring of manufactured homes.</li> <li>• Project 14: Maintain and replace current warning sirens as needed.</li> <li>• Project 15: Install sirens for early warning capability</li> <li>• Project 16: Develop land use strategies to promote the safe use of land downstream from dams.</li> <li>• Project 19: Approach ODNR to make necessary repairs to dams.</li> <li>• Project 20: Create an agreement with ODNR to maintain and repair dams with the county and local jurisdictions</li> <li>• Project 21: Evaluate the feasibility of installing warning capabilities for dams.</li> <li>• Project 22: Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</li> <li>• Project 23: Install rain water detection systems at railroad crossings</li> <li>• Project 24: Support efforts to increase broadband capabilities in the county.</li> <li>• Project 25: Evaluate the feasibility of hardening election security including mail-in and electronic voting.</li> <li>• Project 26: Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</li> </ul>



MITIGATION PROJECTS BY PARTICIPATING JURISDICTIONS	
<i>Jurisdiction</i>	<i>Project</i>
Village of South Bloomfield	<ul style="list-style-type: none"> <li>• Project 1: Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</li> <li>• Project 2: Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</li> <li>• Project 3: Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain.</li> <li>• Project 5: Create stream buffer ordinances for each incorporated municipality.</li> <li>• Project 6: Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</li> <li>• Project 8: Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</li> <li>• Project 10: Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</li> <li>• Project 11: Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</li> <li>• Project 12: Promote enhanced anchoring of manufactured homes.</li> <li>• Project 14: Maintain and replace current warning sirens as needed.</li> <li>• Project 15: Install sirens for early warning capability</li> <li>• Project 16: Develop land use strategies to promote the safe use of land downstream from dams.</li> <li>• Project 22: Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</li> <li>• Project 23: Install rain water detection systems at railroad crossings</li> <li>• Project 24: Support efforts to increase broadband capabilities in the county.</li> <li>• Project 25: Evaluate the feasibility of hardening election security including mail-in and electronic voting.</li> <li>• Project 26: Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</li> </ul>



MITIGATION PROJECTS BY PARTICIPATING JURISDICTIONS	
<i>Jurisdiction</i>	<i>Project</i>
Village of Williamsport	<ul style="list-style-type: none"> <li>• Project 1: Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.</li> <li>• Project 2: Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.</li> <li>• Project 3: Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain.</li> <li>• Project 5: Create stream buffer ordinances for each incorporated municipality.</li> <li>• Project 6: Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.</li> <li>• Project 8: Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.</li> <li>• Project 10: Educate agricultural/farming owners and applicable landowners on stream bank maintenance.</li> <li>• Project 11: Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.</li> <li>• Project 12: Promote enhanced anchoring of manufactured homes.</li> <li>• Project 14: Maintain and replace current warning sirens as needed.</li> <li>• Project 15: Install sirens for early warning capability.</li> <li>• Project 16: Develop land use strategies to promote the safe use of land downstream from dams.</li> <li>• Project 19: Approach ODNR to make necessary repairs to dams.</li> <li>• Project 20: Create an agreement with ODNR to maintain and repair dams with the county and local jurisdictions.</li> <li>• Project 22: Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.</li> <li>• Project 23: Install rain water detection systems at railroad crossings</li> <li>• Project 24: Support efforts to increase broadband capabilities in the county.</li> <li>• Project 25: Evaluate the feasibility of hardening election security including mail-in and electronic voting.</li> <li>• Project 26: Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.</li> <li>• Project 27: Collect updated emergency action plans (EAPs) for Class I/II structures and create a GIS layer of inundation areas that appear in EAPs. Include downstream structures in the layer to support calculation of loss estimates.</li> </ul>

Appendix 3: Inactive Actions/Projects lists those that have been completed, deferred, or deleted.



## 4.0 PLAN MAINTENANCE AND INTEGRATION

§ 201.6(c)(4)(i)	[The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
§ 201.6(c)(4)(ii)	[The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.
§ 201.6(c)(4)(iii)	[The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

This section of the plan outlines the process by which Pickaway County and the municipalities therein will update and maintain this document.

### 4.1 Monitoring, Evaluating and Updating the Plan

The planning committee recognizes the importance of a plan maintenance procedure, not only as a function of the regulatory driver governing the completion of plans as a requirement for mitigation funding but also as an opportunity to support networking amongst key stakeholders in the county. The committee understands it is not feasible to dedicate full-time efforts to maintaining this plan. Therefore the committee developed a maintenance process based on FEMA’s five-year update cycle. The process is as flows.

- **Year 1:** Upon receipt of “approved pending adoption” (APA) status, jurisdictions will begin the adoption process. PCEMA will monitor the adoption process and compile a report to submit to the committee prior to the annual meeting.
- **Year 2:** During the second quarterly LEPC meeting, the committee will discuss the hazard list, completed and in progress mitigation actions, and local participation.
- **Year 3:** PCEMA will garner public participation through an online survey. During the second quarterly LEPC meeting the committee will review the asset inventory.
- **Year 4:** The planning committee will meet following the second quarterly LEPC meeting to discuss mitigation actions and update status narratives.
- **Year 5:** The planning committee will engage in the update process.

The goal of the annual meeting is to generate content for the next update. The discussions during these meetings also serve as a means to educate new stakeholders. Representatives on the planning committee may change and having annual maintenance meetings offers an opportunity to orient new members to what mitigation is, how the planning process works, etc. The annual meetings then support a more in-depth update process. Prior to the annual meeting,



PCEMA will provide an agenda as well as a copy of any status updates they have received since the previous meeting. Minutes will be recorded for inclusion in future updates.

The planning committee recognizes that following incidents that generate a federal disaster declaration offers an opportunity to review this document while the hazard and hazard impacts are fresh in the minds of stakeholders. As such, the PCEMA intends to reconvene or survey the committee within one month of the occurrence of a declared disaster to determine mitigation measures that could have impacted direct losses from the incident. PCEMA will compile minutes or a record to present at the next annual meeting and for inclusion in future planning efforts.

#### **4.2 Implementation through Existing Programs**

Most local leaders are aware of and understand traditional hazard mitigation funding programs (e.g., the Hazard Mitigation Grant Program [HMGP], Pre-Disaster Mitigation [PDM] program, etc.). However, the key to the widespread implementation of the mitigation plan is the recognition of opportunities for integrating opportunities for mitigation into other planning and community development initiatives. For instance, highway or streetscape projects present opportunities to address runoff and potential flash flooding. The development of parks and other open spaces can also mitigate weather hazards. Even substantial preparedness for the inevitable hazard occurrences can double as mitigation efforts in that a more efficient and effective response can lessen the overall loss the community experiences. As such, many other funding sources and programs beyond HMGP and PDM enable hazard mitigation.

Multiple existing mechanisms can support mitigation in Pickaway County including emergency operations planning and continuity of government planning. The following table describes the potential integration of these elements with hazard mitigation in detail.



<b>MITIGATION INTEGRATION</b>		
<i>Existing Program</i>	<i>Participating Agencies</i>	<i>Narrative (and Goal Alignment)</i>
Floodplain Management	Pickaway County Emergency Management Agency  Municipal Floodplain Administrators	According to FEMA's Community Status Book, Circleville City, Ashville Village, Commercial Point Village, Darbyville Village, New Holland Village, South Bloomfield Village, and Williamsport Village participate on the NFIP and thus maintain floodplain regulations that at least mirror the state's regulations. Jurisdictional floodplain administrators enforce ordinances locally. Currently, no municipalities participate in the Community Rating System (CRS).  GOAL ALIGNMENT 1. Eliminate all loss of life and property resulting from hazards.
Emergency Operations Planning	Pickaway County Emergency Management Agency  Municipal Partners  Response Agency Partners	PCEMA incorporates mitigation principals in the Pickaway County Emergency Operations Plan to predetermine the hazards to which responders may respond. The EOP primarily addresses the negative effects of natural, technological, and human-caused hazards using an all-hazards framework.  GOAL ALIGNMENT 1. Eliminate all loss of life and property resulting from hazards. 3. Use a "whole of government" approach to support the social services needs of the community in the aftermath of hazards.
Subdivision and Land Use Ordinances	Pickaway County Planning Commission  Municipal Partners	According to the capabilities survey, distributed by the committee, to each jurisdiction in the county Ashville Village, Commercial Village, New Holland Village and South Bloomfield Village all maintain and enforce Subdivision and Land Use Ordinances (SALDOs). SALDOs regulate the development of housing, commercial, industrial and public infrastructure. These ordinances can reduce exposure of development to hazard events.  GOAL ALIGNMENT 1. Eliminate all loss of life and property resulting from hazards. 2. Construct an infrastructure that is resilient to all hazards, thereby ensuring service delivery during hazard events. 4. Ensure all future economic development represents resilient construction





### **4.3 Continued Public Involvement**

All adopting jurisdictions maintain copies of this plan. Citizens can review the plan and provide comments at any of these locations. Citizens may also access the plan through the PCEMA. The PCEMA will maintain a copy of the document on its website.

Though the plan is available at these locations, citizens may not be aware of that availability or understand the nature and purpose of a hazard mitigation plan. As such, additional means of public education and involvement are important. The county EMA periodically sponsors education efforts and often works with partner agencies in the county to release public information. Much of this information educates the public about actions to take before an emergency occurs. The PCEMA can modify its content to include basic information about risk reduction.

The planning committee had moderate success disseminating a public survey via social media during the 2019-2020 plan update process. In addition to sharing the survey via its own social media channels, the PCEMA coordinated with other agencies represented on the planning committee to share it via their websites and social media outlets. In the third year of the planning cycle, the PCEMA will begin to garner public comment on hazards and risks. Utilizing surveys and public forums will enable a targeted discussion with the public about the types of projects it would support during the next plan update process.



## **5.0 APPENDICES**

This section includes five appendices that support the narrative presented in Sections 1.0 through 4.0 above.

5.1 Planning Process Involvement

5.2 Project Prioritization

5.3 Inactive Projects

5.4 Public Survey, Raw Data

5.5 Citations



## **APPENDIX 1: PLANNING PROCESS INVOLVEMENT**

This appendix provides evidence of the planning process, to include participation at meetings and topics discusses. Appendix 4 provides evidence of public involvement.



Unable to respond to the survey while open, Mayor Howard of the Village of Darbyville spoke with the consultant on October 12, 2020. The conversation was based on the capabilities Darbyville has with the responses added to the Capabilities Table on page 32 of this plan. The Mayor also spoke about a grant the village had received to complete a Water Treatment Plant Project. The mayor indicated that the project was partially paid for by the grant as well as village funds from the capital budget.

The Mayor also provided insight on how building codes are applied in the village. Although the village has not adopted building codes or zoning ordinances, commercial properties are regulated by the county.



## COMMITTEE MEETING 1



**PICKAWAY COUNTY HAZARD MITIGATION PLAN**  
**PLANNING COMMITTEE MEETING #1**

**AGENDA**

Date: Friday, October 11, 2019  
Time: 10:00 a.m.  
Estimated Duration: 60-90 minutes  
Location: Pickaway County EMA

1. Welcome and Introductions
2. Hazard Mitigation 101
  - **Background:** FEMA and OEMA Requirements, Applicable Funding Source Eligibility
  - **Overview:** Planning Process
  - **Overview:** Planning Committee Responsibilities
3. Hazards
  - **Review:** Hazards from Previous Plan (see reverse)
  - **Discussion:** Additions, Deletions, Changes
4. Mitigation Goals
  - **Discussion:** What are mitigation goals?
  - **Review:** Mitigation Goals from Previous Version
  - **Activity:** Setting Goals for the Next Mitigation Planning Cycle

**Review Committee Member Homework**

“Tell Me a Story” Hazard Narratives  
Community Asset Inventory  
Existing Project Review (i.e., Status Updates)

5. Public Involvement
  - **Review:** Review Online Public Survey
  - **Discussion:** Public Meetings/Town Halls
6. Schedule for Next Meetings
7. Adjournment

Hazards from Previous Hazard Mitigation Plan

Dam Failure

Drought

Earthquake

Flooding

Hazardous Materials

Severe Weather (i.e., Summer Storms, Winter Weather, Extreme Heat)

Tornado

Others to Consider

Civil Disturbances

Invasive Species

Land Subsidence, Landslide

Terrorism

Wildfire or Urban Fire



**PICKAWAY COUNTY HAZARD MITIGATION PLAN**  
**PLANNING COMMITTEE MEETING #1**  
**MINUTES**

Date: Friday, October 11, 2019  
Time: 10:00 a.m.  
Duration: 90 minutes  
Location: Pickaway County EMA  
Attendees: See sign-in sheet attached

Pickaway County began the process of updating its hazard mitigation plan with a planning committee meeting on Friday, October 11, 2019. After an overview by the emergency management agency (EMA) director and round-robin introductions, the county's consultant facilitated the meeting. The first agenda item was a brief overview of the hazard mitigation planning process to include the roles and responsibilities of committee members. The consultant explained that members serve as conduits to other assets in the community. They may assist in data collection or provide access to other stakeholders (e.g., contact information and introductions to) with specialized knowledge. Mostly, however, committee members will provide strategic direction for the planning process and ensure that the resultant document is an accurate representation of the county's composition, capabilities, and disaster resilience goals.

Next, the committee discussed the hazards to include in the updated plan. The existing version, from 2012, included the following hazards.

- Dam failure
- Drought
- Earthquake
- Flooding
- Hazardous materials
- Severe weather
- Tornado

The consultant told committee members that the dam failure hazard would need to be revised to include dams and levees per Ohio Emergency Management Agency recommendations. Additionally, the consultant asked if the committee would like to split the existing severe weather discussion into its parts. The committee agreed to split the weather

discussion into (a) severe thunderstorms and hail (to include lightning strikes), (b) high/strong wind, and (c) temperature extremes (heat and cold). The committee also discussed several other hazards to add to the list. New hazards will include subsidence and land movements, and the county engineer's office representative indicated that he could provide information on the location of slips and sinks that impact roadways. The public health representative suggested adding public health emergencies to tie his agency's planning efforts into the overall resilience efforts. The remaining committee members agreed with his suggestion. The committee decided to add terrorism as a hazard, but focus that discussion on domestic incidents and cyber terrorism. Given access issues caused by train traffic and the presence of SR 23 as a major route between Columbus and Chillicothe, the committee discussed the inclusion of the transportation incidents at length. On the consultant's suggestion, the group added transportation through the frame of "access" versus the potential for accidents. Finally, the committee added wildland fire. Thus, the updated hazard list will be:

- Dam and levee failure,
- Drought,
- Earthquake,
- Flooding,
- Hazardous materials,
- High/strong winds,
- Public health emergencies,
- Severe thunderstorms and hail,
- Subsidence and land movements,
- Temperature extremes,
- Terrorism (i.e., domestic and cyber),
- Tornado,
- Transportation incidents, and
- Wildfire.

The next agenda item dealt with the goals for the updated mitigation strategy. The consultant introduced the concept of "mitigation goals" and presented the goals from the 2012 version of the plan. In 2012, a goal corresponded to each identified hazard (e.g., "To minimize the losses of life and property due to XYZ in Pickaway County"). While those goals served the planning purpose, the consultant suggested that the committee consider wider-ranging goals

that could subsume hazard mitigation and other emergency preparedness initiatives that contribute to the community's resilience. The consultant framed that discussion as a question: "What would a perfectly resilient Pickaway County look like?" The committee then generated four goals to guide this effort.

1. Eliminate all loss of life and property resulting from hazards.
2. Construct an infrastructure that is resilient to all hazards, thereby ensuring service delivery during hazard events.
3. Use a "whole of government" approach to support the social services needs of the community in the aftermath of hazards.
4. Ensure all future economic development represents resilient construction.

To conclude the meeting, the consultant provided an overview of the public participation requirements associated with the planning process as well as for instructions for committee member "homework" assignments (see attached). Historically, communities satisfied the public involvement component through minimally-attended town hall meetings. While those meetings can still be valuable, the advent of technology (and particularly the rise in the use of social media) has made garnering participation through online surveys much more effective. To that end, the consultant distributed a proposed public survey (see attached) for review. The consultant will ask for committee approval of that survey at the next meeting. With approval, the consultant will provide a Survey Monkey link for the survey and ask committee members and other stakeholders to share the link via their social media feeds.

One of the responsibilities of the committee members is to assist with providing a local context for the plan. Through small homework assignments, committee members can inject personal stories and local language into the plan's narrative. The homework assignments stemming from Meeting 1 are as follows.

- **"Tell Me a Story":** This worksheet serves as a way to include hazard events that may have significantly impacted Pickaway County, but did not rise to a level of severity that triggered inclusion on National Weather Service and other repositories.
- **Instructions:** See the example on the sheet. For each noted hazard, circle whether you believe there has been an increase, decrease, or no change in the magnitude and severity of that hazard in Pickaway County. Then mark your level of concern about that hazard by checking the appropriate box. Finally, select three hazards and provide a brief narrative of a personal experience you had with them. Feel free to add hazards not already on this list.

- **Asset Inventory:** The plan should include a discussion of the vulnerability to hazards on “community assets.” Assets are generally those facilities that community members feel are important. They typically fall into one of four categories.
  - **People:** Concentrations of residents and employees, types of visiting populations, locations and concentrations of functional/access needs populations, etc.
  - **Economy:** Major employers, primary economic sectors, and commercial centers whose losses or inoperability would have severe impacts on the community (and its ability to recover from a disaster).
  - **Built Environment:** Infrastructure, critical facilities, cultural resources, emergency services, future development, etc.
  - **Natural Environment:** Valuable areas that can provide protective functions that reduce the magnitude of hazards, critical habitat areas, etc.
  - **Instructions:** Make a list of those facilities in your jurisdiction that you feel align with these four categories. The list should be broad. We will discuss it in detail at the next planning meeting.
  
- **Project Status:** These minutes include the project list from the 2012 version of the plan. The update will need to address all projects from the existing plan, noting each as “completed,” “deleted,” “deferred,” or “on-going.”
  - **Instructions:** Review the project list for projects that apply to your agency or jurisdiction. Hand-write any status update of which you are aware, and bring a copy of your notes to the next meeting.

Attachments:

- Sign-in sheet
- Public survey draft
- “Tell Me a Story” worksheet
- Existing projects list

## PICKAWAY COUNTY HAZARD MITIGATION PLAN UPDATE

According to the FEMA, which oversees the hazard mitigation process at the local, regional, state, and national levels, “mitigation is the effort to reduce loss of life and property by lessening the impact of disasters” (2016). Generally, mitigation is any action that can be taken now or in the future to reduce the impact of a disaster. These actions become projects during the mitigation planning process, where coordinating agencies are identified, potential costs are estimated, and potential funding sources are identified.

### WHY IS PARTICIPATION IN MITIGATION PLANNING IMPORTANT?

1	Local governments have a responsibility to provide for the public safety.
2	There is also a specific regulatory driver for participation. Communities that do not adopt an approved hazard mitigation plan will not be eligible for the following federal funding: Flood Mitigation Assistance (FMA), Hazard Mitigation Grant Program (HMGP), or Pre-Disaster Mitigation (PDM).
3	The mitigation plan contains more than just projects that can be funded by FEMA. By participating, you may realize that other community initiatives, such as storm water management, and even some infrastructure projects have hazard mitigation components. As such, by including those in the mitigation plan, you may identify alternate or extra sources of funding for your projects.

### ASSET INVENTORY

A major role that participants play is updating asset inventories. They list the facilities a community feels are important, and they fall into one of four categories.

- **People:** Concentrations of residents and employees, types of visiting populations, locations and concentrations of functional/access needs populations, etc.
- **Economy:** Major employers, primary economic sectors, and commercial centers whose losses or inoperability would have severe impacts on the community (and its ability to recovery from a disaster).
- **Built Environment:** Infrastructure, critical facilities, cultural resources, emergency services, future development, etc.
- **Natural Environment:** Valuable areas that can provide protective functions that reduce the magnitude of hazards, critical habitat areas, etc.



## MITIGATION PROJECTS

Projects fall into one of four categories shown in the table below. These projects directly reduce the risks a community faces from hazards.

Category	Description	Examples
Local Plans and Regulations	These actions include government authorities, policies or codes that influence the way land and buildings are developed and built	Comprehensive Plans, Land Use Ordinances, NFIP, Community Rating System, Open Space Preservation, etc.
Structure and Infrastructure Projects	These actions involve modifying existing structures and infrastructure to protect them from a hazard, or remove them from a hazard area. This can also include constructing structures to reduce the impacts of hazards	Acquisitions, elevations, or relocations of structures in flood zones, utility undergrounding, flood walls and retaining walls, culverts, safe rooms, etc.
Natural Systems Protection	These are actions that minimize damage and losses, while also preserving or restoring the functions of natural systems	Sediment and erosion control, stream restoration, forest management, wetland restoration and preservation, etc.
Education and Awareness Programs	These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.	Radio or television spots, websites with maps and information, presentations to school groups or other organizations, participating in national programs such as StormReady, etc.

The project update process will be done in two phases. The first is the updating phase, which involves updating the status of the projects listed in the current plan.

- **COMPLETED:** The project, as it is written, has been completed in its entirety. Any reporting and/or paperwork has been closed out
- **DELETED:** The project no longer aligns with local priorities or has been deemed unfeasible/beyond the scope of mitigation.
- **DEFERRED:** The project is still a viable project; however, other priorities have forced its consideration to be moved into the future.
- **ON-GOING:** The project has been started; work is on-going on the project and it is not anticipated to be done before the date current plan expires.

In addition to this status, we need a brief description of the project. What has been done to date? If the project is completed, when was it completed? If the final project is different than written, please explain the difference. If deleting or deferring the project, why? In order to win approval for the hazard mitigation plan, both the Ohio Emergency Management Agency and FEMA expect to see these updates. The second phase of the project list is the development of new projects. This will occur later in the process, and you may begin thinking about new projects for your jurisdiction.



# MITIGATION PROJECT IDEAS

## Types of Mitigation Actions

1. Local Planning and Regulations
2. Structure and Infrastructure Projects
3. Natural Systems Protection
4. Education and Awareness Programs

*General examples are planning and zoning, floodplain protection, property acquisition and relocation, or public outreach projects.*

## FLOODING

**Local Planning & Regulations:** Comprehensive planning and floodplain management can mitigate flooding by influencing development.

- **Objective:** INCORPORATE FLOOD MITIGATION IN LOCAL PLANNING.
  - **Strategy:** Pass and enforce an ordinance that regulates dumping in streams and ditches.

**Structure & Infrastructure Projects:** Rainwater and snowmelt can cause flooding and erosion in developed areas.

- **Objective:** IMPROVE STORM WATER DRAINAGE SYSTEM CAPACITY.
  - **Strategy:** Require developers to construct on-site retention basins for storm water and as a firefighting water source.

**Natural Systems Protection:** Natural resources provide floodplain protection, riparian buffers, and other ecosystem services that mitigate flooding.

- **Objective:** PROTECT & RESTORE NATURAL FLOOD MITIGATION FEATURES.
  - **Strategy:** Establish and manage riparian buffers along rivers and streams.

**Education & Awareness Programs:** Support mitigation by educating property owners regarding options for mitigating their own properties.

- **Objective:** EDUCATE PROPERTY OWNERS ABOUT FLOOD MITIGATION TECHNIQUES.
  - **Strategy:** Educate the public about securing debris, propane tanks, yard items, or stored objects that might otherwise be swept away, damaged, or pose a hazard if picked up and washed away by floodwaters.

## SEVERE WEATHER

**Local Planning & Regulations:** Adopt regulations governing residential construction to prevent wind and other weather damage.

- **Objective:** ADOPT & ENFORCE BUILDING CODES.
  - **Strategy:** Review building codes and structural policies to ensure they are adequate to protect older structures from severe weather damage.

**Structure & Infrastructure Projects:** Power lines can be protected from the impacts of severe weather.

- **Objective:** PROTECT POWER LINES.
  - **Strategy:** Install redundancies and loop feeds.

**Education & Awareness Programs:** Support mitigation by lessening impacts to a community's vulnerable populations.

- **Objective:** ASSIST VULNERABLE POPULATIONS.
  - **Strategy:** Identify specific at-risk populations that may be exceptionally vulnerable in the event of long-term power outages.

## MULTIPLE HAZARDS

**Local Planning & Regulations:** Understanding community vulnerability and level of risk is important to identify and prioritize mitigation alternatives.

- **Objective:** ASSESS COMMUNITY RISK.
  - **Strategy:** Develop and maintain a database to track community vulnerability (i.e., exposure in known hazard areas).

**Structure & Infrastructure Projects:** Lessening damage to structures supports mitigation.

- **Objective:** PROTECT STRUCTURES.
  - **Strategy:** Retrofit fire and police stations to become hazard resistant.

**Education & Awareness Programs:** Encouraging private mitigation reduces the potential strain on public sources.

- **Objective:** PROMOTE PRIVATE MITIGATION EFFORTS.
  - **Strategy:** Use outreach programs to: (a) advise homeowners of risks to life, health, and safety; (b) facilitate technical assistance programs that address measures citizens can take; or (c) facilitate funding for mitigation measures.



## EARTHQUAKE

**Local Planning & Regulations:** Support mitigation by better understanding and assessing local vulnerability to earthquakes.

- **Objective:** MAP AND ASSESS COMMUNITY VULNERABILITY TO SEISMIC HAZARDS.
  - **Strategy:** Develop an inventory of public and commercial buildings that may be particularly vulnerable to earthquake damage, including pre-1940s homes and homes with cripple wall foundations.

**Structure & Infrastructure Projects:** Reduce potential damage to critical facilities and infrastructure from future seismic events through structural upgrades.

- **Objective:** PROTECT CRITICAL FACILITIES & INFRASTRUCTURE.
  - **Strategy:** Require bracing of generators, elevators, and other vital equipment at hospitals.

**Education & Awareness Programs:** Support mitigation through increasing awareness of the hazard.

- **Objective:** INCREASE EARTHQUAKE RISK AWARENESS.
  - **Strategy:** Offer GIS hazard mapping online for residents and design professionals.

## LAND SUBSIDENCE

**Local Planning & Regulations:** Support mitigation by ensuring that development efforts consider the soil conditions of an area.

- **Objective:** MANAGE DEVELOPMENT IN HIGH-RISK AREAS.
  - **Strategy:** Restrict develop in areas with soil that is considered poor or unsuitable for development.

**Structure & Infrastructure Projects:** To prevent property loss, acquire and demolish or relocate buildings and infrastructure in high-risk areas.

- **Objective:** REMOVE EXISTING STRUCTURES FROM SUBSIDENCE HAZARD AREAS.
  - **Strategy:** Identify and offer buyouts and other incentives for property owners who relocate from subsidence-prone areas.

**Education & Awareness Programs:** Support mitigation by increasing residents' knowledge of subsidence.

- **Objective:** EDUCATE RESIDENTS ABOUT SUBSIDENCE.
  - **Strategy:** Promote community awareness of subsidence risks and impacts.

## DROUGHT

**Local Planning & Regulations:** Monitoring drought conditions can provide early warning for policymakers and planners to make decisions.

- **Objective:** MONITOR DROUGHT CONDITIONS.
  - **Strategy:** Identify local drought indicators, such as precipitation, temperature, surface water levels, soil moisture, etc. Establish a regular schedule to monitor and report conditions on at least a monthly basis.

**Structure & Infrastructure Projects:** Improving water supply and delivery systems helps to save water.

- **Objective:** RETROFIT WATER SUPPLY SYSTEMS.
  - **Strategy:** Develop new or upgrade existing water delivery systems to eliminate breaks and leaks.

**Natural Systems Protection:** Certain landscaping and civil design techniques can encourage a drought-tolerant landscape.

- **Objective:** ENHANCE LANDSCAPING & DESIGN MEASURES.
  - **Strategy:** Use permeable driveways and surfaces to reduce runoff and promote groundwater discharge.

**Education & Awareness Programs:** Encourage practices that foster soil health and improve soil quality to help increase resiliency and mitigate the impacts of droughts.

- **Objective:** EDUCATE FARMERS ON SOIL & WATER CONSERVATION PRACTICES.
  - **Strategy:** Encourage rotation of crops by growing a series of different types of crops on the same fields every season to reduce soil erosion.



# PICKAWAY COUNTY HAZARD MITIGATION PLAN 2019 UPDATE



Pickaway County  
Emergency Management

October 11, 2019 ~ 10:00 AM

160 Island Road  
Circleville, OH 43113

# WELCOME AND INTRODUCTIONS



# HAZARD MITIGATION 101



- Federal Emergency Management Agency (FEMA) – Region V
- Oversees the hazard mitigation process at the local, regional, state, and national levels
  - Defines mitigation as, “the effort to reduce loss of life and property by lessening the impact of disasters” (FEMA.gov, 2016)



# HAZARD MITIGATION 101



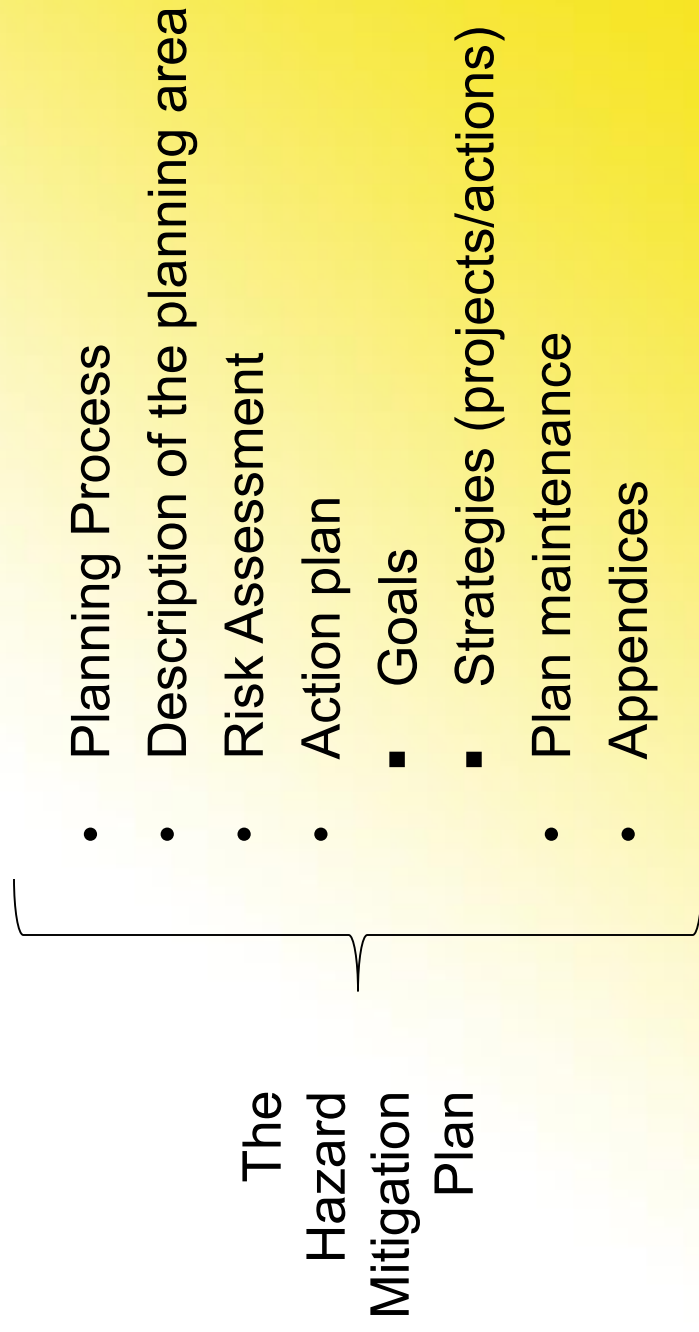
Ohio Emergency Management Agency (OEMA)

- Oversees the hazard mitigation process at the state levels
- Ensure jurisdictional participation
- Ensure alignment with state project and funding strategies



# PLANNING PROCESS

DMA2K ~ Stafford Act, Section 322 ~ 44 CFR 201.6





# PLANNING PROCESS

- Tasks and activities
- Contact with jurisdictions and consultant
- Review and approval of drafts

Project start

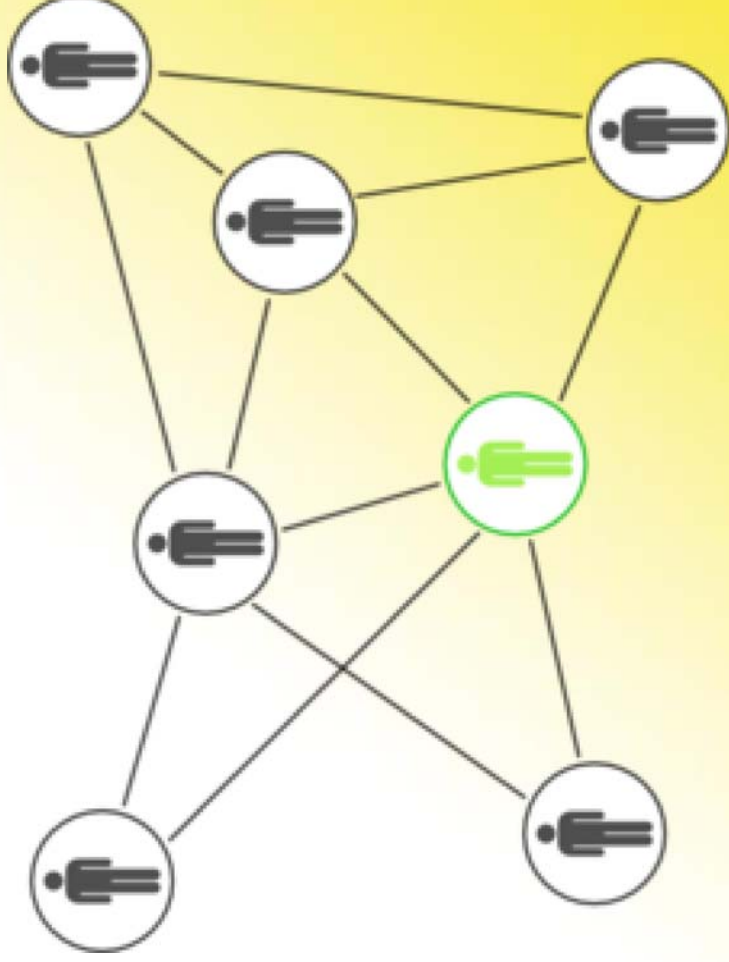
FEMA approval

July 2019

May 2020

In-person meetings ~ Phone calls ~ Workshops  
Activities ~ Surveys ~ Conference calls ~ Research  
Mapping ~ Analysis ~ Historical data ~ Reviews  
Partnerships ~ Plan integration ~ Development

# PLANNING COMMITTEE RESPONSIBILITIES

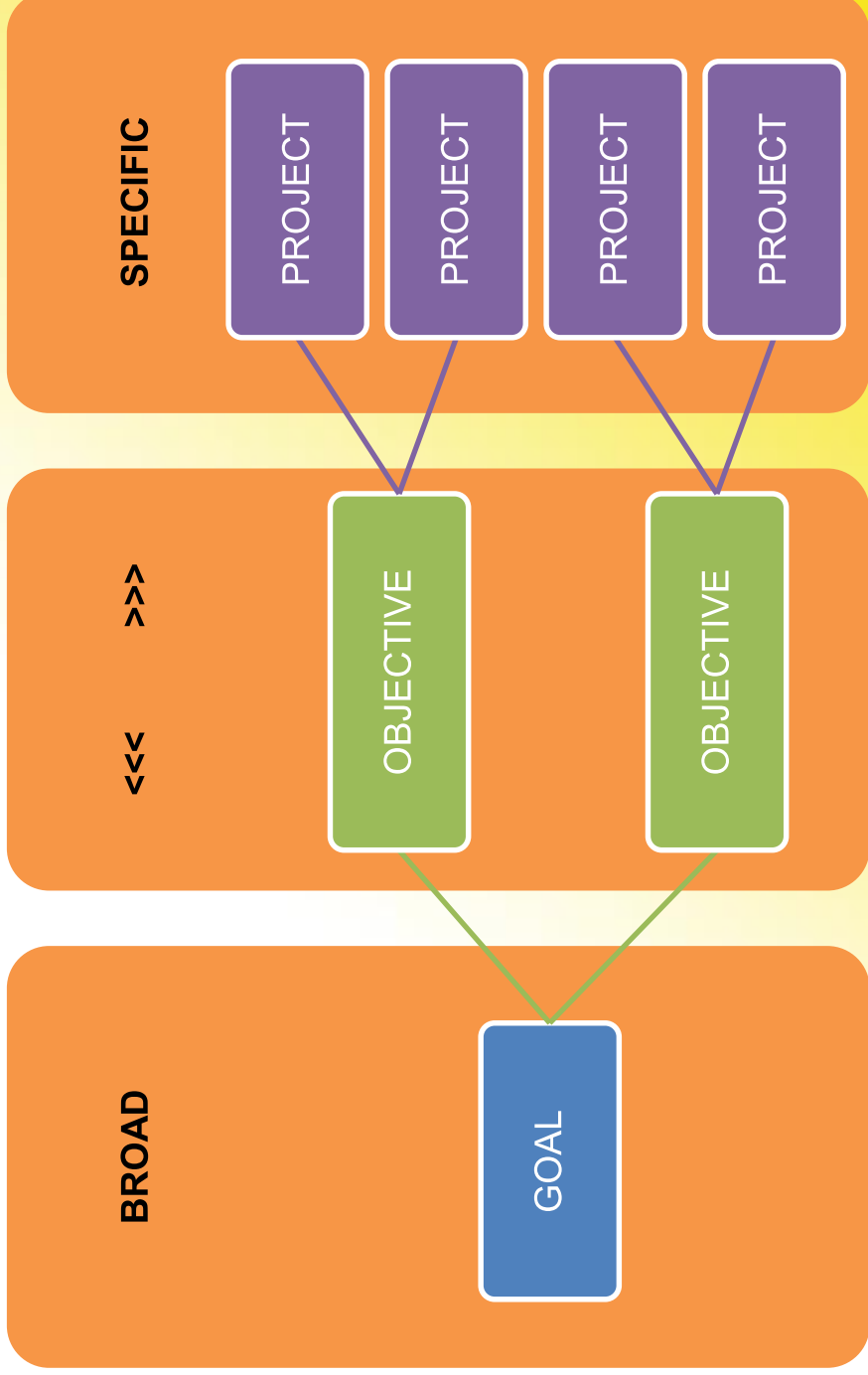


# HAZARDS





# GOALS, OBJECTIVES, AND PROJECTS



# GOALS – PREVIOUS PLAN

1. To minimize the losses of life and property due to flooding in Pickaway County.
2. To minimize the losses of life and property due to severe weather in Pickaway County.
3. To minimize the losses of life and property due to tornadoes in Pickaway County.
4. To minimize the losses of life and property due to earthquake in Pickaway County.
5. To minimize the losses of life and property due to drought in Pickaway County.
6. To minimize the losses of life and property due to dam failure in Pickaway County.
7. To minimize the losses of life and property due to hazardous materials in Pickaway County.

# COMMITTEE MEMBER HOMEWORK

*(check your email!)*

- “Tell Me a Story” Hazard Narratives
  - Have you noticed a change in frequency, magnitude, intensity?
  - How concerned is your jurisdiction about the hazard?
  - Example from your community
  - Please select at least three hazards
- Community Asset Inventory
  - People, Economy, Built Environment, Natural Environment
  - Name, Street Address, Type of Asset
- Existing Project Review
  - Review projects for entire county and your jurisdiction
  - Update status (completed, deleted, deferred, on-going)

# PUBLIC INVOLVEMENT OPPORTUNITIES

- Surveys
  - Social media
  - Jurisdictional/agency websites
  - Press releases
- Meetings
  - Plan review (mid-point)
  - Plan review (final)
- Other Opportunities (?)
  - Other planning initiatives (CDBG, economic development, etc.)
  - LEPC or other regular meetings

**THANK YOU!**

## COMMITTEE MEETING 2



## PICKAWAY COUNTY HAZARD MITIGATION PLAN PLANNING COMMITTEE MEETING #2

### AGENDA

Date: Friday, December 13, 2019

Time: 11:00 a.m.

Estimated Duration: 60 minutes

Location: Pickaway County EMA

1. Welcome and Introductions
2. Review “Tell Me a Story” Narratives
3. Assets
  - **Review:** Assets Generated from Homework
  - **Activity:** Additions to Master List
  - **Discussion:** Where to Obtain Addresses
4. Mitigation Projects
  - **Discussion:** Status Updates for Projects in Previous Plan<sup>1</sup>
5. Public Involvement
  - **Activity:** Public Survey Approval (see minutes from Meeting 1)
6. Schedule for Next Meetings
7. Adjournment

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<sup>1</sup> We provided the existing projects list with the minutes to Meeting 1. You may bring your handwritten comments to this meeting.



**PICKAWAY COUNTY HAZARD MITIGATION PLAN**  
**PLANNING COMMITTEE MEETING #2**  
**MINUTES**

Date: Friday, December 13, 2019  
Time: 11:00 a.m.  
Duration: 90 minutes  
Location: Pickaway County EMA  
Attendees: See sign-in sheet attached

Members of the committee began by discussing mitigation actions listed in the current plan. The members assigned a status to each current action. Statuses were “complete,” “on-going,” “deferred,” or “deleted.” For actions listed as complete, committee members provided a date of completion (when available) and an explanation of how the action was completed. Similarly, for actions listed as deleted, an explanation of why the action was no longer feasible for the community was provided. Most of this portion of the meeting proceeded as general discussion between committee members. Members provided general, background information for projects when a status was unknown. For any actions that were specific to a community that was not represented at the meeting, the consultant stated they would contact the community directly for an action status.

The committee then moved on to the public involvement survey. Committee members reviewed the questions provided to them at the first meeting and approved the release of the survey to the public. The survey will go live after January 1, 2020 with the consultant providing the survey link to committee members and other stakeholders to share via social media. See the approved survey attached.

The final item discussed was assets. Committee members will continue to review assets in their jurisdictions for inclusion. The county GIS department directed the consultant to the agency’s website for information on parcels, flood zones, transportation, etc.

The initial meeting agenda included a summary of the “Tell Me a Story” homework assignment from Meeting 1. Due to inclement weather, however, the consultant arrived late to the meeting and the summary of the responses received was removed from discussion. The summary that the consultant would have presented is attached.

Hazard	Perceptions of Change			Level of Concern			
	NC-No Change	I-Increase	D-Decrease	Not Concerned	Somewhat Concerned	Concerned	Very Concerned
Dam & Levee Failure	100%	0%	0%	33%	33%	33%	0%
Drought	66%	33%	0%	0%	66%	33%	0%
Earthquake	100%	0%	0%	66%	33%	0%	0%
Flooding		100%	0%	0%	0%	66%	33%
Hazardous Materials	33%	66%	0%	0%	0%	100%	0%
High/Strong Winds		100%	0%	0%	0%	100%	0%
Public Health Emergencies	66%	33%	0%	33%	33%	0%	33%
Severe Thunderstorm & Hail		100%	0%	0%	0%	66%	33%
Subsidence/Land Movements	66%	33%	0%	0%	66%	33%	0%
Temperature Extremes	33%	66%	0%	33%	0%	66%	0%
Terrorism	66%	33%	0%	0%	33%	66%	0%
Tornado		100%	0%	0%	0%	66%	33%
Transportation Incidents		100%	0%	0%	0%	66%	33%
Wildfire	66%	33%	0%	0%	33%	66%	0%

Sample

3

Hazard	Perceptions of Change			Level of Concern			
	NC-No Change	I-Increase	D-Decrease	Not Concerned	Somewhat Concerned	Concerned	Very Concerned
Dam & Levee Failure	100%	0%	0%	33%	33%	33%	0%
Drought	66%	33%	0%	0%	66%	33%	0%
Earthquake	100%	0%	0%	66%	33%	0%	0%
Flooding		100%	0%	0%	0%	66%	33%
Hazardous Materials	33%	66%	0%	0%	0%	100%	0%
High/Strong Winds		100%	0%	0%	0%	100%	0%
Public Health Emergencies	66%	33%	0%	33%	33%	0%	33%
Severe Thunderstorm & Hail		100%	0%	0%	0%	66%	33%
Subsidence/Land Movements	66%	33%	0%	0%	66%	33%	0%
Temperature Extremes	33%	66%	0%	33%	0%	66%	0%
Terrorism	66%	33%	0%	0%	33%	66%	0%
Tornado		100%	0%	0%	0%	66%	33%
Transportation Incidents		100%	0%	0%	0%	66%	33%
Wildfire	66%	33%	0%	0%	33%	66%	0%

Sample

3

## COMMITTEE MEETING 3



**PICKAWAY COUNTY HAZARD MITIGATION PLAN  
PLANNING COMMITTEE MEETING #3**

**AGENDA**

Date: Monday, February 10, 2020  
Time: 10:30 a.m.  
Estimated Duration: 60-90 minutes  
Location: Pickaway County EMA

1. Welcome and Introductions
2. Discuss Capability Survey
3. Assets
  - **Review:** Assets Generated by Committee
4. Mitigation Projects
  - **Discussion:** New Projects for Update
5. Public Involvement
  - **Discussion:** Public Survey Results thus far
  - **Discussion:** Schedule Public Meetings
6. Present Draft Documents
7. Schedule for Next Meetings
8. Adjournment

**PICKAWAY COUNTY HAZARD MITIGATION PLAN**  
**PLANNING COMMITTEE MEETING #3**  
**MINUTES**

Date: Monday, February 10, 2020  
Time: 11:00 a.m.  
Duration: 35 minutes  
Location: Pickaway County EMA  
Attendees: See sign-in sheet attached

The meeting began with a brief overview of the capability assessment survey. The county and each jurisdiction in the county will receive a link to the survey, which consists of questions regarding ordinances, funding, planning initiatives and floodplain management. The committee also spoke about assets for the plan. Each jurisdiction was requested to provide a list of potentially-vulnerable community assets such as critical facilities, critical infrastructure, historic properties, etc. This list is used in both the discussion of the planning area and to show specific sites vulnerable to the hazards profiled in the plan.

The contractor provided a quick overview of the public survey. As of the meeting, approximately 50 residents or individuals in the county participated. Results showed various concerns about specific hazards. Community organizations, jurisdictions, first response agencies, etc. are encouraged to share the link via their webpages and social media (<https://www.surveymonkey.com/r/PickawayCountyHazardMitigation>).

The next item on the agenda was new projects for the 2020 update. Project ideas included building a large tornado shelter at the county fairgrounds, upgrading and adding warning sirens, renovations to the fairgrounds to allow for use as a point of distribution site, rainwater detection systems near railroad crossings, IT projects to secure elections, adding security features to areas that are used annually for fairs, festivals, and large gatherings, and broadband projects to include new lines, residential and commercial area projects, and 911 enhancement projects. The committee also spoke about a project currently being reviewed for funding to remove part of a dam at Canal Park. The committee had questions about a state-owned dam that is in need of repair and what projects and funding would be available for the county. The consultant will research information on possible funding (the HHPD may provide funding with a written agreement between the state and the county).

The consultant will begin contacting representatives from each jurisdiction beginning the

week of February 17, 2020, to answer any questions regarding the survey and to discuss mitigation projects. The committee will decide on a date for the next planning meeting and the public meeting.



## COMMITTEE MEETING 4



## PICKAWAY COUNTY HAZARD MITIGATION PLAN PLANNING COMMITTEE MEETING #4

### AGENDA

Date: Monday, May 11, 2020  
Time: 11:00 a.m.  
Estimated Duration: 60-90 minutes  
Location: GoToMeeting Web Conference

1. Welcome and Introductions
2. Discuss Capability Survey
3. Project Prioritization
  - **Activity:** Prioritization Criteria
  - **Activity:** Project Scoring
4. Plan Maintenance
5. Public Involvement
  - **Discussion:** Public Survey Results thus far
  - Prepare for Public Workshop
6. Discuss Remaining Draft Documents
7. Where We Go from Here
8. Adjournment

**PICKAWAY COUNTY HAZARD MITIGATION PLAN**  
**PLANNING COMMITTEE MEETING #4**  
**MINUTES**

Date: May 11, 2020  
Time: 10:00 a.m.  
Duration: 75 minutes  
Location: [www.gotomeeting.com](http://www.gotomeeting.com) (web conference)  
Attendees: See sign-in sheet attached

The meeting began with a discussion on the capability survey. The consultant and a representative from Pickaway EMA will continue to follow up with jurisdictional representatives. Other representatives attending the meeting will also reach out to their counterparts in neighboring municipalities. The committee discussed plan maintenance and devised a five year schedule to that will correspond with the second quarter LEPC meeting each year.

The committee reviewed the public survey raw data and prepared for the virtual public workshop following this committee meeting. The agenda for the public workshop included a brief overview of hazard mitigation provided by Pickaway EMA followed by a discussion on hazard profiles and finally an opportunity for the public to ask questions or make comments.

The final item covered during this meeting was the project prioritization. The committee rated each project using ten criterion that were assigned point values. Following the meeting, the consultant tallied the scores for each project, added the priority to each project and forwarded a draft to the committee to review.

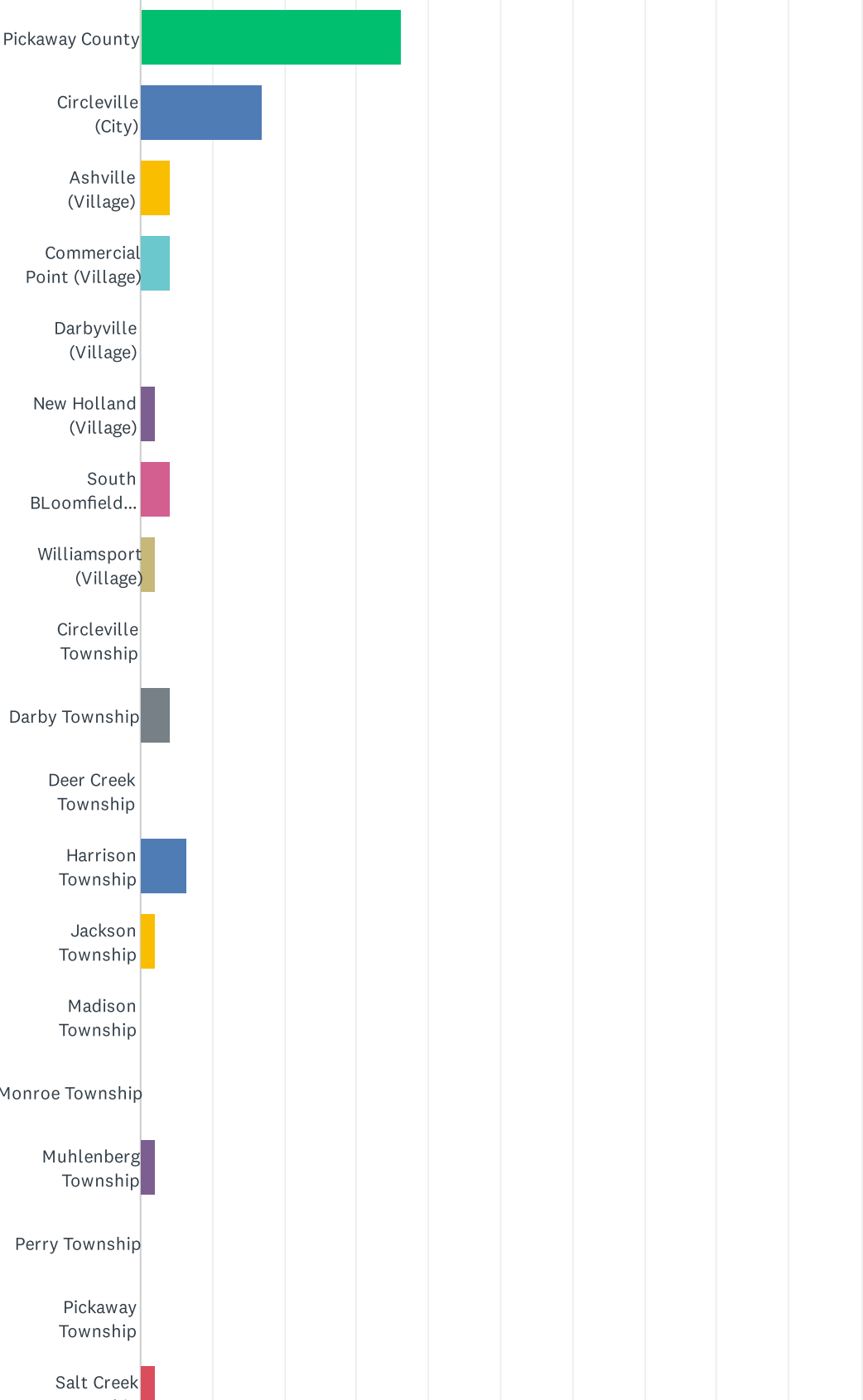
The meeting concluded with the consultant asking for any feedback on the drafts that had been reviewed and information on submittal of the plan for approval and adoption of the plan upon APA.



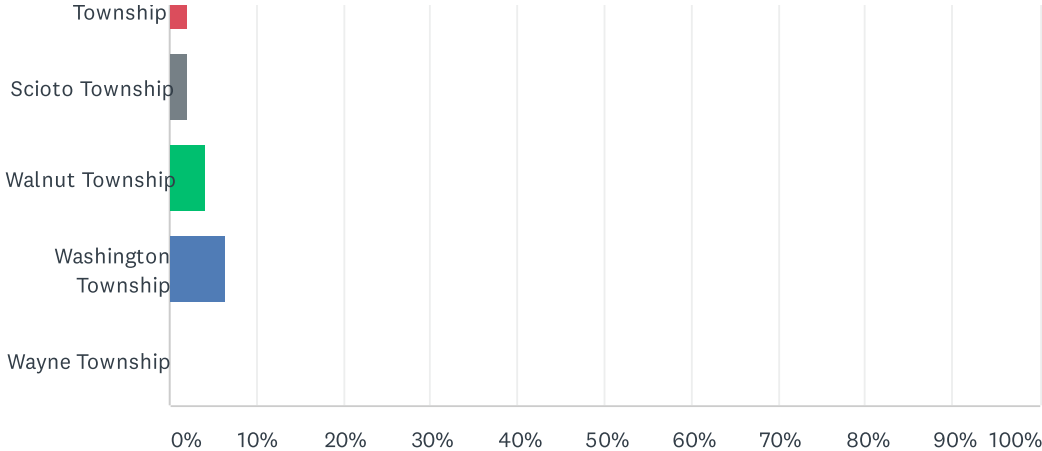
# CAPABILITY SURVEY

# Q1 What is the name of your jurisdiction?

Answered: 47 Skipped: 0



Pickaway County HMP Capability Assessment Survey



Pickaway County HMP Capability Assessment Survey

ANSWER CHOICES	RESPONSES	
Pickaway County	36.17%	17
Circleville (City)	17.02%	8
Ashville (Village)	4.26%	2
Commercial Point (Village)	4.26%	2
Darbyville (Village)	0.00%	0
New Holland (Village)	2.13%	1
South Bloomfield (Village)	4.26%	2
Williamsport (Village)	2.13%	1
Circleville Township	0.00%	0
Darby Township	4.26%	2
Deer Creek Township	0.00%	0
Harrison Township	6.38%	3
Jackson Township	2.13%	1
Madison Township	0.00%	0
Monroe Township	0.00%	0
Muhlenberg Township	2.13%	1
Perry Township	0.00%	0
Pickaway Township	0.00%	0
Salt Creek Township	2.13%	1
Scioto Township	2.13%	1
Walnut Township	4.26%	2
Washington Township	6.38%	3
Wayne Township	0.00%	0
<b>TOTAL</b>		<b>47</b>



Q2 Please provide your name and email address/phone number so that we may contact you with any questions about this survey.

Answered: 47 Skipped: 0

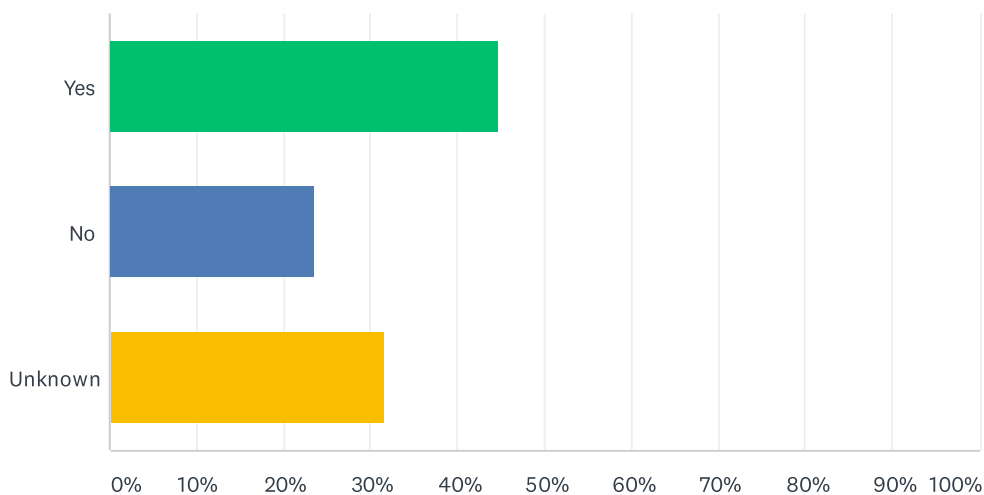
ANSWER CHOICES	RESPONSES	
Name	100.00%	47
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	0.00%	0
ZIP/Postal Code	0.00%	0
Country	0.00%	0
Email Address	100.00%	47
Phone Number	100.00%	47

**Q3 If you represent a department within that jurisdiction's government structure, what is the name of your department?**

Answered: 42 Skipped: 5

**Q4 Comprehensive plans promote sound land use and regional cooperation among local governments to address planning issues. These plans serve as the official policy guide for including the location, type and extent of future development by establishing the basis for decision-making and review processes on zoning matters, subdivision and land development, land uses, public facilities and housing needs over time. Does your jurisdiction have or participate in a comprehensive plan?**

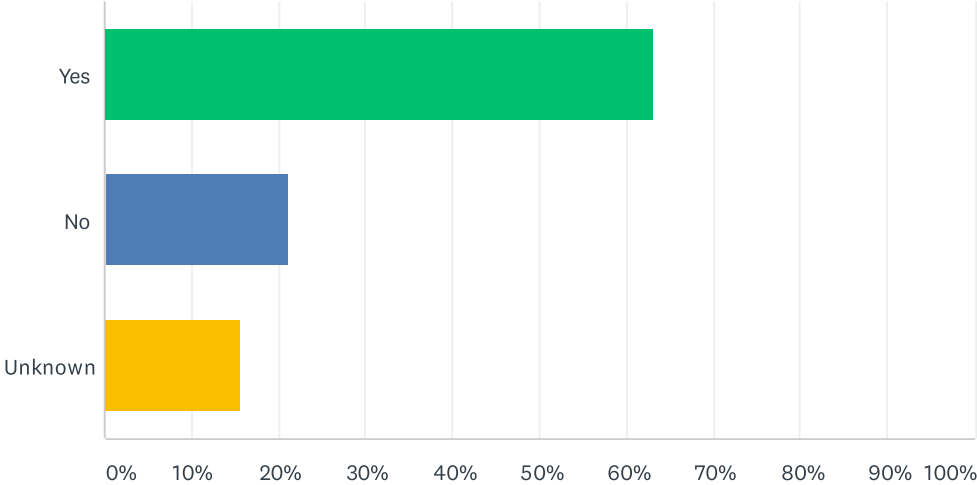
Answered: 38 Skipped: 9



ANSWER CHOICES		RESPONSES	
Yes		44.74%	17
No		23.68%	9
Unknown		31.58%	12
TOTAL			38

### Q5 Building codes regulate construction standards for new construction and substantially renovated buildings. Does your jurisdiction have a building code in place?

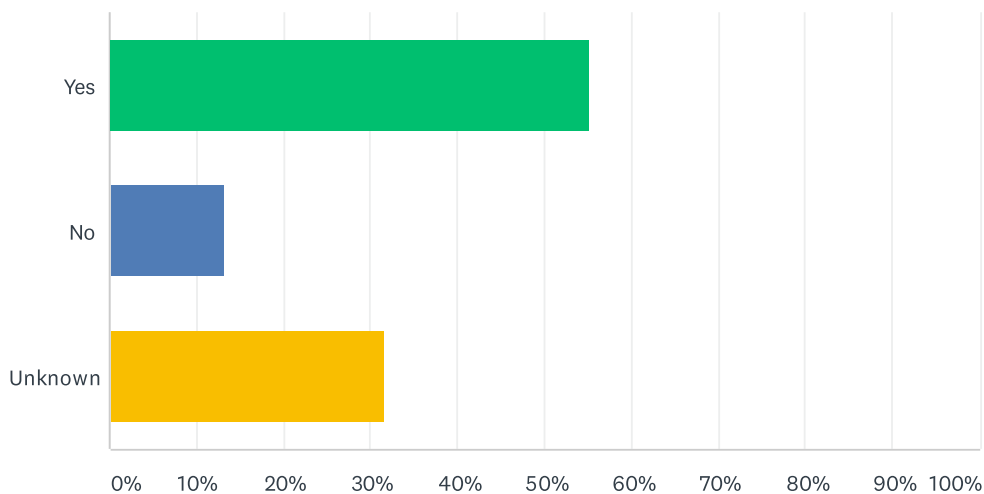
Answered: 38 Skipped: 9



ANSWER CHOICES	RESPONSES
Yes	63.16% 24
No	21.05% 8
Unknown	15.79% 6
<b>TOTAL</b>	<b>38</b>

Q6 Subdivision and land development ordinances (SALDOs) are intended to regulate the development of housing, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Within these ordinances, guidelines on how land will be divided, the placement and size of roads and the location of infrastructure can reduce exposure of development to hazard events. Does your jurisdiction have a subdivision and/or land use ordinance?

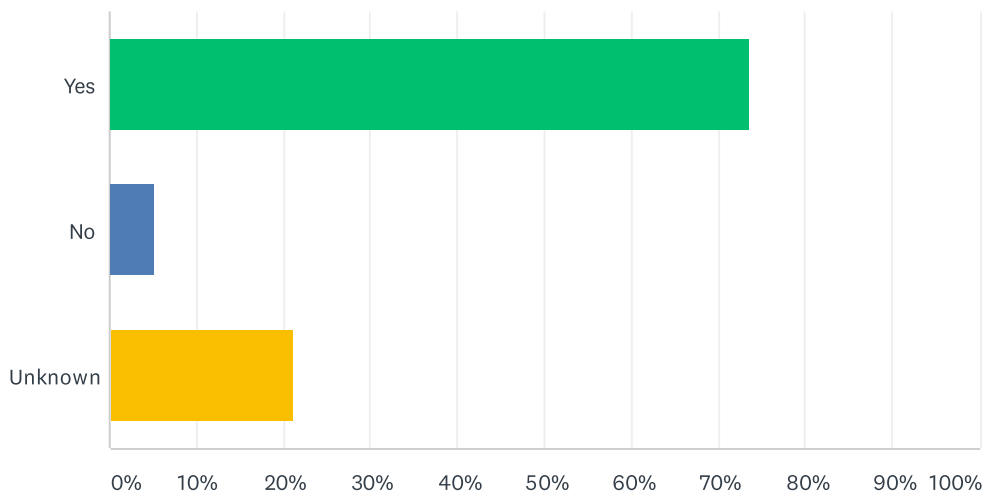
Answered: 38 Skipped: 9



ANSWER CHOICES	RESPONSES	
Yes	55.26%	21
No	13.16%	5
Unknown	31.58%	12
TOTAL		38

Q7 Zoning ordinances allow for local communities to regulate the use of land in order to protect the interests and safety of the general public. Zoning ordinances can be designed to address unique conditions or concerns in a given community. Does your jurisdiction have a zoning ordinance?

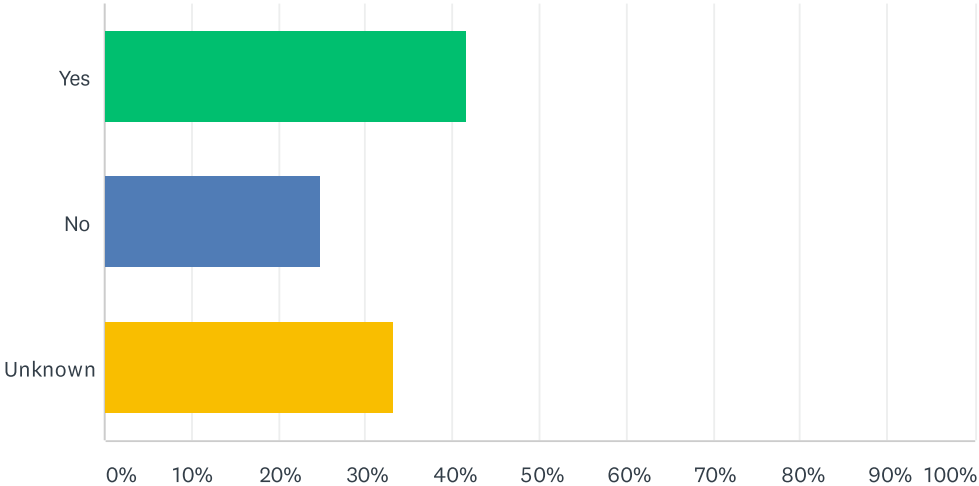
Answered: 38 Skipped: 9



ANSWER CHOICES	RESPONSES	
Yes	73.68%	28
No	5.26%	2
Unknown	21.05%	8
TOTAL		38

### Q8 Does your municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital FIRM (DFIRM)?

Answered: 36 Skipped: 11



ANSWER CHOICES		RESPONSES	
Yes		41.67%	15
No		25.00%	9
Unknown		33.33%	12
TOTAL			36

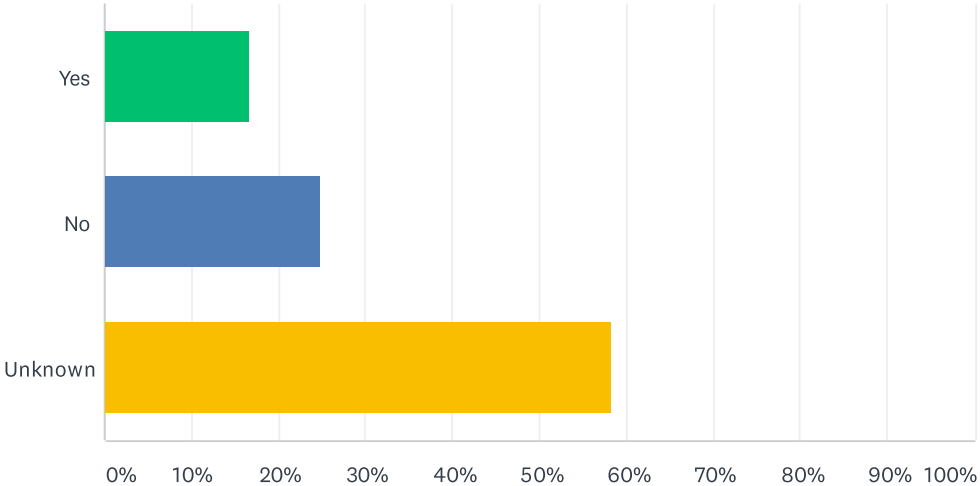
Q9 How do you make DFIRM/FIRM information available (e.g., docs placed in libraries, on our website, etc.)?

Answered: 14 Skipped: 33



### Q10 Has your municipality adopted the most current DFIRM/FIRM and flood insurance study (FIS)?

Answered: 36 Skipped: 11



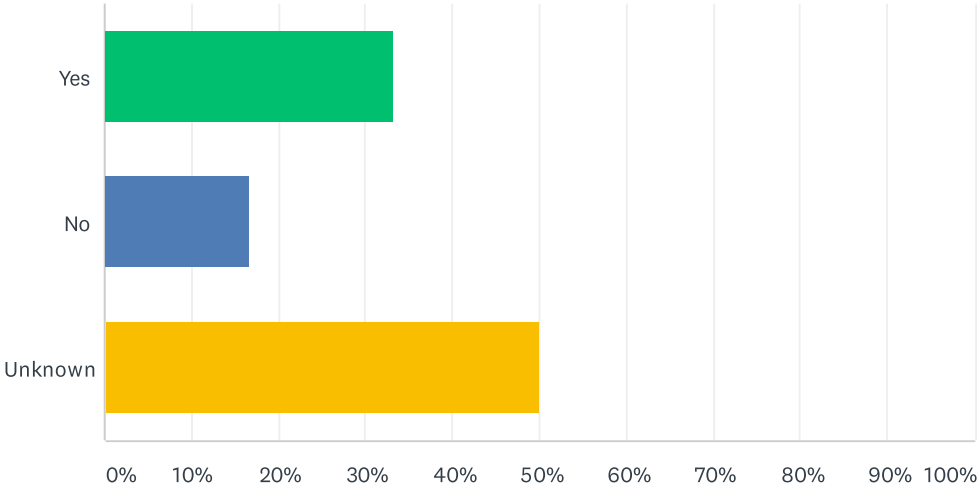
ANSWER CHOICES	RESPONSES	
Yes	16.67%	6
No	25.00%	9
Unknown	58.33%	21
TOTAL		36

**Q11 If approved, state the date of adoption.**

Answered: 5 Skipped: 42

### Q12 Does your municipality support requests for map updates?

Answered: 36 Skipped: 11



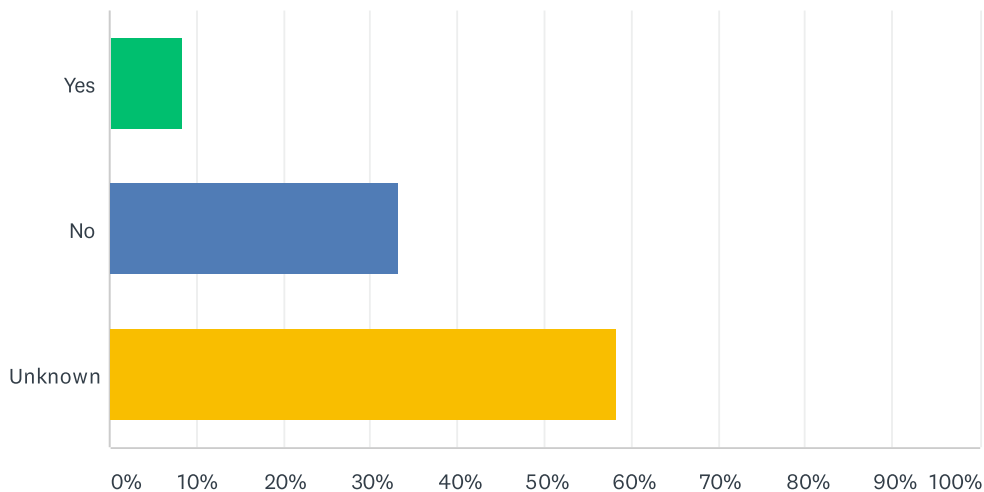
ANSWER CHOICES	RESPONSES
Yes	33.33% 12
No	16.67% 6
Unknown	50.00% 18
TOTAL	36

## Q13 How does your department support requests for map updates?

Answered: 11 Skipped: 36

### Q14 Does your municipality share with FEMA any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?

Answered: 36 Skipped: 11



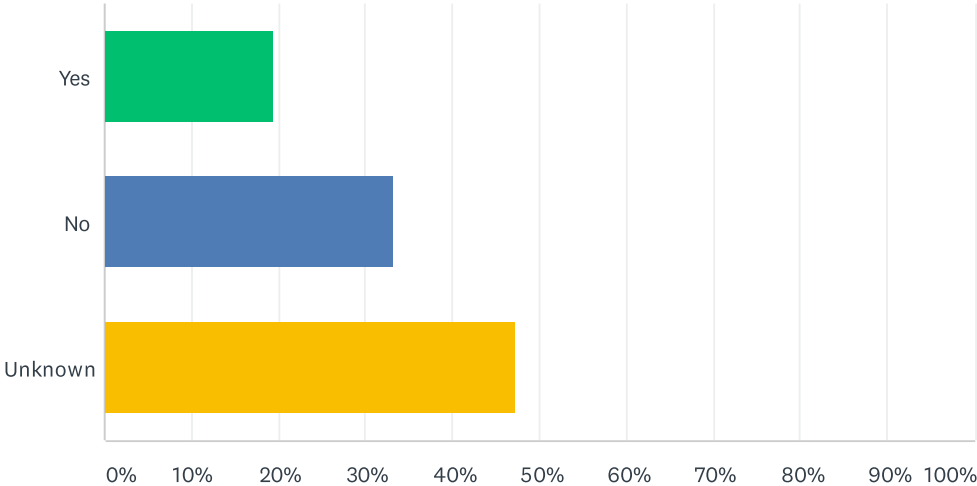
ANSWER CHOICES	RESPONSES
Yes	8.33% 3
No	33.33% 12
Unknown	58.33% 21
<b>TOTAL</b>	<b>36</b>

## Q15 How do you share this information with FEMA?

Answered: 3 Skipped: 44

### Q16 Does your municipality provide technical assistance with local floodplain determinations?

Answered: 36 Skipped: 11



ANSWER CHOICES	RESPONSES
Yes	19.44% 7
No	33.33% 12
Unknown	47.22% 17
TOTAL	36

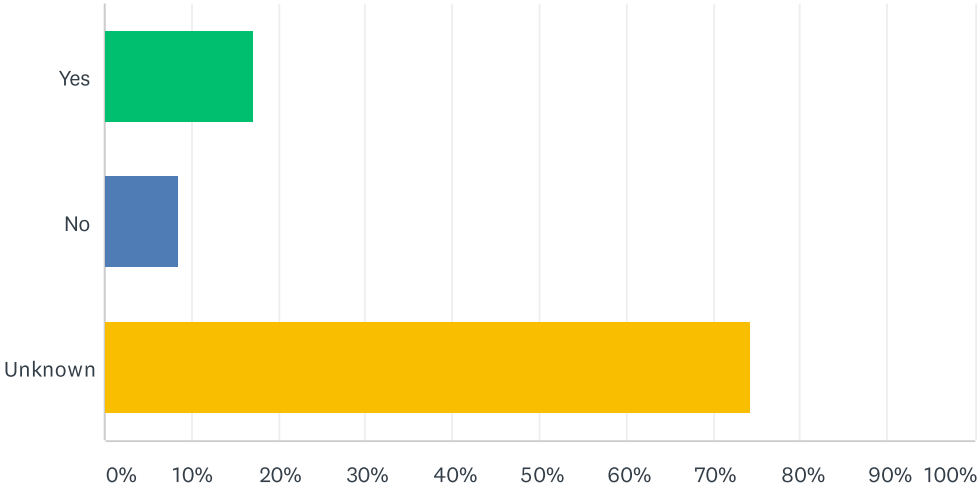
## Q17 What type(s) of technical assistance do you provide?

Answered: 5 Skipped: 42



# Q18 Does your municipality maintain a record of approved Letters of Map Change?

Answered: 35 Skipped: 12



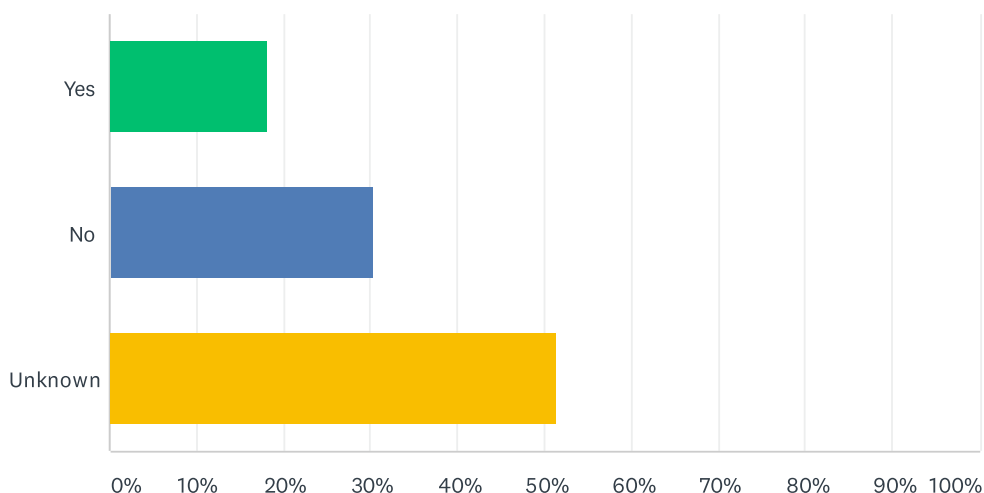
ANSWER CHOICES	RESPONSES	
Yes	17.14%	6
No	8.57%	3
Unknown	74.29%	26
TOTAL		35

## Q19 Which office is responsible for maintaining records of Letters of Map Change?

Answered: 7 Skipped: 40

Q20 Has your municipality adopted a compliant floodplain management ordinance that, at a minimum: regulates development in special flood hazard areas (SFHAs); utilizes any base flood elevation (BFE) and floodway data (and/or requires BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres); identify measures to keep all new and substantially-improved construction reasonably safe from flooding or above the BFE; and documents and maintains records of elevation data for new or substantially-improved structures?

Answered: 33 Skipped: 14



ANSWER CHOICES	RESPONSES	
Yes	18.18%	6
No	30.30%	10
Unknown	51.52%	17
TOTAL		33

**Q21 What office is responsible for issuing permits for all proposed development in SFHAs?**

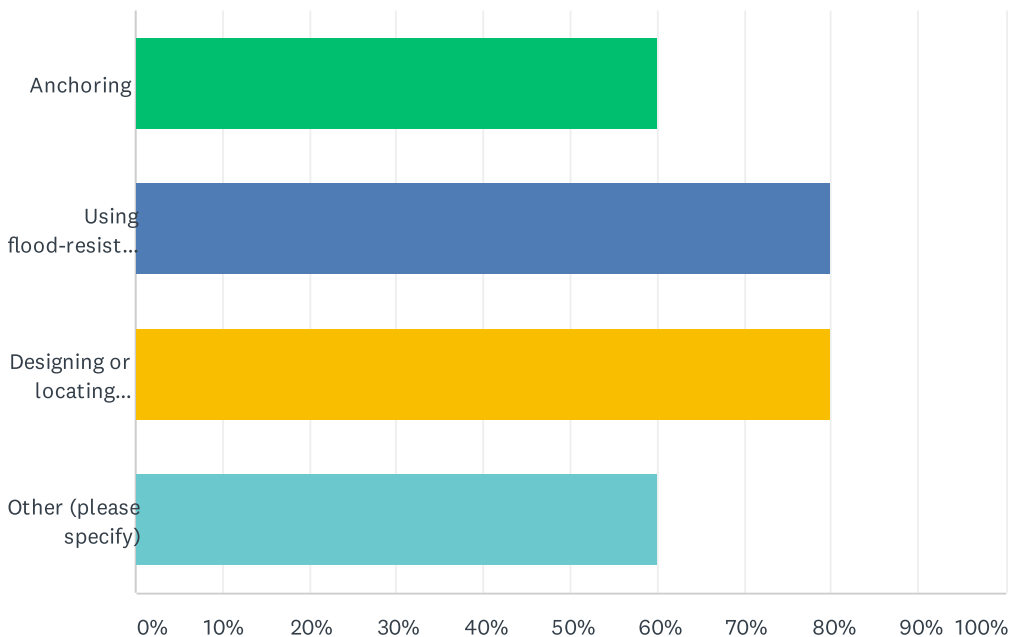
Answered: 6 Skipped: 41

Q22 What office is responsible for obtaining, reviewing, and utilizing (or requiring) BFE and floodway data for regulated developments?

Answered: 6 Skipped: 41

### Q23 What measures does your municipality encourage to keep new and substantially-improved construction reasonably safe from flooding to or above the BFE?

Answered: 5 Skipped: 42



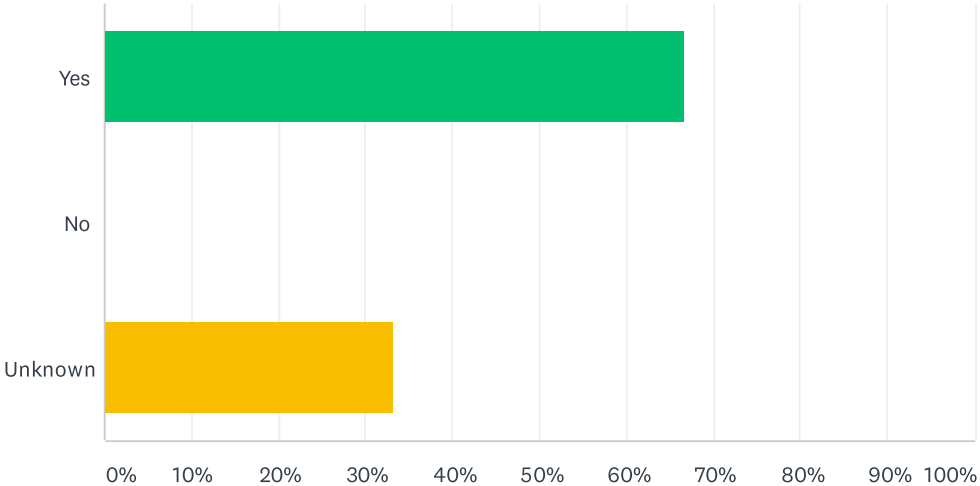
ANSWER CHOICES	RESPONSES	
Anchoring	60.00%	3
Using flood-resistant materials	80.00%	4
Designing or locating utilities and service facilities to prevent water damage	80.00%	4
Other (please specify)	60.00%	3
Total Respondents: 5		

**Q24 What office is responsible for identifying and recommending these measures?**

Answered: 5 Skipped: 42

### Q25 Does your municipality enforce its floodplain ordinance by monitoring compliance and taking remedial action to correct violations?

Answered: 6 Skipped: 41



ANSWER CHOICES	RESPONSES	
Yes	66.67%	4
No	0.00%	0
Unknown	33.33%	2
<b>TOTAL</b>		<b>6</b>

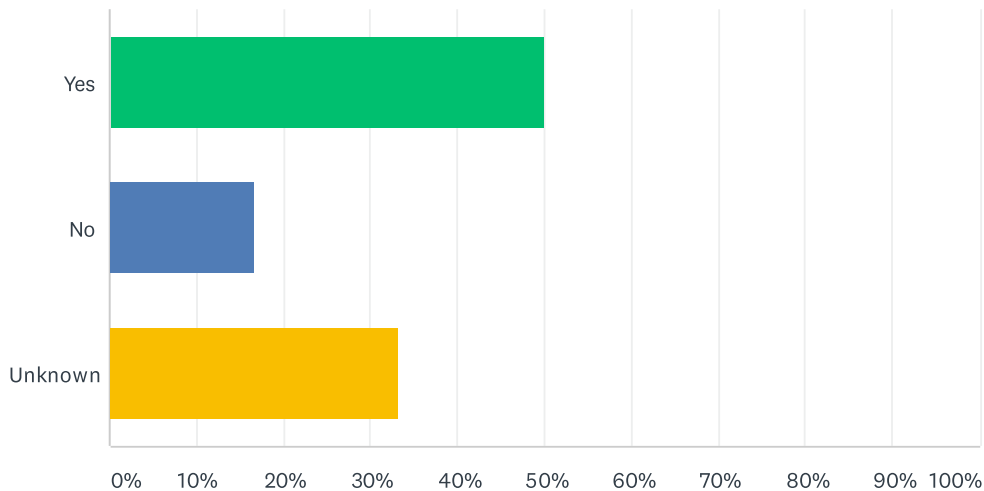


**Q26 How do you monitor for compliance? What types of remedial actions are taken?**

Answered: 3 Skipped: 44

Q27 Has your municipality considered adopting activities that extend beyond minimum requirements? Examples include: Participation in the Community Rating System (CRS); Prohibition of production or storage of chemicals in the SFHA; Prohibition of certain types of structures, such as hospitals, nursing homes, and jails in the SFHA; Prohibition of certain types of residential housing (e.g., manufactured housing) in the SFHA; and Floodplain ordinances that prohibit any new residential or non-residential structures in the SFHA.

Answered: 6 Skipped: 41



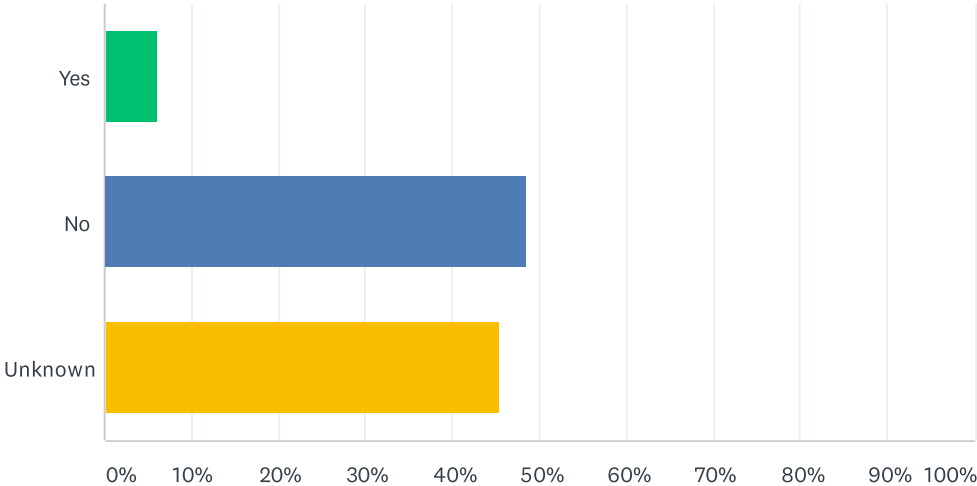
ANSWER CHOICES	RESPONSES	
Yes	50.00%	3
No	16.67%	1
Unknown	33.33%	2
TOTAL		6

## Q28 What activities have you considered or implemented?

Answered: 1 Skipped: 46

### Q29 Does your municipality educate community members about the availability of flood insurance?

Answered: 33 Skipped: 14



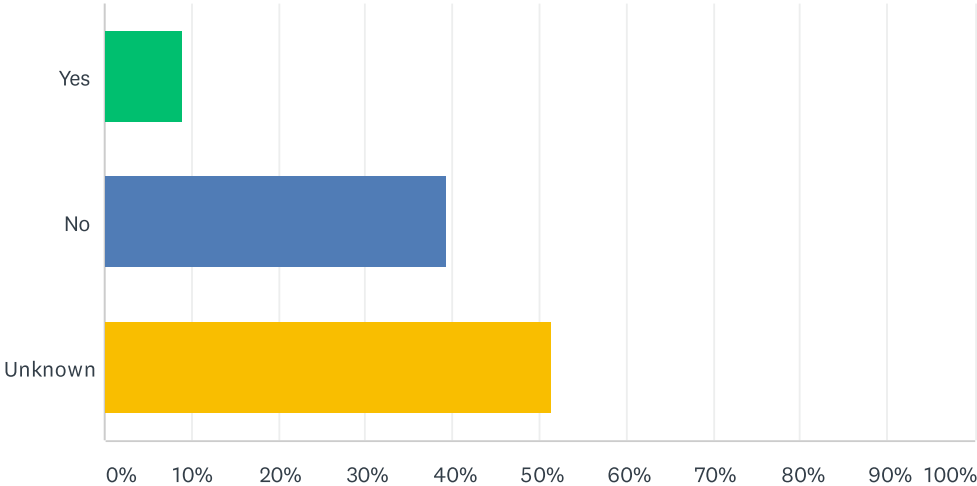
ANSWER CHOICES	RESPONSES
Yes	6.06% 2
No	48.48% 16
Unknown	45.45% 15
TOTAL	33

## Q30 How do you educate community members about flood insurance?

Answered: 2 Skipped: 45

### Q31 Does your municipality inform community property owners about changes to the DFIRM/FIRM that would impact their insurance rates?

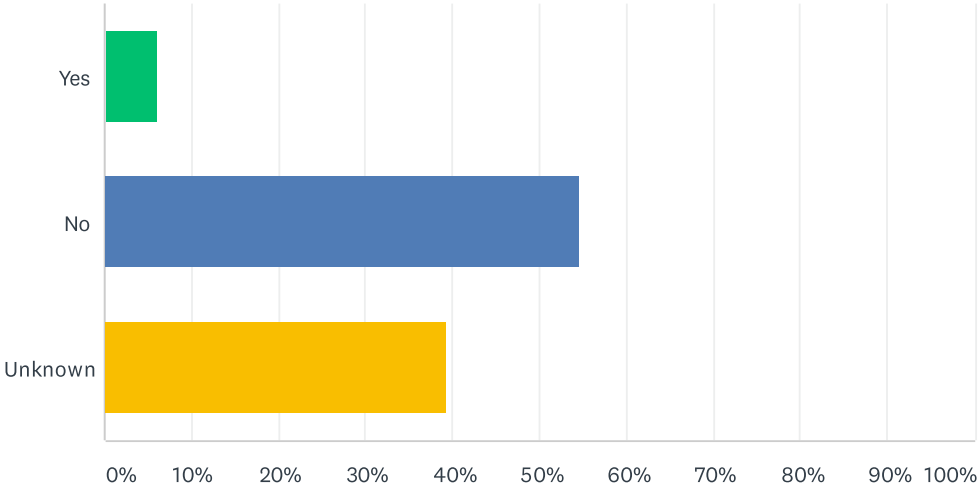
Answered: 33 Skipped: 14



ANSWER CHOICES	RESPONSES	
Yes	9.09%	3
No	39.39%	13
Unknown	51.52%	17
TOTAL		33

### Q32 Does your municipality provide general assistance to community members regarding insurance issues?

Answered: 33 Skipped: 14



ANSWER CHOICES		RESPONSES	
Yes		6.06%	2
No		54.55%	18
Unknown		39.39%	13
TOTAL			33

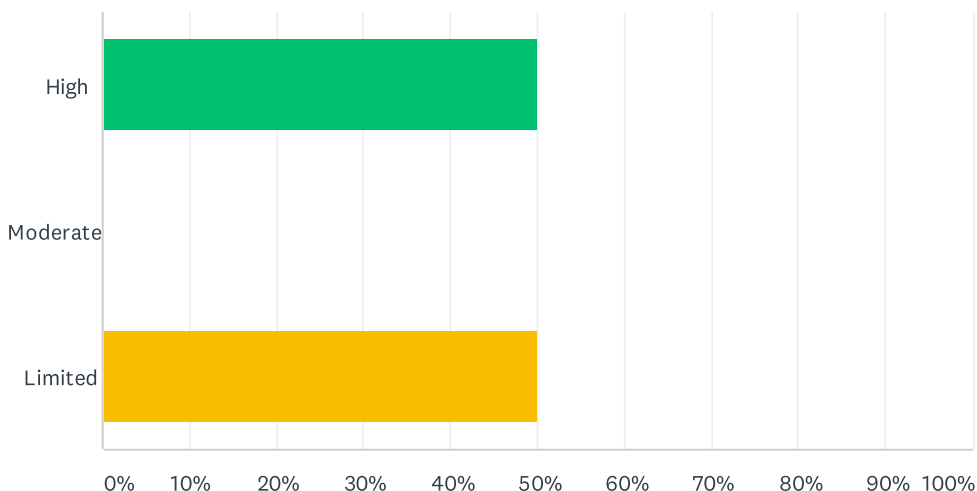
### Q33 What type of assistance do you provide?

Answered: 2 Skipped: 45



Q34 As with all community and economic development and emergency preparedness planning efforts, there may be a number of barriers to full implementation. With respect to these planning and regulatory capabilities, barriers may include a lack of personnel to enforce existing regulations, a reluctance on the part of the public to participate in planning, etc. You can likely think of several others for your jurisdiction. Given the combination of these barriers with the presence of the plans and regulatory elements that have been surveyed thus far, how would you label your jurisdiction's ability to fully meet the planning and regulatory capability?

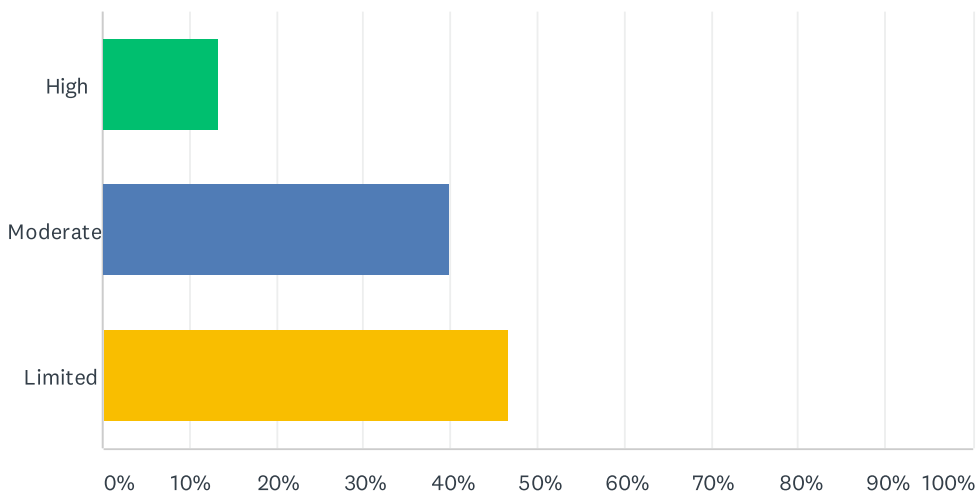
Answered: 2 Skipped: 45



ANSWER CHOICES	RESPONSES	
High	50.00%	1
Moderate	0.00%	0
Limited	50.00%	1
TOTAL		2

Q35 Administrative capability is described by an adequacy of departmental and personnel resources for the implementation of mitigation-related activities. Technical capability relates to an adequacy of knowledge and technical expertise of local government employees or the ability to contract outside resources for this expertise in order to effectively execute mitigation activities. Common examples of skill sets and technical personnel needed for hazard mitigation include the following. Planners with knowledge of land development/management practices Engineers or professionals trained in construction practices related to buildings and/or infrastructure (e.g., building inspectors) Planners or engineers with an understanding of natural and/or human-caused hazards Emergency managers Floodplain managers Land surveyors Scientists familiar with hazards in the community Staff with education or expertise to assess community vulnerability to hazards Personnel skilled in geographic information systems (GIS) Given these examples and your knowledge of your jurisdiction paid staff and contacting capabilities, how would you rate your jurisdiction's ability with respect to the administrative and technical capability?

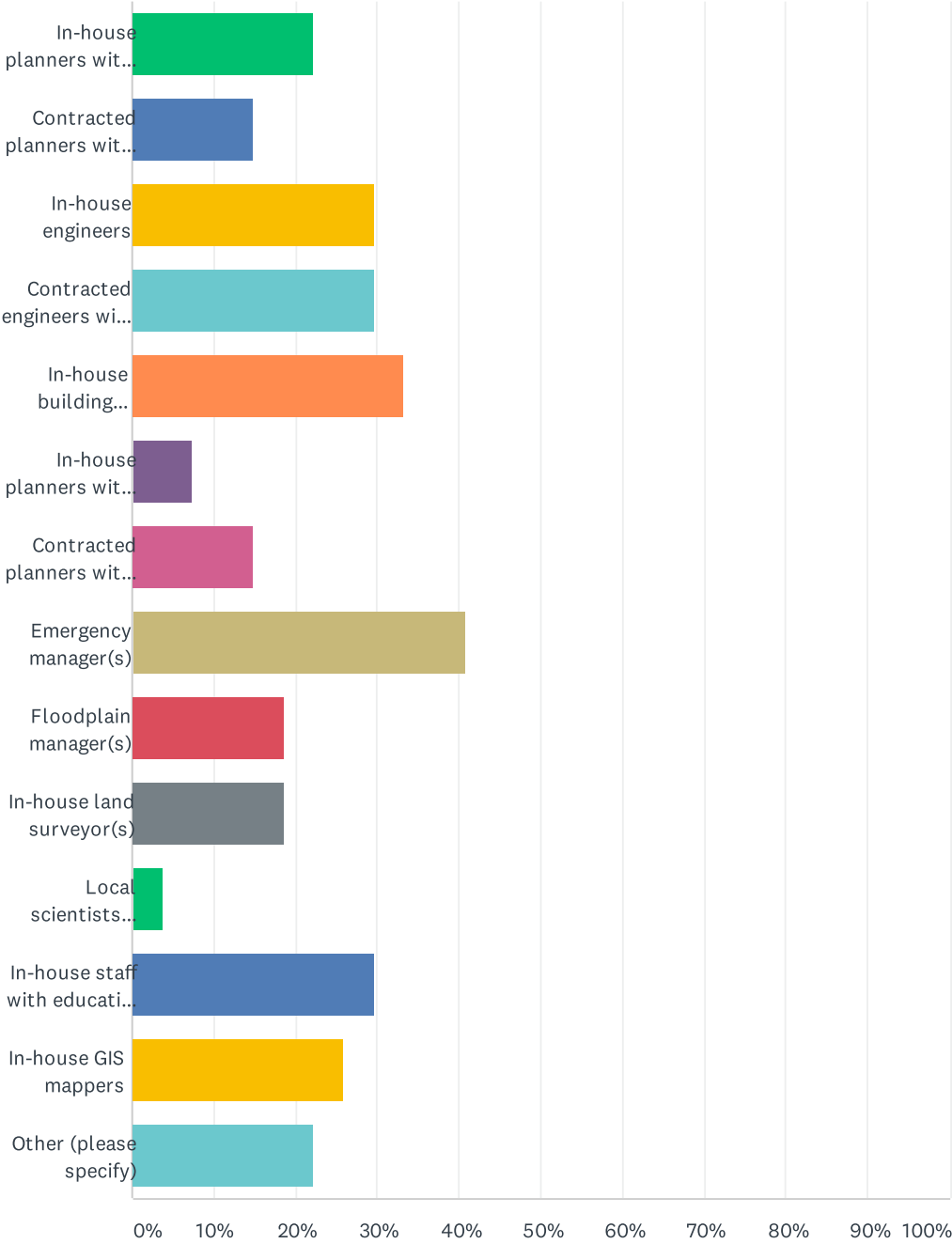
Answered: 30 Skipped: 17



ANSWER CHOICES	RESPONSES
High	13.33% 4
Moderate	40.00% 12
Limited	46.67% 14
TOTAL	30

### Q36 To which types of specialized staff do you have access?

Answered: 27 Skipped: 20

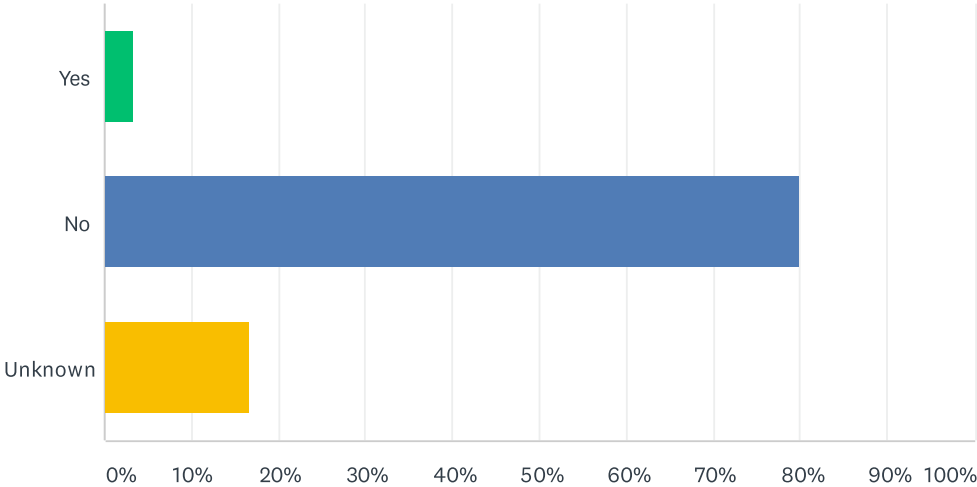


## Pickaway County HMP Capability Assessment Survey

ANSWER CHOICES	RESPONSES	
In-house planners with knowledge of land development/management practices	22.22%	6
Contracted planners with knowledge of LOCAL land development/management practices	14.81%	4
In-house engineers	29.63%	8
Contracted engineers with intimate LOCAL knowledge	29.63%	8
In-house building inspectors	33.33%	9
In-house planners with an understanding of natural and/or human-caused hazards	7.41%	2
Contracted planners with an understanding of LOCAL natural and/or human-caused hazards	14.81%	4
Emergency manager(s)	40.74%	11
Floodplain manager(s)	18.52%	5
In-house land surveyor(s)	18.52%	5
Local scientists familiar with hazards in your community (e.g., staff at a local/nearby university)	3.70%	1
In-house staff with education or expertise to assess vulnerability to hazards	29.63%	8
In-house GIS mappers	25.93%	7
Other (please specify)	22.22%	6
Total Respondents: 27		

### Q37 Does your jurisdiction have a paid grants specialist on its payroll?

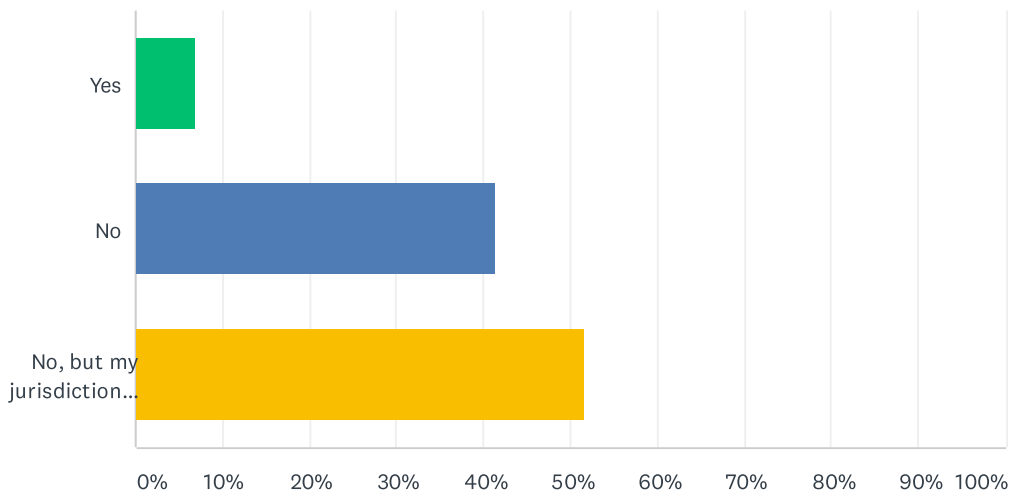
Answered: 30 Skipped: 17



ANSWER CHOICES	RESPONSES
Yes	3.33% 1
No	80.00% 24
Unknown	16.67% 5
TOTAL	30

### Q38 Does your jurisdiction have available funds in its CAPITAL BUDGET that could be used for mitigation projects?

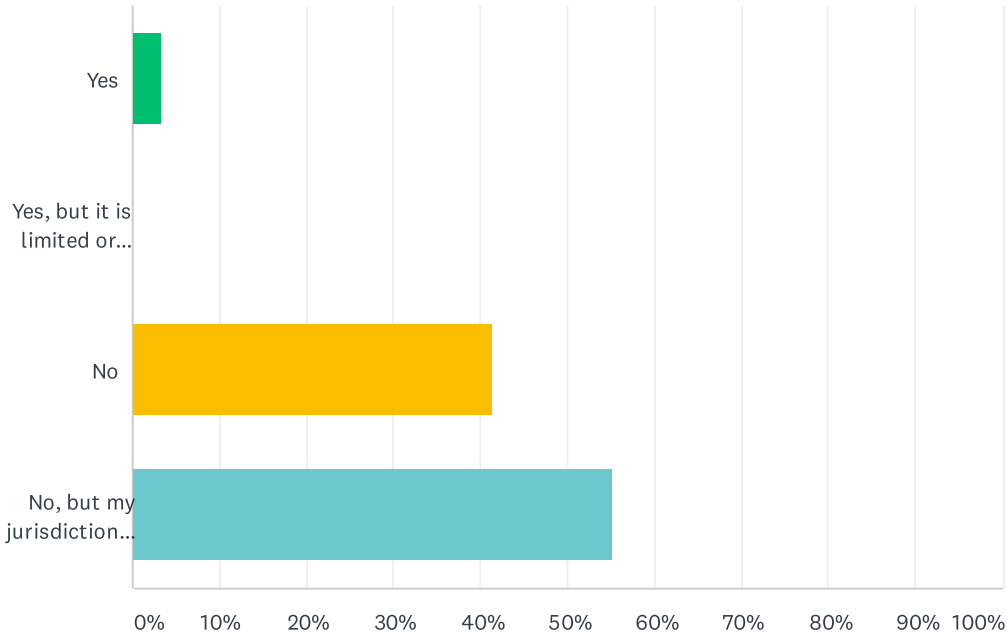
Answered: 29 Skipped: 18



ANSWER CHOICES	RESPONSES	
Yes	6.90%	2
No	41.38%	12
No, but my jurisdiction would be willing to consider it in future budgets	51.72%	15
<b>TOTAL</b>		<b>29</b>

### Q39 Does your jurisdiction have available funds in its PUBLIC WORKS BUDGET that could be used for mitigation projects?

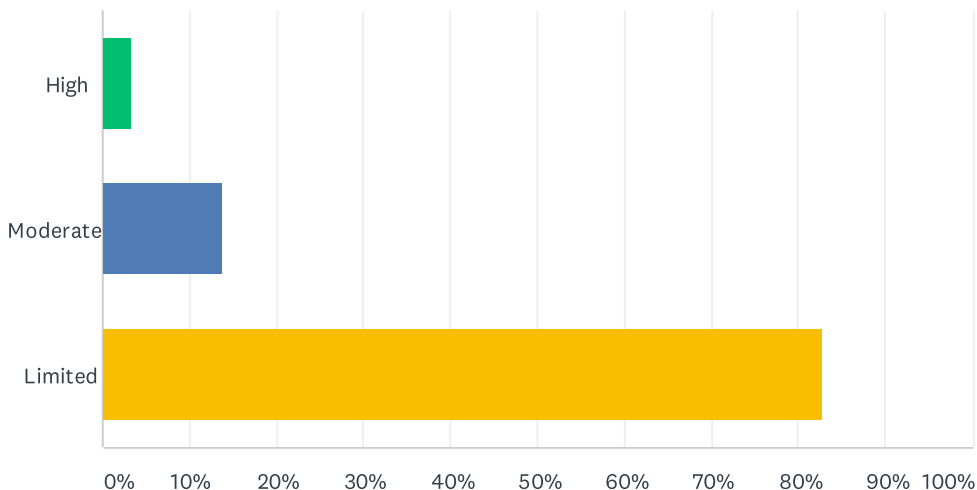
Answered: 29 Skipped: 18



ANSWER CHOICES	RESPONSES	
Yes	3.45%	1
Yes, but it is limited or would be comprised of in-kind services	0.00%	0
No	41.38%	12
No, but my jurisdiction would be willing to consider it in future budgets	55.17%	16
<b>TOTAL</b>		<b>29</b>

Q40 In addition to existing, in-house fiscal resources such as available capital or public works funds, mitigation projects can be supported through partnerships with other jurisdictions, the procurement of grants, etc. Given these options as well as the availability of capital and public works funds (as evidenced by your responses above), how would you rate your jurisdiction's fiscal capabilities to support hazard mitigation?

Answered: 29 Skipped: 18

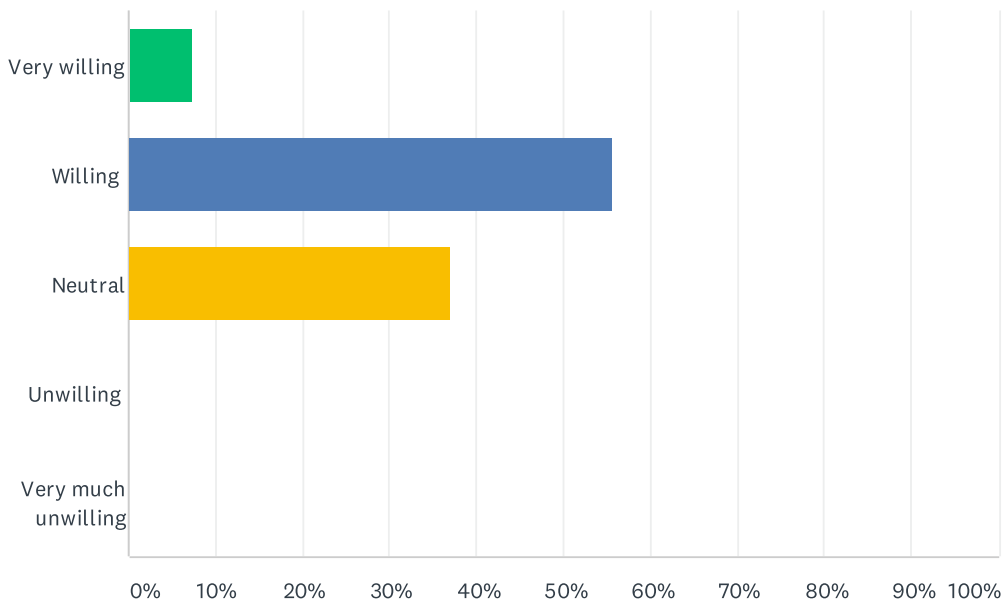


ANSWER CHOICES	RESPONSES	
High	3.45%	1
Moderate	13.79%	4
Limited	82.76%	24
TOTAL		29



Q41 The following is an example of a hazard mitigation strategy. XYZ community guides development away from known hazard areas. Based on your knowledge of your community, it would be \_\_\_\_\_ to implement such a strategy.

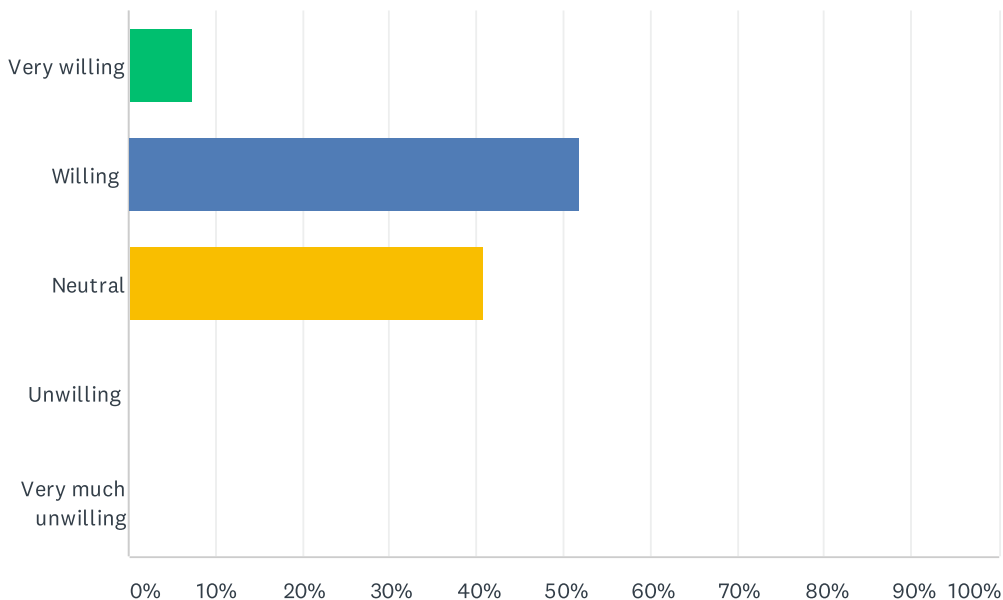
Answered: 27 Skipped: 20



ANSWER CHOICES	RESPONSES	
Very willing	7.41%	2
Willing	55.56%	15
Neutral	37.04%	10
Unwilling	0.00%	0
Very much unwilling	0.00%	0
<b>TOTAL</b>		<b>27</b>

Q42 The following is an example of a hazard mitigation strategy. XYZ community restricts public investments or capital improvements within hazard areas. Based on your knowledge of your community, it would be \_\_\_\_\_ to implement such a strategy.

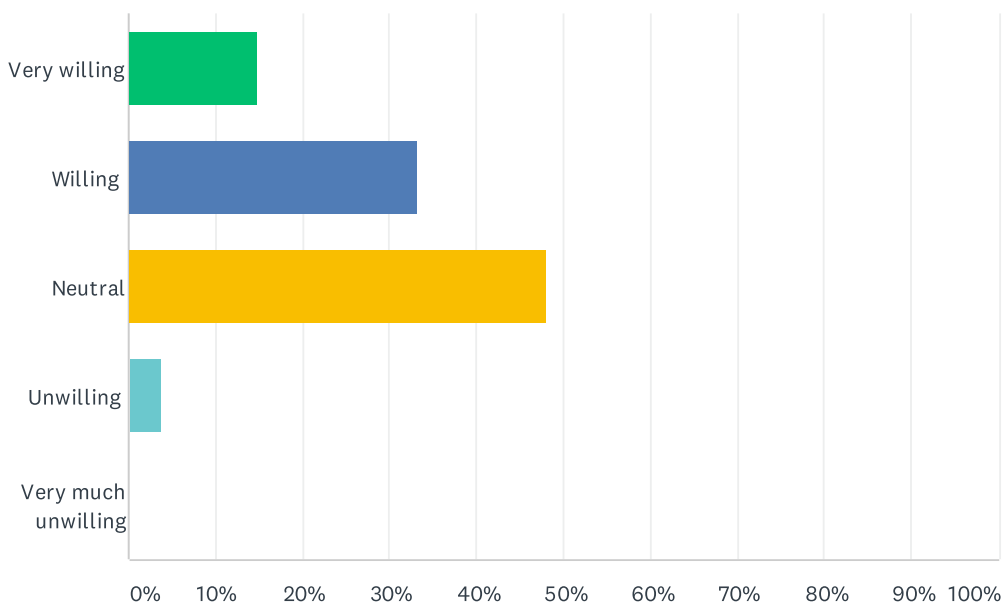
Answered: 27 Skipped: 20



ANSWER CHOICES	RESPONSES	
Very willing	7.41%	2
Willing	51.85%	14
Neutral	40.74%	11
Unwilling	0.00%	0
Very much unwilling	0.00%	0
TOTAL		27

Q43 The following is an example of a hazard mitigation strategy. XYZ community enforces local development standards (e.g., building codes, floodplain management ordinances, etc.) that go beyond minimum state or federal requirements. Based on your knowledge of your community, it would be \_\_\_\_\_ to implement such a strategy.

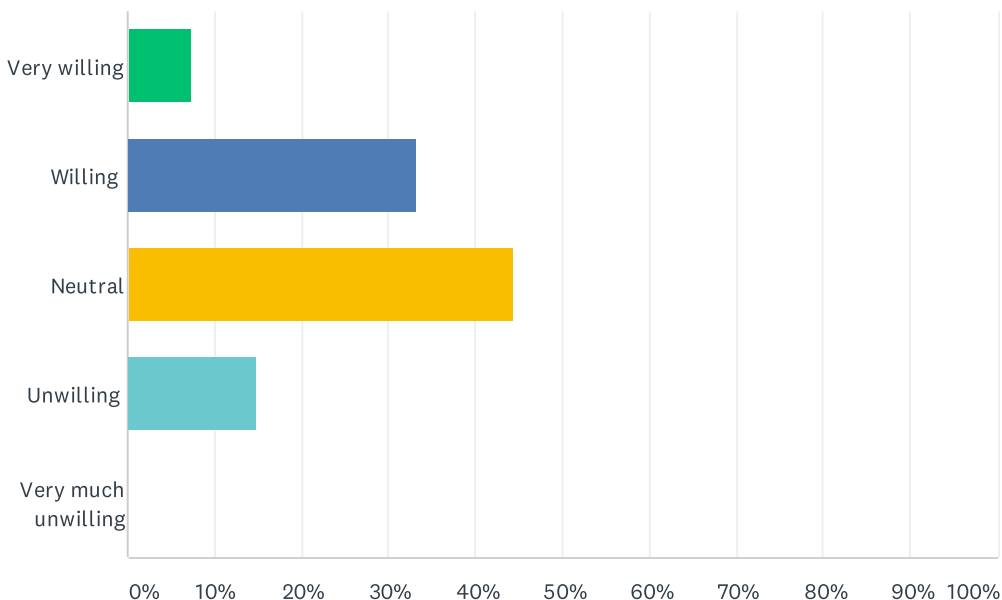
Answered: 27 Skipped: 20



ANSWER CHOICES	RESPONSES
Very willing	14.81% 4
Willing	33.33% 9
Neutral	48.15% 13
Unwilling	3.70% 1
Very much unwilling	0.00% 0
<b>TOTAL</b>	<b>27</b>

Q44 The following is an example of a hazard mitigation strategy. XYZ communities offers financial incentives (e.g., through property tax credits) to individuals and businesses that employ resilient construction techniques (e.g., voluntarily elevate structures, employ landscape designs that establish buffers, install green infrastructure elements, etc.). Based on your knowledge of your community, it would be \_\_\_\_\_ to implement such a strategy.

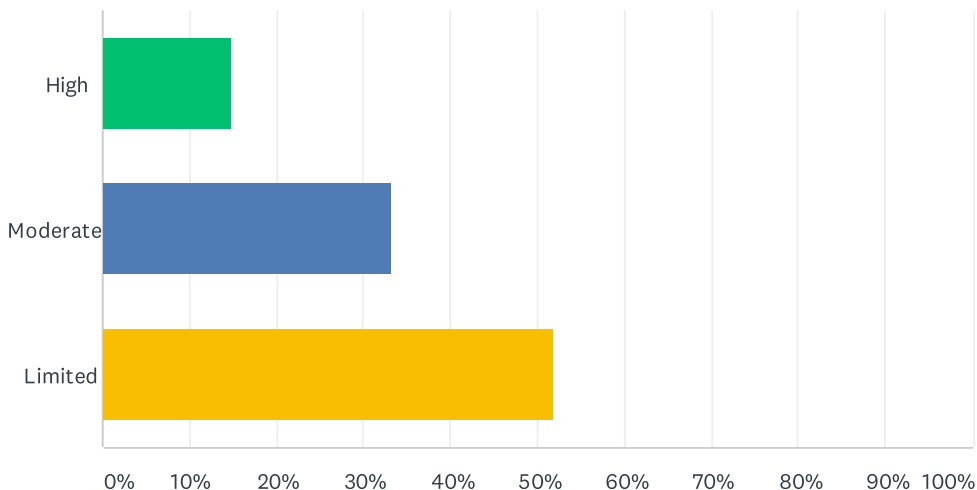
Answered: 27 Skipped: 20



ANSWER CHOICES	RESPONSES	
Very willing	7.41%	2
Willing	33.33%	9
Neutral	44.44%	12
Unwilling	14.81%	4
Very much unwilling	0.00%	0
TOTAL		27

Q45 The political capability can be one of the most difficult to evaluate due to the strong feelings it can elicit. After thinking about your responses to the preceding four questions, how would you rank your jurisdiction's political capabilities?NOTE: A "High" capability refers to a situation where there is significant political will to implement hazard mitigation policies and priorities.

Answered: 27 Skipped: 20



ANSWER CHOICES	RESPONSES	
High	14.81%	4
Moderate	33.33%	9
Limited	51.85%	14
TOTAL		27

Q46 Thank you for taking the time to complete this survey. Please use this space to make any comments relative to capabilities that were not included in the preceding survey. You may also leave any general thoughts you may have about the implementation of hazard mitigation throughout the county, cities, and villages in Pickaway County.

Answered: 6 Skipped: 41

## APPENDIX 2: PROJECT PRIORITIZATION

This appendix provides the scoring for the each project using the matrix in Section 3.



# PICKAWAY COUNTY

## HAZARD MITIGATION PLAN

### PROJECT PRIORITIZATION

Prior to meeting 4, the committee members had an opportunity to review the projects to be included in this update. During the virtual meeting, each project was displayed on screen. Committee members determined the applicability of 10 criterion for each project. The consultant tallied the scores following the meeting and presented the project and prioritization to the committee for review. The criterion were as follow:

- **Criterion 1 (10 points):** The project attempts to reduce the negative impacts of frequent hazards.
- **Criterion 2 (9 points):** The project attempts to reduce the negative impacts of severe hazards.
- **Criterion 3 (8 points):** The project addresses more than one hazard at once.
- **Criterion 4 (7 points):** The project aims to protect the most vulnerable populations.
- **Criterion 5 (6 points):** The project is easily funded with local funds or attainable grants.
- **Criterion 6 (5 points):** The project promotes partnerships within the county.
- **Criterion 7 (4 points):** The project is easy to implement (i.e., most of the population agrees with the project, and it doesn't have negative political ramifications).
- **Criterion 8 (3 points):** The project directly aligns with one or more of the goals set by the committee.
- **Criterion 9 (2 points):** The project protects the environment.
- **Criterion 10 (1 point):** The project is already scheduled to start or is in progress.



**PICKAWAY COUNTY PROJECT PRIORITIZATION**

Project #	Project	Criteria										Total	Priority
		1	2	3	4	5	6	7	8	9	10		
1	Undertake periodic public awareness campaigns to educate the public on the benefits of mitigation and preparedness, as well how to respond to hazards.	Y	Y	Y	Y	Y	N	N	Y	N	N	43	9
2	Acquire, retrofit, elevate, or relocate flood prone structures throughout Pickaway County.	Y	Y	N	N	Y	Y	N	Y	N	Y	33	17
3	Ensure that NFIP requirements are being met concerning repairs, renovations, and remodeling of structures located in the regulatory floodplain	Y	Y	N	Y	Y	Y	Y	Y	N	Y	45	6
4	Evaluate the feasibility of both traditional and non-traditional mitigation techniques to address overland flooding near CR 511, SR 752, Haggerty Road, and Island Road.	Y	Y	N	N	N	Y	N	Y	N	N	27	20
5	Create stream buffer ordinances for each incorporated municipality.	Y	Y	Y	Y	N	Y	N	Y	N	N	42	11
6	Investigate the need for NFIP participants to participate in the Community Rating System (CRS) Program.	N	N	N	N	Y	Y	Y	Y	N	Y	19	23
7	Evaluate risk and develop mitigation alternatives for low lying areas that result in pooling and flooding.	Y	Y	Y	Y	N	Y	Y	Y	N	Y	47	5
8	Evaluate risk and develop mitigation alternatives for flooding on roadways at and near railroad crossings and overpasses.	Y	Y	N	N	Y	Y	Y	Y	Y	N	39	12
9	Explore stream bank erosion mitigation alternatives such as soil bioengineering practices, native material revegetations, and in-stream structures to further prevent and repair streambank erosion.	Y	Y	N	N	Y	Y	Y	Y	Y	N	39	12
10	Educate agricultural/farming owners and applicable landowners on stream bank maintenance.	Y	Y	N	Y	Y	Y	Y	Y	N	N	44	8
11	Support tree-trimming to prevent limb breakage and for safeguarding nearby utility lines during severe weather.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	55	1
12	Promote enhanced anchoring of manufactured homes.	Y	Y	N	N	N	N	N	Y	Y	Y	25	21
13	Build a community safe room/tornado shelter at the county fairgrounds	Y	Y	N	Y	N	Y	N	Y	Y	Y	37	15
14	Maintain and replace current warning sirens as needed.	Y	Y	N	N	N	Y	N	Y	Y	Y	30	19
15	Install sirens for early warning capability.	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	53	2
16	Develop land use strategies to promote the safe use of land downstream from dams.	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	45	6
17	Evaluate the feasibility of renovating an area of the fairgrounds to facilitate a drive-through point of distribution site.	Y	Y	Y	Y	N	Y	N	Y	N	Y	43	9
18	Remove part of defunct dam from canal park.	Y	Y	N	Y	N	Y	Y	Y	N	Y	39	12
19	Approach ODNR to make necessary repairs to dams.	Y	Y	N	N	Y	N	N	Y	Y	Y	31	18
20	Create an agreement with ODNR to maintain and repair dams with the county and local jurisdictions.	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	53	2
21	Evaluate the feasibility of installing warning capabilities for dams.	N	N	N	N	Y	Y	Y	Y	N	N	18	25
22	Maintain and replace unserviceable equipment to sustain hazardous materials response capabilities.	Y	Y	N	N	Y	N	Y	Y	Y	Y	35	16
23	Install rain water detection systems at railroad crossings	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	53	2
24	Support efforts to increase broadband capabilities in the county.	N	N	N	Y	N	Y	Y	Y	N	N	19	23
25	Evaluate the feasibility of hardening election security including mail-in and electronic voting.	N	N	N	N	N	Y	Y	Y	N	N	12	26
26	Evaluate the feasibility of hardening potential targets at festival sites, large gathering areas, and government facilities.	N	N	N	N	N	Y	Y	Y	N	N	12	26
27	Collect updated emergency action plans (EAPs) for Class I/II structures and create a GIS layer of inundation areas that appear in EAPs. Include downstream structures in the layer to support calculation of loss estimates.	N	N	N	Y	Y	Y	Y	Y	N	N	25	21

## APPENDIX 3: INACTIVE PROJECTS

The appendix lists projects from the previous version of Pickaway County’s mitigation plan that have been completed, deleted, or deferred.

INACTIVE PROJECTS		
<i>Designation</i>	<i>Project</i>	<i>Notes</i>
Deleted	Update existing flood damage prevention and ordinances (as it relates to 44 CFR 60.3)	Old Action 1.1.4. Committee members determined that all communities already maintain ordinances to be consistent with NFIP regulations so this action is unnecessary.
Deleted	Equip all county and public gathering places with lightning detectors.	Old action 2.1.2
Deleted	Review building codes and evaluate low cost earthquake resistant features.	Old action 4.1.2. The committee agreed do to the low risk of earthquake in the county, available funds for mitigation could be used on actions related to higher risk hazards.
Completed	Identify structure inventory for properties at-risk to flood (specifically properties located in the special flood hazard area/1% annual chance).	Old action 1.1.1
Completed	Evaluate stream buffer requirements (if applicable) as part of zoning, subdivision regulations, or building codes.	Old action 1.1.6. The committee reported that affected communities updated ordinances and regulations as necessary.
Completed	Install surge protectors on electronic equipment on county and municipal facilities.	Old action 2.1.3. The committee reported that all vulnerable electronic equipment is protected with surge protectors and/or battery backups.
Completed	Install uninterruptible power supplies on critical electronic equipment in county and municipal facilities.	Old action 2.11
Completed	Purchase equipment necessary to efficiently removed snow and ice from county roads during severe winter weather.	Old action 2.3.2. The Pickaway County Engineer reports that the department has purchased three new trucks for snow removal.
Completed	Determine where well ae located by working with local and state authorities.	Old action 5.2.1. This action was completed with the creation of the ODNR database.
Completed	Maintain an inventory of category 1 and 2 dams in GIS Format.	Old action 6.1.1. This action is considered complete as this information is available through ODNR and the National Inventory of Dams.
Completed	Purchase the necessary equipment to sustain hazardous materials emergency response teams.	Old action 7.1.1. The committee reported the LEPC and response agencies made purchases to supply hazardous material teams with necessary equipment.



## **APPENDIX 4: PUBLIC SURVEY, RAW DATA**

This appendix contains the raw data from the public survey discussed in Section 1.



# #1

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 8:52:26 AM  
**Last Modified:** Tuesday, February 04, 2020 8:55:33 AM  
**Time Spent:** 00:03:06  
**IP Address:** 96.11.186.2

## Page 2: Hazard Information

### Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Somewhat concerned</b>

### Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**Hazardous materials,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

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**Q4**

If applicable, to what do you think the change can be attributed?

Climate and population increase

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Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Anchoring mobile homes and roof-mounted and ground equipment
- ,
- Building community shelters for tornadoes and severe weather events
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

Circleville City

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

1-5 years

How long have you resided in your community?

**Q14**

36-55

Please provide your age.

**Q15**

Respondent skipped this question

Please write any general comments here.

# #2

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 9:28:33 AM  
**Last Modified:** Tuesday, February 04, 2020 9:38:38 AM  
**Time Spent:** 00:10:05  
**IP Address:** 24.93.96.48

## Page 2: Hazard Information

### Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Somewhat concerned</b>

### Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Severe thunderstorms and hail**



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Climate change, but the jury is still out on what's causing the change (man made or natural/cyclical).

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Radio,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Not applicable**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect
- ,
- Requiring water conservation during drought conditions
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

Scioto Township

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

11-20 years

How long have you resided in your community?

**Q14**

55-72

Please provide your age.

**Q15**

Respondent skipped this question

Please write any general comments here.

---

**#3**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:05:54 PM  
**Last Modified:** Tuesday, February 04, 2020 12:08:47 PM  
**Time Spent:** 00:02:52  
**IP Address:** 156.63.69.15

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	Increase
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	Increase
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

I don't know

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Anchoring mobile homes and roof-mounted and ground equipment
- ,
- Building community shelters for tornadoes and severe weather events
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

Circleville City

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

6-10 years

How long have you resided in your community?

---

**Q14**

**26-35**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#4**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:07:26 PM  
**Last Modified:** Tuesday, February 04, 2020 12:12:50 PM  
**Time Spent:** 00:05:24  
**IP Address:** 156.63.69.142

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

---



**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

- Flooding,**
- High/strong winds,**
- Public health emergencies,**
- Severe thunderstorms and hail,**
- Tornado,**
- Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

---

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Good**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8**

**No**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

,

**Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

,

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Building community shelters for tornadoes and severe weather events**

,

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**55-72**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#5**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:07:48 PM  
**Last Modified:** Tuesday, February 04, 2020 12:13:35 PM  
**Time Spent:** 00:05:47  
**IP Address:** 96.11.186.2

---

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Severe thunderstorms and hail**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Not sure. Politically correct answer is global warming.

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news,**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Radio**

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**

,

**Upgrading the water and sewer systems,**

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

,

**Preserving the floodplains as open space,**

**Burying power lines to provide for interrupted power during severe weather**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Circleville Township**

---

**Q13**

How long have you resided in your community?

**More than 20 years**

---

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#6

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:07:34 PM  
**Last Modified:** Tuesday, February 04, 2020 12:13:41 PM  
**Time Spent:** 00:06:06  
**IP Address:** 156.63.69.79

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

---

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Fair**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---



**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

Yes

---

Page 4

**Q9**

Have you ever...(check all that apply)

Repaired or replaced the roof

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

I/we spent my/our own money

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

Upgrading the water and sewer systems,  
Planting trees to prevent erosion and promote cooler micro-climates  
,  
Burying power lines to provide for interrupted power during severe weather  
,  
Establishing standards for all utilities regarding tree pruning around lines  
,  
Building community shelters for tornadoes and severe weather events

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Wayne Township

---

**Q13**

**More than 20 years**

How long have you resided in your community?

**Q14**

**55-72**

Please provide your age.

**Q15**

**Respondent skipped this question**

Please write any general comments here.

**#7**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:07:33 PM  
**Last Modified:** Tuesday, February 04, 2020 12:15:08 PM  
**Time Spent:** 00:07:34  
**IP Address:** 96.11.186.2

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4** **Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5** **No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6** **Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

Via wireless emergency notifications (e.g., text messages)

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

Yes

---

Page 4

**Q9**

Have you ever...(check all that apply)

Respondent skipped this question

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

Not applicable

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

Upgrading the water and sewer systems,  
Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.  
,  
Planting trees to prevent erosion and promote cooler micro-climates  
,  
Promoting the collection and reuse of rainwater such as in rain gardens and green roofs  
,  
Requiring water conservation during drought conditions  
,  
Preserving the floodplains as open space,  
Burying power lines to provide for interrupted power during severe weather  
,  
Establishing standards for all utilities regarding tree pruning around lines

---

Page 5

**Q12**

**Commercial Point Village**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**1-5 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#8**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:09:44 PM  
**Last Modified:** Tuesday, February 04, 2020 12:15:10 PM  
**Time Spent:** 00:05:26  
**IP Address:** 96.11.186.2

---

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Very concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	Increase
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	Increase
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Social media (Twitter, Facebook, etc.)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Requiring water conservation during drought conditions**

,

**Conducting inspections of new construction and enforcing building codes**

,

**Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

,

**Preserving the floodplains as open space,**

**Establishing standards for all utilities regarding tree pruning around lines**

,

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Madison Township**



**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#9**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:07:52 PM  
**Last Modified:** Tuesday, February 04, 2020 12:18:16 PM  
**Time Spent:** 00:10:24  
**IP Address:** 96.11.186.2

---

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Concerned</b>
Flooding	<b>Very concerned</b>
Hazardous materials	<b>Very concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Very concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Concerned</b>
Please add any comments here, or list any hazards about which you are concerned that are not included on the above list.	<b>Nuclear fallout, sink holes, snow and ice</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Earthquake,**  
**Flooding,**  
**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado,**  
**Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>Increase</b>
Drought	<b>Increase</b>
Earthquake	<b>Increase</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Increase</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>Increase</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>Increase</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Everything

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Poor**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news,  
Radio,  
A family member, neighbor, friend, or acquaintance**

---

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards**
- ,
- Other (please specify):  
turn riparian zones along streams and rivers into parks or hunting and fishing area open to the public instead of all farm land closed to everyone or select few

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Not applicable, I do not live in Pickaway County**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

Please write any general comments here.

what happens upstream affects downstream communities.

---

**#10**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:13:24 PM  
**Last Modified:** Tuesday, February 04, 2020 12:18:21 PM  
**Time Spent:** 00:04:56  
**IP Address:** 128.146.234.61

---

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Very concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Decrease</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Increase</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Global climate change

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---



**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,**
  - Planting trees to prevent erosion and promote cooler micro-climates**
  - ,**
  - Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
  - ,**
  - Requiring water conservation during drought conditions**
  - ,**
  - Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
  - ,**
  - Preserving the floodplains as open space,**
  - Burying power lines to provide for interrupted power during severe weather**
  - ,**
  - Establishing standards for all utilities regarding tree pruning around lines**
  - ,**
  - Supporting educational campaigns aimed at preparing the population for a variety of hazards**
- 

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Not applicable, I do not live in Pickaway County**

How long have you resided in your community?

---

**Q14**

**55-72**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#11**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:14:23 PM  
**Last Modified:** Tuesday, February 04, 2020 12:19:19 PM  
**Time Spent:** 00:04:55  
**IP Address:** 96.11.186.2

---

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Social media (Twitter, Facebook, etc.)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

No

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Maintained trees around the house or removed problematic trees

Have you ever...(check all that apply)

---

**Q10**

I/we spent my/our own money

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
  - Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
  - ,
  - Planting trees to prevent erosion and promote cooler micro-climates
  - ,
  - Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
  - ,
  - Requiring water conservation during drought conditions
  - ,
  - Conducting inspections of new construction and enforcing building codes
  - ,
  - Adopting building codes that go above and beyond the basic requirements of construction
  - ,
  - Burying power lines to provide for interrupted power during severe weather
  - ,
  - Establishing standards for all utilities regarding tree pruning around lines
  - ,
  - Building community shelters for tornadoes and severe weather events
- 

Page 5

**Q12**

**Circleville Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Less than 1 year**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#12**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:10:37 PM  
**Last Modified:** Tuesday, February 04, 2020 12:19:36 PM  
**Time Spent:** 00:08:59  
**IP Address:** 96.11.186.2

---

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Radio,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)



**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Repaired or replaced the roof**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Planting trees to prevent erosion and promote cooler micro-climates**
  - ,
  - Reducing the amount of surface pavement to reduce flooding and the heat island effect**
  - ,
  - Requiring water conservation during drought conditions**
  - ,
  - Burying power lines to provide for interrupted power during severe weather**
  - ,
  - Establishing standards for all utilities regarding tree pruning around lines**
  - ,
  - Anchoring mobile homes and roof-mounted and ground equipment**
  - ,
  - Building community shelters for tornadoes and severe weather events**
- 

Page 5

**Q12**

**Madison Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**55-72**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

## #13

**INCOMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 12:31:24 PM  
**Last Modified:** Tuesday, February 04, 2020 12:33:35 PM  
**Time Spent:** 00:02:11  
**IP Address:** 156.63.69.15

---

### Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5**

**Respondent skipped this question**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Respondent skipped this question**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7** Respondent skipped this question

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8** Respondent skipped this question

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9** Respondent skipped this question

Have you ever...(check all that apply)

---

**Q10** Respondent skipped this question

If you have done any of the previous to your property, how was it paid for?

---

**Q11** Respondent skipped this question

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12** Respondent skipped this question

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13** Respondent skipped this question

How long have you resided in your community?

---

**Q14** Respondent skipped this question

Please provide your age.

---

**Q15** Respondent skipped this question

Please write any general comments here.

---

# #14

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 1:30:13 PM  
**Last Modified:** Tuesday, February 04, 2020 1:39:07 PM  
**Time Spent:** 00:08:53  
**IP Address:** 96.11.186.2

## Page 2: Hazard Information

### Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

### Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado,**  
**Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Planting trees to prevent erosion and promote cooler micro-climates**
  - ,
  - Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
  - ,
  - Requiring water conservation during drought conditions**
  - ,
  - Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
  - ,
  - Burying power lines to provide for interrupted power during severe weather**
  - ,
  - Establishing standards for all utilities regarding tree pruning around lines**
  - ,
  - Supporting educational campaigns aimed at preparing the population for a variety of hazards**
- 

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**11-20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

## #15

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 2:08:49 PM  
**Last Modified:** Tuesday, February 04, 2020 2:17:28 PM  
**Time Spent:** 00:08:38  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---



**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Climate change

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Radio,**

**Social media (Twitter, Facebook, etc.),**

**Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

**Yes**

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

---

**I/we spent my/our own money**

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Preserving the floodplains as open space,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Circleville City

**Q13**

How long have you resided in your community?

Not applicable, I do not live in Pickaway County

**Q14**

55-72

Please provide your age.

**Q15**

Respondent skipped this question

Please write any general comments here.

**#16**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 2:23:52 PM  
**Last Modified:** Tuesday, February 04, 2020 2:28:54 PM  
**Time Spent:** 00:05:01  
**IP Address:** 96.11.186.126

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Not at all concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Not at all concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Not at all concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

- Drought,**
- Flooding,**
- High/strong winds,**
- Severe thunderstorms and hail,**
- Temperature extremes,**
- Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

**Respondent skipped this question**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Not applicable, I do not live in Pickaway County**

How long have you resided in your community?

---

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

**#17**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 2:44:21 PM  
**Last Modified:** Tuesday, February 04, 2020 2:48:30 PM  
**Time Spent:** 00:04:09  
**IP Address:** 76.190.57.90

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2** In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Public health emergencies,  
Tornado**

---

**Q3** Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>

---

**Q4** Respondent skipped this question

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5** Do you live in a special flood hazard area (SFHA)?

**No**

---

**Q6** Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Good**

---



**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Other (please specify):  
N/A**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**Not applicable**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Circleville City**

---

**Q13**

How long have you resided in your community?

**Not applicable, I do not live in Pickaway County**

---

**Q14**

Please provide your age.

**36-55**

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

**#18**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 2:59:49 PM  
**Last Modified:** Tuesday, February 04, 2020 3:04:14 PM  
**Time Spent:** 00:04:25  
**IP Address:** 96.11.186.2

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Very concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

- Drought,**
- Flooding,**
- High/strong winds,**
- Severe thunderstorms and hail,**
- Temperature extremes,**
- Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

global warming

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Excellent**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text  
messages)**

---

How do you find out about upcoming hazards such as the  
ones discussed previously in this survey? (Select all that  
apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective  
notifications from these sources that allow you to make  
appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed  
problematic trees  
,  
Repaired or replaced the roof,  
Cleared the underbrush**

---

Have you ever...(check all that apply)

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property,  
how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**11-20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#19**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 3:08:52 PM  
**Last Modified:** Tuesday, February 04, 2020 3:15:18 PM  
**Time Spent:** 00:06:25  
**IP Address:** 96.11.186.2

---

Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Earthquake,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado,**  
**Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

---

**Q4**

If applicable, to what do you think the change can be attributed?

na

---

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

Excellent

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---



**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

- Television announcements or the news,**
  - Radio,**
  - A family member, neighbor, friend, or acquaintance,**
  - In the newspaper,**
  - Via wireless emergency notifications (e.g., text messages)**
- 

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

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**Q9**

Have you ever...(check all that apply)

- Maintained trees around the house or removed problematic trees**
  - ,**
  - Repaired or replaced the roof,**
  - Cleared the underbrush**
- 

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

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**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Less than 1 year**

How long have you resided in your community?

---

**Q14**

**55-72**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#20

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 2:42:50 PM  
**Last Modified:** Tuesday, February 04, 2020 3:21:35 PM  
**Time Spent:** 00:38:45  
**IP Address:** 96.11.186.2

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Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Tornado,  
Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>Decrease</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>Increase</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>Decrease</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Excellent**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

Yes

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

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**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Cleared the underbrush**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**

,

**Upgrading the water and sewer systems,**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Establishing standards for all utilities regarding tree pruning around lines**

,

**Building community shelters for tornadoes and severe weather events**

,

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**26-35**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#21**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 3:21:08 PM  
**Last Modified:** Tuesday, February 04, 2020 3:28:45 PM  
**Time Spent:** 00:07:37  
**IP Address:** 104.169.80.136

---

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>Increase</b>
Drought	<b>Decrease</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Decrease</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Increase</b>
Temperature extremes	<b>Decrease</b>
Terrorism	<b>Increase</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Decrease</b>
Wildfire	<b>Decrease</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Excellent**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Radio,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Anchoring mobile homes and roof-mounted and ground equipment
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

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**Q12**

Salt Creek Township

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**6-10 years**

How long have you resided in your community?

---

**Q14**

**55-72**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#22**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 3:39:03 PM  
**Last Modified:** Tuesday, February 04, 2020 3:43:32 PM  
**Time Spent:** 00:04:29  
**IP Address:** 74.218.49.214

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

- Flooding,**
- High/strong winds,**
- Severe thunderstorms and hail,**
- Temperature extremes,**
- Tornado,**
- Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Fair**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
In the newspaper**

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards**

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Not applicable, I do not live in Pickaway County**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#23**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 4:48:35 PM  
**Last Modified:** Tuesday, February 04, 2020 4:52:07 PM  
**Time Spent:** 00:03:32  
**IP Address:** 156.63.69.142

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# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Not at all concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Not at all concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Severe thunderstorms and hail**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	Increase
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Repaired or replaced the roof**

Have you ever...(check all that apply)

---

**Q10**

**Not applicable**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

**Respondent skipped this question**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12**

**Pickaway Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**55-72**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#24

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 04, 2020 4:46:35 PM  
**Last Modified:** Tuesday, February 04, 2020 4:52:35 PM  
**Time Spent:** 00:06:00  
**IP Address:** 96.11.186.2

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Poor**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Radio,**  
**Social media (Twitter, Facebook, etc.),**  
**A family member, neighbor, friend, or acquaintance,**  
**Via wireless emergency notifications (e.g., text messages)**

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

**Upgrading the water and sewer systems,  
Planting trees to prevent erosion and promote cooler micro-climates  
,  
Burying power lines to provide for interrupted power during severe weather  
,  
Establishing standards for all utilities regarding tree pruning around lines**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12**

**Williamsport Village**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**1-5 years**

How long have you resided in your community?

---

**Q14**

**26-35**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#25

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 8:52:38 AM  
**Last Modified:** Wednesday, February 05, 2020 9:04:30 AM  
**Time Spent:** 00:11:52  
**IP Address:** 156.63.69.79

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Not at all concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Severe thunderstorms and hail**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	Increase
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Good

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)



**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**

,

**Requiring water conservation during drought conditions**

,

**Establishing standards for all utilities regarding tree pruning around lines**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Circleville City**

---

**Q13**

How long have you resided in your community?

**6-10 years**

---

**Q14**

Please provide your age.

**26-35**

---

**Q15**

Please write any general comments here.

**Respondent skipped this question**

---

#26

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 9:26:38 AM  
**Last Modified:** Wednesday, February 05, 2020 9:35:15 AM  
**Time Spent:** 00:08:37  
**IP Address:** 96.11.186.2

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado,**  
**Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	Increase
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Good

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Radio,  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

6-10 years

How long have you resided in your community?

---

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#27

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 9:26:57 AM  
**Last Modified:** Wednesday, February 05, 2020 9:35:21 AM  
**Time Spent:** 00:08:23  
**IP Address:** 96.11.186.2

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	Not at all concerned
Drought	Somewhat concerned
Earthquake	Not at all concerned
Flooding	Not at all concerned
Hazardous materials	Somewhat concerned
High/strong winds	Somewhat concerned
Public health emergencies	Somewhat concerned
Severe thunderstorms and hail	Not at all concerned
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	Not at all concerned
Temperature extremes	Not at all concerned
Terrorism (i.e., domestic and cyber)	Somewhat concerned
Tornado	Somewhat concerned
Transportation incidents	Somewhat concerned
Wildfire	Not at all concerned

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Decrease</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

**Respondent skipped this question**

Page 3

**Q5**

Do you live in a special flood hazard area (SFHA)?

**No**

**Q6**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Excellent**

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees  
,  
Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money,  
Other (please specify):  
insurance**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems,  
Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.  
,  
Planting trees to prevent erosion and promote cooler micro-climates  
,  
Preserving the floodplains as open space**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Pickaway Township**

---

**Q13**

How long have you resided in your community?

**More than 20 years**

---



**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#28**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 9:35:04 AM  
**Last Modified:** Wednesday, February 05, 2020 9:41:12 AM  
**Time Spent:** 00:06:08  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Very concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Increase</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4** **Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5** **No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

**Radio,**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Social media (Twitter, Facebook, etc.),**

**A family member, neighbor, friend, or acquaintance,**

**In the newspaper,**

**Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

Page 5

**Q12**

**Scioto Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**11-20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#29

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 9:40:26 AM  
**Last Modified:** Wednesday, February 05, 2020 9:44:51 AM  
**Time Spent:** 00:04:25  
**IP Address:** 156.63.69.15

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Very concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,  
High/strong winds,  
Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Flooding	<b>Increase</b>
High/strong winds	<b>Increase</b>

**Q4**

If applicable, to what do you think the change can be attributed?

**Respondent skipped this question**

**Q5**

Do you live in a special flood hazard area (SFHA)?

**No**

**Q6**

**Good**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

**Social media (Twitter, Facebook, etc.)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

,

**Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Preserving the floodplains as open space,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Anchoring mobile homes and roof-mounted and ground equipment
- ,
- Building community shelters for tornadoes and severe weather events

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Circleville City

**Q13**

How long have you resided in your community?

More than 20 years



**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#30**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:17:25 AM  
**Last Modified:** Wednesday, February 05, 2020 10:24:12 AM  
**Time Spent:** 00:06:46  
**IP Address:** 74.218.49.214

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

- Flooding,**
- High/strong winds,**
- Severe thunderstorms and hail,**
- Temperature extremes,**
- Terrorism,**
- Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>Increase</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Climate change; cyber security changes, infrastructure decline

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Fair**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees  
,  
Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**6-10 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#31

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:24:57 AM  
**Last Modified:** Wednesday, February 05, 2020 10:32:11 AM  
**Time Spent:** 00:07:14  
**IP Address:** 64.113.185.161

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Page 2: Hazard Information

Pickaway County Hazard Mitigation Survey

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

distracted drivers and more people on the road

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)**

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

**Respondent skipped this question**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12**

**Ashville Village**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Not applicable, I do not live in Pickaway County**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---



#32

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:37:42 AM  
**Last Modified:** Wednesday, February 05, 2020 10:44:41 AM  
**Time Spent:** 00:06:58  
**IP Address:** 74.218.49.214

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado,**  
**Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	Increase
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	Increase
Terrorism	No change
Tornado	Increase
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

I don't know

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Not applicable, I do not receive notifications**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#33

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:29:55 AM  
**Last Modified:** Wednesday, February 05, 2020 10:46:25 AM  
**Time Spent:** 00:16:30  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Not at all concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

- Television announcements or the news,**
- Social media (Twitter, Facebook, etc.),**
- A family member, neighbor, friend, or acquaintance,**
- Via wireless emergency notifications (e.g., text messages)**

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---



**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards**

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**Q12**

**Monroe Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**1-5 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#34**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:49:01 AM  
**Last Modified:** Wednesday, February 05, 2020 10:54:59 AM  
**Time Spent:** 00:05:58  
**IP Address:** 74.218.49.214

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Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Not at all concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Good

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

**Respondent skipped this question**

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**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Respondent skipped this question**

---

**Q13**

How long have you resided in your community?

**Not applicable, I do not live in Pickaway County**

---

**Q14**

Please provide your age.

**55-72**

---

**Q15**

Please write any general comments here.

---

**Respondent skipped this question**

#35

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:48:34 AM  
**Last Modified:** Wednesday, February 05, 2020 10:57:41 AM  
**Time Spent:** 00:09:06  
**IP Address:** 96.11.186.2

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Very concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Dam and levee failure,  
Drought,  
Flooding,  
High/strong winds,  
Severe thunderstorms and hail,  
Temperature extremes,  
Tornado,  
Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>Increase</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Climate change

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

- Television announcements or the news,**
- Radio,**
- Social media (Twitter, Facebook, etc.),**
- A family member, neighbor, friend, or acquaintance,**
- Via wireless emergency notifications (e.g., text messages)**

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---



**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.

,

Regulating the type of development that is permitted in areas that are dangerous due to hazards

,

Planting trees to prevent erosion and promote cooler micro-climates

,

Promoting the collection and reuse of rainwater such as in rain gardens and green roofs

,

Reducing the amount of surface pavement to reduce flooding and the heat island effect

,

Requiring water conservation during drought conditions

,

Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source

,

Establishing standards for all utilities regarding tree pruning around lines

,

Anchoring mobile homes and roof-mounted and ground equipment

,

Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

Pickaway Township

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

More than 20 years

How long have you resided in your community?

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#36

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 11:05:21 AM  
**Last Modified:** Wednesday, February 05, 2020 11:08:59 AM  
**Time Spent:** 00:03:38  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Not at all concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3** Respondent skipped this question

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

---

**Q4** Respondent skipped this question

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5** No

Do you live in a special flood hazard area (SFHA)?

---

**Q6** Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7** Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8** Yes

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9** Maintained trees around the house or removed problematic trees  
,  
Cleared the underbrush

Have you ever...(check all that apply)

---

**Q10** I/we spent my/our own money

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Establishing standards for all utilities regarding tree pruning around lines

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Circleville City

**Q13**

How long have you resided in your community?

Not applicable, I do not live in Pickaway County

**Q14**

Please provide your age.

36-55

**Q15**

Please write any general comments here.

Respondent skipped this question

#37

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 11:07:15 AM  
**Last Modified:** Wednesday, February 05, 2020 11:13:47 AM  
**Time Spent:** 00:06:31  
**IP Address:** 74.218.49.214

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>Increase</b>
Tornado	<b>Increase</b>

**Q4**

If applicable, to what do you think the change can be attributed?

variable wheather patterns

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)**

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Repaired or replaced the roof**

Have you ever...(check all that apply)

---

**Q10**

Other (please specify):  
insurance

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Building community shelters for tornadoes and severe weather events**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**1-5 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#38

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 11:17:56 AM  
**Last Modified:** Wednesday, February 05, 2020 11:27:35 AM  
**Time Spent:** 00:09:38  
**IP Address:** 74.218.49.214

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Very concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Earthquake,**  
**Hazardous materials,**  
**Severe thunderstorms and hail,**  
**Tornado,**  
**Transportation incidents**



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Good

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

Television announcements or the news,  
 Radio,  
 Social media (Twitter, Facebook, etc.),  
 A family member, neighbor, friend, or acquaintance,  
 Via wireless emergency notifications (e.g., text messages)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

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**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Building community shelters for tornadoes and severe weather events
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

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**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

**6-10 years**

How long have you resided in your community?

**Q14**

**55-72**

Please provide your age.

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#39

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:29:30 AM  
**Last Modified:** Wednesday, February 05, 2020 11:28:09 AM  
**Time Spent:** 00:58:38  
**IP Address:** 74.218.49.214

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Somewhat concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Decrease</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Decrease</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

Yes

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

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**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

Other (please specify):

Landlord

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems,**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Conducting inspections of new construction and enforcing building codes**

,

**Adopting building codes that go above and beyond the basic requirements of construction**

,

**Anchoring mobile homes and roof-mounted and ground equipment**

,

**Building community shelters for tornadoes and severe weather events**

,

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

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**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**1-5 years**

How long have you resided in your community?

---

**Q14**

**19-25**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#40**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 10:23:46 AM  
**Last Modified:** Wednesday, February 05, 2020 11:41:28 AM  
**Time Spent:** 01:17:41  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Transportation incidents**

---



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	Decrease
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	Increase
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Social media (Twitter, Facebook, etc.)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Not applicable, I do not receive notifications**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

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**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
  - Upgrading the water and sewer systems,**
  - Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
  - Planting trees to prevent erosion and promote cooler micro-climates**
  - Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
  - Reducing the amount of surface pavement to reduce flooding and the heat island effect**
  - Conducting inspections of new construction and enforcing building codes**
  - Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
  - Burying power lines to provide for interrupted power during severe weather**
  - Establishing standards for all utilities regarding tree pruning around lines**
-

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**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Not applicable, I do not live in Pickaway County**

How long have you resided in your community?

---

**Q14**

**26-35**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#41**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 12:25:49 PM  
**Last Modified:** Wednesday, February 05, 2020 12:36:02 PM  
**Time Spent:** 00:10:12  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	Increase
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	Increase
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	Increase
Temperature extremes	Increase
Terrorism	Increase
Tornado	Increase
Transportation incidents	Increase
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**

,

**Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

,

**Burying power lines to provide for interrupted power during severe weather**

---

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**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Pickaway Township**

---

**Q13**

How long have you resided in your community?

**1-5 years**

---

**Q14**

**26-35**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#42**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 2:07:39 PM  
**Last Modified:** Wednesday, February 05, 2020 2:14:25 PM  
**Time Spent:** 00:06:45  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Very concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Somewhat concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado,**  
**Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

---

**Q4** **Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

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**Q5** **No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6** **Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---



**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

- Television announcements or the news,
- Social media (Twitter, Facebook, etc.),
- In the newspaper,
- Via wireless emergency notifications (e.g., text messages)

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

No

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**Q9**

Have you ever...(check all that apply)

- Maintained trees around the house or removed problematic trees
- ,
- Repaired or replaced the roof

**Q10**

If you have done any of the previous to your property, how was it paid for?

I/we spent my/our own money

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Requiring water conservation during drought conditions
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Not applicable, I do not live in Pickaway County**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#43**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 2:18:19 PM  
**Last Modified:** Wednesday, February 05, 2020 2:26:01 PM  
**Time Spent:** 00:07:41  
**IP Address:** 74.113.45.186

---

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Severe thunderstorms and hail,  
Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	Increase
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Good

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Not applicable, I do not receive notifications**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Establishing standards for all utilities regarding tree pruning around lines**

,

**Building community shelters for tornadoes and severe weather events**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Washington Township**

---

**Q13**

How long have you resided in your community?

**More than 20 years**

---

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#44

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 2:38:59 PM  
**Last Modified:** Wednesday, February 05, 2020 2:56:41 PM  
**Time Spent:** 00:17:42  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Climate Change

---

Page 3

**Q5**

Do you live in a special flood hazard area (SFHA)?

**Yes**

---

**Q6**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Fair**

---

**Q7**

**Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---



**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards**

Page 5

**Q12**

**South Bloomfield Village**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#45**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 05, 2020 2:46:30 PM  
**Last Modified:** Wednesday, February 05, 2020 3:02:05 PM  
**Time Spent:** 00:15:35  
**IP Address:** 74.218.49.214

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Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,  
Severe thunderstorms and hail**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money,**

If you have done any of the previous to your property, how was it paid for?

Other (please specify):

the electric company paid for it (South Central Power)

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems,**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Conducting inspections of new construction and enforcing building codes**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Establishing standards for all utilities regarding tree pruning around lines**

---

Page 5

**Q12**

**Walnut Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#46

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, February 06, 2020 12:25:12 PM  
**Last Modified:** Thursday, February 06, 2020 12:32:51 PM  
**Time Spent:** 00:07:39  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Not at all concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Not at all concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,  
High/strong winds,  
Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>Increase</b>
Tornado	<b>No change</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Radio,**

**A family member, neighbor, friend, or acquaintance,**

**Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---



**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Building community shelters for tornadoes and severe weather events**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Deer Creek Township**

**Q13**

How long have you resided in your community?

**More than 20 years**

**Q14**

Please provide your age.

**36-55**

**Q15**

Please write any general comments here.

**Respondent skipped this question**

#47

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, February 06, 2020 2:13:21 PM  
**Last Modified:** Thursday, February 06, 2020 2:17:58 PM  
**Time Spent:** 00:04:36  
**IP Address:** 174.232.1.236

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Not at all concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Not at all concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	Increase
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Burying power lines to provide for interrupted power during severe weather**

,

**Establishing standards for all utilities regarding tree pruning around lines**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Circleville City**

---

**Q13**

How long have you resided in your community?

**More than 20 years**

---

**Q14**

Please provide your age.

**26-35**

---

**Q15**

Please write any general comments here.

**Respondent skipped this question**

---

#48

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, February 07, 2020 7:31:50 AM  
**Last Modified:** Friday, February 07, 2020 7:41:45 AM  
**Time Spent:** 00:09:55  
**IP Address:** 174.233.160.23

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Very concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Science shows human activity, fossil fuels, fracking, etc cause climate change. We do need a green New Deal!

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Repaired or replaced the roof**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Circleville City

**Q13**

How long have you resided in your community?

Not applicable, I do not live in Pickaway County



**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#49

**INCOMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, February 07, 2020 10:15:22 AM  
**Last Modified:** Friday, February 07, 2020 10:19:16 AM  
**Time Spent:** 00:03:53  
**IP Address:** 96.11.186.2

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

High/strong winds

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Television announcements or the news,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

**Respondent skipped this question**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12**

**Respondent skipped this question**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Respondent skipped this question**

How long have you resided in your community?

---

**Q14**

**Respondent skipped this question**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#50

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, February 07, 2020 2:03:53 PM  
**Last Modified:** Friday, February 07, 2020 2:22:18 PM  
**Time Spent:** 00:18:25  
**IP Address:** 156.63.69.142

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Somewhat concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>Increase</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>Decrease</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>Increase</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**A family member, neighbor, friend, or acquaintance**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**No**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Cleared the underbrush**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.

,

Regulating the type of development that is permitted in areas that are dangerous due to hazards

,

Planting trees to prevent erosion and promote cooler micro-climates

,

Promoting the collection and reuse of rainwater such as in rain gardens and green roofs

,

Reducing the amount of surface pavement to reduce flooding and the heat island effect

,

Requiring water conservation during drought conditions

,

Conducting inspections of new construction and enforcing building codes

,

Burying power lines to provide for interrupted power during severe weather

,

Establishing standards for all utilities regarding tree pruning around lines

,

Anchoring mobile homes and roof-mounted and ground equipment

,

Building community shelters for tornadoes and severe weather events

,

Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Muhlenberg Township

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**55-72**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#51**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, February 10, 2020 9:23:03 AM  
**Last Modified:** Monday, February 10, 2020 9:31:39 AM  
**Time Spent:** 00:08:35  
**IP Address:** 96.11.186.2

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Concerned</b>

---



**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

- Drought,**
- Flooding,**
- High/strong winds,**
- Severe thunderstorms and hail,**
- Tornado,**
- Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Transportation and hazardous material incidents are a product of increased traffic with limited improvements to major thoroughfares. Pickaway County needs more funding focused on improvements to the U.S. 23 corridor, creating a more limited access highway.

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

**No**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees  
,  
Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding
- ,
- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Establishing standards for all utilities regarding tree pruning around lines

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Wayne Township

**Q13**

How long have you resided in your community?

More than 20 years

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#52**

**INCOMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, February 10, 2020 9:27:53 AM  
**Last Modified:** Monday, February 10, 2020 9:32:06 AM  
**Time Spent:** 00:04:12  
**IP Address:** 174.233.132.124

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Somewhat concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

High/strong winds,  
 Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)  
 ,  
 Tornado,  
 Transportation incidents

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	Increase
High/strong winds	Increase
Public health emergencies	No change
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	Increase
Temperature extremes	Increase
Terrorism	No change
Tornado	Increase
Transportation incidents	Increase
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Excellent

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.),  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

Yes

Page 4

**Q9**

Have you ever...(check all that apply)

Respondent skipped this question

**Q10**

If you have done any of the previous to your property, how was it paid for?

Respondent skipped this question

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

Respondent skipped this question

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**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Respondent skipped this question

**Q13**

How long have you resided in your community?

Respondent skipped this question

**Q14**

Please provide your age.

Respondent skipped this question

**Q15**

Respondent skipped this question

Please write any general comments here.

---

**#53**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, February 10, 2020 9:28:38 AM  
**Last Modified:** Monday, February 10, 2020 10:14:45 AM  
**Time Spent:** 00:46:06  
**IP Address:** 174.232.1.38

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Very concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,  
Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Decrease</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Increase</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Global warming.

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Excellent**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

**Social media (Twitter, Facebook, etc.)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---



**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

Other (please specify):

None of the above

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

Other (please specify):

Do not own a home

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems,**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**

,

**Building community shelters for tornadoes and severe weather events**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Circleville City**

---

**Q13**

How long have you resided in your community?

**1-5 years**

---

**Q14**

Please provide your age.

**19-25**

---

**Q15**

Please write any general comments here.

None

---

#54

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, February 10, 2020 10:14:30 AM  
**Last Modified:** Monday, February 10, 2020 10:17:18 AM  
**Time Spent:** 00:02:47  
**IP Address:** 96.11.186.2

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Not at all concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Decrease</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Decrease</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Decrease</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

**Respondent skipped this question**

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Respondent skipped this question**

**Q13**

How long have you resided in your community?

---

**Respondent skipped this question**

**Q14**

Please provide your age.

---

**Respondent skipped this question**

**Q15**

Please write any general comments here.

---

**Respondent skipped this question**

#55

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, February 10, 2020 10:45:13 AM  
**Last Modified:** Monday, February 10, 2020 10:51:55 AM  
**Time Spent:** 00:06:42  
**IP Address:** 76.190.5.77

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Very concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Very concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Somewhat concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	Increase
Hazardous materials	No change
High/strong winds	Increase
Public health emergencies	Increase
Severe thunderstorms and hail	Increase
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	Increase
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Good

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

Yes

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money,**

Other (please specify):

Insurance for roof damage

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems,**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Conducting inspections of new construction and enforcing building codes**

,

**Adopting building codes that go above and beyond the basic requirements of construction**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Building community shelters for tornadoes and severe weather events**

,

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Circleville City**

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#56**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 11, 2020 4:51:27 PM  
**Last Modified:** Tuesday, February 11, 2020 4:59:49 PM  
**Time Spent:** 00:08:21  
**IP Address:** 96.11.186.2

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Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

---



**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,  
High/strong winds**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

I believe the temperature swings, high winds and flooding are attributed to climate change.

Page 3

**Q5**

Do you live in a special flood hazard area (SFHA)?

**No**

**Q6**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Average**

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees  
,  
Repaired or replaced the roof,  
Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Anchoring mobile homes and roof-mounted and ground equipment
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

Washington Township

**Q13**

How long have you resided in your community?

More than 20 years

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#57

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 12, 2020 11:53:40 AM  
**Last Modified:** Wednesday, February 12, 2020 12:04:42 PM  
**Time Spent:** 00:11:02  
**IP Address:** 74.218.49.214

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Global Warming

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money,  
Other (please specify):  
Insurance**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Building community shelters for tornadoes and severe weather events
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

Washington Township

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

11-20 years

How long have you resided in your community?

**Q14**

36-55

Please provide your age.

**Q15**

Respondent skipped this question

Please write any general comments here.

#58

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, February 18, 2020 11:35:53 PM  
**Last Modified:** Tuesday, February 18, 2020 11:41:17 PM  
**Time Spent:** 00:05:23  
**IP Address:** 172.58.141.253

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

**Q2**

**Flooding**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Global Warming

---

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Maintained trees around the house or removed problematic trees**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

Page 5

**Q12**

Respondent skipped this question

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

Not applicable, I do not live in Pickaway County

How long have you resided in your community?

---

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#59

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, February 19, 2020 10:18:00 PM  
**Last Modified:** Wednesday, February 19, 2020 10:24:59 PM  
**Time Spent:** 00:06:59  
**IP Address:** 24.145.129.72

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Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**Hazardous materials,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado,**  
**Transportation incidents**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>Increase</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Increase</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>Increase</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>Decrease</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Climate change and media coverage. I think many of these occurred in the past, we just didn't hear as much about it.

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

- Television announcements or the news,**
- Social media (Twitter, Facebook, etc.),**
- A family member, neighbor, friend, or acquaintance,**
- Via wireless emergency notifications (e.g., text messages)**

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Building community shelters for tornadoes and severe weather events
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

---

Page 5

**Q12**

Pickaway Township

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

More than 20 years

How long have you resided in your community?

**Q14**

36-55

Please provide your age.



**Q15**

Respondent skipped this question

Please write any general comments here.

---

#60

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, February 21, 2020 9:22:34 AM  
**Last Modified:** Friday, February 21, 2020 9:28:11 AM  
**Time Spent:** 00:05:36  
**IP Address:** 156.63.69.142

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Very concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Very concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>Increase</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Just making sure everything is safe and ready for such incidents.

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

No

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Conducting inspections of new construction and enforcing building codes**

,

**Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

,

**Adopting building codes that go above and beyond the basic requirements of construction**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Building community shelters for tornadoes and severe weather events**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**19-25**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#61**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, February 24, 2020 12:10:03 PM  
**Last Modified:** Monday, February 24, 2020 12:16:40 PM  
**Time Spent:** 00:06:36  
**IP Address:** 108.82.10.222

---

Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Not at all concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Not at all concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>
Please add any comments here, or list any hazards about which you are concerned that are not included on the above list.	<b>Urban gangs</b>

---

## Q2

**Tornado**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Only change is in how we report them.

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

,

**Preserving the floodplains as open space,**

**Adopting building codes that go above and beyond the basic requirements of construction**

,

**Burying power lines to provide for interrupted power during severe weather**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Commercial Point Village**

---

**Q13**

How long have you resided in your community?

**More than 20 years**

---

**Q14**

55-72

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#62

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, February 27, 2020 11:25:59 AM  
**Last Modified:** Thursday, February 27, 2020 11:38:42 AM  
**Time Spent:** 00:12:43  
**IP Address:** 96.11.186.2

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Concerned</b>
Drought	<b>Very concerned</b>
Earthquake	<b>Concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

---



**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>Decrease</b>
Tornado	<b>No change</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Climate change.

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Television announcements or the news,  
A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Anchoring mobile homes and roof-mounted and ground equipment

---

Page 5

**Q12**

Williamsport Village

In which community do you live (or work, if you do not live in Pickaway County)?

**Q13**

More than 20 years

How long have you resided in your community?

**Q14**

Over 72

Please provide your age.

**Q15**

Respondent skipped this question

Please write any general comments here.

#63

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, March 02, 2020 3:05:29 PM  
**Last Modified:** Monday, March 02, 2020 3:10:05 PM  
**Time Spent:** 00:04:35  
**IP Address:** 98.102.56.194

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Tornado,**  
**Transportation incidents**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	No change
Drought	No change
Earthquake	No change
Flooding	No change
Hazardous materials	No change
High/strong winds	No change
Public health emergencies	No change
Severe thunderstorms and hail	No change
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	No change
Temperature extremes	No change
Terrorism	No change
Tornado	No change
Transportation incidents	No change
Wildfire	No change

**Q4**

Respondent skipped this question

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

No

Do you live in a special flood hazard area (SFHA)?

**Q6**

Average

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

Social media (Twitter, Facebook, etc.),  
Via wireless emergency notifications (e.g., text messages)

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

---

**I/we spent my/our own money**

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems,**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Requiring water conservation during drought conditions**

,

**Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

,

**Preserving the floodplains as open space,**

**Burying power lines to provide for interrupted power during severe weather**

---

Page 5

**Q12**

**Walnut Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**11-20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#64**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, March 08, 2020 1:01:38 PM  
**Last Modified:** Sunday, March 08, 2020 1:07:44 PM  
**Time Spent:** 00:06:05  
**IP Address:** 74.113.47.200

---

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Concerned</b>

---

**Q2**

**High/strong winds**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

---



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Decrease</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Good**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Radio,  
Social media (Twitter, Facebook, etc.)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems**

---

Page 5

**Q12**

In which community do you live (or work, if you do not live in Pickaway County)?

**Williamsport Village**

---

**Q13**

How long have you resided in your community?

**More than 20 years**

---

**Q14**

Please provide your age.

**55-72**

---

**Q15**

Please write any general comments here.

**Respondent skipped this question**

---

#65

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, March 15, 2020 6:56:22 PM  
**Last Modified:** Sunday, March 15, 2020 7:12:06 PM  
**Time Spent:** 00:15:43  
**IP Address:** 24.93.98.101

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Somewhat concerned</b>
Flooding	<b>Very concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Somewhat concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>Increase</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**Yes**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Repaired or replaced the roof,**

**Cleared the underbrush,**

Other (please specify):

Trimmed body hair

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

Page 5

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**6-10 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#66

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, March 23, 2020 9:57:33 AM  
**Last Modified:** Monday, March 23, 2020 10:03:53 AM  
**Time Spent:** 00:06:19  
**IP Address:** 174.252.193.250

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Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Somewhat concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Hazardous materials,**  
**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Tornado**

---



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Decrease</b>
Hazardous materials	<b>Increase</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

N/a

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Radio,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Cleared the underbrush**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Conducting inspections of new construction and enforcing building codes**

,

**Preserving the floodplains as open space,**

**Burying power lines to provide for interrupted power during severe weather**

,

**Establishing standards for all utilities regarding tree pruning around lines**

,

**Building community shelters for tornadoes and severe weather events**

,

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

Page 5

**Q12**

**Washington Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**More than 20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#67

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, April 02, 2020 2:46:21 PM  
**Last Modified:** Thursday, April 02, 2020 2:49:48 PM  
**Time Spent:** 00:03:27  
**IP Address:** 74.113.47.183

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Not at all concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>Increase</b>
Tornado	<b>No change</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>No change</b>

---

**Q4** **Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

Page 3

**Q5** **No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6** **Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Social media (Twitter, Facebook, etc.),**

**Via wireless emergency notifications (e.g., text messages)**

---

**Q8**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

**Yes**

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Repaired or replaced the roof**

---

**Q10**

If you have done any of the previous to your property, how was it paid for?

**I/we spent my/our own money**

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding**
- ,
- Upgrading the water and sewer systems,**
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**
- ,
- Regulating the type of development that is permitted in areas that are dangerous due to hazards**
- ,
- Planting trees to prevent erosion and promote cooler micro-climates**
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs**
- ,
- Reducing the amount of surface pavement to reduce flooding and the heat island effect**
- ,
- Requiring water conservation during drought conditions**
- ,
- Conducting inspections of new construction and enforcing building codes**
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**
- ,
- Preserving the floodplains as open space,**
- Adopting building codes that go above and beyond the basic requirements of construction**
- ,
- Burying power lines to provide for interrupted power during severe weather**
- ,
- Establishing standards for all utilities regarding tree pruning around lines**
- ,
- Anchoring mobile homes and roof-mounted and ground equipment**
- ,
- Building community shelters for tornadoes and severe weather events**
- ,
- Supporting educational campaigns aimed at preparing**

---

Page 5

**Q12**

**Scioto Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**11-20 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#68

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, April 20, 2020 1:25:37 PM  
**Last Modified:** Monday, April 20, 2020 1:30:51 PM  
**Time Spent:** 00:05:13  
**IP Address:** 75.104.17.122

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Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Very concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Somewhat concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)**

---



**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>No change</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Increase</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

If applicable, to what do you think the change can be attributed?

Lack of maintenance

Page 3

**Q5**

**I don't know**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Fair**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**Television announcements or the news,  
Social media (Twitter, Facebook, etc.)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

**Q8**

**No**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Cleared the underbrush**

Have you ever...(check all that apply)

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

**Upgrading the water and sewer systems,  
Planting trees to prevent erosion and promote cooler micro-climates  
,  
Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12**

**Walnut Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**Less than 1 year**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

#69

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Saturday, May 02, 2020 8:22:43 AM  
**Last Modified:** Saturday, May 02, 2020 8:26:18 AM  
**Time Spent:** 00:03:35  
**IP Address:** 66.11.24.125

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Somewhat concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Concerned</b>
High/strong winds	<b>Very concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Somewhat concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Concerned</b>
Wildfire	<b>Not at all concerned</b>

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Tornado**

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

---

**Q4**

If applicable, to what do you think the change can be attributed?

Stronger oceanic storms

---

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

---

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

---

**Q7**

**Television announcements or the news,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8**

Yes

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

Have you ever...(check all that apply)

**Maintained trees around the house or removed problematic trees**

,

**Cleared the underbrush**

---

**Q10**

**I/we spent my/our own money**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Regulating the type of development that is permitted in areas that are dangerous due to hazards**

,

**Reducing the amount of surface pavement to reduce flooding and the heat island effect**

,

**Conducting inspections of new construction and enforcing building codes**

,

**Preserving the floodplains as open space,**

**Adopting building codes that go above and beyond the basic requirements of construction**

,

**Burying power lines to provide for interrupted power during severe weather**

,

**Anchoring mobile homes and roof-mounted and ground equipment**

,

**Supporting educational campaigns aimed at preparing the population for a variety of hazards**

---

Page 5

**Q12**

**Jackson Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**6-10 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

**#70**

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, May 18, 2020 5:10:14 PM  
**Last Modified:** Monday, May 18, 2020 5:16:56 PM  
**Time Spent:** 00:06:41  
**IP Address:** 24.210.115.169

---

Page 2: Hazard Information

# Pickaway County Hazard Mitigation Survey

## Q1

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Concerned</b>
Hazardous materials	<b>Somewhat concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Somewhat concerned</b>
Severe thunderstorms and hail	<b>Concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Somewhat concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Not at all concerned</b>
Wildfire	<b>Not at all concerned</b>

---

## Q2

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>No change</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>No change</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>No change</b>
Transportation incidents	<b>No change</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Average**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

**A family member, neighbor, friend, or acquaintance,  
Via wireless emergency notifications (e.g., text messages)**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)



**Q8**

**No**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Respondent skipped this question**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

**Upgrading the water and sewer systems,**

**Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.**

,

**Planting trees to prevent erosion and promote cooler micro-climates**

,

**Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source**

,

Other (please specify):

#1 priority is to add more tornado sirens. Help Townships out.

---

Page 5

**Q12**

**Walnut Township**

In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13**

**6-10 years**

How long have you resided in your community?

---

**Q14**

**36-55**

Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#71

**INCOMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, May 21, 2020 5:30:09 PM  
**Last Modified:** Thursday, May 21, 2020 5:32:08 PM  
**Time Spent:** 00:01:59  
**IP Address:** 192.182.184.12

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Very concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Somewhat concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Very concerned</b>
Transportation incidents	<b>Very concerned</b>
Wildfire	<b>Concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Drought,**  
**Flooding,**  
**High/strong winds,**  
**Severe thunderstorms and hail,**  
**Temperature extremes,**  
**Transportation incidents,**  
**Wildfire**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>No change</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>No change</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>No change</b>
Temperature extremes	<b>Increase</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Increase</b>
Wildfire	<b>Increase</b>

---

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

---

---

Page 3

**Q5**

**Respondent skipped this question**

Do you live in a special flood hazard area (SFHA)?

---

**Q6** Respondent skipped this question  
Think back to a recent occurrence (any from question 2).  
How would you rate your community's ability to respond?

---

**Q7** Respondent skipped this question  
How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

---

**Q8** Respondent skipped this question  
Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9** Respondent skipped this question  
Have you ever...(check all that apply)

---

**Q10** Respondent skipped this question  
If you have done any of the previous to your property, how was it paid for?

---

**Q11** Respondent skipped this question  
Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

---

Page 5

**Q12** Respondent skipped this question  
In which community do you live (or work, if you do not live in Pickaway County)?

---

**Q13** Respondent skipped this question  
How long have you resided in your community?

---

**Q14** Respondent skipped this question  
Please provide your age.

---

**Q15**

Respondent skipped this question

Please write any general comments here.

---

#72

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, June 11, 2020 8:11:21 AM  
**Last Modified:** Thursday, June 11, 2020 8:16:59 AM  
**Time Spent:** 00:05:38  
**IP Address:** 76.190.57.90

---

Page 2: Hazard Information

**Q1**

Please indicate how concerned you are about the following hazards where you live.

Dam & levee failure	<b>Not at all concerned</b>
Drought	<b>Not at all concerned</b>
Earthquake	<b>Not at all concerned</b>
Flooding	<b>Somewhat concerned</b>
Hazardous materials	<b>Not at all concerned</b>
High/strong winds	<b>Somewhat concerned</b>
Public health emergencies	<b>Not at all concerned</b>
Severe thunderstorms and hail	<b>Somewhat concerned</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Not at all concerned</b>
Temperature extremes	<b>Not at all concerned</b>
Terrorism (i.e., domestic and cyber)	<b>Not at all concerned</b>
Tornado	<b>Somewhat concerned</b>
Transportation incidents	<b>Somewhat concerned</b>
Wildfire	<b>Not at all concerned</b>

---

**Q2**

In the past 10 years, which hazards do you remember occurring in your community? (check all that apply)

**Flooding,**  
**High/strong winds,**  
**Public health emergencies,**  
**Severe thunderstorms and hail,**  
**Tornado**

---

**Q3**

Have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

Dam and levee failure	<b>No change</b>
Drought	<b>No change</b>
Earthquake	<b>No change</b>
Flooding	<b>Increase</b>
Hazardous materials	<b>Decrease</b>
High/strong winds	<b>Increase</b>
Public health emergencies	<b>Increase</b>
Severe thunderstorms and hail	<b>Increase</b>
Land subsidence (e.g., erosion, land slide, mine subsidence, etc.)	<b>Decrease</b>
Temperature extremes	<b>No change</b>
Terrorism	<b>No change</b>
Tornado	<b>Increase</b>
Transportation incidents	<b>Decrease</b>
Wildfire	<b>No change</b>

**Q4**

**Respondent skipped this question**

If applicable, to what do you think the change can be attributed?

Page 3

**Q5**

**No**

Do you live in a special flood hazard area (SFHA)?

**Q6**

**Excellent**

Think back to a recent occurrence (any from question 2). How would you rate your community's ability to respond?

**Q7**

How do you find out about upcoming hazards such as the ones discussed previously in this survey? (Select all that apply)

- Television announcements or the news,**
- Radio,**
- Social media (Twitter, Facebook, etc.),**
- A family member, neighbor, friend, or acquaintance,**
- Via wireless emergency notifications (e.g., text messages)**

**Q8**

**Yes**

Do you receive timely, accurate, and effective notifications from these sources that allow you to make appropriate decisions about what to do?

---

Page 4

**Q9**

**Respondent skipped this question**

Have you ever...(check all that apply)

---

**Q10**

**Not applicable**

If you have done any of the previous to your property, how was it paid for?

---

**Q11**

Please indicate the types of mitigation actions you would support; these could be something you can do, or an initiative by local officials. (Check all that apply)

- Buying out properties, relocating homes, or elevating structures that are prone to repetitive flooding
- ,
- Upgrading the water and sewer systems,
- Installing generators in critical facilities such as hospitals, police stations, fire stations, etc.
- ,
- Planting trees to prevent erosion and promote cooler micro-climates
- ,
- Promoting the collection and reuse of rainwater such as in rain gardens and green roofs
- ,
- Requiring water conservation during drought conditions
- ,
- Conducting inspections of new construction and enforcing building codes
- ,
- Requiring new development to construct on-site retention basins for excessive stormwater runoff and as a firefighting water source
- ,
- Preserving the floodplains as open space,
- Adopting building codes that go above and beyond the basic requirements of construction
- ,
- Burying power lines to provide for interrupted power during severe weather
- ,
- Establishing standards for all utilities regarding tree pruning around lines
- ,
- Anchoring mobile homes and roof-mounted and ground equipment
- ,
- Supporting educational campaigns aimed at preparing the population for a variety of hazards

**Q12**

**Circleville City**

In which community do you live (or work, if you do not live in Pickaway County)?



**Q13**

**Less than 1 year**

How long have you resided in your community?

---

**Q14**

**19-25**

Please provide your age.

---

**Q15**

**Respondent skipped this question**

Please write any general comments here.

---

## APPENDIX 5: CITATIONS

This appendix assures proper attribution to the many data sources used throughout the hazard mitigation plan.

AccuWeather. (2012). Weather Channel decision to name winter storms will increase confusion in critical safety information to public. Online. Retrieved from <https://www.accuweather.com/en/press/84520>

American Society of Civil Engineers. (2017). 2017 infrastructure report card. Online. Retrieved from <https://www.infrastructurereportcard.org/>

Bestplaces.net. (2020). Online. Retrieved from <https://www.bestplaces.net/climate/county/ohio/pickaway>

Borealforest.org. (n.d.). Forest fires: An overview. Online. Retrieved from [http://www.borealforest.org/world/innova/forest\\_fire.htm](http://www.borealforest.org/world/innova/forest_fire.htm)

Centers for Disease Control and Prevention. (2012). Lesson 1: Introduction to epidemiology, Section 11: Epidemic disease occurrence. *Principles of Epidemiology in Public Health Practice, Third Edition, An Introduction to Applied Epidemiology and Biostatistics*. Online. Retrieved from <https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html>

Centers for Disease Control and Prevention. (2010). The 2009 H1N1 pandemic: Summary highlights, April 2009-April 2010. Online. Retrieved from <https://www.cdc.gov/h1n1flu/cdcresponse.htm>

Coppola, D.P. (2015). *Introduction to International Disaster Management* (3<sup>rd</sup> ed.). Waltham, MA: Butterworth-Heinemann.

Douglas, J. (2003). Earthquake ground motion estimation using strong-motion records: A review of equations for the estimation of peak ground acceleration and response spectral ordinates. *Earth Science Reviews*, 61, 43-104. doi:10.1016/S0012-8252(02)00112-5

EMS1. (2016). Ohio Responders Reopen Fire Station to Avoid Frequent Trains. Retrieved from: <https://www.ems1.com/ambulances-emergency-vehicles/articles/ohio-responders-reopen-fire-station-to-avoid-frequent-trains-lodsNa6A3tRpTm6B/>

Federal Emergency Management Agency. (2013). *Integrating Hazard Mitigation into Local Planning*. Washington, DC: Federal Government.

Federal Emergency Management Agency. (2005). *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning*. Washington, DC: Federal Government.



- Federal Emergency Management Agency. (2013). Local Hazard Mitigation Planning Handbook. Washington, DC: Federal Government.
- Federal Emergency Management Agency. (2013). Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards. Washington, DC: Federal Government.
- Federal Emergency Management Agency. (2016). National Mitigation Framework. Washington, DC: Federal Government.
- Federal Emergency Management Agency, Emergency Management Institute. (2013). IS-271.A: Anticipating hazardous weather & community risk, 2<sup>nd</sup> Ed. Online. Retrieved from <https://training.fema.gov/is/courseoverview.aspx?code=IS-271.a>
- Haddow, G. D., Bullock, J. A., & Coppola, D. P. (2017). *Introduction to emergency management* (6<sup>th</sup> ed.). Cambridge, MA: Butterworth-Heinemann.
- Intergovernmental Panel on Climate Change. (n.d.). Home page. Online. Retrieved from <https://www.ipcc.ch/>
- Keller, E.A., & DeVecchio, D.E. (2015). National Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes (4<sup>th</sup> ed.). Santa Barbara, CA: Pearson.
- National Climate Assessment. (2014). Home page. Online. Retrieved from <https://nca2014.globalchange.gov/>
- National Geographic. (2018). Wildfires information and facts. Online. Retrieved from <http://www.nationalgeographic.com/environment/natural-disasters/wildfires/>
- National Interagency Fire Center. (2019). Statistics. Online. Retrieved from [https://www.nifc.gov/fireInfo/fireInfo\\_statistics.html](https://www.nifc.gov/fireInfo/fireInfo_statistics.html)
- National Oceanic & Atmospheric Administration, National Centers for Environmental Information. (2019). Storm events database. Online. Retrieved from <https://www.ncdc.noaa.gov/stormevents/>
- National Oceanic & Atmospheric Administration, Storm Prediction Center. (n.d.). Beaufort wind scale. Online. Retrieved from <https://www.spc.noaa.gov/faq/tornado/beaufort.html>
- National Oceanic & Atmospheric Administration, SciJinks. (2019). Why does wind blow? Online. Retrieved from <https://scijinks.gov/wind/>
- National Park Services. (2019). National Register Database. Online. Retrieved from <https://www.nps.gov/subjects/nationalregister/database-research.htm>
- National Weather Service. (n.d.). Severe thunderstorm safety. Online. Retrieved from <https://www.weather.gov/safety/thunderstorm>
- National Weather Service. (2009). Glossary, severe weather terminology. Online. Retrieved from <https://w1.weather.gov/glossary/index.php?letter=a>



- North Gate Alliance. (2013). Strategic Land Use Plan. Pickaway County, OH: County Government.
- ODNR Division of Water Resources, Dam Safety. (n.d.). Dam safety. Online. Retrieved from <http://water.ohiodnr.gov/safety/dam-safety>
- ODNR Division of Water Resources, Dam Safety. (n.d.). Ohio dam locator. Online. Retrieved from <https://gis2.ohiodnr.gov/MapView/?config=ohiodams>
- Ohio Department of Development. (2018). Ohio County Profiles. Online. Retrieved from <https://development.ohio.gov/files/research/C1066.pdf>
- Ohio Department of Transportation. (2020). Geological Hazard Inventory Maps. Online. Retrieved from <http://www.dot.state.oh.us/Divisions/Engineering/Geotechnical/Pages/GeoHazards.aspx>
- Ohio Emergency Management Agency. (2019). 2019 State of Ohio Hazard Mitigation Plan. Columbus, OH: State Government.
- Panovich, B. (2012). What's the big deal with naming winter storms? Online. Retrieved from <http://wxbrad.com/whats-the-big-deal-with-naming-winter-storms/>
- Plantscience.com. (n.d.). What causes lightning? Online. Retrieved from <http://www.planet-science.com/categories/over-11s/natural-world/2012/06/what-causes-lightning.aspx>
- Post, J. M. (2007). Killing in the name of other gods. In *The mind of the terrorist: The psychology of terrorism from the IRA to al-Qaeda*. New York: Palgrave Macmillan.
- Rice, D. (2015). What are Alberta clippers? Online. Retrieved from <https://www.usatoday.com/story/weather/2015/01/20/alberta-slippers/22049039/>
- Sears, K. (2017). *Weather 101: From Doppler radar and long-range forecasts to the polar vortex and climate change, everything you need to know about the study of weather*. Avon, MA: Adams Media.
- Thomas, D., & Phillips, B. D. (2013). *Social vulnerability to disasters* (2 ed.). Boca Raton, FL: CRC.
- U.S. Army Corps of Engineers. (n.d.). National inventory of dams. Online. Retrieved from <https://nid-test.sec.usace.army.mil/ords/f?p=105:113:3676673998012::NO::>
- U.S. Army Corps of Engineers. (n.d.). National levee database. Online. Retrieved from <https://levees.sec.usace.army.mil/#/>
- U.S. Census Bureau. (2019). Circleville City, Ohio Quickfacts. Online. Retrieved from <https://www.census.gov/quickfacts/fact/table/circlevillecityohio/HSG010218#HSG010218>



- U.S. Coast Guard, National Response Center. (2019). *2010-2019 reports*. Online. Retrieved from <http://www.nrc.uscg.mil/>
- U.S. Department of Agriculture. (2017). 2017 Census of Agriculture. Online. Retrieved from [https://www.nass.usda.gov/Publications/AgCensus/2017/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Ohio/](https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_2_County_Level/Ohio/)
- U.S. Department of Homeland Security. (n.d.). Wildfires. Online. Retrieved from <https://www.ready.gov/wildfires>
- U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. (2019). National pipeline mapping system: Public viewer. Online. Retrieved from <https://pvnpm.phmsa.dot.gov/PublicViewer/>
- U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. (2019). Year incident summary reports. Online. Retrieved from <https://hazmatonline.phmsa.dot.gov/IncidentReportsSearch/Welcome.aspx>
- U.S. Geological Survey. (n.d.). Droughts: Things to know. Online. Retrieved from [https://www.usgs.gov/special-topic/water-science-school/science/droughts-things-know?qt-science\\_center\\_objects=0#what](https://www.usgs.gov/special-topic/water-science-school/science/droughts-things-know?qt-science_center_objects=0#what)
- U.S. Global Change Research Program. (2016). Home page. Online. Retrieved from <https://www.globalchange.gov/>
- Weather Street.com. (2013). What causes wind? Online. Retrieved from [http://weatherstreet.com/weatherquestions/What\\_causes\\_wind.htm](http://weatherstreet.com/weatherquestions/What_causes_wind.htm)
- Wikipedia. (2019). Ashville, Ohio. Online. Retrieved from [https://en.wikipedia.org/wiki/Ashville,\\_Ohio](https://en.wikipedia.org/wiki/Ashville,_Ohio)
- Wikipedia. (2019) Commercial Point, Ohio. Online. Retrieved from [https://en.wikipedia.org/wiki/commercial\\_point,\\_Ohio](https://en.wikipedia.org/wiki/commercial_point,_Ohio)
- Wikipedia. (2019). Darbyville, Ohio. Online. Retrieved from [https://en.wikipedia.org/wiki/Darbyville,\\_Ohio](https://en.wikipedia.org/wiki/Darbyville,_Ohio)

