SUMMIT COUNTY HAZARD MITIGATION PLAN

Summit County

JUNE 28, 2018

SUMMIT COUNTY EMERGENCY MANAGEMENT AGENCY
175 S. Main Street, Suite 103, Akron, OH 44308

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Forward

Summit County Hazard Prevention Plan

The goal of the Summit County Hazard Prevention Plan is ***to provide the citizens of Summit County with the necessary assessments and recommendations in order to implement actions which reduce or eliminate long term risks to human life and property from hazards.*** It identifies the responsibilities, functions, and working relationships between and within governmental entities and their various departments; private support groups and individual citizens regarding planning. This plan has been developed, as a guide to these groups in an effort to address hazard prevention needs, opportunities and activities that will create a disaster resistant Summit County. This plan will also serve as the basis for Summit County and the State of Ohio to consider technical assistance.

The Summit County Hazard Prevention Subcommittee (core planning group) was established by the Summit County Emergency Management Executive Committee on August,15 2002. Consensus of the Subcommittee on each aspect of the plan was submitted to the Summit County Emergency Management Executive Committee for approval in June of 2003. During the original planning process and throughout two subsequent updates, many outside groups were solicited for their current plans, zoning and development regulations, and current and potential project ideas in the area of hazard prevention. The drafted plan is sent to the chief elected official of each of the political subdivisions for comment and must be officially adopted by participation jurisdictions.

The Emergency Management Executive Committee will conduct an annual review of the Hazard Prevention projects. Representatives from each jurisdiction participating in the plan will be solicited to perform a complete review of the plan every five years in compliance with FEMA regulations.

We would like to express our appreciation to the individuals and organizations that assisted in the completion of the plan. Their input was instrumental in creating a Hazard Prevention Plan that will guide communities in their efforts to create a safer Summit County.

Director Thomas Smart **Date** 2/11/19

Hazard Reduction and Prevention

Purpose

To provide the citizens of Summit County with the necessary assessments and recommendations for the purpose of implementing actions which reduce or eliminate long term risks to human life and property from hazards.

Situation and Assumption

Situations

- "Rubber Capital of the World," Akron is now highly recognized as a world according to the 2014 census. Summit County contains a total land area of 419 square miles and is home to 541,943 persons. Located in the Northeast portion of Ohio, it is bordered to the north by Cuyahoga County the northeast by Geauga County, the west by Medina County, the southwest by Wayne County, the south by Stark County, and the east by Portage County.
- Summit County contains terrain comprised of plateaus and rolling hills. The vegetation for the area is considered Beech Maple Forest. Approximately 60 percent of Summit County lies in the Cuyahoga River basin, which drains into Lake Erie. The southern 40% of the county is in the Muskingum Watershed and ultimately draining to the Ohio River Basin. The average annual precipitation is 40 inches and the average annual temperature is 58°F.
- Summit County is home to 31 political subdivisions. Akron is the largest city within the County and also acts as the County seat. Once known as the leader in polymer research, The University of Akron's Institute of Polymer Science is internationally acclaimed. 28.8% of all workers in the County are employed in the services industry. Major employers in the County include Summa Hospital, Akron Children's Hospital Medical Center, Cleveland Clinic, Akron General, The University of Akron, First Energy Corporation, and Goodyear Tire and Rubber Company. The County of Summit budget for 2017 is about $514 million with a total estimated private and public building value of $33 billion.
- Interstate Highways 76 and 80, U.S. Route 224, and State Routes 18, 82, 162, 261, 303, and 619 cross the County east and west. Interstate Highways 77 and 271, and State Routes 8, 21, 91, 93, and 241 run north and south. Major waterways in Summit County include the Cuyahoga, Tuscarawas, and Rocky Rivers. The commercial airport in Green, Ohio and the Akron-Canton Regional Airport, is home to many commercial airline companies, with flights arriving and departing daily. Akron-Fulton Airport, located in Akron is an international airport that supports private planes and cargo. Major railroad systems still used in Summit County include Norfolk Southern and CSX Transportation, which are two Class 1 (i.e., major) freight railroads.

- The Wheeling and Lake Erie Railway, a regional-sized railroad, and its subsidiary, the Akron-Barberton Cluster Railway, also provide service in the area. The Cuyahoga Valley Scenic Railroad operates seasonal excursion rail service through the National Park.

Assumptions

- Hazard reduction and prevention activities require coordination and cooperation among diverse governmental and private organizations in order to protect the lives and property of Summit County residents.
- The location and extent of some disasters can be pre-determined and actions can be taken to reduce or eliminate loss of life, property and damage to the environment.

Concept of Operations

Authority by Law

- For disasters declared after November 1, 2004, a local government must have a mitigation plan approved pursuant to this section in order to receive HMGP project grants.
- Ohio Revised Code 5502.26 requires the establishment of an emergency management program. This program requires development of an emergency operations plan and identification of a coordinator. The coordinator is responsible to administer, organize, coordinate and operate an emergency management program.
- The Summit County Emergency Management Agency Agreement states that the County, on behalf of the participating political Subdivisions, will be responsible for the Emergency Management Agency program and without limitation, development of an emergency operations plan.
- The Summit County Emergency Management Agency leads, coordinates, and supports the emergency management system, in order to protect lives and prevent the loss of property from all hazards. Dividing emergency management activities in the following categories facilitates reaching these goals: mitigation, preparedness, response and recovery.
- Summit County Emergency Management Agency will pursue pre- and post-disaster mitigation projects in accordance with the Hazard Reduction and Prevention Plan.
- The Hazard Reduction and Prevention Plan is a multi-jurisdictional plan requiring participates in the planning process and formal adoption by each of the political subdivision participating in the plan. The following jurisdictions participated in the planning process and seek approval of the Summit County Hazard Mitigation Plan. (See Tab 1 for planning team members)

Municipality	Population estimates 2017 Census
City of Akron	197,846
City of Barberton	26,120
City of Cuyahoga Falls	49,247
City of Fairlawn	7,468
City of Green	25,747
City of Hudson	22,245
City of Macedonia	11,940
City of Munroe Falls	5,063
City of New Franklin	14,165
City of Norton	12,013
City of Stow	34,769
City of Tallmadge	17,552
City of Twinsburg	18,959
Bath Township	9,691
Boston Township	1,298
Copley Township	17,307
Coventry Township	10,876
Northfield Center Township	5,841
Richfield Joint Recreation District	No residents
Richfield Township	3,152
Sagamore Hills Township	10,995
Springfield Township	14,576
Twinsburg Township	2,889
University of Akron	*2,850
Village of Boston Heights	1298
Village of Clinton	1209
Village of Lakemore	3073
Village of Mogadore	2832
Village of Northfield	3669
Village of Peninsula	562
Village of Reminderville	4248
Village of Richfield	3637
Village of Silver Lake	2499
Summit County	541,228
Summit Metro Parks	541,228
Office of Research, Ohio Development Services Agency	

*The University of Akron has a population of 25,000 on class days, the chart reflects their resident population in the dormitories.

Inter-jurisdictional Authority

The following agencies have different levels of planning responsibilities based on local, state and federal law. These agencies are responsible to implement the Mitigation Action Plans as resources become available and incorporate the information in the Hazard Mitigation Plan into their own planning documents. The mitigation plan is a guide to reducing identified problem areas and will help prevent future losses and avoid know hazards. Many hazards cross jurisdictional boundaries, this plan will help neighboring jurisdictions understand how development in their area may impact surrounding communities. Project in the Summit County Hazard Mitigation Plan serve as a tool to identify areas for improvement and help support planning efforts that lead to the mitigation of identified hazards. The continued mitigation planning process will allow all the participating jurisdictions and the multi-jurisdiction planning agencies to work together to find solutions.

- Summit County Emergency Management Agency leads, coordinates, and supports the emergency management system, in order to protect lives and prevent the loss of property from all hazards. Dividing emergency management activities in the following categories facilitates reaching these goals: mitigation, preparedness, response and recovery. https://co.summitoh.net/index.php/emergency-operations-plan
- The strong home-rule form of government in Ohio means that local governments in the state are the primary decision-makers for land use management, building codes, zoning and other regulatory tools. Individual community plans, building and zoning regulations were gathered and taking into consideration for the creation of this plan. (Refer to Tab 10)
- The Summit County Department of Community and Economic Development develop and promote plans and programs designed to assure balanced growth and efficient utilization of resources within the County. This is accomplished by assisting in the establishment or expansion of industrial, commercial, or research facilities, in turn by creating and preserving job and employment opportunities for the people in the County. With local community approval, certain areas of Summit County are designated Enterprise Zones. This allows incentive agreements to be negotiated between the County, local communities and businesses seeking to expand or relocate within the zone areas. Enterprise Zone incentive agreements are a valuable economic stimulus; which encourages new business investment projects by providing direct tax incentives.
- Summit County Planning Commission relies on the professional planning staff within the Summit County Department of Community and Economic Development for recommendations and administration. The Summit County Planning Commission was established to develop studies, maps, recommendations, and reports relating to physical, environmental, social, economic, and governmental functions, services and other aspects of the County. The Planning Commission typically reviews and

makes recommendations on zoning changes in townships, oversees the dedication and vacation of roads, and administers the County Subdivision Regulations. Additional Planning Division activities include G.I.S. mapping projects, commercial, industrial and residential reports and distribution of Census statistics. Summit County Floodplain legislation Codified Ordinance 1345 http://whdrane.conwaygreene.com/NXT/gateway.dll?f=templates&fn=default.htm&vid=whdrane:OHSummit and Summit County General Land Use Plan http://co.summitoh.net/index.php/departments/community-a-economic-development/planning

- The Akron Metropolitan Area Transportation Study serving Summit and Portage Counties must produce a short-range transportation plan that lists and prioritizes federal aid transportation improvements, as a representation of the consensus of local and state officials. They must also produce a multi-model long-range plan that considers local plans and development objectives as well as overall social, economic and environmental goals. Plans must identify highway improvements, public transportation improvements, and transportation enhancements. Enhancements include the development of trails, bikeways, skywalk systems and other pedestrian related facilities. http://amatsplanning.org/planning/
- County of Summit Engineer's Office duties include planning, designing, constructing and maintaining the County's road and bridge system including drainage improvements and storm water management. The Engineer serves as the engineer for all townships reporting annually to the Township Trustees and associated personnel. In 2017 Summit County Council adopted the Summit County Surface Water Management District. Bath Township was the first community to join. http://www.summitengineer.net/news/publications/632-surface-water-management-district
  http://www.summitengineer.net/attachments/section/5/sce_storm_water_maual_2013_03_06_rev1.pdf
- Metro Regional Transit Authority in Summit County provides bus and van services with express service to downtown Cleveland and Special Citizens Area Transit (SCAT) for senior citizens and people with disabilities. Their primary function is Summit County special planning studies, which focuses on serving Northeast Ohio. Section 306 of the ORC allows for services via railways, tramlines, subways, rapid transit, monorails and busses. https://www.akronmetro.org/transit-planning.aspx
- Akron-Canton Regional Airport focuses on domestic short-haul passenger service. The regional airport board has the power to make rules, fix rates, and acquire, construct and manage airports and airport facilities within or outside territorial boundaries.
- Summit County Sanitary Sewer Services, under the direction of the Summit County Executive operates and maintains wastewater collection, transportation and treatment systems and water purification and distribution systems in unincorporated areas and in certain incorporated areas. It may also provide facilities for temporary retention of storm water and for construction of lines to dispose of surface water. Water improvements may also be made under Chapter 6119 of the ORC and is established to promote health and general welfare under Chapter 6117. A vulnerability assessment plan was completed in 2015 to guide mitigation action.

- ReWorks provides for waste management and the coordination of local solid waste activities for all land in Summit County. http://www.summitreworks.com/annual-report/?page=1
- Summit Metro Parks identifies regionally significant trail and greenway opportunities within the County. These corridors will link the natural and cultural resources together as a County-wide system to meet recreational, educational, environmental and economic development objectives. Park districts are established under Chapter 1545 of the ORC. https://www.summitmetroparks.org/about-summit-metro-parks.aspx
- The mission of the Summit County Public Health is to protect and promote the health of the entire community through programs and activities designed to address the safety, health and well-being of the people who live in Summit County. Through its programs and activities, the Health District seeks to create a healthful environment and ensure the accessibility of health services to all. The role of the Board of Health of the Summit County Public Health is to adopt policies and secure funding through appropriate budgeting for programs and services to be carried out by the Health District. The Board of Health has authority to make such orders and regulations as are necessary for the promotion of health and prevention of disease and the abatement or suppression of nuisances. https://www.scph.org/assessments-reports
- Ohio State University Extension serving Summit County provides information and educational materials to farmers and rural residents to protect persons, livestock, facilities and equipment from possible destruction or damage caused by a disaster. They participate in USDA County Emergency Board meetings and provide information to the Flash Report and damage assessment reports. They report outbreaks of animal and plant diseases and disseminate information on the control and eradication of those diseases, as well as provide information to be broadcast through the Emergency Alert System, TV radio and print media to assist local farmers and residents in coping with the disaster and its aftermath.
- The Summit Soil and Water Conservation District (SWCD) is a political sub-division of the State of Ohio, Department of Natural Resources, Division of Soil and Water Conservation. Established in 1946, the Summit SWCD serves all of Summit County providing local leadership for soil and water conservation and water quality enhancement. Through a Memorandum of Understanding with the U.S. Department of Agriculture, technical assistance is provided to the district by the Natural Resources Conservation Service. The policies and procedures of the Summit SWCD are established by a board of five supervisors, who are elected by the residents or landowners of Summit County. These volunteers serve three-year terms and conduct monthly business meetings, which are open to the general public.
- Ohio Department of Natural Resources Division of Water educates people to make appropriate water resource decisions – well balanced and with sufficient information and knowledge to protect and wisely use Ohio's water resources. They provide influence through regulatory, water information and technical assistance programs, as well as, by example in the management of those lands and waters for which they are responsible. Ensuring the wise management of Ohio's water

resources depends on the effectiveness of the local governments influence and on their ability to build the capacity of Ohio's citizens, communities and counties to understand value and care for their water resources.

- Northeast Ohio four County Regional Planning and Development Organization works with local and county governments in Portage, Stark, Summit and Wayne Counties in wastewater management planning, watershed protection, surface and groundwater protection, economic development, socio-economic data distribution, and federal/state grants review. The mission is to improve the region's quality of life, through collaborative planning efforts with area governments, in order to ensure environmental quality, orderly growth, and economic and community development. http://www.nefcoplanning.org/Middle%20Cuyahoga%20Action%20Plan.html http://forestry.ohiodnr.gov/stateforestplans http://water.ohiodnr.gov/safety/dam-safety http://water.ohiodnr.gov/water-use-planning/floodplain-management
- Northeast Ohio Regional Sewer District Storm Water Management Program addresses problems related to storm water runoff from hard surfaces. Runoff contributes to regional stream flooding, erosion, and water-quality issues, and the program improves our ability to further address storm water problems that cross community boundaries. They serve Sagamore Hills, Village of Richfield, Village of Northfield, City of Hudson and the City of Macedonia. https://www.neorsd.org/stormwater-2/stormwater-management-program/
- Muskingum Watershed Conservation District develops and implements a plan to reduce the effects of flooding and conserve water for beneficial public use. The following communities contribute to the districts storm water utility: Green, New Franklin, Springfield, Lakemore, Coventry and Clinton. https://www.mwcd.org/flood-reduction-and-conservation-stewardship/flood-reduction
- The Akron Water Department provides metering services, water service and meter maintenance, backflow prevention regulation, portable water supply, and water distribution operation and maintenance for approximately 300,000 customers for all City of Akron residents including the surrounding communities of Fairlawn, Mogadore, a portion of Hudson and Copley, and the Joint Economic Development Districts in Bath, Copley, Coventry, and Springfield Townships. Additionally, Water Distribution serves Great Lakes Canning in Twinsburg Township, and miscellaneous customers in Boston Township and Cuyahoga Falls. Akron also provides water to Stow, Summit Co., and Tallmadge on a wholesale basis.
- City of Akron Sewer Department Water Reclamation Services is responsible for the collection, conveyance, and treatment of wastewater for the City of Akron and all or a portion of many neighboring communities including; Cuyahoga Falls, Fairlawn, Munroe Falls, Stow, and Tallmadge; the Townships of Bath, Copley, Coventry and Springfield; and the Villages of Lakemore and Mogadore. Our mission is to provide effective and efficient wastewater and storm water management services, while protecting the environment for this and future generations.

- The National Park System maintains a Fire Management Plan to comply with policy and provide long-term direction for wildland-fire response, fire prevention, and use of prescribed fire. The plan includes potential use of prescribed fire at two additional sites to improve habitat and manage burnable fuels. The two locations include the former Richfield Coliseum site in Richfield Township and the Terra Vista Natural Study Area in the Village of Valley View. The remainder of the park will remain full suppression. https://parkplanning.nps.gov/projectHome.cfm?projectID=39508
- The University of Akron Emergency Management team's goal is to integrate emergency planning, response, recovery and mitigation for a number of hazards, both manmade and natural disasters, into the daily operations at the University of Akron. As a Disaster Resistant University, the University of Akron promotes a disaster resistant culture on campus through education, mitigation projects, and well-practiced emergency plans and procedures. By working towards these goals we can feel confident about the continuity of the business of education and research, in the event of emergencies or disasters. The University Akron is a public research university and is part of the University System of the State of Ohio. The University of Akron's Board of Trustees is the governing body for The University of Akron, pursuant to Ohio Revised Code 3359.
  https://www.uakron.edu/safety/eohs/emergency-management.dot
- The Richfield Joint Recreation District (RJRD) was formed by the Village of Richfield and Richfield Township for the purpose of purchasing Crowell Hilaka Girl Scout Camp, which was permanently closed in 2011. In November 2014, voters in the village and township passed a $4.4 million bond levy to purchase the property along with a $2.7 million operation levy. Today, Western Reserve Land Conservancy continues to help the RJRD explore additional public funding sources and potential uses for the property. RJRD Board of Trustees is the governing body for the Richfield Heritage Preserve, a 336-acre preserve offering visitors' access to lakes, streams and wooded trails any day of the year from dawn to dusk. The RJRD Board of Trustees is made-up of seven members. The Richfield Village Council and the Richfield Township Trustees each appoint three Board Members to represent the two entities. These six Board Members then elect a seventh Board Member. The mission of the RJRD is to safeguard, support and maintain the natural properties of Richfield while encouraging recreational and educational opportunities in our community. https://www.rjrd.org/about-rjrd.html

Mitigation Goals and Priorities

- Create an environment where planning participants can submit various project ideas with traditional and non-traditional methods of mitigation.

- To develop consensus amongst planning participants on which hazards will have the most impact on the community and to commit to pursuing all project that will mitigate losses to life, property and the environment.
- To mitigate risk and vulnerabilities from flooding, stormwater, dam failure, landslide and subsidence, abandoned mines, severe storms, tornado events, winter storms, extreme cold and heat, hazardous materials incidents, civil disturbance and terrorism, infectious diseases, transportation incidents, water contamination, utility /energy interruption, and cyber-attack.
- To protect critical infrastructure, utilities, and cyber networks from natural and man-made hazards

Organization and Assignment of Responsibilities

General

- The County of Summit has established an Emergency Management Agreement. All political subdivisions have entered into the Summit County Emergency Management Agreement. This Agreement establishes the Emergency Management Executive Committee, who has the power to appoint technical, management and advisory committees.
- The mitigation plan is a guide to reducing identified problem areas and will help prevent future losses and avoid know hazards. Each participating jurisdiction will have this plan as a reference to incorporate various sections in capital improvement plans, zoning, community development plans and other planning mechanisms when appropriate as they move forward (Tab 12).
- The Summit County Hazard Planning Group was made up of at least one representative from each of the 31 political subdivisions in Summit County, plus the University of Akron, Summit Metro Parks, and the Richfield Joint Recreation District. The group also had representatives from Summit County Community and Economic Development, Summit County Engineer, Summit County Emergency Management, Summit County Public Health, Summit County Soil and Water Conservation District, Portage County EMA, Geauga County EMA, House of the Lord, and Citizens. (Tab 1)
- The County of Summit Executive supports the Summit County Emergency Management Agency's endeavors to mitigate hazards in Summit County by the establishment of a Summit County Hazard Reduction and Prevention Plan.

Responsibilities

- Summit County Emergency Management Agency

- Develop, maintain, and distribute the Hazard Reduction and Prevention Plan.
- Continue to update hazard prevention needs and opportunities.
- Annually identify mitigation projects that increase the resiliency of Summit County.
- Summit County continually develop and update COOP plans in the event facilities and/or agencies are impacted. Summit County Agencies also maintain disaster recovery plans. It is expected that affected agencies would exercise their COOP plans as appropriate. Private sector businesses are encouraged to develop business continuity plans
- Summit County Emergency Management Executive Committee
- Identify the hazards that affect Summit County
- Identify hazard prevention needs and opportunities
- Identify projects that increase the resiliency of Summit County Action Plan.
- Educate planners on incorporating the plan into other community plans.

- Planning Group (Tab 1)
  - Represents each political subdivision in Summit County, plus the University of Akron
  - Identifies hazards and vulnerabilities for their district and countywide.
  - Submits projects and prioritizes the projects for their jurisdiction.
  - Include the goals and hazard mitigation actions into local plans.

Plan Development and Maintenance

Plan Development

Hazard Identification:

The Summit County Emergency Management Agency Hazard Identification and Risk Assessment document represents comprehensive research of potential hazards affecting Summit County, historic hazard data (Tab 4), review of the State of Ohio Mitigation Plan, a community survey and the assessment of the historic data. Some hazards had limited data available for the Hazard Identification.

- The Hazard Identification involved a process of determining what hazards have the potential to affect Summit County. Part of the 2018 review included the removal of some hazards due to lack of historical data. Some Hazards were added for future research and development.

- Hazards are "…any actual or imminent threat to the survival or overall health, safety, or welfare of the civilian population that is caused by any natural, man-made, or technological event."

- The original list of hazards was compiled with the assistance of interns from The University of Akron who administered phone surveys, interviews, consulting books, and using the web to compile the Historic Hazard Profile. The Historic Hazard Profile is a chronological listing of past hazards/disasters in the County. A disaster occurs when, "A threat to lives, property, and the environment depletes the resources of a community beyond ordinary practice."
- Summit County Emergency Management Boards have identified hazards with the greatest potential to affect lives and property. Disaster data is a continually changing cycle; it is essential that this document change with it. This document will receive periodic updates to remain useful and current. This will allow us to better understand the mitigation needs of Summit County. (Refer to Tab 2 for the current hazards.) Some hazards have been added due to growing potential in these areas. The Planning Group listed new hazard for future consideration and annalist. (Refer to Tab 3 for new hazards)
- The process of obtaining historic hazard information involved a cooperative effort that included many members of the local communities. Valuable information was gathered by the Summit County Emergency Management Agency, the University of Akron, fire chiefs, police chiefs, elected officials, local historical societies, local libraries, Emergency Management Incident files, and a retired Akron Beacon Journal Reporter. The Historic Hazard Profile provides us a better understanding of the potentially hazardous threats in Summit County. By determining the location, extent, and magnitude of past disasters, and examining emerging risks, we are left with a better idea of what hazards are most prevalent in the County. (Refer to Tab 4 for historical detail).
- A community survey was performed in February of 2018 to get public input on hazards in our community. (Refer to Tab 5 for survey questions and survey results.)

Risk Assessment:

- After compiling the historic hazard data (Tab 4), a Planning Group was formed to conduct the Risk Assessment by analyzing and rating all the hazards according to their history, past ranking and emerging trends. (Refer to Tab 6 for Risk Matrix)
- The Planning Group worked in regional teams to discuss hazards, identify vulnerabilities and hazards were ranked based on the scale located on (Tab 7 for ranking). After the assessment was done on the local level, the group came back together to rank the hazards on a countywide level.
- After ranking the current hazards, the Planning Group discussed the new hazards from the emergency management boards and committees. It was determined that these hazards needed to be added to the plan but further research should be done. (Refer to Tab 3 for list of new hazards for consideration.)
- Vulnerability mapping was updated to reflect new census track information, update residential and commercial structures and identify critical infrastructure that would be impacted by a disaster in Summit County. We looked at flood plain data and riparian setbacks. We mapped dams, drainage, impervious surfaces and bodies of water.

We looked at soils prone to slide and minds. We mapped significant transportation and utilities. We look at open space and environmental concerns. We will continue to update our data and we are working on making the mapping more interactive. Maps for this plan are available at http://scids.summitoh.net/misc_data/EMA_Mit.Plan_Map_Updates.zip

- Land Usage
  The County's area is 419.4 square miles, broken down by land usage as follows:
  Tax Year 2017/2018 Collection Year Valuation Percent of Assessed Valuation
  Residential $ 9,234,330,310 63.99% Commercial/Industrial 2,556,464,710 17.71% Minerals 1,838,240 0.01% Public Utility 485,482,640 3.36% Governmental (including parks) 2,042,940,870 14.15% And Other Tax-Exempt Agricultural 112,299,850 0.78% Total $14,433,356,620 100.00% Housing, Median Value of Owner Occupied Homes 2010 in Summit County $141,700 29.

Public Outreach

- Meetings: All Subcommittee meetings were announced ahead of time and open to the public in accordance with Ohio's Sunshine Law. This will continue for additional meetings to update or revise the plan.
- Published information such as the Hazard Survey and Draft Plan on the Emergency Management Agency's website to make it available for public review and comment. New information will be added as reviews are conducted.
- A Community Hazard survey was sent out via email, social media and posted on our website. We encourage our community partners to share the survey on their social media and their websites. (Tabs 5)
- The elected officials, law enforcement, fire, public works, planning, zoning, parks, continuous county EMAs, Domestic Preparedness Steering Committee, Emergency Management Executive Board, our Citizen Emergency Response Team members and the public were invited to our two workshops on through email, social media and phone calls.
- The plan was posted for public comment on our website, social media and emailed out to community partners for distribution on their websites and social media.
- Public Outreach will continue to be an important part of the implementation and maintenance of this plan.
- Information is posted on social media (Facebook and Twitter) throughout the planning process.

Community Participation:

If an effort to look at the big picture and avoid duplication or conflict in planning, we continually seek input from all political subdivisions in Summit County. Throughout the process of creating this Plan elected officials, police chiefs, fire chiefs, building officials, zoning and service officials were contacted by phone, by email and individual meetings to provide historical information, current plans and possible mitigation projects.

2013 Hazard Mitigation Plan Update

In an effort to provide the citizens of Summit County with the best possible Hazard Mitigation Plan, the 2013 update (Tab 9) was made possible through community outreach and participation. The update included the re-evaluation of hazards previously noted as placing the County at risk and establishing their continued relevancy and threat to Summit County. The members of the planning group for this update were primarily interconnected through email and phone conversations. Community leaders, officials, and members of the public were notified of the needed plan revisions and given the opportunity to make recommendations. They were asked to provide insight on community needs and hazard mitigation projects. These email chains and phone conversations were accompanied by oral reports provided by private industry, as well as, governmental agencies. The continued cooperation of various entities assisted in making this update possible. Some of these entities included various officials and leaders, The Summit County Engineer's Office, ODNR, OSU Extension, Summit Soil and Water Conservation District, local private industries, a multitude of community personnel, as well as, the work of multiple Summit County Emergency Management employees.

The planning group reviewed and updated a great deal of information presented in this plan, including the reevaluation of the Summit County hazard mitigation strategies, goals, objectives and actions. While adhering to these reevaluated strategies, goals, and objectives, the information pertaining to hazard identification, risk assessment and vulnerability analysis was also updated. Updated statuses of each mitigation initiative were provided, while embracing those completed or showing progress.

2018 Hazard Mitigation Plan Update

- We started to reach out to the communities for our five-year review of our Mitigation Plan on February 15, 2017. Communities where emailed and called to update hazards, zoning, and land use plans (Tab 12) We also update our list of planning partners (Tab 1). We used interns from the University of Akron.
- We took every opportunity to discuss the plan review at meetings and ask our partners to prepare projects to be added to the plan. We spoke at the Police Chiefs Association, Fire Chiefs Association, Township Trustees Association, The Copley, Bath, and Fairlawn Safety Council, and the Emergency Management Executive Board.
- Two Flood Mitigation meetings where held on June 22, 2017; one for elected officials and one for residents that have repetitive loss structures. Ohio Emergency Management Agency, the Ohio Department of Natural Resources, the Federal Emergency Management Agency and Summit County Emergency Management

hosted the event to discuss flood risk reduction opportunities. Current Flood insurance communities are listed in Tab 13.

- EMA 101 Training was conducted on October 3, 2017 and October 6, 2017. Explanation of the Mitigation Plan and the upcoming five-year review was presented. Also, we talked about Mitigation and NFIP grants and that we would be in contact about projects for the Mitigation Plan (Tab 14).
- We hosted two Planning Group Mitigation Workshops on April 24, 2017 and April 25, 2017. At least one representative from each of our 31 political subdivisions attended Geauga and Portage County EMAs and members of the public (Tab 1). This group preformed the hazard ranking and vulnerability assessment. Representatives were asked to take the information from the workshop back to their community and turn in projects to be included in the Mitigation plan update.
- The planning group was provided several tools to help them identify projects, including sample projects from past HMA grants and the STAPLEE Action Evaluation Table (Refer to Tab10) to help them prioritize their hazard mitigation actions considering the cost of the actions and the benefits to their community. We had numerous meetings, emails and phone conversations with individual communities on the mitigation plan.
- Both the City of Barberton and the University of Akron have asked to join the Summit County Hazard Mitigation Plan.

Goals

"To provide the citizenry of Summit County the necessary assessments and recommendations to implement actions to reduce or eliminate long term risks to human life and property from hazards." This included, but was not limited to:

- Making people aware of problem areas and encouraging communities to recognize the identified hazards for future planning.
- Encouraging both public and private groups to mitigate prior to disasters and encouraging mitigation after disasters to prevent re-occurrence.
- Identifying practical mitigation solutions for identified hazards.
- Identifying possible prevention and reduction projects.
- Requesting project ideas from the communities as well as plans which address mitigation issues.

Mitigation Action Prioritization:

- The prioritization process has changed from the previous plan. Each political subdivision placed their project in order of importance. (Tab 8)
- Members of the planning group were emailed the STAPLEE approach to allow for a careful review of the feasibility of mitigation action. STAPLEE stands for Social, Technical, Administrative, Political, Legal, Economic and Environmental. (Tab 8)
- FEMA mitigation planning requirements indicate that any prioritization system used shall include a special emphasis on maximizing cost-benefit of the proposed projects. (Refer to Tab 10)

Plan Adoption

- All 31 political subdivisions in Summit County plus the University of Akron, Summit County Metro Parks and The Richfield Joint Recreation District will seek plan approval from Ohio Emergency Management and the Federal Emergency Management Agency.
- Summit County and its participating jurisdictions will formally adopt the plan by Resolution or Ordinance. (A copy of a blank Resolution can be found in Tab 11).

Action Plan:

- This Plan includes hazard reduction and prevention strategies that provide projects which affect every community in the County. Projects are submitted to the Ohio Emergency Management Agency (OEMA). The OEMA then reviews the project selection and evaluation methodology used by the communities for completeness and project eligibility. After all requirements are met on the state level, the project is then eligible for submission to FEMA when pre and post mitigation funds become available. Projects that are included in the Hazard Reduction and Prevention Plan will have first priority.
- Annually, communities will have the opportunity to submit projects that prevent or reduce damage or loss of life due to disasters. Summit County Emergency Management will reach out to plan participants and the Planning Group the first of the year. Summit County Emergency Management will provide guidance and resources to assist with project ideas. The Hazard Reduction and Prevention Plan should maintain at least one project affecting each jurisdiction in Summit County. As a result of our extensive outreach efforts, we have added many new projects to the plan. A complete listing of the past projects and current project can be found on (Tab 8, 9 and 10)

Future projects ideas:

- Preventative activities that keep problems from getting worse. The use and development of hazard areas is limited through planning or regulations. Building, zoning, planning, and or code enforcement officials usually administer these activities.
- Planning and mapping efforts for communities to identify mitigation projects. Work with businesses, community members, dam owners, churches, etc. to plan so they can reduce injuries and damage to property.
- Property protection is usually undertaken by property owners on a building-by-building or parcel basis.
- Emergency service measures are taken during disaster events to minimize their impact. These measures are usually the responsibilities of city or County emergency management staff.

- Structural projects keep hazards away from an area. Structural projects include dams, dikes and levees. These are usually long-term actions which are usually accompanied by very high up-front costs and on-going maintenance cost.
- Natural resource protection preserves or restores natural areas or the natural functions of hazard areas. An example of this is a floodplain or wetland area maintained in its natural state.
- Public information programs advise property owners, potential property owners, and potential visitors. Public information can also increase people's awareness to their vulnerability and property risk, and protect people and property from hazards.

Plan Maintenance:

- The Summit County Emergency Management Agency is responsible for ensuring that necessary changes to the Hazard Reduction and Prevention Plan are prepared, coordinated, published and distributed. The Agency will forward revisions of the Hazard Reduction and Prevention Plan to all affected/responsible organizations and publish for public review on the web for acceptance before the final version is printed.
- Each organization tasked with emergency responsibilities in this Hazard Reduction and Prevention Plan is responsible for updating its portion of the plan. This should be based on deficiencies identified by emergencies, drills, exercises, and changes in governmental structure and emergency organizations. All changes will be submitted to the Summit County Emergency Management Agency.
- The intended audiences for this Hazard Reduction and Prevention Plan are the responsible organization assigned to address the planning functions for all political subdivisions in Summit County. The Summit County Emergency Management Agency will initiate an annual review of the Plan based on established Plan goals with the appropriate organizations. The Emergency Management Executive Committee will conduct an annual review of the Hazard Prevention projects and evaluate them based on the established project evaluation criteria.
- The Hazard Planning Group will be reconvened to perform a complete review of the Plan to meet state and federal guidelines. This will be done no longer than every five years from the date of the last acceptance by the Federal Emergency Management Agency. All meetings are open to the public in accordance with the Sunshine Law.
- The Summit County Emergency Management Agency will work with organizations tasked with emergency responsibilities in this Hazard Reduction and Prevention Plan to improve the quality of data gathered after a disaster. It will work with local, state and federal agencies on methods of tracking incidents and the cost associated with responding to and recovering from disasters.
- An after-action report will be completed within 90 days of an exercise or event. Recommendations will be distributed to the appropriate agency for corrective actions. This process is the responsibility of the Emergency Management Agency and will be reported to the Emergency Management Executive Committee until all corrective actions have been implemented.

Authorities and References

A. Authorities

- Federal
  - Sec. 201.6, page 8851, Federal Register/Vol. 67, No.38/Tuesday, February 26, 2002/Rules and Regulations.
- State
  - Ohio Revised Code Section 5502.21 to 5502.51.
- Local
  - Summit County Emergency Management Agreement

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- "Monthly Averages." Weather Channel web. 26 Aug. 2017. <http://www.weather.com/weather/wxclimatology/monthly/graph/USOH0008
- Cuyahoga Valley National Park 2014 Fire Management Plan
- Summit County Annual Information Statement

Tab 1 Planning Group, these individuals either attended one of the planning workshops or helped facilitate the collection of projects for the Mitigation Action Plan.

Agency	Name	Title
Akron University	Mark Beers	Emergency Management Coordinator
Bath Township	Vito Sinopoli	Police Chief
Bath Township	Walter Hower	Fire Chief

Boston Heights	Terry Bowlin	OHM
Boston Township	Charlie Riedel	Fire Chief
C.E.R.T.	Nick Gichenko	C.E.R.T. Team Member
C.E.R.T.	Jim Landry	C.E.R.T. Team Member
C.E.R.T./C.A.R.E.	Lori Kossick	C.E.R.T. Team Member
City of Akron	Vince Yurick	Water Safety/Training Coordinator
City of Akron	Mark Brown	Acting Water Operations Foreman
City of Akron	Melinda Sampsel	Grants Manager
City of Akron	Genny Hanna	Engineering
City of Akron	Michele DiFiu	Engineering
City of Akron	Brad Beckert	Flood Plain Manager
City of Akron	Doug Taylor	Housing Rehabilitation Administrator
City of Akron	Duane Groeger	Housing Administrator
City of Barberton	Melissa McFadden	Administrative Coordinator
City of Barberton	Caroline Crawford	Storm water Manager
City of Barberton	Michael Vinay	Service Director
City of Cuyahoga Falls	Paul Moledor	Fire Chief
City of Cuyahoga Falls	David Young	Water Department
City of Green	Virgil Schlabach	Assistant Fire Chief
City of Green	Valerie Carr	Public Service Director
City of Green	Jeff Funai	Fire Chief
City of Green	Wayne Wiethe	Director of Planning
City of Hudson	Brad Kosco	City Engineer/Flood Plain Administrator
City of Norton	Bill Braman	Zoning Inspector
City of Norton	Dave White	City Engineer/Flood Plain Administrator
City of Stow	Michael Jones	Deputy City Engineer
City of Twinsburg	Amy Mohr	City Engineer/Flood Plain Administrator
City of Twinsburg	Steve Bosso	Assistant Fire Chief
City of Twinsburg	Tim Morgan	Fire Chief
Copley Township	Janice Marshall	Administrator
Copley Township	Bruce Koellner	Copley Township Trustee
Copley Township	Matt Springer	Storm water Manager
Coventry Township	Adam Rockich	Deputy Fire Chief
Coventry Township	Richard Kutuchief	Trustee
Coventry Township	Anna Bryant	Administrator
Fairlawn	Bill Arnold	Assistant Building Commissioner
Fairlawn	Ernie Staten	Deputy Director of Public Service
Geauga County EMA	Austin Rice	Planner
Macedonia	Brian Ripley	Executive Captain
Macedonia	Chris Hall	Zoning Inspector
Macedonia	Stan Kosilesky	CVE

Macedonia	Joseph Gigliotti	CVE
Munroe Falls	Jim Bowery	Service Director
Munroe Falls	Jerry Hughes	Chief of Police
Munroe Falls	Lee Chafin	Fire Chief
New Franklin	Stevie Leslie	Fire Chief
New Franklin	Paul Adamson	Mayor
New Franklin	Joshua Slaga	GPD Group
New Franklin	Bryan Kepler	Service Director
Northfield Center	Sam Cioco	Administrator
Northfield Center	Paul Buescher	Trustee
Northfield Center	Richard Reville	Trustee
Northfield Center	Rick Youel	Service Director
Northfield Center	Judy Flauto	Secretary
O.D.N.R.	Michael Studeny	Assistant Park Manager 2
O.D.N.R.	Joshua Garretson	Natural Resource Administrator
O.D.N.R.	Brian Andrews	Natural Resources Captain
Ohio EMA	Daniel Clevidence	Mitigation Specialist
Ohio EMA	Luan Nguyen	Mitigation Specialist
OHM Advisors	Tom Tucker	Senior Project Manager/Engineer
Portage County EMA	Ryan Shackelford	Emergency Management Coordinator
Sagamore Hills	David Hayes	Police Chief
Soil & Water Conservation District	Brian Prunity	District Program Administrator
Springfield	Ted Weinsheimer	Road Superintendent
Summit County EMA	Noah Porter	Intern
Summit County EMA	Jena Beckett	EMA Specialist
Summit County EMA	Tina Merlitti	EMA Specialist
Summit County EMA	Tommy Smoot	EMA Senior Administrator
Summit County GIS	Carissa Signore	GIS Technical Applications Administrator 2
Summit County GIS	Suma Patri	GIS Technical Applications Administrator
Richfield Township	Joseph Davis	Police Lieutenant
Richfield Joint Recreation District	Robert Becker	Chairman RJRD
Summit County Public Health	Marlene Martin	Emergency Preparedness Coordinator/PIO Summit County Public Health
Summit County Public Health	Jennifer Smith	Emergency Preparedness Coordinator/MMRS Coordinator
Summit County Public Health	Abby Zindren	CDC

Summit County Public Health	Chris Breck	Emergency Preparedness
Summit Metro Parks	Mike Johnson`	Chief of Conservation
Summit Engineer	Heidi Swindell	Community Outreach
Summit Engineer	Joe Paradise	Deputy Director of Engineering Services
Tallmadge	Ben Stasik	Deputy Fire Chief
The House of the Lord	Herman Matherson	Citizen
Twinsburg C.E.R.T.	Marc Kascsak	C.E.R.T. Team Member
Twinsburg C.E.R.T.	Mark Annichine	C.E.R.T. Team Member
Twinsburg C.E.R.T.	Gail Green	C.E.R.T. Team Member
Twinsburg C.E.R.T.	Steve Doe	C.E.R.T. Team Member
Twinsburg Township	Todd Johnson	Service Coordinator
Twinsburg Township	Chris McCabe	Deputy Service Coordinator
Village of Clinton	Jason Popiel	Village Engineer
Village of Lakemore	Gary Orr	Lieutenant
Village of Lakemore	Brett Reinbolt	Fire Chief
Village of Mogadore	Matthew Glass	Village Engineer
Village of Northfield	Richard Wasosky	Village of Norton Engineer
Village of Peninsula	Doug Mayer	Mayor
Village of Richfield	Joseph Davis	Police Lieutenant
Village of Silver Lake	Mark Lipan	Service Director
Village of Silver Lake	Benjamin Gregory	Assistant Service Director
Village of Silver Lake	Mark Lipan	Service Director

Tab 2 Hazard Identification

Summit County's Risk Assessment represents research of past and potential disasters affecting Summit County. Each community within Summit County was contacted by phone to gather local hazard identification and risk assessment information. This information was also collected through contact with community historical societies, researching newspaper articles, books and internet sites. Hazard data availability widely varied during this process. Hazards have been identified as being the most likely disasters to affect Summit County has been evaluated based upon the worst-case scenario. The Hazard Identification for Summit is based on hazards which may affect

individual communities and/or portions of Summit County and could result in the depletion of resources to the point of activation of the Summit County Emergency Operations Plan. A community survey was sent out in February of 2018 to solicit input from citizens on hazards in Summit County and how they would prioritize those hazards. Two community workshops where held in April of 2018 to review the current hazards in the plan and consider additional hazards. Once the hazards where agreed upon, each hazard was ranked by individual community and countywide using our Vulnerability Mapping interactive maps at http://summitmaps.summitoh.net/EMAPublic/) or PDF maps at http://co.summitoh.net/index.php/hazard-reduction-a-prevention and Historic Hazard Profile (Tab 4). The purpose of the Hazard Identification is to provide a framework for developing the rest of the hazard assessment.

The Top Hazards listed in this section are staged in order of severity. The Summit County Office of Economic Development has developed the corresponding maps mentioned throughout this plan. PDF maps and copies of the ranking tools are available on the Summit County Emergency Management Agency Web Site at http://co.summitoh.net/index.php/hazard-reduction-a-prevention

The following 16 hazards where review based on the current Summit County Hazard Prevention and Reduction Plan, the State of Ohio Mitigation Plan, historical data and suggestions from various Emergency Management Agency Sub-committees. A community survey was developed and sent out for email distribution to all political subdivisions, fire chiefs, police chiefs, the Domestic Preparedness Steering Committee, and the Emergency Management Executive Board. We received 324 responses located at (Tab 5). Participants were asked to rank the likelihood and severity of each hazard and they were asked what hazards should be a high priority for mitigation.

Two community workshops where held to assess the hazards and identify vulnerabilities of top hazards. (Tab 6, 7) contains the method that was used and a chart with the results of that meeting. The group then review new hazards that were up for consideration, (Refer to Tab 9). Those hazards are listed in the plan and corresponding projects will be accepted by the Emergency Management Executive Board for review.

Civil Disturbance and Terrorism
Cyber Attack
Drought
Earth Quake
Extreme Heat
Extreme Cold
Flood and Dam Failure
Hazardous Material Incidents
Infectious Disease

Landslide and Subsidence
Tornados and Severe Storms
Transportation Incidence
Utility/Energy Interruption
Water Contamination
Wild Fire
Winter Storms

Droughts, Earth Quakes, and Wild Fires were eliminated from this plan due to the lack of historical impact.

Drought: A drought is a prolonged period of abnormally dry weather sufficiently prolonged for the lack of water to cause serious hydrologic imbalance in the affected area. Summit County is mostly urban with few crops. In urban areas, ground water is a major source for rural and urban households, supplying 45 percent of the communities' water; the remaining 55 percent of households use public-water supplies with surface water as the source.

Earthquake: Although Ohio does get earthquakes, most of these earthquakes have been felt only locally and have caused no damage or injuries. According to ODNR mapping the largest earthquake experienced in Summit County was between 3.0 and 3.9. (ODNR Division of Geological Survey)

Wild Fire: There is very little fire history information available for northeast Ohio. Most fire behavior data is for the southern part of the state. While fire could have possibly had a historical role in oak forest of CVNP, there is little data to support this assumption. Fire was probably not a natural process that occurred frequently in the eastern deciduous of northern hardwood stands. (Cuyahoga Valley National Park Fire Management Plan, 2014, pg. 14 (Cleland and Kickmann, 1981)) In 1977, CVNP began the documentation of wild fire. The majority of park fires were less than one acre in size and almost always human caused. According to the 2014 CVNP Fire Management Plan, Decomposition appears to keep fuel compactness and bulk density low, so fire intensity would be expected to be low to moderate while severity would be mild to moderate. However, the CVNP Fire Coordinator has reported that currently there is an increase in fuel due to the growing number of dead ash trees from the emerald ash boar. (May, 2018) It is unclear how the increase in dead ash trees would change the fuel characteristic of the park.

Top Hazards in Summit County

Transportation Incidents: Transportation incidents include commercial and private aviation incidents, roadway incidents, pipelines and rail traffic incidents that may or may not involve hazardous materials. This type of emergency could potentially result in

long-range effects, especially when hazardous materials are involved. Fatality and injury have a potential to be high, particularly in urban areas of State Route 8, Interstate 76 and Interstate 77, known as the Central Interchange. The use of transportation in daily commerce poses inherent risks with the ability to affect every community in Summit County. The severity of a transportation incident in Summit County would be extensive. In the last 40 years, Summit County has experienced 11 large scale incidents. Three past incidents have been identified as the costliest: 1) The crash of a private plane into an apartment complex causing 9 deaths on November 10th, 2015, 2) The crash of a passenger plane, in 1993, causing 134 injuries and 3) a truck accident and explosion in 1978, costing almost $3 million (adjusted to 2003) for the repairs to the Ohio Turnpike. Probability of future events slight to moderate. Historical transportation incident information is detailed on Tab 4, page 52 of this plan. The November 10, 2015 crash of a private aircraft carrying 9 passengers in Akron resulted in a Summit County State of Emergency Declaration. The aircraft impacted a 4-plex apartment building. The pilot, copilot and 7 passengers died; no ground injuries were reported.

Winter Storms: The Midwest is known for heavy snow, strong winds/blizzards, extreme wind chill, lake-effect snow and ice storms. Winter Storms which include snowstorms, ice storms and any other winter precipitation. The northeastern portion of Ohio near the Great Lakes experiences what is known as “lake-effect snow”. As cold air passes over the relatively warm waters of the large lakes, the weather system absorbs moisture and heat, and releases this in the form of snow. The northern part of summit county gets additional snow due to lake-effect. Severe winter storms are destructive to buildings and utilities and may lead to extensive mass sheltering or statewide response and recovery efforts. The accumulations of ice extremely hazardous to motorists and pedestrians (maps 109, 110, &111). The most prevalent impacts of heavy accumulations of ice are slippery roads and walkways that lead to vehicle and pedestrian accidents; collapsed roofs from fallen trees and limbs from heavy ice and snow loads; and felled trees, telephone poles and lines, electrical wires, and communication towers (maps 118 &119). As a result of severe ice storms, telecommunications and power can be disrupted for days. This type of emergency poses the most difficult response effort due to road conditions which impede or prohibit vehicle movement. Summit County`s average yearly snowfall is between 36 - 48 inches in the southern portion and 48 - 72 inches in the northern portion. In the last 68 years, Summit County has experienced 20 major storms, some lasting several days and a disaster declaration for the Blizzard in 1978 (Disaster number 3055). Other significant winter storms to mention would be on January 14, 1999, the County received 16 inches of snow in one day, causing buildings to collapse at the Summit County Fair Grounds and damaging 26 vehicles. We have seen extreme temperatures as low as –25 degrees, which occurred on January 19, 1994 causing schools to close and rupturing water pipes. There is little local cost assessment data regarding winter storms, but in 1993, the cost of snow removal alone was over $6 million If power outages and economic losses due to reduced travel were factored in, the costs would likely be much greater. The County also qualified for natural disaster assistance due to damages and losses caused by frost and freeze which occurred from March 1 - May 31, 2012. The Emergency Operations Center was activated on January 6, 2014 for snow and dangerous cold. Multiple warming centers where open

throughout the county. The probability of future events is 29% with the federal disaster probability of 1%. Historical winter storm information is detailed on Tab 4, page 42 of this plan. Extreme Cold has been split off (history Tab 4, page 50 and Tab 3) because we can experience extreme cold without a winter storm.

Infectious Diseases: Infectious diseases are caused by various types of microscopic germs such as viruses, bacteria, parasites, and fungi. These germs cause illnesses that range from the common cold or flu, to disabling conditions, such as Lyme disease and Polio, to deadly diseases like Hantavirus Infection and AIDS. Infectious diseases can be a major public health concern because of the severity of disease or potential for epidemic spread throughout the County, which may indicate a newly recognized infectious agent, an outbreak, epidemic, related public health hazard or act of bio-terrorism (maps 78 & 79). An outbreak would strain our health care system and cause closures of schools, churches, community centers and tourist sites causing millions of dollars (maps 80-84). Continuity of Operations plans would be implemented to insure essential services continue to run. Summit County recently created a combined health district. Summit County Public Health serves all of Summit County. In 2009, President Barack Obama proclaimed a national emergency for H1N1 influenza pandemic in the United States due to the rapid increase in illness across the Nation. Additional resources where needed to quickly receive, distribute, account for and administer the H1N1 influenza vaccine to as many Ohioans as possible. October 2014 a health care worker from Texas who had cared for a patient with Ebola Virus traveled to Summit County for a weekend visit. On return to Texas, she was diagnosed with Ebola Virus disease setting off a whirlwind of activity regarding contact classification, contact monitoring, environmental controls, hospital
preparedness, heightened media and public awareness. The severity of infectious disease in Summit County would be minor due to lack of historical information however the potential for a future public health incident does exist.

Severe Storms: Severe summer storms traditionally precede an approaching cold air mass. In the northern hemisphere, the spin of the earth naturally produces weather patterns affecting North America, which travel from west to east across the continent. Key components to the formation of storms are a low-pressure zone, high pressure zone and the jet stream.

Thunderstorms develop when large differences exist between adjacent zones combined with significant water vapor. As warm air begins to lift, it eventually starts to cool and condensation takes place. When the moisture condenses, heat is released which further aids in the lifting process. If enough instability is present in the atmosphere, this process will continue long enough for cumulonimbus clouds to form, which supports lightning and thunder. As water droplets rise into the colder air, they can freeze. When the velocity of wind becomes great enough, the ice pellets are repeatedly lifted and dropped in the storm adding layers of ice with each cycle. Once the wind cannot support the weight of the ice pellet it falls the ground in the form of hail.

One key component to a thunderstorm is lightning, an atmospheric discharge of electricity. A typical strike is made of 3 to 4 strokes. The sudden increase in pressure

and temperature from lightning produces rapid expansion of the air surrounding and within a bolt of lightning. In turn, this expansion of air produces a sonic shock wave which produces the sound of thunder. Lightning, other storm components, often seeks a path though the tallest object available. Trees, utility line/poles, tall buildings and even humans can be sought as a pathway for the discharging electricity. Tornados are violently rotating columns of air in contact with the ground and descends from the base of a severe thunderstorm. They are of varying sizes and can obtain wind speeds up to 200 mph. Severe storms have the potential to occur anywhere within Summit County at any time of the year with the most likely occurrence in spring or early summer.

Severe storms may also cause straight-line winds, called downbursts, that can be just as damaging as tornadoes. A downburst is an area of strong, downward moving air associated with a downdraft from a thunderstorm. As the downdraft impacts the ground, the air is forced outwards in all directions while it also curls backwards. This results in incredible wind damage close to the surface of the ground, as well as horizontal rotation midway up between the ground and the base of the thundercloud.

Often, downbursts can produce straight-line wind damage over an area as small as 1 mile to as large as 250 miles from the center of the downdraft. A downburst that spans a distance less than 2.5 miles in diameter is considered a *microburst*. Microbursts last for about five minutes and can cause wind speeds in excess of 160 mph. Because of their extremely fast winds, incredible wind shear and relatively small size, microbursts prove hazardous to aircraft and have been the cause of tragic airplane crashes, including the 1985 Delta Airlines Flight 191 crash in Dallas-Fort Worth.

Conversely, downbursts that span greater than 2.5 miles in radius are called macrobursts. Macrobursts can last nearly half an hour and produce wind speeds in excess of 130 mph. According to NOAA, macrobursts can produce wind damage comparable to an EF-3 tornado.

In populated areas like Summit County, Census mapping shows the area of dense population, where a severe storm would be most destructive and the current average home value is $141,700. (maps 78,79,130,131,132,133,134,135, &136). FEMA's website shows six disaster declarations from severe storms and ranks severe storms as the number one disaster for Summit County. There is a 215% chance that a severe storm will impact Summit County in any given year with a 23% chance of a disaster declaration (Tab 4, page 74). The six storms also include tornado and flooding damages. Dollars for damages are for all counties in the State of Ohio impacted by the disaster. (https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties)

Disaster Number	Date Declared	Total Assistance
DR-951	8/4/1992	
DR-1444	11/18/2002	$579,893.02
DR-1519	8/1/2003	$29,841,961.98
DR-1556	9/19/2004	$49,466483.35
DR-1805	9/14/2008	$38,841,941.56
EM-3346	6/30/2012	

Tornadoes are among one of the most unpredictable of weather phenomena. They are the most hazardous when they occur in populated areas like Summit County. Census mapping shows the area of dense population where a tornado would be most destructive and the current average home value is $141,700 (2018). (maps 78,79,130,131,132,133,134,135, &136). Tornadoes can turn objects into destructive missiles, toppling trees and lifting cars. The Enhanced Fujita Scale or EF Scale, which became operational on February 1, 2007, is used to assign a tornado a 'rating' based on estimated wind speeds and related damage. When tornado-related damage is surveyed, it is compared to a list of Damage Indicators (DIs) and Degrees of Damage (DoD) which help estimate better the range of wind speeds the tornado likely produced. From that, a rating (from EF0 to EF5) is assigned. (see chart below)

The State of Ohio ranks 21st in the nation in tornado occurrences, experiencing an average of 15 tornados a year. Summit County has experienced 10 tornados. (See Tab 4 for History) Total damages and loss of life could be severe and could overwhelm the ability of local responders to address the emergency. According to the Ohio Mitigation Plan EF-2 Vulnerability and Estimate of Potential Residential Losses would be high due to the large numbers of structures built before the impetration of building codes and the density of residential structures in Summit County (see land usage on page 11). The impact can be unpredictable, sudden, and severe. The potential for loss of life and property damage is high. The ability to overwhelm most response capabilities is ever present. Storms that involve lightning and hail add a greater degree of potential damage. Summit County's most costly storm was in 2014 costing over $11 million. Historical tornado information is detailed on Tab 4, page 70, of this plan. Based on historical data Summit County has a 24% chance of a tornado in any given year with a 5% chance that the tornado would be declared a disaster. Public assistance received as a result of tornados are listed below: Dollars for damages are for all counties in the State of Ohio impacted by the disaster.

(https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties)

Disaster Number	Date Declared	Total Assistance
DR-266	7/15/1969	
DR-421	4/4/1974	
DR-1484	8/1/2003	$85,657,172.30

Scale	Wind speed estimate[5]		Potential damage	Example of damage
	mph	km/h		
EF0	65–85	105–137	Minor or no damage. Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over. Confirmed tornadoes with no reported damage (i.e., those that remain in open fields) are always rated EF0.	
EF1	86–110	138–177	Moderate damage. Roofs severely stripped; mobile homes overturned and badly damaged; loss of exterior doors; windows and other glass broken.	
EF2	111–135	178–217	Considerable damage. Roofs torn off from well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted;	
EF3	136–165	218–266	Severe damage. Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations are blown off some distance.	
EF4	166–200	267–322	Devastating damage. Well-constructed and whole frame houses completely leveled; cars and other large objects thrown and small missiles generated.	
EF5	>200	>322	Incredible damage. Strong-framed, well-built houses tossed off foundations and swept away; steel-reinforced concrete structures are badly damaged; tall buildings collapse or have severe structural deformations; cars, trucks, and train cars are thrown 1 mile (1.6 km). Trees completely debarked.	

Flood: Flood threatens many political subdivisions in Summit County. The severity of flooding has been minor; however, flood events may also cause secondary problems, such as landslides and subsidence. Floods occur when streams or lakes overflow their banks and spill onto the adjoining land area, which is called a floodplain. Flooding can be caused by heavy and/or prolonged rain that saturates the soil and runs off filling stormwater systems. The ground can be too hard from extended periods for dry weather or it can be frozen causing water runoff. You can also have snowmelt or inadequate drainage systems that may cause flooding. Approximately 60 percent of Summit County lies in the Cuyahoga River basin, which drains into Lake Erie. The southern 40% of the county is in the Muskingum Watershed and ultimately draining to the Ohio River Basin. The average annual precipitation is 40 inches.

- Types of floods:
  - Riverine flooding: results from the overflow of rivers and streams from rain or melt water.
  - Flash flooding: results from fast rising streams after heavy rain or snowmelt.
  - Urban flooding: results from the overflow of storm sewers and streets after heavy rainfall.

Whereas typical flooding from a significant weather event would have a much more widespread effect on the County as a whole, resulting in multiple areas being simultaneously impacted. Attached maps identify the flood plain (map 91 & 92), corresponding building values, dams, Summit County's Riparian Corridor (map 90), impervious surfaces (map 95) and bodies of water (map 96). The property damage for two floods, in 1994, resulted in over $11 million in damages. From

2002-2017 Summit County experienced 22 flooding events. There are only 3 communities out of the 31 in Summit County that do not have identified flood plains; those are Northfield Village, Richfield Township and the Village of Richfield. Individual Community maps are contained in this document. The most recent flooding affecting the County was May 12, 2014. Based on historical data (tab 4, page 109) there is a 78% chance of some flooding in Summit County in any given year with a 5% chance that the flood will be declared a federal disaster. Summit County has had three disaster declarations related to flooding: Dollars for damages are for all counties in the State of Ohio impacted by the disaster. (https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties)

Disaster Number	Date Declared	Total Assistance
DR-266	7/15/1969	
DR-1484	8/1/2003	$85,657,172.30
DR-1519	6/3/2004	$29,841,961.98

The list below shows the residential and commercial structure in the flood plain:

Name	**Type**	**Residential**	**Commercial**
Akron	City	$4,700,457	$12,227,511
Barberton	City	$4,384,831.00	$1,585,650.00
Cuyahoga Falls	City	$137,350.00	$0.00
Fairlawn	City	$0.00	$0.00
Green	City	$0.00	$0.00
Hudson	City	$0.00	$0.00
Macedonia	City	$0.00	$0.00
Munroe Falls	City	$576,600.00	$0.00
Norton	City	$159,000.00	$2,656,600.00
Stow	City	$0.00	$0.00
Tallmadge	City	$77,962.00	$0.00
Twinsburg	City	$334,000.00	$237,500.00
Boston Heights	Village	$0.00	$0.00
Clinton	Village	$8,000.00	$60,000.00
New Franklin	Village	$438,460.00	$0.00
Lakemore	Village	$58,000.00	$0.00
Mogadore	Village	$0.00	$0.00
Northfield	Village	$0.00	$0.00
Peninsula	Village	$0.00	$0.00
Reminderville	Village	$0.00	$0.00
Richfield	Village	$0.00	$0.00
Silver lake	Village	$40,100.00	

Bath	Township	$80,000.00	$0.00
Boston	Township	$0.00	$0.00
Copley	Township	$2,856,023.00	$125,000.00
Coventry	Township	$1,941,020.00	
Northfield Center	Township	$0.00	$0.00
Richfield	Township	$0.00	$0.00
Sagamore Hills	Township	$0.00	$0.00
Springfield	Township	$331,400.00	$0.00
Twinsburg	Township	$0.00	$0.00

Dam Failures

A dam is defined as an artificial barrier that is usually constructed across a stream channel to impound water. Dam failure is a gradual or immediate collapse of water impounding system, which results in downstream damages. Dam failures can be the result of rainfall and flooding, inadequate spillways, resulting in over topping, erosion, debris, improper design or operation and earthquake.

Emergency managers look at dam failure in two categories, Sunny-Day Failures or Rainy-Day failure. Sunny Day Failures would be during non-flooding events and Rainy-Day Failure would be exacerbated by rainfall and flooding. During a Sunny-Day there may be less water but little to now warning time. Water volume can very up to 200% making emergency planning difficult.

There are several Class I dams in Summit County. The failure of a Class I dam would result in the probable loss of life and/or serious hazard to health, property, high-value industrial or commercial properties and public utilities. Dams having a storage volume greater than 5,000 acre-feet or a height of more than 60 feet are classified as a Class I dam. Probability of weather related flooding is moderate.

The extent of dam failure could be significant for certain communities with dams but is not expected to contribute to county wide flooding. Summit County dams are included in the hazard mapping, map 93. Summit County has a total of 50 regulated dams that are ranked and monitored by the Ohio Department of Natural Resources. There are 18 Class I Dams. Class I Dams have a total storage volume greater than five thousand acre-feet or a height greater than sixty feet. Failure of a Class I Dam would result in the loss of human life and structural collapse of at least on residence or one commercial or industrial business.

11 out of the 18 Class I Dams have Approved Emergency Action Plans including inundation maps. Many of the Class I Dams would have a more localized impact due to the close proximity of homes and businesses below the dam. Significant roadways and bridges would need to be closed due to

flood waters caused by a dam break. Class I dams on the Cuyahoga River would have significant impact on the river valley. There are a few dams that would have a direct impact on area drinking water.

Summit County has 16 Class II Dams which are defined as having a total storage volume greater than five hundred acre-feet or a height of greater than forty feet. Sudden failure would cause one of the following; flooding of residential, commercial, industrial or publicly owned structures, Disruption of public water, wastewater treatment, cause a health hazard, or release industrial or commercial waste.

There are 16 Class III Dams having a total storage volume greater than fifty acre-fee or a height of greater than twenty-five feet. Loss of life is not probable with a Class III Dam but property losses including damage or disruption to local roads are likely.

Due to lack of historical data, it is difficult to predict a dam or levee failure. The information we do have is located in Tab 4, page 126. However, the probability of future occurrence is reduced due to proactive preventative action on the part of the Ohio Department of Natural Resources (ODNR) and the planning and maintenance program required of the individual dam and levee owners. ODNR conducts periodic safety inspections and provides oversite for dam and levee repairs. East Reservoir is currently undergoing major repairs and the Nimisilla Dam has required response efforts to pump water away six times in the last 18 years.

The State of Ohio has identified the following dams in Summit County as High Hazard potential resulting in the loss of at least 50 human lives; West Reservoir Dam, Wolf Creek Dam, Tuscarawas River Diversion Dam, North Reservoir Dam, East Reservoir Dam, and Lake Dorothy Dam.

Hazardous Materials Incidents: A hazardous material incident is a spill of toxic or noxious material at a fixed site or in a transportation incident. A hazardous materials incident could occur anywhere within the County, including roadways, and storage and disposal sites. The severity of hazardous materials incidents could be extensive. There is no one predominate chemical produced in Summit County. In addition to the facilities holding reportable chemicals, Summit County's Local Emergency Planning Committee maintains files on over 192 (June 2017) facilities known as extremely hazardous substances facilities. Since the 1980's we have documented over 80 significant releases where Summit Counties Hazardous Materials Team has been called. Location of spill and estimated cost of damage is listed in Tab 4, page 56. There have been no disaster declarations.

Civil Disturbances and Terrorism: The Federal Bureau of Investigation defines terrorism as "the unlawful use of force or violence against persons or property to intimidate or coerce a government, civilian population, or any segment thereof in furtherance of political or social objectives". Civil disturbances result in the disruption of civil order and peace and require police actions to control or suppress. Terrorist incidents are one of the concerns in Summit County. They are unpredictable but would most likely affect high visibility targets. Terrorist incidents are a form of violence aimed at a public audience. Civil

disturbances could occur anywhere within the County but would probably be limited to the more populated areas. Nationally, the greatest numbers of disturbances emerge due to strikes, but could also include labor disputes, riots, sabotage, and vandalism. Summit County has an active Domestic Preparedness Steering Committee that revises critical infrastructure and risk facilities regularly. Infrastructure records have been submitted to the State of Ohio Office of Homeland Security and are not subject to disclosure in accordance to R.C 149.433. Sixteen incidents of civil disturbance or terrorism were documented over the last 35 years in Summit County, and the costs associated with these disturbances have been significant. "May Day" is an annual celebration that marks the end of the school semester for the University of Akron. On average, from 2000 through 2002, the event causes roughly $70,000 in personnel cost. The terrorist act of a disgruntled employee, in 1977, which caused an explosion in the Akron sewer system received a federal disaster declaration and cost over $31 million (adjusted to 2003). Terrence McNeil, an Akron City Hospital employee, was charged with 15 federal counts for soliciting the killings of military members in the name of the Islamic State (ISIS) in 2016. On May 9, 2012, five men in the Brecksville/Sagamore Hills area attempted to blow up Station Road Bridge but were ousted by an undercover FBI agent who sold them inert explosives. Historical civil disturbance and terrorism information is detailed on Tab 4, page 128, of this plan.

<u>Subsidence and Landslides:</u>

- Terms Defined

  - Subsidence is defined as a drop in the earth's surface due to a collapse in bedrock and other underlying material (sand, gravel) into underground mines. There are a number of causes for this effect. In Ohio the two primary causes are abandoned underground mines (AUMs) and karst.
    Underground mining of coal began in the early 1800's and continues to current day. In the 1900's underground salt, limestone and gypsum mining began. Most mining is accomplished by direct human action utilizing heavy machinery to remove the material; however, with salt there are cases where pressurized water is used to wash-out the deposit (solution mining). All of these mines create voids under the Earth's surface. Several key factors determining the potential for these voids to collapse include depth, mining technique used, types of rock and or soils and development on the ground surface.
    Abandoned underground coal mines in Ohio have the added environmental impact of discharging acidic water. It is common for coal mines to become charged with water. The collected water interacts with the remaining coal deposit and other materials becoming acidic. If acidic mine water is discharged into creeks or streams it can alter the chemical composition of the water habitat.

Cases exist where changes in water acidity have caused sensitive aquatic life considerable harm.

Karst topography in Ohio is a landscape shaped by the dissolution of a soluble limestone or dolomite layers of bedrock. As surface water percolates down to the water table, it slowly dissolves away the limestone or dolomite creating voids under the Earth's surface. In cases where a visible depression is present, surface water may flow directly to the water table. Depending on the depth of the void, there may be no observable ground surface deformation. Deep voids may exist at or below the water table and, as a result, the rock is replaced by water. Long-term changes in the water table could destabilize deep voids resulting in surface deformation as observed in southern Missouri and northern Arkansas. Shallow voids are often underground caves or caverns, which lack any replacement support. With time, the roof of these voids may collapse and result in ground failure.

Once a hole or fissure appears in a karst area, surface water can travel directly to the aquifer bypassing the natural filtration and cleaning processes. The result has been contamination of aquifers from farm chemicals, animal waste, along with oil and gasoline from roadway runoff. Cases exist where aquifer contamination resulted in making the water unfit for human consumption. Also, karst topography can result in unusual flooding when water tables are high. Such flooding issues are difficult to address. The last form of land subsidence in Ohio is associated with soils, which dramatically expand when wet and contract when dry. Structures built on these soils can experience significant shifting as the ground saturates and dries.

- Landslides or Mudslides are defined as a downward, outward movement of slopes due to rains, or snow melting with accompanying damage and debris deposition. These may also include sudden collapses of tunnel walls, supports, or mines with resulting damages to surface structures or features, such as highways or buildings.

- Types

  - Rotational Slump: occurs when weak rock or sediment move as a mass in slow or imperceptible movement
  - Earthflow: involves rock/sediment, or weathered surface materials flowing downslope in a mass
  - Rockfall: characterized as the most rapid (and dangerous) form of movement. Rock from a cliff or cut will fall onto roadbeds, highways, or structures. This action is common during late winter and early spring during periods of freezing and thawing. A majority of these events may be caused by traffic vibrations,

undercut slopes, increased weight on slopes, the removal of vegetation, and ensuing erosion.

- Conditions
  - Steep Slope, cliffs or bluffs lead to landslide, especially in conjunction with one or more of the following:
  - Jointed rocks; fracture in rocks allow surface moisture to penetrate and weaken the rock.
  - Fine-grained, permeable rock or sediment: these are allow large amounts of moisture to enter, increasing the material's weight, reducing the boning strength of individual grains, and dissolving grain-cementing materials.
  - Clay or shale unites subject to lubrication: Groundwater penetration of clay or shale can lead to a loss of binding strength between individual mineral grains and subsequent failure. Excess groundwater lubricates the contact between susceptible units and underlying materials and thus, promotes failure.
  - Large amounts of water: Periods of heavy rainfall, excess snowmelt, or other events where water is accumulated saturate the zone above the normal water table and cause a landslide.

- History

  - Summit County is identified as having a high landslide incidence. Cases of landslides have been documented within Summit County. The large majority of these situations have occurred in the northern portion of the County in the Richfield, Bath, northern Cuyahoga Falls and Akron areas where homes were constructed on the slip prone (Rv) soils in the Cuyahoga Valley. The Towpath Village Area, Timbertop Apartments, Meredith Lane in Cuyahoga Falls, and Glen Cairn in Richfield, are developments located in areas prone to slope movement and erosion. Other areas prone to erosion and slope failure occur where larger tributaries such as Tinkers Creek, Yellow Creek or Furnace Run, erode the toe of the slope. The Summit County Engineer`s Office currently has closed Oak Hill Road in Boston Township, because it is a habitual landslide zone. Other areas prone to landslides include Stow, Twinsburg, Munroe Falls, Sagamore Hills and Northfield Center. The Engineer`s office has stated that the benefit of reopening the road is outweighed by the cost associated with keeping it safe. We do not currently have specific units of measure for past landslides but have been told that these can range anywhere from a few to hundreds of feet in some cases.
    Mine subsidence, while not frequent in Summit County, would have the highest probability of occurring in the southern portion of the County where the largest number of mines are located. The

majority of documented subsidence within the County has been due to unconsolidated fill (buried debris and tree stumps), old well or cisterns, and old subsurface drain tile. We do not currently have specific units of measure for past occurrences of subsidence but have been told that this hazard can range from a few inches to several feet. This information was provided by The Summit County Soil and Water Conservation District.

The Ohio Mine Subsidence Insurance Underwriting Association provides eligible Ohio counties with mine subsidence insurance Summit County residents are eligible to obtain insurance at the owner's discretion at a cost of five dollars annually. In the past 5 years, 2013 through 2017, Summit County has had 6 claims with paid losses and adjustment expenses in the amount of $21,936.30 according to the Ohio Mine Subsidence Insurance Underwriting Associations Annual Reports.

- Vulnerability/Maximum Threat

  - The Summit County Engineer`s Office perceives the threat of landslides as moderately high. The Engineer`s office treats and responds to landslides as they occur, while routinely monitoring soils prone to this type of behavior. If the County did have an occurrence of subsidence in one of the above-mentioned areas, approximately one half of the population of that area could be affected. The Ohio Department of Natural Resources (ODNR) and the soil specialists' which they employ, state that grounds with a 15% slope or greater are susceptible to landslides. Maps 102 and 103 show the census blocks where soil is prone to slide and buildings where soil is prone to slide. Below is a list of areas currently being monitored by the Summit County Engineer's Office.

- Probability

  - The Summit County Engineer`s Office perceives the threat of landslides as moderately high. Landslide probabilities are enhanced as a result of severe weather, hilly areas and along riverbanks throughout the County. Urban expansion and new highway construction without careful planning increases the chance of subsidence and landslides. As development occurs in the townships that are listed above, minor scattered individual incidents may occur. Also, as noted above, landslides have the highest probability of occurring within the central and northern portions of the County, while mine subsidence would most likely occur in the southern portion of the County.

Landslide Assessment			
Slide #	Township/City	County Hwy #	LOCATION DESCRIPTION
1	Bath	27	West Bath Rd ; North of the Barn , (LAT/LONG)41.16615000, -81.59119444
2	Bath	48	Near the intersection of N Revere Rd & W Bath Rd; (0.05 miles East of N Revere Rd)
3	Bath	48	0.1 mile west of Revere Rd (At Mile Marker 4)
4	Boston	32	Location Description: West of the SCE Boston Township Maintenance Facility
5	Boston	32	Between 0.3miles East of I-271 Overpass and 0.5 miles East of I-271 Overpass
6	Boston	125	Colombia Rd approx. 1.95 miles east of Dewey Rd
7	Richfield	47	Everett Rd approx. 0.7 miles east of Revere Rd
8	Boston	47	Oak Hill Rd approx. 1.4 miles east of Revere Rd
9	Sagamore Hills	111	West Highland Rd 1.2 miles east of Riverview Rd; adjacent to Brandywine Ski Resort
10	Bath	46	Ira Rd, approximately .4 miles east of Kemery Rd
11	Boston	N.A.	Oak Hill Rd. Approx. 1.7 miles South of Major Rd
12	Boston	41	Quick Rd approx. 6 miles east of Akron Peninsula Rd
13	Bath	114	Revere Rd (Dog Patch Hill) approx. 0.05 mile north of West Bath Rd
14	Bath	114	Revere Rd approx. 0.05 miles north of Yellow Creek Rd
15	Bath	114/33	Revere Rd/Yellow Creek Intersection
16	Boston	9	Riverview Rd under the I-271 Bridge
17	Sagamore Hills	25	Valley View Rd; approx. 0.25 miles south of Sagamore Rd
18	Richfield	174	Halfway Between Revere Rd. and Oak Hill Rd.
19	Richfield	174	Wheatley Rd. approx. 0.5 miles west of Revere Rd
20	Bath	33	Yellow Creek Rd approx. east of Revere Rd
21	Bath	33	Yellow Creek Rd 0.05 miles west of Revere Rd
22	Bath	195	Martin Rd approximately 0.3 miles Southwest of Ira Rd
23	Bath	114	Revere Rd (west side) approx.. 4 miles North of Yellow Creek Rd
24	Bath	114	N Revere Rd approx. 0.4 miles north of Yellow Creek Rd
25	Bath	N.A.	Berrywood Dr at the bridge just north of Sourek Rd
26	Boston	253	Northampton Rd ; east of Akron Peninsula Rd
27	Bath	198	Sourek Rd North Side approx. 150 East of Berrywood Dr
28	Bath	114	North Revere Rd approx. 0.35 miles south of Yellow Creek Rd
29	Bath	N.A.	Berrywood Drive at the bridge just North Sourek Rd
30	Boston	32	Boston Mills Rd (south side) approx. 0.2 miles easterly of the I-80 overpass
31	Boston	125	Columbia Rd near mailboxes
32	Sagamore Hills	111	Highland Rd (Red Lock Hill #2), approx. 1.3 miles east of Riverview Rd
33	Boston	32	Boston Mills Rd 50ft East of the I-80 East overpass
34	Boston	N.A.	Hines Hill Rd approx. 0.6 miles North of the split with Boston Mills Rd
35	Bath	195	Martin Rd at the first stream crossing East of Shade Rd
36	Richfield	47	Everett Rd approx. 0.9 miles East of the Revere Rd (at Riding Run Metro Park Entrance)
37	Bath	33	Yellow Creek Rd approx. 500 ft west of Sand Run Rd
38	Bath	114	Revere Rd approx. 0.25 miles North of Ira Rd
39	Richfield	47	Everett Rd approx. 0.9 miles East of the Revere Rd (at Riding Run Metro Park Entrance)
40	Richfield	47	Everett Rd approx. 0.9 miles East of the Revere Rd (at Riding Run Metro Park Entrance)

41	Boston	32	Boston Mills Rd after the first turn east of the I-271 overpass
42	Sagamore Hills	111	Highland Rd approx. 0.9 miles east of Riverview Rd
43	Boston	253	North Hampton Rd approx. 0.15 miles South of Akron-Peninsula Rd
44	Boston	32	Boston Mills Rd approximately 0.2 miles easterly of the I-80 over pass
45	Bath	114	N Revere Rd approx. 0.4 miles north of Yellow Creek Rd
46	Richfield	174	Wheatly Rd. 0.5 miles west of Revere Rd

October 2, 2018

Summit County Engineer Landslide Mitigation Projects Active and Pending

1. West Bath Road between N. Revere Road and Bath Road
   Estimated Construction Cost $965,000
   Engineering Consultant Fees $143,000
   Temporary Slope Easements $ 36,000
   Active

2. West Bath Road between Bonnie Brook Drive and N Revere Road
   Estimated Construction Cost $784,000
   Engineering Consultant Fees $112,000
   Temporary Slope Easements$ 28,000
   Pending

3. Boston Mills Road between 1-271 and Boston Heights Corporation Line
   Estimated Construction Cost $5,300,000
   Engineering Consultant Fees $ 758,000
   Temporary Slope Easements$ 190,000
   Active

4. Boston Mills Road between Black Road and Riverview Road
   Estimated Construction Cost $3,500,000
   Engineering Consultant Fees $ 500,000
   Temporary Slope Easements$ 126,000
   Pending

5. Brandywine Road between Highland Road and Boston Heights Corporation Line
   Estimated Construction Cost $ 480,000
   Engineering Consultant Fees $ 69,000
   Temporary Slope Easements$ 17,000
   Pending

6. Columbia Road between Black Road and Riverview Road
   Estimated Construction Cost $3,200,000
   Engineering Consultant Fees $ 458,000
   Temporary Slope Easements $ 115,000
   Pending

7. W. Highland Road between Canal Road and W. Boyden Road
   Estimated Construction Cost$ 720,000
   Engineering Consultant Fees $ 103,000
   Temporary Slope Easements$ 26,000
   Pending

8. Hines Hill Road between Boston Mills Road and 1-271
Estimated Construction Cost $ 970,000
Engineering Consultant Fees $ 139,000
Temporary Slope Easements$ 35,000
Pending

9. Hines Hill Road between 1-271 and Boston Heights Corporation Line
Estimated Construction Cost $ 276,000
Engineering Consultant Fees$ 39,000
Temporary Slope Easements $ 10,000
Pending

10. W. Martin Road between Kemery Road and Oak Hill Road
Estimated Construction Cost $1,380,000
Engineering Consultant Fees$ 197,000
Temporary Slope Easements $ 50,000
Pending

11. Northampton Road between Akron Peninsula Road and Cuyahoga Falls Corp. Line
Estimated Construction Cost$ 640,000
Engineering Consultant Fees $ 92,000
Temporary Slope Easements$ 23,000
Pending

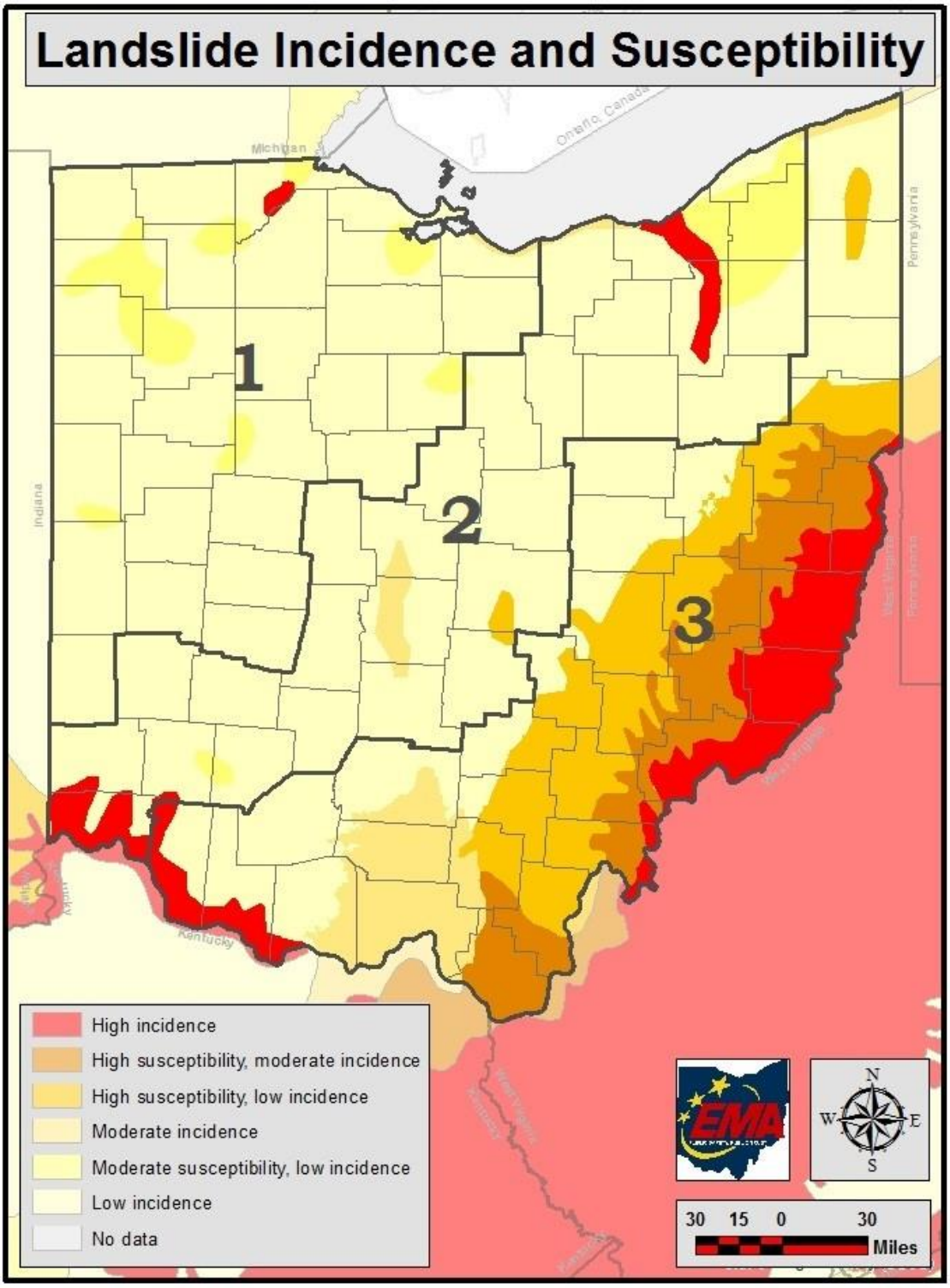
12. Quick Road between Akron Peninsula Road and Cuyahoga Falls Corp. Line
Estimated Construction Cost $1,920,000
Engineering Consultant Fees $ 275,000
Temporary Slope Easements$ 69,000
Pending

13. N. Revere Road between W. Bath Road and Shade Road
Estimated Construction Cost $1,100,000
Engineering Consultant Fees $ 157,000
Temporary Slope Easements$ 40,000
Pending

14. N. Revere Road between Ira Road and Woodsmill Road
Estimated Construction Cost $ 480,000
Engineering Consultant Fees$ 69,000
Temporary Slope Easements$ 17,000
Pending

15. Riverview Road between W. Streetsboro Road and Stine Road
Estimated Construction Cost $ 552,000
Engineering Consultant Fees $ 79,000
Temporary Slope Easements$ 20,000
Pending

16. Valley View Road between Chafee Road and county line
Estimated Construction Cost $1,200,000
Engineering Consultant Fees $ 172,000
Temporary Slope Easements$ 43,000
Pending



Tab 3 New Hazards for Consideration

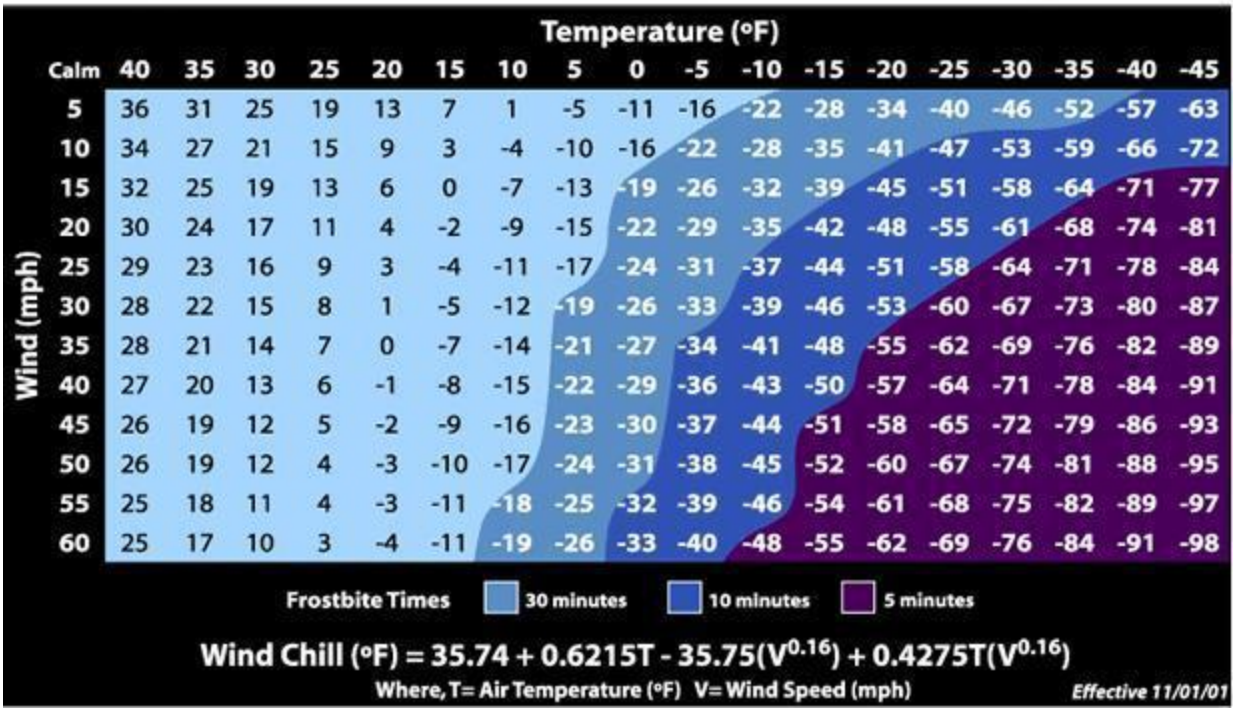
The following Hazards have been added for further consideration and study. The planning group debated over if these hazards should stand alone or if they are byproducts of other hazards. We agreed that we should support efforts to mitigate the impact of these hazards. The group believes that the

potential for catastrophic impact to life, property and the environment does exist. We will continue to monitor and gather data to support these individual hazards so they can be evaluated at a later date.

Extreme Cold

When winter temperatures drop significantly below normal, staying warm and safe can become a challenge. Extremely cold temperatures often accompany a winter storms causing power failures. Exposure to cold temperatures, whether indoors or outside, can cause other serious or life-threatening health problems. The Center for Disease Control (CDC) estimates that 739 deaths for which hypothermia is the underlying cause occur each year in the United States. Children under 6, elderly, people stranded, outside laborers, animals, people who live in a home that is poorly insulated or without heat and the homeless are particularly at risk, but anyone can be affected. Summit County is vulnerable to experiencing extremely cold conditions. While Summit County Residents and governments are accustomed to handling winter events, occasional extreme events can cause disruption and make conditions dangerous. Extreme cold is the result of highs being in the mid-teens with lows in the single digits (including wind chill advisories) for a sustained period of time. Whenever temperatures drop decidedly below normal and as wind speed increases, heat can leave the body more rapidly. The Wind Chill index is the temperature your body feels when the air temperature is combined with the wind speed. It is based on the rate of heat loss from exposed skin caused by the effects of wind and cold. As the speed of the wind increases, it can carry heat away from your body much more quickly, causing skin temperature to drop. When there are high winds, serious weather-related health problems are more likely, even when temperatures are only cool. The Wind Chill Chart on the next page shows the difference between actual air temperature and perceived temperature, and amount of time until frostbite occurs. Extreme cold conditions can lead to mass sheltering and result in casualties. On several accounts, warming centers were opened in Akron during the winter season of 2017. The decision was made by the Mayor of Akron and the Director of Neighborhood Assistance. In 2017, Summit County opened five warming centers operating from 8:30am to 10:00pm. A queried between November 2017 and March 1, 2018 identified 4 cases of hypothermia. See Tab 4 for more historical information. Mitigation should be considered especially where there is a larger concentration of homelessness. The coldest recorded temperature dates back to January 19, 1994 when the temperature was negative 25 degrees Fahrenheit. Extreme cold can also have an impact on our infrastructure. Water main breaks can occur, extensive road damage resulting from frozen water creating potholes, road chemicals can cause corrosion to bridges and sub-surface electrical components. Snow and ice storms can pose a threat to overhead utilities such as electricity, cable television, and telephone service. Prolonged periods of cold have resulted in record demands for electricity. Loss of electricity can cause heat and hot water interruptions which can render housing uninhabitable. Homes may also become too cold due to inadequate heating systems. Use of space heaters and fireplaces increases the risk of household fires and carbon monoxide poisoning. Accumulate snow and ice has the potential for widespread disruption of emergency services and transportation operations. Snow in excess of 16 inches can bring transportation to a halt. There is little data for extreme cold. The information we do have is located in Tab 4, page 50.

NWS Windchill Chart



Wind (mph) \ Temperature (°F)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph) *Effective 11/01/01*

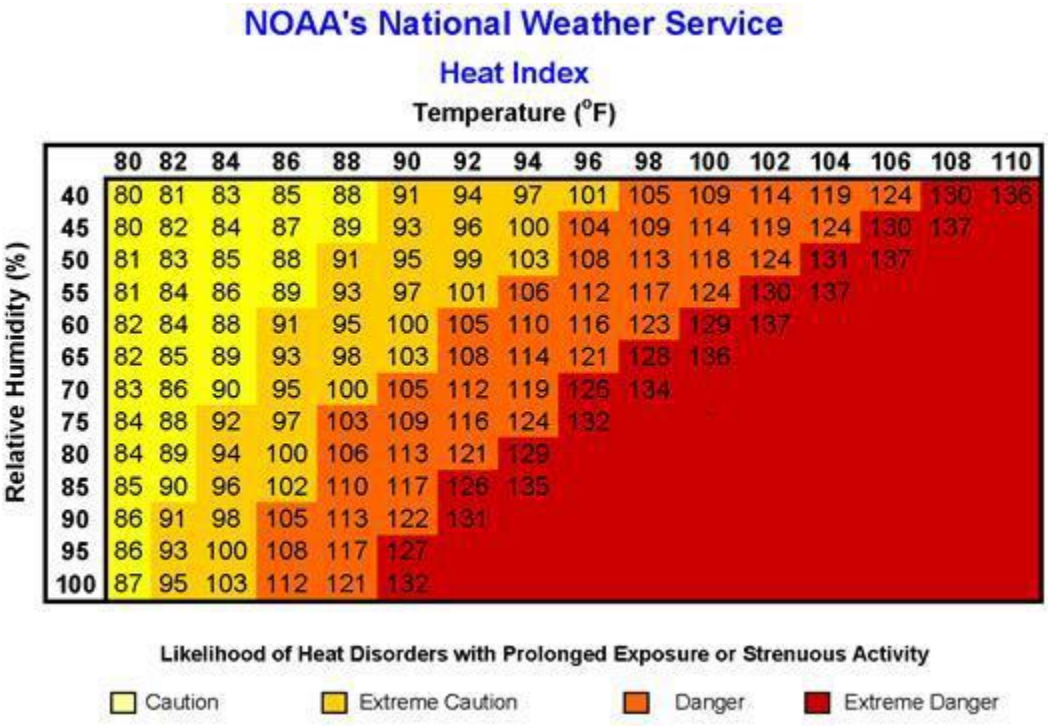
Extreme Heat

Summit County will experience periods of extremely high temperature and humidity during the summer season. Currently, NOAA's NCDC online data has no Excessive Heat events listed for Summit County, Ohio. Extreme heat can be defined as a long period (2 to 3 days) of high heat and humidity. Many different factors contribute to extreme heat such as weather temperature, humidity, cloud cover and time of year. Heat adversely affects everyone, however, certain groups are particularly at risk: the elderly, children under 6, people in poor physical health, homeless and outside laborers. Extreme heat and humidity may be one of the most underrated and least understood of the deadly weather phenomena. In contrast to the very visible, destructive, and violent nature associated with hurricanes, tornadoes, floods, and earthquakes, a heat wave is a "silent disaster." Unlike violent weather events that cause extensive physical damage and leave victims who are easily discernible, the hazards of a heat wave are dramatically less apparent, especially at the onset.

The use of an artificially cooled environment (air conditioning or evaporative cooling units), even a few hours each day, will reduce the risk for heat-related illness and death. Public health information about extreme heat should be directed toward the at risk populations. Persons without home air conditioners or those who lose air conditioning through breakdown or power failure should be assisted in taking advantage of public cooling centers. There will be an increased burden on the electrical system. During an event of such, evaporation is slowed and the body must work extra hard to maintain a normal temperature.

Extreme and chronic heat coupled with high humidity pose serious hazards to human health. Health outcomes following exposure to severe heat range from cramps and exhaustion to heat stroke and death. Individuals most at-risk for heat-related illnesses include: the elderly and very young children, individuals with respiratory and/or cardiac difficulties, individuals taking certain medications, persons living alone, or living in urban areas. The health of these most at-risk individuals is often impacted by environmental conditions and heat-relieving behaviors.

The heat index is a measure of how hot it feels when relative humidity is factored in with the actual air temperature. Relative humidity is the percentage of moisture in the air compared with the maximum amount of moisture the air can hold. Humidity is an important factor in how hot it feels because when humidity is high, water doesn't evaporate as easily, so it's harder for your body to cool off by sweating. See the Heat Index chart on the next page. Conditions that can influence extreme heat include static atmospheric conditions and poor air quality. Beginning April 1st through October 31st, Monday through Friday (not to include recognized holidays), the Air Quality Staff of Summit County Public Health (SCPH) will utilize the National Weather Service (NWS) to monitor advisories issued related to excessive heat. The NWS will initiate alert procedures when the Heat Index is expected to exceed 105º to 110ºF, depending on local climate, for at least two consecutive days.



Water Contamination

Water becomes contaminated due to several factors such as runoff, direct dumping, algae blooms, etc. Water contamination is hazardous material of any kind that is polluting a source of water. The contamination can include anything from both biological and chemical substances, and the water source may be lakes, rivers, ponds, reservoirs, etc. Water is used by humans for purposes of drinking and bathing. Toledo has recently experienced an algae bloom that prohibited residents from using the water. An algal bloom occurs mainly in freshwater and marine environments. An algal bloom can occur because of multiple reasons however runoff from fertilizer is the leading cause. Proper treatment chemicals can manipulate the bloom of algae.

Utility/Energy Interruption

Living without natural gas, phone, connectivity, waste water or water for a significant amount of time could have a significant impact on public safety, government, business and citizens' ability to function (maps 117, 118, 199, 120, 121, 122 &123). Outages are short or long-term losses of service in an area.

Outages can occur as a result of lightening, ice storms, high winds, heavy rainfall, cyber-attack, mechanical malfunction, etc. When an outage occurs, many factors are disrupted such as communication, transportation, food and water, business, and medical services. A more significant outage include the Northeast blackout of 2003; a widespread power outage throughout parts of the Northeastern and Midwestern United States and the Canadian province of Ontario on Thursday, August 14, 2003, just after 4:10 p.m. EDT. Some power was restored by 11 p.m. Across the country, most did not get their power back until two days later. In other areas, it took nearly a week or two for power to be restored. The outage was a result of lines brushing up against trees and failing. A total of 50 million people were without power which resulted in 11 fatalities and $6 billion in damages. This incident was declared an emergency (EM-3187), public assistance dollars approved was in the amount of $1,597,088.45 and total public assistance grants (PA), dollars obligated was in the amount of $1,616,903.05 for emergency work (Categories A-B) - dollars obligated.

In January 2015, a burst steam pipe at a switching office in Akron caused some service problems for AT&T customers in several Northeast Ohio communities. 9-1-1 systems in Summit, Portage, Medina and Stark counties were impacted.

Cyber Attack

The threat of a cyber-attack can be imminent in Summit County without any notice. A cyber-attack occurs when hackers damage or destroy a network or a system. Cyber-attacks are fairly new however if it is not properly monitored, classified information can be compromised. Critical systems include interlinked computer networks regulating power, water, financial services, medical care, public safety, telecommunication networks, and transportation systems. Cascading effects of electronic infrastructure disruptions will threaten health/lives, property, the economy, and local/state/national security. The increasing sophistication of attackers requires planning across all levels of government to develop strategies to mitigate before an attack happens. Back in May of 2018, the FBI arrested a male individual in Summit County for partaking in hacktivist activities. Around the country, hacktivism is occurring which reinforce the need for cybersecurity.

Tab 4 Historic Disasters

Summit County has experienced its share of disasters in the past. A number of disasters of varying origins and effects have struck the County in the past 50 years. The disasters indicated in the Historic Hazard Profile have had adverse effects in the community/communities they took place within. A hazard is defined under Chapter 5502 of the Ohio Revised Code as:

> "…any actual or imminent threat to the survival or overall health, safety, or welfare of the civilian population that is caused by any natural, man-made, or technological event."

By recognizing past trends through this historic list of events, Summit County Emergency Management intends to draw a picture of what hazards are inherent to the County. This process will allow us to better direct our Mitigation efforts in order to best protect and respond to future disasters. The following is a list of hazard events that have affected the County in the past 65 years. The data contained in this document has been categorized by event. Each incident has been chronologically listed from the oldest date of the study, June 1952, to the most recent date, May 2018. The following reference key is

referenced throughout the Historic Hazard Profile and will disclose where the information for each incident was derived from.

Reference Key

-- The book, Thunder in the Heartland
~ -- Phone surveys and interviews
* -- Emergency Management incident files
% -- NCDC Online Data Records

Winter Storm Incidents

Date	Damage from Incident	Location of Incident
January 12, 1918	**Statewide Blizzard brought average winds of 30 to 50 mph with gust up to 60 mph. 10 to 15 inches of snow fell. Drifting snow closed roads and train lines.**	**Statewide Ohio Historical Society**
November 23-27, 1950	**Beginning on Thanksgiving and continuing Sunday and by Monday morning, snow depths reached 33 inches at Steubenville, 30 inches in Geneva, and 29 inches at Youngstown. Bulldozers were used to clear roads so that ambulances could reach those in need. The Ohio National Guard used Jeeps to transport people to hospitals and to deliver food to rural homes. Wires and trees were blown down by winds as high as 60 mph. Many buildings collapsed under the weight of 2 to 3 feet of snow and much deeper drifts. [Akron] virtually shut down for four days. With no place to put excess snow, crews filled dump trucks and unloaded the white stuff into the Ohio & Erie Canal and Summit Lake.**	**Statewide Ohio Historical Society And Akron Beacon Journal**

January 12-13 1964	**Roads, airports, schools, and factories were closed after heavy snowfall. Snowfalls were recorded between 8 and 12 inches. On Jan. 12th, winds gusted at 30 miles per hour and closed many roads due to large snow drifts**	**Widespread County Wide #**
February 8-9, 1971	**Many businesses and schools were closed both days. Winds reached thirty to forty miles per hour. Temperatures of 5 to 15 degrees made going outside hazardous. Abandoned vehicles hurt snow removal. Akron-Canton Airport was shut down for hours and mail delivery was cancelled on the 9th. Summit County received between 9 and 15 inches of snowfall over the two-day period.**	**Widespread to varying degrees County Wide #**
December 1-2, 1974	**Incident occurred on the Sunday of Thanksgiving weekend. Many travelers were left stranded at airports. Temperatures were slightly above freezing. Snowfall in the Summit County region was between 22 and 24 inches over the two-day period. Deep snow closed roads, abandoned vehicles made snow removal troublesome for city workers. Akron-Canton Airport was closed for portions of both days. Colleges were closed on Dec. 2 while secondary schools were closed for two or three days. Electric Power and phone service were disrupted when heavy snow and strong winds blew down lines and trees. Buildings began to collapse under the weight of the snow.**	**Occurred County wide to varying extents #**
January 28, 1977	**Prior to Jan. 28th Summit County had seen its share of winter weather in 1977. The previous snowfalls had left 6 to 8 inches of snow on the**	**County Wide to Varying Degrees # and ~**

	ground when the blizzard conditions started on Jan. 28. Winds ranged from thirty-five to forty-five miles an hour. Wind gusts reached 60 miles an hour. This caused large drifts and obscured visibility. Temperatures plummeted statewide from 0 to -10 degrees with wind chills below -50 degrees. Coupled with natural-gas shortages, factories, commerce, and schools closed due the conditions. State roads and secondary highways were closed. Ohio National Guard was activated.	
January 26, 1978	**The Blizzard of 1978 was the worst winter storm in Ohio History. Transportation, business, industry, and schools were closed statewide for two days with many being closed for up to 5 days. Temperatures fell thirty degrees in two hours. Winds increased to more than 50 miles an hour causing blinding wind-blown snow. Wind gusts reached a maximum of 75 mph at Akron. Wind damage was immense across the County. Many trees, electric, and telephone lines were blown down causing power outages County-wide. Winds caused structural damage to buildings, blew down street signs, and broke windows. The length of the blizzard caused huge snowdrifts that stopped highway and rail transportation. Air travel was stopped for two to three days. The entire length of the Ohio Turnpike was closed. Ohio National Guard was activated. President Jimmy Carter declared a federal disaster in Ohio on Thursday and**	**County Wide to Varying Degrees # and ~**

	dispatched federal troops to the region. Death toll was fifty-one state-wide.	
February 27-29, 1984	**During the three-day period, snowfall in Summit County was between 18 and 20 inches. Caused disruption to transportation and services.**	**County Wide to Varying Degrees #**
March 31, 1987	**Snowfall was between 6 and 10 inches. Schools closed on March 31. Wet clinging snow broke tree branches and power lines causing power failures.**	**County Wide to Varying Degrees #**
April 4, 1987	**Akron-Canton Airport reported 20.6 inches of snow in one day. Temperatures were in the mid-thirties and the snow clung to power lines and trees. They broke under the pressure. Wind gust of 40 mph caused drifting. Many homes lost electricity. Some roofs buckled under the pressure.**	**County Wide to Varying Degrees #**
February 24, 1990	**A deadly whiteout struck the Summit County Area. Snowfalls were only two to four inches but strong winds kept the snow in the air. Temperatures dropped into the teens. Visibility was low and roads became icy and hazardous to drive on during this period. Chain reaction accidents were high on interstates as visibility in some areas was cut to a few yards.**	**County Wide to Varying Degrees #**
March 13, 1993 - March 17, 1993	**Blizzard conditions existed in Summit County. The combination of strong winds and 6-12 inches of snow caused transportation issues throughout the County. Snow removal costs in Summit County alone reached $5,443,766.02**	**County Wide to Varying Degrees #**
January 2, 1999	**Snow changed to freezing rain**	**County Wide to**

	and sleet, with a brief change to rain as temperatures rose above freezing. Temperatures dropped quickly into the teens causing wet snow and ice to refreeze and creating significant ice on the ground, roads, and sidewalks. Icy conditions coupled with temperatures below zero and wind chills around 30 degrees below zero closed schools. Many sidewalks and secondary streets remained unclear for days due to the combination of very cold temperatures and thick ice.	**Varying Degrees %**
January 14-17, 1999	**Heavy snow accumulated 16 inches in Summit County. Blowing and drifting snow contributed to several traffic accidents. Pipes burst because of cold temperatures. On Jan. 17, a building collapsed at the County fairgrounds. Twenty-six vehicles stored there were damaged or destroyed.**	**County Wide to Varying Degrees %**
February 28, 2011	**Heavy rain and rapid snow melt led to a rapid rise in the Cuyahoga River in Summit County which reached moderate flood stage at Old Portage. One to two inches of rainfall fell during the overnight hours of the 27th into the 28th and combined with six to ten inches of heavy snow was on the ground resulted in rapid runoff. Several people had been rescued from homes and vehicles as the water came up. One rescue worker suffered hypothermia rescuing a motorist floating away in flood waters in Northfield Center. Estimated $300,000 in property damages.**	**Twinsburg. OH***

December 26, 2012	**Periods of snow affected Summit County from the late morning to the evening hours. Some of the snow was heavy, piling up to 10 inches in some places. 25 MPH wind accompanied the snow creating blowing and drifting. Visibility was reduced to ½ mile. Property Damage exceeded $100,000 dollars. Multiple accidents reported.**	**Summit and eastern surrounding counties%**
January 25, 2014	**Heavy snow and 34 mph wind gusts created near blizzard conditions. Several cities in the county saw 8-10 inches of snow within a couple hours. Several accidents reported. Property Damage exceeded $400,000 dollars.**	**Summit County%**
February 4-5 2014	**A low-pressure system tracked Northeast bringing heavy snow to Northeast Ohio. 3-6 inches fell on Summit County. Temperatures were in the mid to upper twenties causing icy conditions for most the county. Accidents reported. Property Damage $100,000**	**Summit County, Youngstown, Findley, Toledo%**
February 17-18 2014	**Heavy evening snow fell on Summit County the evening of February 17th and intensified during the morning of the 18th. Many cities received 8+ inches of snow. Freezing rain, 35 mph wind gusts and visibilities less than a quarter mile made it difficult to combat. Over $300,000 dollars in property damage was recorded.**	**Twinsburg, Lorain and surrounding areas%**

February 2, 2015	**Snow started during the early morning hours of the 1st. The snow was initially light with accumulations of a couple tenths an hour, but after daybreak the snow intensified. By mid- morning visibilities were less than a half mile with snowfall rates of an inch or more per hour. The snow briefly changed to freezing rain for a few hours late on the 1st and early on the 2nd. The freezing rain then switched back to snow and finally ended during the early afternoon hours. Strong northeast to northwest winds accompanied the precipitation with gusts in excess of 25 mph for much of the storm. This caused considerable blowing and drifting. A peak total of 9.3 inches was reported at Twinsburg along with a slight coating of ice. Travel was severely disrupted by this storm. Schools were closed over most of the area.**	**Summit and surrounding counties%**
January 12, 2018	**A cold front moved in the early hours of January 12th. In most areas the rain mixed with snow within hours eventually transitioning into freezing rain. The freezing rain lasted for several hours resulting in an accumulation of about a tenth of an inch of ice. In some areas the snow fell until just about midnight. In other areas the snow fell until sunrise the next morning. North of Interstate 76 about 4 to 6 inches of snow fell. South of Interstate 76 about 3 to 5 inches of snow fell. Peak winds were at about 40 mph, lessening in the evening. Conditions made driving difficult and many**	**Summit and surrounding counties%**

	accidents were reported. Damages were in the $200,000 range.	

Extreme Cold/ Wind Chill

February 2, 1996	**Bitter cold arctic air was over the area with overnight low temperatures averaging between zero and 10 below and daytime high temperatures in the single digits. Wind gusts of 25 mph on the 2nd dropped wind chills as low as 40 below zero and the wind picked back up on the 5th again bringing similarly low wind chills.**	**County Wide to Varying %**
January 19, 1997	**Low temperatures were in the single digits or below zero across all of Northern Ohio, causing frozen and ruptured water pipes. With wind chills of 40 to 50 below zero, many schools were forced to close**	**County Wide to Varying %**
March 27, 2012	**Temperatures dropped below freezing for several hours resulting in the damage of plants. Exact losses are unknown until the growing season ends. At Akron-Canton airport the low was 26 degrees Fahrenheit and 27 at Akron-Fulton airport.**	**County Wide to Varying %**

April 29, 2012	**An area of strong high pressure was centered over the upper Ohio Valley on the morning of April 29th. Clear skies and calm winds allowed for very cold low temperatures. Readings in some areas dipped into the lower 20s and temperatures were below freezing at most locations for several hours. As much as 80 percent of the grape crop was destroyed. Fruit trees in northern Ohio were also hard hit. Monetary losses from this freeze were significant totaling $150,000.**	**County Wide to Varying %**
January 6-7, 2014	**Extremely cold conditions lingered over the area on the 6th and 7th. With temperatures minus 10 degrees or lower it was reported as being the coldest day since 1994. At around 9pm it was reported temperatures were negative 37 degrees Fahrenheit at Akron-Canton airport on the 6th. Wind chills dropped below minus 25 degrees Fahrenheit and continued for 24 hours. Sustained West to Northwest winds were between 25 and 35 mph with gusts approaching 45 mph. Schools were closed in the area on the 6th and the 7th.**	**County Wide to Varying Degrees%**
January 27-29, 2014	**A menacing cold air mass remained in Northern Ohio until the 29th. In the early morning wind chill was between negative 25 and 35 degrees Fahrenheit. Between 4 and 9am the wind chill dropped to negative 28 degrees Fahrenheit at Akron Fulton and negative 30 degrees Fahrenheit at Akron-Canton airport. Wind speeds were between 5 and 15 mph traveling West to Southwest. The 1977 record of negative 14 degrees Fahrenheit was broken in**	**County Wide to Varying Degrees%**

	Mansfield by one degree (negative 15 degrees Fahrenheit). Conditions began to improve by late morning. Temperatures increased to single digits but fell below zero again around midnight. No damages were reported however all schools in the area were closed on the 28th and some schools remained closed on the 29th as well.	
February 15, 2015	**Arctic pressure moved from Canada to Northern Ohio. Subzero temperatures and winds gusting to as much as 30 mph created severe wind chills (as cold as minus 30 degrees Fahrenheit) during the morning hours. Winds decreased in the evening hours of the 15th enabling low temperatures on the 16th to decrease to minus 10 degrees or lower in some areas. Fortunately, all schools were closed on the 16th due to a national holiday.**	**County Wide and Northern County areas%**
February 20, 2015	**Extremely cold temperatures and threatening wind chills swept across Northern Ohio for a second time in the same week. The coldest temperatures were recorded since the January 1994 outbreak. Minus 10 temperatures along with Westerly Winds allowed for wind chills to drop below minus 25 degrees Fahrenheit for a few hours. Conditions gradually improved with time. Schools were closed throughout the Northeast Ohio region until further notice.**	**County Wide and Northern County areas%**

Transportation Incidents

Date	Damage and Cost of Incident	Location of Incident
July 21, 1964	A heavy rain dumped more than 3 inches of rain in an hour. The influx of rain sent storm water through a 36-inch sewer below Tallmadge Pkwy. The pipe had been leaking for years and over the years had carried away enough soil to create a void below the road that was 25 feet wide by 40 feet deep. The force of the downpour from this incident caused the sewer to collapse opening the hole in the road. A car carrying 3 passengers fell into the whole. Rescue efforts saved two of the passengers but the hole collapsed further while trying to rescue the third victim. Two rescuers were killed as well as the third victim.	Tallmadge Pkwy/Memorial Pkwy Akron, OH
November 23, 1973	A DC 9 airplane over ran the runway and caused injury to the 134 passengers on board.	Akron-Canton Airport Greensburg Rd. Green, OH
September 1, 1978	A truck hauling 8,000 gallons of diesel fuel flipped on the Cuyahoga River Valley Bridge along the Ohio Turnpike. The fuel ignited on impact causing and explosion. Significant structural damage was done to the bridge. Costs to repair and respond to the incident was $1 million. Other indirect damage occurred in the diversion of traffic for days while the road was repaired.	Peninsula, OH

July 21,1988	**A tractor trailer carrying 10 drums of the corrosive liquid Intermediate Dye spilled its contents on the access road off Route 8 leading to Hines Hill Rd. 14 total civilian and response personnel were sent to hospitals. Cost of the incident totaled $46,256.**	**Access ramp on Route 8 and Hines Hill Road, OH**
February 26, 1989	**CSX Transportation train derailment. 21 cars were involved. CSX railroad northbound derailed at the rear of Goodrich Chemical. Results were explosion, fire, mass evacuation and hazardous material leak of Butane. Costs associated with this incident relate to lost operating time, hazardous material clean up, response personnel.**	**Akron, Ohio ***
January 9,1990	**Conrail train derailment causing a hazardous material spill of Diesel fuel. Cost for response and cleanup was 16, 680.24.**	**Hudson, OH ***
August 26, 1991	**A truck carrying barrels of a polymer was traveling along West Comet Road. One of the barrels underwent a mixing and a rapid polymerization caused the barrels to explode and land in a nearby residence yard. The polymerized material leaked from the tuck onto the roadway. Evacuation of residence to the northwest of the incident resulted. Cost of the incident was $10,240.37**	**West Comet Rd and Hampshire Rd. Franklin Township ***
Mid 1990's	**Gasoline tanker caught on fire**	**Bath, OH***

	on Route 77. There was runoff into a nearby creek that added to clean-up costs	
May 17, 1994	**Six busses were traveling on their way back from the Cleveland Zoo to Louisville. Four of the busses collided. Twelve children and one adult were transported to local hospitals. 259 individuals were involved on all busses. Accident occurred and 77N and Cleveland Massillon Rd.**	**77N and Cleveland Massillon Rd.**
1999	**A train derailed and collided with telephone lines. In the process it ran into motor vehicles. Phone service was knocked out for days. This had a large effect on SGS Corporate offices who had to resort to expensive cell phone calls as their means of communication. Approx. seven people were injured as a result of this incident.**	**Munroe Falls, OH**
November 10, 2015	**An airplane crashed into a 4-plex apartment building in Akron, OH. The pilot, co-pilot and all 7 passengers died; no ground injuries were reported. The airplane was destroyed. The immediate Emergency Response Cost neared $10,000. Nine lives were lost.**	**300 Block Mogadore Rd, OH ***

Hazardous Material Incidents

Date	Damage and Cost of Incident	Location of Incident
1970's	Gas leak from Shell Gas Station on Miller and Market. Chamberlin Apartment complex was evacuated as a result of this incident.	Copley
August 8, 1981	Oil from a large tire fire seeped into Lake Butler prompting clean up measures and a visit from the Ohio EPA. Response costs were incurred and additional costs associated with Camp Butler who pulls their drinking water from the lake.	Parker Tire Co. 5608 Akron-Cleveland Rd. Boston Township
May 26, 1989	The burning of poisons at a Northfield Center company caused a hazardous material incident. 18 firefighters were injured and sent to various local hospitals.	Twinsburg Rd. Northfield Center
July 11, 1990	Summit Mall hazardous material incident. Cost associated with incident was $10,496.41.	Summit Mall Fairlawn, OH

December 9, 1990	**Akron Rubber Lining had a Hazardous material spill that resulted in a large fire. Evacuation of 150 persons in 80 homes and 50 businesses. Red Cross activated and opened shelters. Cost of response to incident was $30,325.77**	**Akron Rubber Lining 2542 Gilchrist Rd. Akron, OH**
Mid 1990's	**Aerosol Products facility fire. Damage to building. 1 death and associated response costs.**	**Macedonia, OH**
August 5, 1993	**A hazardous chemical release and resulting fire caused $10,520.11 in response alone. Structural damage to the facility was incurred.**	**Trinitech International 2225 Enterprise Parkway Twinsburg, Ohio**
January 6, 1995	**Overturned gasoline tanker. 8,500 gallons of gasoline in tanker, 1,000 gallons was released. Runoff and containment issues were a factor. Cost of incident was $67,746.88.**	**Springfield, Ohio**

February 28, 1995	**Ohio Turnpike was shut down at exits 11 and 12 when a truck overturned. 90,000 vehicles were disrupted. Turnpike was shut down for 8 hours. Cost established at 23,443.05.**	**Ohio Turnpike Exits 11 and 12**
May 10, 1995	**Tallmadge Hazardous Material Incident. Cost of incident as $3,235.00.**	**Eastwood Ave Tallmadge, Ohio 44278**
June 16, 1995	**Marathon oil pipeline leak. Line leaked 5, 264 barrels of unleaded gasoline in the atmosphere and soil. 24 homes were evacuated. Remediation, displacement, and purchasing costs were attributed to this incident.**	**Franklin Township**
June 20, 1995	**Natural Gas Leak off of Snyder Ave. Personnel costs to the owner were a factor in this incident. Response costs were also a factor.**	**Herm's Court Snyder Ave Barberton, Ohio 44203**
July 2, 1995	**Hazardous material spill at a local business. Costs for the incident totaled $3,629.81.**	**Southeast Ave. Tallmadge, Ohio 44278**
September 28, 1995	**Springfield Upper Tusc Plant leaked 140 pounds of Sulfur Dioxide. Response costs for the incident were $4,155.89.**	**Springfield Upper Tusc Plant #36 Springfield, Ohio**
December 11, 1995	**Morgan Adhesives hazardous material spill. Cost of response was $2,023.57.**	**Morgan Adhesives 4560 Darrow Rd. Stow, Ohio**

April 7, 1996	**Chrysler hazardous material spill. Response costs were established to be $6,071.45.**	**Chrysler Plant Twinsburg, Ohio**
October 11, 1996	**Akron Dispersions hazardous material spill. Response costs were $9,432,83**	**Akron Dispersions Copley, Ohio 44321**
October 16, 1996	**Allen Bradley Company toxic fumes incident. Cost for response to the event totaled $3,111.34.**	**Allen Bradley Company Twinsburg, Ohio**
December 3, 1996	**Jefferson Park Office Buildings were evacuated due to chlorine gas.**	**Jefferson Park Office Building Fairlawn, Ohio 44333**

Date	**Damage and Cost of Incident**	**Location of Incident**
April 30, 1997	**Hazardous Material spill at a local business. Cost of response to the incident was $1,926.01.**	**103 5th St SE Barberton, Ohio 44203**
May 10, 1997	**55-gallon drum of Dimethyl ethylamine was punctured by a tow motor. Cost for response was $12,497.44.**	**Roadway Express Copley, Ohio 44321**
June 12, 1997	**Hazardous Material spill at a local business. Cost of response was $9,327.27.**	**120 North Hayden Hudson, Ohio 44236**
July 23, 1997	**Crystalloid Electronics had a hazardous material incident. Cost from this incident was $8,630.76.**	**Crystalloid Electronics 5282 Hudson Dr. Hudson, Ohio 44236**

July 23, 1997	**Chemical spill into Sanitary System. A 55-gallon drum was leaking a hazardous material from a trailer. Cost for response was $7,999.83**	**Route 91 and Uniondale Dr. Stow, Ohio 44224**
July 25, 1997	**Twinsburg hazardous material incident. Cost was $2,183.47**	**2700 E Aurora Rd. Twinsburg, Ohio**
August 31, 1997	**Hazardous Material Spill on dock at Roadway Express. High Toxicity reading was obtained from a trailer on site. Cost of response to incident was $6,571.26**	**Roadway Express 1275 Ohio Dr. Copley, Ohio 44321**
September 10, 1997	**Hazardous Material Leak in a BFI truck. Material leaked was Trichloroisocyanuric Acid. Cost of response to incident was $2,157.86**	**Intersection of Fishcreek and Maple Park in Stow.**

Date	**Damage and Cost of Incident**	**Location of Incident**
May 5, 1998	**Hazardous material incident at Graham Rd and S. Dover. Cost for this incident was $4,430.39**	**Graham Rd and S. Dover Silver Lake, Ohio**
June 12, 1998	**Hazardous Material Spill at Northcoast Logistics. Response costs were $1,216.42**	**Northcoast Logistics 3875 Industrial Pkwy Mogadore, Ohio 44260**
June 12, 1998	**HAZMAT Incident of smoking Aluminum Droff in a trailer. Response cost was $2,252.33**	**Commercial Alloys 1831 Highland Dr. Twinsburg, Ohio**
December 24, 1998	**Chlorine leak in Barberton Citizens Hospital Laundry Room. Cost of incident was $5,602.03**	**Barberton Citizens Hospital Barberton, Ohio**

February 5, 1999	**Hydrocarbon spill resulting from runoff of a large structure fire into a nearby creek. Booms had to be placed in the creek. Cost for this incident was $3,283.90.**	**1745 Copley Rd. Akron, Ohio**
August 2, 1999	**Hazardous Material leak from a 55-gallon drum on a truck. Incident cost was $5,456.44.**	**5085 Wooster Rd. Norton, Ohio 44203**
October 1, 1999	**Hazardous Material Incident at Kreidel Plastics. Response cost was $22,276.55.**	**Kreidel Plastics 16 N Van Buren Ave Barberton, Ohio**

Date	**Damage and Cost of Incident**	**Location of Incident**
March 27, 2000	**Diesel Fuel Spill into stream near the Waste Water Treatment Plant. Response cost was $4,078.57.**	**Waste Water Treatment Plant #29 10200 Regatta Dr. Reminderville, Ohio**
September 27, 2000	**Leak of 10 gallons of Kerosene into Turkeyfoot Channel. Response cost was $2,111.81.**	**Sawyer Wood Service Springfield, Ohio**
February 17, 2001	**Hazardous Material Leak into the Tuscarawas River. Cost for response was $2,887.53.**	**Malco Products, Inc. 361 Fairview Ave Barberton, Ohio**
July 28, 2001	**Hazardous Material Fire at a chemical storage company. Cost of incident was $1,163.64.**	**Biotech Company 9009 Freeway Dr. Macedonia, Ohio**

September 14, 2001	**Hazardous Material incident at RI International.**	**RI International 440 West Hopocan Ave. Barberton, Ohio ***
March 12, 2002	**Spill of Trichloroethylene in back of trailer. Cost of clean-up was $6,368.53.**	**McCain Plastic 5600 Mayfair Rd Green, Ohio ***
February 16, 2006	**Methanol incident on 1775 Main St. in Peninsula, OH.**	**1775 Main St. Peninsula, OH ***
July 12, 2006	**Hazardous Materials incident at I-77 Southbound in Copley, OH. Cost to clean up $10,928.29.**	**I-77 Southbound Copley, OH ***
September 15, 2006	**Oil spill on 2900 Vincent in Cuyahoga falls. No cost reported.**	**2900 Vincent Cuyahoga Falls, OH ***
February 27, 2007	**Tank rollover at intersection US 224 & Kubler Trail in Springfield. Cost to clean up $8,135.79.**	**US 224 & Kubler Trail Springfield, OH ***
April 16, 2007	**Hazardous Materials incident on I-271 Northbound. Cost to clean up $4,561.01.**	**I-271 Northbound Peninsula, OH ***
August 10, 2007	**Gasoline spill at 37 Chestnut in Northfield Village.**	**37 Chestnut Northfield Village, OH ***
September 24, 2007	**Unknown white powder incident at 75 Executive Parkway. Cost to clean up $6,737.09.**	**75 Executive Parkway Hudson, OH ***
October 8, 2007	**Mercury spill incident at 3600 W. Market St**	**3600 West Market Street Akron, OH ***
December 20, 2007	**Hazardous Materials Incident at Broad and Main Cuyahoga Falls. Cost to clean up $8,898.78.**	**Broad & Main Cuyahoga Falls, OH ***

March 19, 2008	**A hazmat incident happened in Tallmadge on I-76. Haz-mat was called to the incident. Cost to clean-up $8,073.22.**	**I-76 Tallmadge, OH ***
June 26, 2008	**Haz-Mat spill in Fairlawn. Material and Haz-Mat team was called. Cost to clean up $13,196.11.**	**I-77 Fairlawn, OH ***
July 26, 2008	**Mercury spill at 444 West Ave. Cost to clean up $2,013.35.**	**444 West Ave. Tallmadge, OH ***
August 4, 2008	**Chlorine release at 1621 Flikinger. Cost to clean up $2,636.71.**	**1621 Flikinger Lakemore, OH ***
May 12, 2010	**Product spilled at loading dock at 5285 Hudson Drive. Cost to clean up $1,679.26.**	**5285 Hudson Drive Hudson, OH ***
November 2, 2010	**Chlorine system alarm sounded at the Cuyahoga Falls Water Treatment. Chlorine System Leak. No cost reported**	**Cuyahoga Falls Water Treatment Plant 2028 Munroe Falls Ave, OH**
October 7, 2010	**Chlorine system alarm sounded at the Cuyahoga Falls Water Treatment. Chlorine system leak. No cost reported**	**Cuyahoga Falls Water Treatment Plant 2028 Munroe Falls Ave, OH**
May 1, 2011	**Large number of abandoned drums behind the parking lot at 754 S. Cleveland Ave. Approximately 20 1-gallon cans (plastic and metal) was spread over a 500sqft area. Cost to clean up $1,572.63**	**754 S. Cleveland Ave. Springfield, OH**
August 5, 2011	**Diesel hazmat spill on interstate 77 northbound. Total incident cost $ 3,907.02.**	**Fairlawn I-77 Northbound Mile Marker 133 ***
January 11, 2012	**Mercury spill hazmat incident at Barberton High school. Total incident costs $ 1,506.62.**	**Barberton 555 Barber Rd. ***
August 23, 2012	**Mercury hazmat spill in a residential home. Total costs not identified.**	**Macedonia 9398 Ridgeview Dr. ***
April 2, 2013	**Facility diesel fuel spill/ Total cost: $1,856.09**	**4787 State Road Cuyahoga Falls, Ohio 44264**

April 11, 2013	**Suspicious letter with unknown white powder. Total cost: $3,410.37**	**20 South Van Buren Barberton, OH**
July 5, 2013	**Facility chemical leak No estimated cost yet.**	**Springfield Township, OH**
July 15, 2013	**Oil spill near waste management facility. Causing river contamination on the Tuscarawas River. No estimated cost yet.**	**Norton, OH**
August 16,2013	**Two, 2-gallon containers; one empty and one full of a clear liquid herbicide spilled at the intersection of S. Arlington Rd and Killian Street in Springfield township. No estimated cost.**	**Springfield Township: S. Arlington Rd and Killian Street, OH**
August 14, 2014	**A corrosive liquid spill occurred on 77 North and 21 on the ramp. Approximately 250-300 gallons were tested positive for leakage. Total Cost: $3,744.10.**	**I-77 N and Route 21 Ramp ***
October 28, 2015	**A dumpster on city property was reported by the City of Green Fire Department to have a potential radiation source.**	**City of Green, OH ***
December 17, 2015	**A Hydrogen Fluoride leak occurred at 3840 Fishcreek and Saint Gobain. Approximately 2,000 gallons of liquid were in the 10,000-gallon tank. The 2,000 gallons were leaking into a storm drain. Total Cost: $1,058.86.**	**Stow: 3840 Fishcreek Rd and Saint Gobain, OH ***
January 6, 2016	**Northfield Center had bright green water in the retention basin. No source and no active spill detected. SCHMRT was notified for evaluation and containment assistance Final Disposition is unknown.**	**Northfield Center/Northfield Village, OH ***

January 21st 2016	**An ammonia leak occurred at a manufacturing facility located at 1884 E. Highland Rd, Twinsburg. Total Cost: $2,128.75**	**1884 E. Highland Rd, Twinsburg, OH ***
August 23, 2016	**Home owner poured 1 gallon of liquid fire down a clogged drain. HCN and H2S readings were elevated. Home owner was evacuated.**	**122 Southeast Ave, Tallmadge, OH ***
June 10, 2016	**Several employees at a facility in Green experienced sick symptoms. Possible CO leak with higher elevations of CO in the vicinity of ands electric tow motor. The building was vented and turned back over to the owner. Total Cost: $3,041.05**	**3458 Massillon Rd, Green, OH ***
July 16, 2016	**Vehicle was leaking fuel in Richfield Township. Bath Township FD helped aid Richfield FD. Tow Truck company assisted taking the vehicle.**	**Richfield, OH ***
July 25-30, 2016	**A chemical company reported an explosion in a shipping container. A 55-gallon tank filled with divinylbenzene was the source of the explosion. After 5 days the tank was still reacting. The OEPA was contacted.**	**165 South Cleveland Ave, Mogadore, OH ***
November 2, 2016	**10 gallons of gasoline spilled inside the residence of a Twinsburg home. Total Cost: $2,674.99**	**2132, Marsh Rd, Twinsburg, OH ***
November 30, 2016	**A forane-22 spill occurred at 2088 S. Arlington Rd, leaking into a ventilation system.**	**2088 South Arlington Rd, Akron, OH***

December 26, 2016	**Resident complained of a solvent odor coming from her basement. Gas readings were done. Green Fire Department confirmed the odor was centered on the sump pump in the basement.**	**Green, OH ***
February 2, 2017	**Diesel over-fill at Mogadore High School Bus Garage. Oil company over-filled ground fuel tank 50-75 gallons.**	**Mogadore, OH ***
February 23, 2017	**Warehouse chemical spill**	**Springfield Township, OH ***
April 6, 2017	**Oil was found in water on South St. and Lakeshore Blvd in Akron. Hudson FD assisted by providing water spill trailer. Total cost: $282.84 not including man hours**	**Akron, OH ***
April 17, 2017	**A chemical was released into the air. About 10-15 pounds of Butadine was released. No injuries reported. Akron FD assisted.**	**Akron, OH ***
May 10, 2017	**An oil spill occurred at 4479 Allen Road, Stow, Summit County, Ohio due to a car striking a utility pole. Stow FD responded.**	**Stow, OH ***
June 19, 2017	**A hydraulic fluid spill occurred at 1567 Commerce Drive, Stow, Summit County, Ohio due to equipment failure. Stow FD responded to the incident.**	**Stow, OH ***
July 14, 2017	**A chemical release took place at 240 W. Emerling Avenue, Akron, OH. Acrylonitrile and 1, 3-Butadiene was released. Akon FD responded to the**	**Akron, OH ***

	incident. There were no reported injuries.	
July 17, 2017	**Chemical releases took place at 6220 Manchester Rd, New Franklin, OH. Paul's car care caught fire releasing 4-5,000 gallons of oil and burning plastics. New Franklin FD responded. Total cost was $482.74 to clean up.**	**New Franklin Township, OH** *****
September 13, 2017	**Mineral oil was spilled at 4746 Massillon Road, North Canton, Ohio. The release was caused by a recycling truck striking a pole and dislodging a pole mounted transformer. Twinsburg FD responded to the incident.**	**Twinsburg, OH** *****
November 5, 2017	**Mineral oil was spilled resulting from storm damage. Macedonia FD responded to the scene.**	**Macedonia, OH** *****
November 7, 2017	**Oil was released into the storm sewer at 1570 Ottawa Avenue. It is estimated 25 of the 30 gallons spilled went into sewer 15. EPA was notified and Akron FD responded.**	**Akron, OH** *****
January 15, 2018	**Reports came in of an automobile leaking gasoline at 1910 West Market St. Akron FD responded and managed the scene.**	**Akron, OH** *****
February 20, 2018	**Waste oil was released from the Marhofer facility at 3423 Darrow Rd, Stow, Ohio. The oil spilled into the drain coming from the oil caddy in a trash dumpster. Stow FD responded to the incident.**	**Stow, OH** *****
February 27, 2018	**Reports came in of a gas leak that occurred at 2372 Triplett Boulevard, Akron, Ohio. It's estimated 20 gallons was spilled in less**	**Akron, OH** *****

	than an hour. The diesel fuel impacted soil and concrete areas as well as waterways.	
March 2, 2018	**A gasoline spill occurred at 1047 17th Street South West Akron, Summit County, OH. There was an approximate 40 gallons that spilled resulting from a car pole accident. Akron FD responded.**	**Akron, OH** *****
March 22, 2018	**A report has been made of diesel fuel being released for 20 minutes at the State Route 480 eastbound entrance ramp. It has been estimated approximately 25 gallons impacted an asphalt area measuring about 75 feet long and 25 feet wide. Twinsburg FD responded.**	**Twinsburg, OH** *****
April 16, 2018	**An asphalt paving machine burned releasing fuel, oil, and asphalt into a drainage ditch. The incident occurred in Norton, Summit County. It was estimated 40 gallons of petroleum based material was released. Norton FD responded to the area.**	**Norton, OH** *****
April 27, 2018	**Mineral oil spilled at 865 Aberdeen Street, Akron, Ohio. It was estimated 30 gallons discharged immediately. Akron FD responded and managed the incident.**	**Akron, OH** *****
May 5, 2018	**Oil was released at 1445 4th Street, Barberton, Ohio due to a car striking a pole causing a transformer to become dislodged. It was estimated 25 gallons. Barberton FD responded to the incident.**	**Barberton, OH** *****
May 7, 2018	**A spill occurred as a result of human error. The spill came from a fuel sump**	**Green, OH**

	inspection system at 5430 Lauby Rd, Green North Canton, and Hanger #10. The drain filter failed and allowed jet fuel to escape into the storm drain. Approximately 700 gallons was discharged. Clean up continued well into the month of June. The City of Green FD responded.	

Tornado

Date	Damage and Cost of Incident	Location of Incident
1955	A tornado touched down in Sand Run Park causing significant damage to trees, residence and equipment.	Akron, OH
1956	Tornado passed through Cuyahoga Falls. The damage from this incident was widespread. Downed trees and power lines were a cleanup issue. Structural damage to buildings added to the cost of this incident	Cuyahoga Falls, OH
April 19, 1963	An F2 tornado stuck Summit County causing widespread damage. Wind speeds associated with F2 tornadoes range from 113-157 mph. Considerable damage was done to homes and uprooted trees. Property damage from this incident reached $2,500,000.	Summit County 41° 05' N / 81° 30' W %
July 15, 1969 DR-266	Tornadoes, Severe Storms and Flooding	
April 2, 1970	An F1 tornado with a length of 1 mile and width of 50 yards struck Summit County on the morning of the April 2. F1 tornados have associated wind speeds of 73-112 mph. Property damage from this incident reached $2,500.	Summit County 41° 18' N / 81° 30' W %
June 3, 1973	An F3 tornado stuck Summit County with associated wind speeds of 158-205 mph. The tornado was 5 miles in length and had a width of 100 yards. Property damage included uprooted trees and structural damage to homes. Property	Summit County 41° 12' N / 81° 26' W %

	damage from this incident reached $25,000.	
April 4, 1974	**Tornado and Large wind gusts affected the Stow Rd and Old Mill area of Twinsburg. There were residential property damage and downed trees.**	**Twinsburg, OH**
June 15, 1978	**Tornado damage was sustained to the Legal Center Building in Cuyahoga Falls. Structural damage to homes. Wallace Olds dealership was damaged. Telephone and power lines were down. The tornado touched down 5 different times. Storm clean-up, labor, light replacement, stop sign replacement, and damage to windows that were blown out of buildings totaled $20,000.**	
July 10 + 12, 1992 DR - 951	**Several tornadoes ripped through eight miles of industrial, commercial, and residential sections of Cuyahoga Falls and Stow. The largest was an F3 that had a length of 8 miles and a width of 100 yards. F3 tornadoes have associated wind speeds of 158-205 mph. The tornado touched down on Bath Road and hit the Remington Industrial Park at State and Steels Corners Roads. Buildings were demolished, lost roofs, and sustained other structural damage. Hundreds of fallen trees blocked streets all**	**Stow, Cuyahoga Falls, and Silver Lake, OH**

	throughout the city while some residents lost power. A Severe Storm Presidential Disaster Declaration for Summit County was declared. Hundreds of people lost their jobs and damage from the storm reached $2,500,000.	
May 29, 1995	**A tornado touched down just north of the intersection of Hametown Road and Copley Road and moved east to Copley Center. Several businesses were damaged including a plastics manufacturer where an office building and warehouse suffered roof and structural damage. Several trucks were overturned. A lumber and home center just outside of Copley Center suffered significant damage, estimated at about $500,000. About twenty homes suffered minor to moderate damage. Numerous trees were downed. The tornado was an F1 with associated wind speeds of 73-112 mph. The length of the tornado was 1 mile with a width of 100 yards. Property damage from the incident reached $1.5 million.**	**Copley Center %**
April 9, 1998	**A weak tornado touched down briefly near Copley causing some minor roof damage. Magnitude was an F0 with associated wind speeds of 40-72 mph. Width of the**	**Copley, OH %**

	tornado was 25 yards. Property damage from this incident reached $2,000.	
July 28, 1999	**A tornado with a magnitude of F0 crossed into Sagamore Hills from Cuyahoga County. The tornado traveled approximately two miles in Summit County before dissipating as it approached Highway 82 from the north. F0 tornadoes have winds between 40-72 mph. It had a length of 2 miles and a width of 100 yards. Several dozen trees were downed and a couple of houses received minor roof damage. Fallen trees also damaged three cars. Power was out in the community between 24-36 hours. A large tree in downtown Twinsburg landed on a set of bleachers and destroyed them. Two trees fell on homes in Macedonia and two trucks in Macedonia were also severely damaged by fallen trees. Five trees were downed in Northfield. Cleanup efforts lasted one month. Mutual aid was needed during clean up. Summit County Engineers office assisted with a wood chipper and recycling efforts were also made. Property damage from the incident reached $75,000.**	**Northern Summit County ~ and %**
November 10, 2002 DR-1444	**A small F0/F1 tornado touched down in Macedonia near the intersection of Valley View Drive (SR 631) and Aurora Road and moved northeast. The tornado gradually strengthened**	**Twinsburg and Macedonia, OH %**

	and reached F2 intensity as it crossed State Route 14 and moved into Twinsburg. After a track of just over three miles the tornado weakened to F1 intensity and crossed into Cuyahoga County south of Glenwillow. Extensive damage was done in Macedonia and Twinsburg. In Macedonia, 60 homes were damaged including two that were destroyed and 15 others were damaged enough to be declared uninhabitable. The most severe damage in the County occurred in the Glenwood Preserve neighborhood on the north side of Twinsburg. Extensive damage was done on Andover Drive and Deeplake Circle where several homes were leveled. Damage estimates in The damage path was continuous and about 100 yards in width. Dozens of cars were damaged or destroyed and hundreds of trees and power poles downed in Summit County. **Individual Assistance - Dollars Approved** **$579,893.02** **Total Individual & Households Program (IHP) - Dollars Approved*** **$297,240.48** **Total Housing Assistance (HA) - Dollars Approved*** **$282,652.54** **Total Other Needs Assistance (ONA) - Dollars Approved*** **127** **Total Individual Assistance (IA) - Applications Approved***	

July 21-August 25 **August 1, 2003** **DR-1484**	**Disaster number: DR-1484. Tornadoes, flooding, severe storms, high winds. Individual Assistance - Dollars Approved $74,781,195.51 Total Individual & Households Program (IHP) - Dollars Approved* $36,717,257.56 Total Housing Assistance (HA) - Dollars Approved* $38,063,937.95 Total Other Needs Assistance (ONA) - Dollars Approved* 46,109 Total Individual Assistance (IA) - Applications Approved* Public Assistance - Dollars Approved $10,875,976.79 Total Public Assistance Grants (PA) - Dollars Obligated† $1,583,993.66 Emergency Work (Categories A-B) - Dollars Obligated† $9,322,353.13 Permanent Work (Categories C-G) - Dollars Obligated**	**All of Summit County ***

Date	Damage and Cost of Incident	Location of Incident
May 25, 2011	An EF0 tornado touched down in Fairlawn and traveled northeast for over four miles near Cuyahoga Falls. The damage survey suggested that the tornado may not have been in contact with the ground for much of the path length which was no more than 50 yards in width. Only intermittent damage was observed and it is likely that some of this was caused by straight line winds. Most of the damage was from fallen trees but some buildings were also damaged. A church in Fairlawn lost its roof and several buildings sustained roof damage in downtown Cuyahoga Falls. Dozens of trees were either uprooted or snapped by the tornado. Several witnesses reported seeing a tornado in contact with the ground. Estimated $200K in property damage.	Fairlawn *

Severe Storm Incidents

1986	Wind Shear incident created turbulent and windy conditions. There was significant damage to residences. Downed trees created a problem by snapping power lines and littering the roadways causing transportation to stall. Debris clean up became an issue in this incident.	Green, Ohio

July 10 + 12, 1992 DR-951	**Several tornadoes ripped through eight miles of industrial, commercial, and residential sections of Cuyahoga Falls and Stow. The largest was an F3 that had a length of 8 miles and a width of 100 yards. F3 tornadoes have associated wind speeds of 158-205 mph. The tornado touched down on Bath Road and hit the Remington Industrial Park at State and Steels Corners Roads. Buildings were demolished, lost roofs, and sustained other structural damage. Hundreds of fallen trees blocked streets all throughout the city while some residents lost power. A Severe Storm Presidential Disaster Declaration for Summit County was declared. Hundreds of people lost their jobs and damage from the storm reached $2,500,000.**	**Stow, Cuyahoga Falls, and Silver Lake, OH**
Mid to Early 1990's	**Microburst took off roofs of homes. Wind speeds caused a large volume of damage to trees and debris removal became an issue with this event.**	**Green and New Franklin, OH**
May 28, 1993	**Thunderstorm winds downed trees, some across power lines. Several road signs were damaged and property damage from this incident reached $50,000.**	**Countywide to Varying Degrees %**
June 10, 1995	**Thunderstorm winds downed trees, some on power lines, and a roof was partially removed**	**Springfield Township %**

	from a vacant store. A tornado was suspected and a funnel cloud was reported in the area, but a damage survey did not reveal a tornado damage pattern. Property damage as a result of this incident reached $40,000.	
May 24, 1995	**Large hail was reported at a number of locations including Twinsburg and Northfield Center. Trees were downed at several locations as the result of thunderstorm winds. In Macedonia, a downed tree cause significant damage to a house and hail accumulated up to 6 inches. The roof of Manchester High School in southern Summit County suffered significant wind damage. Property damage reached $30,000 from this incident.**	**Countywide to Varying Degrees %**
June 27, 1995	**Trees were downed at several locations including Tallmadge, Akron, and Cuyahoga Falls. Some downed trees damaged buildings and took down power lines. A Coventry Township man was injured in his home when a tree was blown onto it. Large hail of .75 inches in diameter was reported at Chapel Hill and Copley. Property damage from this incident reached $30,000.**	**Countywide to Varying Degrees %**
June 24, 1996	**Numerous trees were downed, part of a roof was taken off Wyoga Lake Towers in Cuyahoga Falls as a result of thunderstorm winds. The roof of a house in Tallmadge was crushed by a falling tree and other homes and buildings were damaged. Wind gusts reached 60mph. Property damage from this incident reached $75,000.**	**West Central Summit County %**

August 15, 1996	**Lightning struck a house and burned the third story causing extensive damage. Property damage was established to be $40,000.**	**Akron OH %**
August 21, 1996	**Lightning struck the town safety centerand knocked out 911 service, half of the phones, the police department alarm panel, and computers. Property damage was established at $10,000.**	**Hudson, OH %**
April 6, 1999	**High winds blew over a tree onto two vans in Cuyahoga Falls. Two people were injured and one was taken to an area hospital as a result. Total property damage resulting from this strong wind incident reached $25,000.**	**Countywide to Varying Degrees %**
August 16, 1997	**Lightning struck a tree and was conducted to a house. The resulting fire caused considerable damage. Property loss as a result of this lightning reached $80,000. Numerous trees were downed near Hale Farm as a result of thunderstorm winds. One hundred acres of corn were blown down. Winds were estimated at 80-90 mph in Bath. Property damage there reached $10,000 while crop damage reached $30,000.**	**Cuyahoga Falls and Bath, OH %**
June 30, 1998	**Many trees, power lines and utility poles were downed in the southern part of Summit County as a result of thunderstorm winds. A wind gust of 74 mph was reported in Barberton and an 84-mph gust was reported at Akron-Canton Airport. Roofs of buildings at the airport were damaged as well as the nose gear of an airplane. At**	**Southern Portion of Summit County %**

	Portage Lakes, boats were ripped from their moorings and turned upside down. Property damage from this incident reached $500,000.	
July 21, 1998	**Numerous trees were downed, mostly in the northern portion of the County. A measured wind gust of 60 mph was reported in Twinsburg. A woman was injured when a tree fell on her car in Northfield Village. Property damage was established at $50,000.**	**Northern Summit County %**
August 24, 1998	**In Akron and in Springfield Township,trees and power lines were downed, some on vehicles and houses. Property damage from this event reached $50,000.**	**Countywide to Varying Degrees %**
August 25, 1998	**A large hail storm producing hail up to 1.75 inches in diameter hit Clinton. Crop damage was established to be $10,000.**	**Clinton %**
September 7, 1998	**Numerous trees, large limbs, and power lines were downed as a result of thunderstorm winds. In Munroe Falls, a tree fell on a house. In Stow, large limbs were downed on at least two vehicles and through the roof of a house. Property damage from this incident reached $100,000.**	**Countywide to Varying Degrees %**
July 9, 1999	**Trees and power lines were downed Countywide. A 70-mph wind gust was measured in Barberton where a roof was blown off a building. The roof landed on a truck completely destroying it. Two other cars were crushed by falling trees in Barberton. The**	**Countywide to Varying Degrees %**

	roof of a house in Akron was torn off and several cars were damaged by falling trees. Around a dozen grave stones were blown over at an Akron cemetery. A total of 400 trees and 225 power lines were blown down in the County. A State of Emergency was declared in Akron because of widespread damage and electrical outages. The NOAA Weather Radio transmitter located on the west side of Akron was knocked off the air by winds estimated at 60 to 70 mph. Scaffolding at a school construction site in Barberton was blown down into the side of the building. Property damage totals reached $700,000.	
October 13, 1999	**Several large trees were downed in Akron as a result of thunderstorm winds. A tree fell on a moving car in Tallmadge. A woman and child inside the car were unhurt, but the car was severely damaged. Property damage for the event reached $40,000.**	**Countywide to Varying Degrees %**
May 18, 2000	**Thunderstorm winds downed trees in Akron, Richfield, Tallmadge, and Copley. Two fallen trees damaged mobile homes in Tallmadge, and a third poked a hole into the roof of a house in Akron. A parked car in Akron was slightly damaged by a tree. Property damage**	**Countywide to Varying Degrees %**

	reached $75,000 Countywide.	
May 23, 2000	**Thunderstorm winds estimated at 60 mph downed 15-20 trees in Green Township near State Route 241. Two homes were slightly damaged by fallen trees. Property damage was established at $25,000.**	**Green Township %**
June 14, 2000	**Thunderstorm winds downed well over one hundred trees in the County. Fifty of the trees were downed at a single residence in Tallmadge with the house on the property suffering extensive damage. Trees were also downed in Akron, Stow, and Cuyahoga Falls. Many cars were damaged by trees and the Cuyahoga River east of Cuyahoga Falls was clogged with limbs and fallen trees. Property damage from this incident. reached $150,000.**	**All of Summit County to Varying Degrees**
July 9, 2000	**Wind storms caused large scale damage to homes and businesses. Trees were down city wide. Power was out for up to four days. Akron declared and emergency for this incident. Mutual Aid was called in from several surrounding communities to assist in the clean-up efforts.**	**Akron and Coventry, OH %**
August 6, 2000	**Thunderstorm winds downed over a dozen trees in Sagamore Hills and Akron. An additional 30 trees were knocked down in Green Township. Property damage for this event reached $35,000.**	**All of Summit County to Varying Degrees %**
December 11, 2000	**Damaging winds began just before midnight and continued through the early morning hours then gradually diminished. Widespread power outages occurred with several trees downed. Wind gusts of 67 mph were**	**All of Summit County to Varying Degrees %**

	measured in downtown Akron. Buildings under construction near Richfield were destroyed.	
February 25, 2001	**Damaging winds out of the southwest and west caused extensive damage to Summit County. Dozens of trees were knocked down across the area with most of the damage occurring during the middle part of the day. Several homes lost siding as a result of the high wind. A few power poles and road signs were also blown down.**	**All of Summit County to Varying Degrees %**
March 9, 2002	**Damaging winds occurred along a cold front that swept through Summit County during late afternoon. A fatality occurred in Cuyahoga Falls when a 63-year-old man was struck and killed by a falling tree. Thousands of trees and were downed Countywide. Many roof and porches were partially or completely destroyed. Peak wind gusts reached 62 mph at Akron-Canton Airport. Combined damage for all of Northern Ohio reached $9,000,000.**	**All of Summit County to Varying Degrees %**
November 10, 2002 DR-1444	**A small F0/F1 tornado touched down in Macedonia near the intersection of Valley View Drive (SR 631) and Aurora Road and moved northeast. The tornado gradually strengthened and reached F2 intensity as it crossed State Route 14 and moved into Twinsburg. After a track of just over three miles the tornado weakened to F1 intensity and crossed into Cuyahoga County south of Glenwillow. Extensive damage was done in Macedonia and Twinsburg. In Macedonia, 60 homes were damaged including two that were destroyed and 15 others were damaged enough to be declared**	**Twinsburg and Macedonia, OH %**

	uninhabitable. The most severe damage in the County occurred in the Glenwood Preserve neighborhood on the north side of Twinsburg. Extensive damage was done on Andover Drive and Deeplake Circle where several homes were leveled. Damage estimates in The damage path was continuous and about 100 yards in width. Dozens of cars were damaged or destroyed and hundreds of trees and power poles downed in Summit County. **Individual Assistance - Dollars Approved** **$579,893.02** **Total Individual & Households Program (IHP) - Dollars Approved*** **$297,240.48** **Total Housing Assistance (HA) - Dollars Approved*** **$282,652.54** **Total Other Needs Assistance (ONA) - Dollars Approved*** **127** **Total Individual Assistance (IA) - Applications Approved***	
October 11, 2006	**A strong cold front moved southeast across northern Ohio. A line of strong to severe thunderstorms developed in advance of this front. Thunderstorms winds downed one tree in Lakemore and a second in Boston Heights. Incident caused $3,000 in property damage.**	**Boston Heights, OH %**
June 8, 2007	**A severe thunderstorm moved across Summit County and**	**All of Summit County to Varying Degrees**

	caused unprecedented damage. Hail as large as softballs fell across much of the County. Extensive damage was done to homes and vehicles in Akron and surrounding areas. As many as 29,000 insurance claims were filed for damage in the County. The south side of Akron was the hardest hit. The incident caused $105 million in property damage.	**%**
June 19, 2007	**A strong cold front moved through northern Ohio during the afternoon and evening hours of the 19th. Ahead of this cold front in a very warm and moist air mass, severe thunderstorms developed during the midday hours. The activity continued through the afternoon before diminishing during the evening hours as the cold front moved east of the area. Magnitude: 50kts. Estimated property damage: $2,000 Hudson, $5,000 Macedonia, $25,000 Richfield.**	**Hudson, Macedonia, Richfield, OH %**
June 27, 2007	**Severe thunderstorms developed across the area during the afternoon hours of the 27th. A cold front was located across the central Great Lakes throughout much of the day on the 27th, and moved through the area on the 28th. Numerous trees were reported down in Green Township, and a tree was reported down in Springfield Township. Estimated property damage: $25K**	**Green, Springfield Township, Lake more, OH %**
August 7 & 9, 2007	**A frontal boundary was oriented west to east across central Ohio. The surface frontal boundary, in combination with upper level atmospheric support, allowed for severe thunderstorms to**	**Portage Lakes, Richfield, Barberton, OH %**

	develop across the region. Many of the thunderstorms that day were severe, and even a few tornadoes developed across northern Ohio. Numerous trees and large limbs were reported down near the Nimisila Reservoir and throughout Portage Lakes State Park. Reports of trees down extended just north into Coventry Township. Thunderstorm winds up to 50kts causing an estimated $50K in property damages.	

August 20, 2007	**Heavy rain fell across the area during the morning of the 20th causing flash flooding conditions. Areas most impacted were from Norton east to Barberton, and from Fairlawn south to Clinton. Reports indicated there were many roads closed throughout western portions of Summit County. In Fairlawn, trained spotters reported flood waters affecting several homes. In Norton, an elementary school was threatened by flash flooding. Teachers' sand bagged doors to prevent water from getting into the school. Rainfall reports from that day indicate that between 1.5 and 4.0 inches of rain fell across the area. However, a few reports from the Portage Lakes area indicate that as much as 4.0 inches of rain fell across the area over the 24-hour period ending around 4pm on the 20th. Further investigation of rainfall reports shows that one reporting station in Portage Lakes measured 1.5 inches of rain between 9:30 am and 10:00 am that morning alone. Estimated $250,000 in property damages.**	**Barberton, OH %**

Date	Damage and Cost of Incident	Location of Incident
May 2, 2008	A large area of low pressure was located over the central plains and a warm front extended from west to east across the region. Showers and thunderstorms developed during the afternoon hours along this frontal boundary. A power pole was snapped. Utility lines were also reported down across the area. Thunderstorm winds up to 50kts caused an estimated $6,000 in property damages.	Barberton, OH %
June 21, 2008	A cold front moved east across northern Ohio during the afternoon of June 21st. Showers and thunderstorms developed in advance of the front. A few of the thunderstorms became severe. Nickel to golf ball size hail lasted for several minutes. Many vehicles were reported damaged by the hail. 1.75in of hail was observed. Estimated property damage: $300,000	Cuyahoga Falls, OH %

Date	Damage and Cost of	Location of Incident
June 26, 2008	Very warm and more humid air became established across the region by midday on the 26th. Low pressure was located well north of the area in Ontario, and another trough of low pressure was swinging southeast from Michigan. Showers and thunderstorms developed during the afternoon and continued through late evening. With increased moisture across the region, some of the thunderstorms not only became severe, but also caused some flash flooding across the area. Several trees and power lines were reported down throughout Springfield Township. Thunderstorm winds up to 50kts caused an estimated $8,000 (Lakemore), $2,000 (Stow), $2K (Greensburg), $6K (East Liberty) in property damages.	Lakemore, Stow, Greensburg, East Liberty, OH %

Date	Damage and Cost of	Location of Incident
July 8, 2008	A cold front moved across the area causing showers and thunderstorms to develop. A few of the thunderstorms became severe, while an area of training storms produced flash flooding in northeastern Ohio. Thunderstorm winds downed three trees. Thunderstorm winds up to 50kts caused an estimated $5,000 in property damage.	Peninsula *
July 22, 2008	A frontal system lingered over northern Ohio. Thunderstorms developed along this front. A few of the stronger storms became severe, while storms moving off of Lake Erie produced torrential rainfall in northeastern Ohio. Penny to Quarter size hail was observed. .75 – 1in of hail caused an estimated $5K (Cuyahoga Falls) and $5,000 (Munroe Falls) in property damage.	Cuyahoga Falls, Munroe Falls *

Date	Damage and Cost of	Location of Incident
July 26, 2008	**A cold front moved east across northern Ohio during the afternoon of July 26th. Severe thunderstorms developed along this front. Large hail was reported with the stronger storms. A swath of golf ball size hail was reported from Norton east through the Barberton area. Many homes and vehicles were damaged by the hail. 1.75 inches of hail caused an estimated $1.5 million in property damage.**	**Barberton, Norton ***
July 26, 2008	**A thunderstorm downburst downed many trees in Norton. An above ground swimming pool was flattened and at least one home had windows blown out. Scattered power outages were reported throughout the city as well. Thunderstorm winds up to 50kts caused an estimated $100,000 in property damage.**	**Norton ***
October 24, 2008 **(Date Declared)**	**Disaster Number: DR-1805. Severe wind storm associated with tropical depression IKE. Public assistance: $1,316,376.26.**	**Summit County ***

Date	Damage and Cost of	Location of Incident
June 1, 2009	Showers and thunderstorms tracked across the region along a cold front during the evening hours of June 1st. The cold front stretched from the Northern Great Lakes to the southern Plains. Some of the thunderstorms became severe during the evening hours. The activity pushed off to the east and diminished shortly before midnight on the 2nd. 1.25 inches of Half dollar size hail was observed. Estimated $50,000 in property damage.	Akron *
August 10, 2009	A cold front was located northwest of the region during the afternoon and evening hours of the 10th. A warm and unstable air mass caused showers and thunderstorms to develop shortly after noontime and persist through the afternoon and evening hours. Some of the thunderstorms became severe producing severe winds and hail. Many trees were reported down throughout the County. Thunderstorm winds up to 50kts caused an estimated $15,000 in property damage.	Akron *

May 7, 2010	**A very strong area of deepening low pressure moved east across northern Ohio during the evening hours of May 7th. By midday on the 8th, the low had reached northern New York state. Showers and thunderstorms associated with the low pressure moved across northern Ohio during the evening hours of the 7th. Several of the thunderstorms became severe and at least one tornado was reported. An EF1 tornado moved across portions of eastern Wood County damaging a few homes and buildings. A downburst caused considerable damage in Erie County. There were dozens of reports of large hail and damaging winds elsewhere across northern Ohio. Estimates have indicated that as many as 5,000 homes and businesses in northern Ohio may have sustained damage during this event. At the peak of the storm more than 300,000 residents were without power in Northeast Ohio alone. A strong cold front trailing the low exited Ohio to the east early on May 8th. Gusty southwest to west winds occurred behind this front. Some wind damage was reported in a few northern Ohio counties during the early afternoon hours of the 8th. 1in of Penny to Quarter sized hail was recorded. Thunderstorm winds downed several large tree limbs.**	**All of Summit County to Varying Degrees %**

	The tree struck a home and caused enough damage for the house to be uninhabitable. Estimated $75,000 (Cuyahoga Falls) and $1,000 (Akron).	
November 10, 2002 **DR-1444**	**A small F0/F1 tornado touched down in Macedonia near the intersection of Valley View Drive (SR 631) and Aurora Road and moved northeast. The tornado gradually strengthened and reached F2 intensity as it crossed State Route 14 and moved into Twinsburg. After a track of just over three miles the tornado weakened to F1 intensity and crossed into Cuyahoga County south of Glenwillow. Extensive damage was done in Macedonia and Twinsburg. In Macedonia, 60 homes were damaged including two that were destroyed and 15 others were damaged enough to be declared uninhabitable. The most severe damage in the County occurred in the Glenwood Preserve neighborhood on the north side of Twinsburg. Extensive damage was done on Andover Drive and Deeplake Circle where several homes were leveled. Damage estimates in The damage path was continuous and about 100 yards in width. Dozens of cars were damaged or destroyed and hundreds of trees and power poles downed in Summit County.** **Individual Assistance - Dollars Approved** **$579,893.02** **Total Individual & Households Program (IHP) - Dollars Approved*** **$297,240.48** **Total Housing Assistance (HA) - Dollars Approved*** **$282,652.54** **Total Other Needs Assistance (ONA) - Dollars Approved*** **127** **Total Individual Assistance (IA) - Applications Approved***	**Twinsburg and Macedonia, OH** **%**
July 21-August 25 **August 1, 2003**	**Disaster number: DR-1484. Tornadoes, flooding, severe storms, high winds.** **Individual Assistance - Dollars Approved**	**All of Summit County** *****

DR-1484	**$74,781,195.51 Total Individual & Households Program (IHP) - Dollars Approved* $36,717,257.56 Total Housing Assistance (HA) - Dollars Approved* $38,063,937.95 Total Other Needs Assistance (ONA) - Dollars Approved* 46,109 Total Individual Assistance (IA) - Applications Approved* Public Assistance - Dollars Approved $10,875,976.79 Total Public Assistance Grants (PA) - Dollars Obligated† $1,583,993.66 Emergency Work (Categories A-B) - Dollars Obligated† $9,322,353.13 Permanent Work (Categories C-G) - Dollars Obligated**	

June 23, 2010	**A stationary front lingered over the Upper Ohio Valley on June 23rd and 24th. Showers and thunderstorms developed along the front during the afternoon. Several of the thunderstorms became severe. Thunderstorm winds downed a few large tree limbs. Thunderstorm winds from 50-54kts created an estimated $2K (Akron), $2,000 (Silver Lake), $2,000 (Stow), $2,000 (Peninsula) in property damages.**	**All of Summit County to Varying Degrees %**

July 28, 2010	**A line of severe thunderstorms associated with a cold front raced across northern Ohio during the evening hours of July 28th. Thunderstorm winds downed several large trees. Thunderstorm winds up to 50kts caused an estimated $10,000 in property damage.**	**Clinton ***
February 28, 2011	**Heavy rain and rapid snow melt led to a rapid rise in the Cuyahoga River in Summit County which reached moderate flood stage at Old Portage. One to two inches of rainfall fell during the overnight hours of the 27th into the 28th. Six to ten inches of heavy snow was on the ground and resulted in rapid runoff. Several people had been rescued from homes and vehicles as the water came up. One rescue worker suffered hypothermia rescuing a motorist floating away in flood waters in Northfield Center. Estimated $300,000 in property damages.**	**Twinsburg ***

May 25, 2011	**Thunderstorm and winds downed large tree branches. The downed tree fell onto a home and destroyed the porch. Thunderstorm winds downed numerous trees. Some homes were damaged as a result of the downed trees. Local media reported that thunderstorm winds damaged roofs and gutters on a few industrial buildings. $168,000 in property damage.**	**Cuyahoga Falls ***

Date	Damage and Cost of Incident	Location of Incident
June 21, 2011	Thunderstorms produced nickel size hail for several minutes. The size of the hail increased significantly around 8:40pm EST, to half dollar size.	All of Summit County to Varying Degrees %
July 19, 2011	Flash flood due to heavy rain. The maximum daily total precipitation that was reported by an official NWS cooperative weather observer was 4.84 inches at the Akron-Canton Airport (CAK). CAK Automated Surface Observing System (ASOS) recorded the rain between 2:00 AM and 4:00 AM of around 4 inches, with additional rainfall thereafter. This rainfall event frequency falls around a 500 year recurrence interval, or 0.2% chance of occurring in a single year. The heavy rain flooded the airport, shorting out the power supply. The automated rain gage failed at this point, but a backup rain gage observation supports the storm total. The basement of the airport flooded, along with the parking lots resulting in floating cars and significant damage to the vehicles. Flights were cancelled for half a day. Estimated $500,000 in property damage.	(CAK)CANTON ARPT *

Date	Damage and Cost of Incident	Location of Incident
July 19, 2011	**Flash flood due to heavy rain. Torrential rainfall with rates around two inches per hour brought around 4 to 6 inches of rain to Summit County. The heaviest rain fell from Akron and to the north and western part of the County. The maximum daily total precipitation that was reported by an official NWS cooperative weather observer was 4.84 inches at the Akron-Canton Airport (CAK). CAK Automated Surface Observing System (ASOS) recorded the rain between 2:00 AM and 4:00 AM of around 4 inches, with additional rainfall thereafter. This rainfall event frequency falls around a 500 year recurrence interval, or 0.2% chance of occurring in a single year. The town of Copley also experienced significant flooding along the Pigeon Creek where the heaviest rain fell. An apartment complex was inundated and rescues were made. Hundreds of homes and businesses experienced basement flooding with a few first floors inundated as well. In the town of Green, residents testified to a historic flood in Spade Road area. Estimated $1.5 million in property damage and $75,000 in crop damage.**	**Bath Center ***

Date	Damage and Cost of Incident	Location of Incident
January 17, 2012	Thunderstorm (up to 50kts) winds downed a few trees. Estimated property damage $7,000.	Akron *
July 4, 2012	2.5 inches of hail. Quarter to tennis ball sized hail was reported. Hundreds of homes and vehicles were damaged by the hail. There were reports of hail found inside of homes after the exterior windows had broken. Estimated $5 million in property damage.	Tallmadge *
July 4, 2012	1.75 inches of hail. Hail as large as golf balls was reported. Many vehicles and a few homes were damaged by the hail. Estimated $750,000 in property damage.	Akron *
July 4, 2012	1.75 inches of hail. Quarter to golf ball sized hail was observed. Hundreds of vehicles were damaged by the hail. A few homes were also damaged by the hail. Estimated $1.5 million in property damage.	Mogadore *
September 7, 2012	Thunderstorm (up to 50kts) winds downed at least ten large tree limbs and a flag pole. Estimated $6,000 in property damage.	Tallmadge *

Date	Damage and Cost of Incident	Location of Incident
October 30, 2012	On Monday, October 29, 2012, Hurricane Sandy made landfall near Atlantic City, NJ, with maximum sustained winds of 80mph. Sandy transitioned to a Post-Tropical Cyclone; however, the storm continued to produce significant wind, storm-surge, rainfall, snowfall, and inland-flooding hazards across the Northeast. National Weather Service reported winds up to 80mph during the height of the storm system. High Wind Warnings, as well as Flood and Flash Flood Watches and Warnings were issued for portions of Ohio. Ohio EMA field liaisons were deployed on October 31 to support operations in Cuyahoga and Lorain Counties. Summit County Emergency Operations Center activated at 4:00pm 10/29/12 to collect information, monitor weather, utility outages and support local operations. Local response includes restoring power outages and cleanup of downed tree limbs.	All of Summit County to Varying Degrees %

Date	Damage and Cost of Incident	Location of Incident
September 6-7,2012	**A moist and unstable air mass was in place ahead of the front and severe thunderstorm watch #628 was issued for Northwest Ohio, followed by severe thunderstorm watch #629 for North Central and Northeast Ohio. A few thunderstorms produced wind damage with numerous reports of penny to quarter size hail. No damage reported.**	**Sagamore Hills, Akron, Cuyahoga Falls**
June 25, 2013	**Numerous tress were brought down by strong winds across northeast Ohio. Portions of Lorain and Cuyahoga counties were hit particularly hard with downed trees and power outages with several trees falling on homes and garages. First Energy reported 29,000 customers without power in Lorain and Cuyahoga Counties.**	**Norton, Lakemore, Lorain and Cuyahoga County %**
June 29, 2013	**Numerous showers occurred across northern Ohio. Two of the thunderstorms were strong enough to produce quarter size hail in the Akron area and continuing east into Portage County. Reports of quarter size hail were received from trained spotters.**	**Akron %**

Jul 10, 2013	**Storms developed through northwest Pennsylvania around 7 pm. Intense rainfall rates verified with reports of 0.75 in 15 minutes. The storms affected every county in the WFO Cleveland county warning area.** **In addition to the flooding, widespread severe weather including three tornadoes occurred on July 10th. A line of intense thunderstorms developed ahead of the advancing cold front during the afternoon hours. Thunderstorm wind gusts in excess of 70 mph were reported. Thousands of downed trees and widespread power outages were reported. The Bellevue area was especially hard by the combination of straight line winds and a weak tornado. Nearly every street in the city had damage of some sort and it took five days for power to be restored to the majority of the city. Another tornado formed in northeastern Seneca County and moved in Huron County. A third tornado affected portions of rural Ashland County. Large swaths of corn were flattened across northern Ohio and nearly every county reported severe weather. As many as 250,000 electric customers lost power during this evening.**	**Seneca and Sandusky County. All surrounding counties in Northern Ohio** **%**

July 23, 2013	**Severe thunderstorms developed in northeast Ohio during the afternoon and early evening hours. Quarter size hail occurred in downtown Cleveland and continued through the eastern suburbs. The most noteworthy hail was observed in southeastern Stark County near Maximo where there was approximately a three-mile-long by quarter mile wide swath of hail damage to crops and buildings. The hail was reported to be golf ball size or larger with significant damage to corn and soybean crops reported. Golf ball size hail was also reported in Grafton. Property damage reported: $1,000.**	**Akron, Stark County %**
May 12, 2014	**Two confirmed tornadoes, one in Medina and the other in Lorain Counties, developed within supercell thunderstorms. The slow movement of the storms combined with intense rainfall rates produced destructive flash floods across dozens of communities.**	**Medina, Lorain, Copley %**

May 12, 2014	**Measured rainfall of 4 to 4.5 fell over Cuyahoga Falls on the evening of May 12th between 930 and 1130 pm. There was significant urban flooding as storm drains were overwhelmed by the excessively high rates. Most intersections in the city were impassable. The City Hall sustained major damage as an estimated 30,000 gallons of water entirely from urban runoff filled their basement damaging $500,000 worth of computers. Approximately 1,000 homes sustained water damage, primarily to basements. Six homes were condemned due to extreme water damage. The flood was similar to the flash flood in 2003. Total Damage: $11 million**	**Silver Lake, OH %**
May 12, 2014	**Heavy rain fell in Munroe Falls on the evening of May 12th. $250,000-300,000 of property damage. Numerous water rescues occurred. Stalled cars, washed out roadways. Total damage: $1.5 million**	**Munroe Falls, OH %**

May 12, 2014	**4 to 4.5 inches of rainfall fell in an hour and a half between 9:30 pm and 11:00 pm. Infrastructure was overwhelmed by the runoff throughout the community. The hardest hit area was near State Route 91 and State Route 59 intersection where several businesses were damaged including a car dealership with 70 cars. The Holy Family Church and School sustained $3,000,000 in damages. Two homes suffered structural failures, one estimated as 4,000 square feet in size. North River Road sustained a complete washout. There was a sinkhole at Wilbur Drive covering half the road. A fire station and business was inundated with several inches of water on Hudson Drive. The Silver Lake Elementary Schools, Bolich Middle and High Schools were all damaged and closed. In all, at least 100 homes were damaged. A number of water rescues were conducted by no serious injuries reported Total Damage: $7 million**	

September 10, 2014	**An EF0 tornado touched down on the Stow-Munroe Falls High School property. No damage was observed at the high school. The tornado continued northeast for about one half of a mile and finally lifted near the intersection of Berwin Drive and Bunker Lake in the Quail Highlands neighborhood. The roof and chimney of one house was heavily damaged by the tornado. Four other houses nearby lost sections of roofing or siding. Many trees were also downed along the damage path which was no more than 50 yards in width.** **Total Damage: $100,000**	**Stow, OH** **%**

Drought Incidents

Date	Damage and Cost of Incident	Location of Incident
January 1953- January 1954	Total precipitation over the course of this drought period was 27.44 inches. Human health, water supply, economic and financial factors, and agricultural concerns are all associated damages of this incident.	All of Summit County #
February 1960- January 1961	Total precipitation over the course of this drought period was 28.53 inches. Heat Stress, increased illness from underdeveloped water supplies.	All of Summit County #
January- December 1963	Total precipitation over the course of this drought period was 26.50 inches. Water use restrictions, food prices increase.	All of Summit County #
September 1987- January 1989	The drought of 1987-1990 had significant impacts on Summit County. The average rainfall for the area was about 31 inches a year. This is about 6 inches below normal. The effect of this extended drought severely diminished the amount of water in local streams, reservoirs, and groundwater available	All of Summit County #

	to meet the water supple needs of the County. Bans or restrictions were implemented in order to conserve water supplies.	
May 1991- April 1992	**Total precipitation over the course of this drought period was 29.97 inches. Loss of public ground water supplies. Decline in water quality.**	**All of Summit County #**
August 6-31, 1996	**Dry weather persisted throughout the month in Summit County. Rainfall averaged just a few tenths of an inch for the entire month. Crops that normally mature during August were affected by the dry weather and crop losses were predicted at ten to thirty percent. The actual dollar amount of crop loss was unknown.**	**All of Summit County #**
June 1- 30, 1999	**Little rain occurred from late May through much of June. Only 1.19 inches of rainfall fell at Akron-Canton during the month making it the 5th driest June on record. Several communities instituted water use restrictions.**	**All of Summit County ~**
February 1 - December 2012	**Summit County was named a primary natural disaster area due to excessive heat which began on Feb. 1. The**	**All of Summit County ~**

	drought began due to the lack of snow in the US, which caused very little melt water to absorb into the soil. Summit County was designated with moderate drought conditions by mid-June. This drought was compared to that of the 1930s and 50s`, but was not in place as long. Inflicted catastrophic economic loss due to lack of crops, which aided in obtaining a Secretarial disaster designation for the County and 85 counties in Ohio.	

Flood

Date	Damage and Cost of Incident	Location of Incident
1953-1956	Tinker Creek area suffered flooding off and on in the 1950's. Damage was caused to residential areas. Property damage mounted from the repeating flood activity.	Twinsburg ~
1958	Flooding on Barber Rd. along the NW corner of Barberton High School Athletic Field, parking lot, and nearby dump. Debris littered the area and obstructed roadways. Clean- up costs were associated with this incident.	Barberton #
1959	Heavy rains caused postponement of winter debris removal. Heaviest damage occurred near State Route 224 on the west side of the city. Water reached levels 18 inches deep. Area around high school was flooded for 1 mile. 24 families were evacuated and cleanup costs reached $100,000.	Barberton #
July 21, 1964	Isolated cloudburst overpowered Akron's sewer system flooding streets, basements, and downtown parking lots. Heaviest rain was on the center of the city to the west side. In an hour and fifteen minutes, 3.05 inches of rain fell on the city. Buildings, bridges, and construction along the canal were damaged. A portion of a	Downtown Akron and West Akron #

	building on Bowery Street fell into the canal. Akron Savings and Loan had to be evacuated. Three deaths were attributed to the incident.	
July 15, 1969 DR-266	**Flooding, Severe Storms and Tornados. Floods resulting from heavy rains of July 4,-5, 1969, occurred on most of the streams draining into Lake Erie between the Portage River on the west and the Rocky River on the east…**	**Summit County**
July 4, 1970	**Clinton experienced flooding down Water St., North St., and South St. Homes were damaged, the former Town Hall had flood related damage, and JB Bar and Grill suffered electrical failure.**	**Clinton ~**
1972	**Flood damage wreaked havoc on homes along South Van Buren Ave. Structural repair and remodeling were needed and cleanup efforts were conducted.**	**Barberton #**
Between 1970 and 1980	**Repetitive flooding incidents in residential areas. There was erosion of property. Cost associated with this incident involves property value losses and repairs.**	**Silver Lake ~**
July 1, 1972	**Little Cuyahoga flooded Case Avenue and Park Street. South Main St. extension also had significant water in the Ley Ditch.**	**Akron (ABJ)**
1969, 1975, 1976 and 1977	**These years saw reoccurring flooding according to FEMA's Flood Plan Study.**	**Summit County**
Feb. 1975	**Flooding occurred when two inches of rainfall clogged up the storm sewers and water could not properly drain.**	**Barberton #**

	Barber Rd. became flooded and could not support traffic.	
September 14, 1979	**The remnants of Hurricane Fredric brought torrential rainfall to the region causing flooding in many areas of the County. The County received anywhere from four to six inches of rain over the course of the day. Roads, industries, and low-lying homes were flooded. Damage to crops was widespread.**	**All of Summit County to varying degrees #**
December 1977	**50-degree temperatures coupled with rain caused a foot of snow to melt. Severe flooding occurred on Barber Rd, 14th St., and 15th St. Basements of homes were flooded and motor vehicle traffic could not pass due to high water levels on the streets.**	**Barberton #**
1979-1980	**Flooding to 50 homes. Structural damage and restoration costs were associated with this flooding incident.**	**Reminderville ~**
December 31, 1990	**Flooding issues were prevalent in 1990 as it was the wettest year on record for Ohio. Akron set a record with a yearly rainfall total of 65.7 inches. This all culminated in the large amounts of flooding on New Year's Eve when snow began to melt into an already saturated ground.**	**All of Summit County to varying degrees #**
1991	**Flooding and heavy rain occurred on the west side of the city. 14 homes were flooded and repairs were made to damaged residences.**	**Barberton #**
April 11, 1994	**Flooding occurred as water overflowed the Tuscarawas River. Several Roads were**	**Clinton %**

	closed and at least four homes and the Town Hall had to be evacuated. Property damage from this incident reached $500,000.	
April 12, 1994	**Heavy rains of generally about three inches on top of saturated ground caused flooding of small streams, streets, and basements. The City of Barberton was especially hit hard. Rainfall over a period of 24 hours measured about seven inches and widespread flooding occurred, especially near Wolf Creek. A number of homes and businesses were flooded. High water remained for several days. Property damage from the incident reached $5,000,000.**	**All of Summit County to Varying Extents %**
July 7-8, 1994	**Torrential rains from several thunderstorms fell onto already saturated grounds. Rainfall of three and one-half inches was measured in Hudson. Significant flooding occurred to streets, small streams, basements, and poor drainage areas. Residents had to be evacuated in parts of Akron and two homes suffered extreme damage when flood waters caused basement walls to fail. Property damage Countywide from this incident reached $5,000,000.**	**Akron%**
June 27, 1995	**Heavy thunderstorm rain fell over areas that had received heavy rains the previous days and caused Countywide flooding of streets, basements, and low-lying**	**All of Summit County to varying degrees %**

	areas. The Manchester Road area of Franklin Township experienced significant flooding with water getting into residences and washing out several drainage culverts and roads. About 500 homes received minor to moderate damage as a result. Property damage from this incident reached $800,000.	
July 25, 1995	**Heavy thunderstorms generated flash flooding on several small streams, streets, and poor drainage areas. An observer in Clinton reported 1.5 inches of rain in 20 minutes. Pavement buckled on Firestone Boulevard in Akron from the rushing water and several vehicles were stranded in the high-water area. Other flooded streets included Waterloo at I-77 and Main Street at Waterloo. Route 8 was closed for a time as well as several other streets. Several motorists had to be rescued from stalled vehicles in flood waters. Several basements were also flooded. Property damage from the incident reached $55,000.**	**All of Summit County to Varying Degrees %**
June 13, 1996	**Heavy rain caused flash flooding of roads, basements and low-lying areas. Some roads had up to three feet of water on them. Property damage from this incident reached $20,000.**	**Springfield Township %**
June 24, 1996	**Heavy rain caused flash flooding of streets, basements and low-lying areas throughout the County. Route**	**Countywide to Varying Degrees %**

	18 and I-77 in Fairlawn were flooded. Property damage from the incident was $30,000.	
December 11, 1996	**Heavy thunderstorm rain caused flooding of streets, basements and low-lying areas in Barberton. Property damage from this incident reached $5,000.**	**Barberton %**
June 1, 1997	**Heavy thunderstorm rain that began in May continued to fall on saturated ground, causing flooding of streets, streams, homes, fields and low-lying areas. Sagamore Road in Sagamore Hills was washed out, while in Bath Township Yellow Creek Road and Boston Mills Road were closed due to mudslides. Health officials throughout Northern Ohio warned residents that wells and cisterns could be contaminated from the flood waters. Crop losses occurred due to continued delays in planting. Property damages reached $40,000 while crop damage reached $10,000.**	**All of Summit County to Varying Degrees %**
January 9, 1998	**Heavy thunderstorm rain on already saturated ground caused flooding of small streams, roads, basements and low-lying areas in the Southeast portion of the County. Several basements were flooded around Green. Cost of property damage was determined to be $50,000.**	**Southeast Portion of Summit County %**
August 25, 1998	**Heavy thunderstorm rain caused flooding of streets, streams, and low-lying areas throughout the County.**	**All of Summit County to varying degrees %**

2001-2002	**Approximately 750 homes reside in the Pond Brook Water Shed District and come under repeated flooding. Two culverts one running overtop the other have posed issues in this area. Many times, one will complicate problems in the other by overflowing.**	**Reminderville ~**
May 15, 2003	**Thunderstorms dumped two to three inches of rain on Cuyahoga Falls in a short period of time. Lowland and street flooding occurred with water as much as three feet deep on some roads. Several cars were stranded in the flood waters and a few buildings sustained minor damage. $100,000**	**Cuyahoga Falls%**
July 21, 2003 and July 22, 2003	**Thunderstorms dumped heavy rains on Summit County causing catastrophic flooding in parts of the County. Rainfall rates exceeded two inches per hour at times during the evening hours. Many streams and creeks left their banks causing widespread flooding. Spotters measured 7.20 inches of rain at Richfield and a gage at Hudson High School record 3 inches of rain between 7:45 p.m. and 8:15 p.m. with a storm total of 7.5 inches. 5 inches of rain was measured in Stow. Two men drowned at approximately 8:50 p.m. in an underground parking garage at a condominium complex located along Atterbury Boulevard in**	**All of Summit County to Varying Degrees %**

	Hudson. Witnesses indicated that the underground garage filled with water in just a few minutes. Nearby Brandywine Creek overfilled its banks and flooded the complex. The creek rose at the rate of two feet every 10 minutes between 8 p.m. and 9 p.m. Flooding reached half way up the first floor of the buildings and around 80 residents of the complex had to be evacuated by boat. Bucket surveys upstream of the complex indicate that as much as 10.4 inches of rain fell on the 21st. A third man was electrocuted and killed while working in his flooded basement. Mud Brook left its banks in the Merriman Valley neighborhood of northwest Akron and cut off an apartment complex on West Portage Trail. The three bridges leading to the complex were washed out trapping nearly 200 people. A temporary road was built and the residents were finally rescued late on the 22nd. Flooding also occurred in Twinsburg, Akron, Cuyahoga Falls, Peninsula, Copley, Bath, Boston Heights, Green and Stow. In Twinsburg, Tinkers Creek went into flood and damaged several dozen homes and businesses. Over 400 homes were damaged in Cuyahoga Falls by flooding. Most of the homes were in neighborhoods along 6th, 7th and Kilarney Streets. An	

	automated rain gage in the area measured 4.60 inches of rain. Flooding affected large sections of Silver Lake and Stow forcing the evacuation of dozens of people. Spotters in Stow measured 6.28 inches of rain. Over 500 homes and around 30 businesses were damaged in Stow. Ten of the homes sustained major damage. People had to be rescued from motor vehicles all over the County as hundreds of roads and bridges were either washed out or flooded. Flooding in Boston Township was the worst since 1913. Over $1 million in damages occurred to public property and roads in Hudson. Another $1.5 million in damages occurred to roads elsewhere in Summit County. Over 300 homes in the County sustained enough damage to be declared destroyed or uninhabitable. As many as 1,000 other homes and businesses sustained lesser damages. Damage estimates for the County top $100 million. $15 million in the National Park. $500,000 July 22, 2003	
July 27, 2003 Disaster Declared 8/1/2003 DR-1484	**Thunderstorms dumped two to four inches of rain on southern Summit County during the early evening hours. Rainfall rates were greater than two inches per hour at times. For the day, 3.94 inches of rain fell at the Akron-Canton Airport in Green Township. With the ground still saturated from flooding the previous week, streams**	**Southern Summit County ***

	and creeks in the County quickly rose and flooded many areas. The flooding was most severe in Green Township where at least six families had to be evacuated from their homes. Many other homes in the Township were damaged by flooding and several roads were either washed out or had to be closed. $750,000	
August 27, 2003	**Thunderstorms dumped two to three inches of rainon much of Summit County. Spotters in Cuyahoga Falls measured 2.2 inches of rain during a 53 minute period ending at 2:30 a.m. Several small streams and creeks left their banks resulting in areas of lowland flooding. Dozens of homes in the County experienced basement flooding. $150,000.**	**Summit County ***
May 21, 2004	**Thunderstorms dumped torrential rains on Summit County during the early morning hours of May 21st resulting in widespread street and lowland flooding. The heaviest rain fell between 2 a.m. and 5 a.m. Over two inches of rain fell across much of northern Summit County. The worst flooding occurred in Cuyahoga Falls and Stow where many roads were either flooded or washed out. Over 200 homes were damaged by flooding in Cuyahoga Falls after the Cuyahoga River left its banks. Dozens of additional homes were damaged in Stow. Flood waters on some roads**	**Countywide ***

	were over two feet in depth. Many cars became stranded in the flood waters. Cuyahoga River flooding caused 2.9 Million in damage in Cuyahoga and Summit Counties.	
May 22, 2004	**During the early morning hours of May 22nd, heavy rain producing thunderstorms moved across Summit County for the third time in less than 24 hours. Rainfall totals of one to three inches were common across the County. Rainfall rates with the stronger storms approached two inches per hour. A spotter in Munroe Falls measured 4.53 inches of rain between daybreak on May 21st and daybreak on the 22nd. A cooperative observer in Cuyahoga Falls measured 3.39 inches of rain during that same period. This rain combined with the ground already saturated from earlier storms led to the renewal of widespread flooding in the County. The Coventry, Copley, Tallmadge, Cuyahoga Falls, Barberton, Stow and Norton areas were among the worst damaged in the County. Flooding in some of these cities was reported to be the worst in over 30 years. In Barberton and Norton, extensive flooding occurred after Wolf Creek left its banks. A dam on Hudson Run was nearly destroyed after flood waters began flowing around the dam. Water on some streets was reported to be as much as three feet deep. Over**	**Countywide** *****

	$1 million in damage occurred along Barber Road in Norton after 20 homes and 23 businesses were flooded. Several culverts were washed out in both Norton and Barberton. Several people were evacuated from homes along Pardee and Graham Roads in Stow around 2 a.m. Dozens of roads in the County had to be closed because of washouts or significant flooding. Damage to roads and other government property from the storms on the 21st and 22nd topped $2.2 million. Hundreds of private residences and businesses sustained flood damage. Initial estimates that as many as 500 homes sustained significant damage. Dozens of vehicles were also damaged. Total Cost: $8.1 million.	
June 3, 2004 **(Date Declared)**	**Disaster number: DR-1519. Flooding, severe summer storm. Public assistance: $1,125,122.24**	**All of Summit County** *****
September 17, 2004	**The remnants of Ivan moved across the Ohio Valley on September 17th. A stationary front extending northeast from the low caused heavy rains to develop and fall on most of northeastern Ohio from late on September 16th through the 17th. Rainfall totals 2.91 inches at Macedonia (Summit County) Runoff from this rain caused several streams and creeks to leave their banks flooding many low lying areas. A few roads had to be closed because of flooding. Hundreds of homes sustained minor**	**Macedonia** *****

	damage from either basement or lowland flooding. Cost to Cuyahoga, Holmes, Medina and Summit Counties combined were $360,000.	
July 31, 2006	**More than 100 homes were drenched by the storm water in Lakemore. They received 4 to 6 inches. Many homes were without powering Lakemore.**	**Lakemore** *****
August 20, 2007	**Flooding happened in the Barberton and Heritage Apartments on 31st St were evacuated. Firefighters helped evacuate people, secure houses and shut down utilities in the area. Barberton received 4 to 6 inches Monday morning. Many homes received water damage. Many streets in the Barberton area were flooded**	**Barberton** *****
February 28, 2011	**Heavy rain and rapid snow melt led to a rapid rise in the Cuyahoga River in Summit County which reached moderate flood stage at Old Portage. One to two inches of rainfall fell during the overnight hours of the 27th into the 28th, and combined with six to ten inches of heavy snow was on the ground resulted in rapid runoff. Several people had been rescued from homes and vehicles as the water came up. One rescue worker suffered hypothermia rescuing a motorists floating away in flood waters in Northfield Center. Estimated**	**Twinsburg** *****

	$300,000 in property damages.	
July 19, 2011	**Flash flood due to heavy rain. The maximum daily total precipitation that was reported by an official NWS cooperative weather observer was 4.84 inches at the Akron-Canton Airport (CAK). CAK Automated Surface Observing System (ASOS) recorded the rain between 2:00 a.m. and 4:00 a.m. of around 4 inches, with additional rainfall thereafter. This rainfall event frequency falls around a 500 year recurrence interval, or 0.2% chance of occurring in a single year. The heavy rain flooded the airport, shorting out the power supply. The automated rain gage failed at this point, but a backup rain gage observation supports the storm total. The basement of the airport flooded, along with the parking lots resulting in floating cars and significant damage to the vehicles. Flights were cancelled for half a day. Estimated $500K in property damage.**	**(CAK)CANTON ARPT, Bath Center ***
October 30, 2012	**On Monday, October 29, 2012, Hurricane Sandy made landfall near Atlantic City, NJ, with maximum sustained winds of**	**All of Summit County to Varying Degrees %**

	80mph. Sandy transitioned to a Post-Tropical Cyclone; however, the storm continued to produce significant wind, storm-surge, rainfall, snowfall, and inland-flooding hazards across the Northeast. National Weather Service reported winds up to 80mph during the height of the storm system. High Wind Warnings, as well as Flood and Flash Flood Watches and Warnings were issued for portions of Ohio. Ohio EMA field liaisons deployed on October 31 to support operations in Cuyahoga and Lorain Counties. Summit County Emergency Operations Center activated at 4:00pm 10/29/12 to collect information, monitor weather, utility outages and support local operations. Local response includes restoring power outages and cleanup of downed tree limbs.	

July 10-12, 2013	**Flash flooding. Primarily in southern portion of the County. Norton, Barberton, Copley, and Akron had the most major or destroyed structures. Total cost unknown as of now. Roughly 10 major or destroyed structures within the County. Public damages and costs still being accounted for.**	**All of Summit County ***
May 12, 2014	**In the evening of the 12th a warm front reversed itself and headed inland over Northern Ohio. Heavy rain fell between Munroe Falls and Akron Ohio. 70 homes and Summit County Public Health sustained basement flooding. $250,000 to $300,000 in damages were incurred in Munroe Falls. The flooding in basements were as high as 7 feet. A house lost its foundation on Lindsey Road and a family had to be rescued on Hiwood Road. Several water rescues were conducted in Munroe Falls and Akron between 10:30 p.m. and midnight.**	**Parts of Summit County and Surrounding Counties%**
May 13, 2014	**The Stow/Silver Lake area was impacted by flash floods in the evening of the 13th. Between 9:30 p.m. and 11p.m. about 4 to 4.5 inches of rain fell. Infrastructure was overwhelmed by the runoff from the community. The most impacted area was between State Route 91 and 59 where several businesses were damaged. The Holy Family**	**Parts of Summit County and Surrounding Counties%**

	Church and School sustained $3,000,000 in damages and two homes suffered infrastructure failure. North River Road experienced a complete washout. At Wilbur Drive there was a sinkhole covering half the road and water covered Hudson Drive. The Silver Lake Elementary Schools and Bolich Middle and High Schools were damaged and closed. The flood was comparable to the 2003/2004 floods but was expected to result in worse monetary damages.	
July 22, 2017	**A frontal boundary lingered over Northeast Ohio. A morning front brought widespread rainfall while the moist environment and stalled front supported organized convection midday. Radar estimated between 1.5 and 3 inches of rain fell between Summit and Ashtabula Counties. High waters caused valley view road to shut down and Aurora saw flooding 1 to 2 feet deep in some areas.**	**Summit County and Surrounding Counties%**

Dam Incidents

1973	Litchfield Lake Embankment Failure	
1970's	Virginia Kendall Park Dam	Dam failure in late 1970's, no damage noted
2002,2003,2007,2011,2013 and 2014	Nimisilla Dam has required several call out for ODNR staff. The efforts applied were to minimize the potential of over-saturation of soils on the D/S earth-filled embankment. Thus to combat any potential stability issues. Furthermore, to reduce infiltration of sediment and over inundating the 10" toe drain. The toe drain runs along to D/S toe or groin of the aux. embankment. The purpose of the system is to intercept seepage and discharge in a controlled manner.	Green and New Franklin
2003	Virginia Kendall Park Dam	Dam overtopped no damage downstream noted
2003	Lake Forest Dam class II	Dam experienced a flood of record in 2003; no damage downstream reported
July 22, 2003	Pine Lake Dam needed to be breached by ODNR	Hudson *
July 22, 2003	Pine Lake Dam needed to be breached by ODNR	Hudson *
August 27, 2003	Nimisilla Dam tributaries need to be cleared to prevent damage to the dam.	Green and New Franklin *
May 22, 2004	During the early morning hours of May 22nd, heavy rain producing thunderstorms moved across Summit County for the third time in less than 24 hours. Rainfall totals of one to	Barberton *

	three inches were common across the County. Rainfall rates with the stronger storms approached two inches per hour. A spotter in Munroe Falls measured 4.53 inches of rain between daybreak on May 21st and daybreak on the 22nd. A cooperative observer in Cuyahoga Falls measured 3.39 inches of rain during that same period. This rain combined with the ground already saturated from earlier storms led to the renewal of widespread flooding in the County. The Coventry, Copley, Tallmadge, Cuyahoga Falls, Barberton, Stow and Norton areas were among the worst damaged in the County. Flooding in some of these cities was reported to be the worst in over 30 years. In Barberton and Norton, extensive flooding occurred after Wolf Creek left its banks. A dam on Hudson Run was nearly destroyed after flood waters began flowing around the dam. Water on some streets was reported to be as much as three feet deep. Over $1 million in damage occurred along Barber Road in Norton after 20 homes and 23 businesses were flooded. Several culverts were washed out in both Norton and Barberton. Several people were evacuated from homes along Pardee and Graham Roads in Stow around 2 a.m. Dozens of roads in the County had to be closed because of washouts or significant flooding. Damage to roads and other government property from the storms on the	

	21st and 22nd topped $2.2 million. Hundreds of private residences and businesses sustained flood damage. Initial estimates that as many as 500 homes sustained significant damage. Dozens of vehicles were also damaged. Total Cost: $8.1 million.	

Terrorist Incidents

Date	Damage and Cost of Incident	Location of Incident
22-Jun-77	**A suspended employee of the Patch Rubber Company, on West Waterloo Road, broke into the company and opened the valves on holding tanks containing petroleum naptha and isopropyl alcohol causing several toilet fires around town and finally an explosion at Glendale cemetery where the chemicals had settled in the sewer system. Damage resulted in assistance from the Federal Disaster Relief fund. Cost reached almost $10.5 million.**	**Akron ~**

1960	**Joslin Manufacturing Company caught on fire. The fire was large and destroyed everything just west and north of the rail overpass. Eventually it blew up sending debris everywhere.**	**Northfield Center ~**
1970	**A large fire in an apartment building, grocery store, and jewelry store caused a large amount of property damage and led to evacuations.**	**Akron ~**

Date	Damage and Cost of Incident	Location of Incident
August 12, 1981	A tire fire on a three-acre field in Boston Township caused smoke that invaded many Summit County communities. A layer of soot was deposited on cars and homes. Resources from 14 fire departments and foam trucks from Cleveland Hopkins Airport were brought in to contain the blaze. In addition Terex sent clean up vehicles to the site. Environmental damage was incurred when the oil form the tires ran into a nearby lake. The property bordered the Cuyahoga Valley National Recreation Area and posed a significant threat to the area.	Peninsula ~
December 20, 1984	A massive explosion and resulting fire was caused by an unidentified substance dumped into a pit at the recycling facility. 3 deaths and 7 injuries were attributed to this event. Property damage neared $1 million. Steam power generated by the plant cut off heat to 3 downtown apartment complexes and hundreds of businesses.	Recycle Energy Plant 226 Opportunity Pkwy Akron, OH ~
1991	Bog fire caused large amount of smoke and damage to the surrounding wildlife reserve. Costs associated with this incident totaled almost $60,000.	Springfield ~

Tab 5 Community Hazard Survey

Dear Community Partners,

Summit County needs your help to evaluate natural, technological and human caused disasters in our area. We are interested in obtaining feedback from residents and people who work in Summit County. Please share this survey link https://www.surveymonkey.com/r/2VGJFCY on your website, social media, email blast lists and with your employees. The Survey will expire on March 9, 2018.

We are currently updating our Hazard Prevention Plan. We hope that this update to our current plan will help us rank our hazards and identify areas where action is needed.

The Summit County Emergency Management Executive Committee thanks you for taking the time to participate in this information-gathering process.

Tina Merlitti

Specialist II, Emergency Management Agency

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175 S. Main St., Suite 103

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Direct Dial: 330-643-8783

Fax: 330-643-2889

Is your home or office vulnerable to damage from flood, tornado or power outage? Do you want to recover quickly from disasters and prevent future damage from these and other hazards?

Summit County needs your help to evaluate natural, technological and human caused hazards in our area. We are currently updating our Hazard Prevention Plan and we would appreciate your input. We hope that this update to our current plan will help us identify areas where action is needed. The plan helps Summit County qualify for federal assistance to address our hazards and helps our community be better prepared.

We know you are busy and respectfully request a few moments of your time to respond to this 26 question survey. The survey should take less than 10 minutes to complete and is anonymous, unless you decide to provide contact information at the end. When you have finished the survey, please click "Done" on the final page.

The Summit County Emergency Management Executive Committee thanks you for taking the time to participate in this information-gathering process.

How concerned are you about the following natural, technological or human made hazards in Summit County? Please use the following descriptions to rank the severity of each hazard.

Low - treatable first aid injury, complete shutdown of facilities and critical services for more than 24 hours, no more than 1 percent of property located in the affected area is severely damaged.

Somewhat - injury or illness not resulting in disability, complete shutdown of facilities and critical services for more than one week, more than 10 percent of the property located in the affected area is severely damaged.

Moderate - permanent disability, severe injury or illness, complete shutdown of facilities and critical services for more than 2 weeks, more than 25 percent of the property located in the affected area is severely damaged.

High - death or fatal injury, complete shutdown of facilities and critical services for more than one month, more than 50 percent of the property located in affected area is severely damaged.

Hazards Survey for Summit County				
Hazard	Low	Somewhat	Moderate	High
Flood/Dam Failure	46.27%	34.47%	12.11%	7.14%
Winter Storm	19.57%	42.55%	29.50%	8.39%
Tornadoes	30.43%	39.13%	22.05%	8.39%
Severe Storms	15.22%	42.86%	28.26%	13.66%
Drought	71.34%	21.18%	5.61%	1.87%
Landslide/Subsidence	79.57%	13.62%	5.57%	1.24%
Infectious Disease	19%	37.38%	27.10%	16.51%
Water Contamination	25.08%	31.89%	24.77%	18.27%

Tab 6 Hazard Vulnerability & Probability Matrix 2018

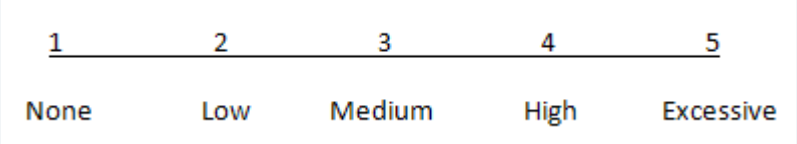
The following graphs contain a description/identification of all the hazards that have the potential to impact the 31 political subdivisions in Summit County, Ohio and a representation of the extent to which the community may be impacted. A representative from every jurisdiction attended (Tab 1) one of two workshops held in April, 2018 and participants worked in regional groups to rank individual political subdivisions. Additional community partners where present to offer their expertise including, Ohio EMA, Summit County Engineer's Office, Summit County Community and Economic Development GIS, Ohio Department of Natural Recourses, Summit County Soil and Water, Portage County EMA, Geauga County EMA, University of Akron, OHM Advisors (engineering group), Summit County Public Health, Akron Water Bureau, Cuyahoga Falls Water Department, The House of the Lord and Citizens Emergency Response Team.

The probability of future hazard events for each jurisdiction as well as the community's vulnerability to those hazardous events as required in §201.6(c)(2)(i) and §201.6(c)(2)(ii) is captured in this matrix. This matrix was updated to reflect the matrix used by Ohio EMA in SHARPPS.

The graph below will categorize probability and vulnerability using the following Matrix:

Frequency:

If a hazard/event does not apply it is given a value of NA. If a hazard/event resulted in no local disaster declarations, it scored a one. If the hazard/event resulted in one – two local disaster declarations, it has a Low Probability of occurrence and scored a two. If it resulted in three – five declarations, it has a Medium Probability and numerical score of three. If the hazard/event resulted in six – eight local disaster declarations, it has a High Probability and scored a four. If the hazard/event resulted in nine or more declarations, it should receive an Excessive Probability rating and a score of five. It is important to note that frequency was considered a key factor in determining the hazard profile. To that end, an Adjusted Frequency score was added for this factor and multiplied by 1.5 to weight the score more importantly than other factors.



Response:

Average Response Duration may be defined as "time on the ground" or the time-period of response to a hazard, or event. Transportation accidents may last a few hours whereas a tire fire may last a week or a flood several weeks. Duration, therefore, may not always be indicative of the degree of damage but it remains an important planning factor.

1	2	3	4	5
Less than ½ day	Less than 1 day	Less than 1 week	Less than 1 month	Less than 1 Year

Onset:

Average Speed of Onset may affect all other factors due to lack of warning or time to prepare for impact. The lead-time required protecting lives and property varies greatly with each event. For instance, a winter storm may develop so slowly that there is time to alert crews and emplace plows, but flash floods can occur with no warning.

1	2	3	4
Over 24 hours	12 – 24 hours	6 to 12 hours	Minimal to no warning

(Average) Impact:

Average Magnitude is the geographic dispersion of the hazard. For instance, how much of your community would be impacted by a flood or hazardous material incident? Similar to the Frequency, this factor is deemed more important and therefore received a weighted value of 1.25 above the raw score. The score is based on the percent of land area impacted by an event.

1	2	3	4
Negligible	Limited	Critical	Catastrophic
(Less than 10)	(10 to 25)	(25 to 50)	(More than 50)

Impact on Business:

The Impact on Business refers to enduring economic impact of the hazard on the community by an event. A score of one compares to a shutdown of critical facilities for less than 24 hours. Two equals a complete shutdown of critical facilities for one week. A score of three means a complete shutdown of critical facilities for at least two weeks. A score of four equals a complete shutdown of critical facilities for 30 days or more. This factor was developed and in keeping with the hazard analysis in the Ohio Standard Mitigation Plan developed by the Ohio EMA Mitigation Branch.

1 2 3 4

1- (Shutdown of critical facilities for less than 24 hours)
2- (Complete shutdown of critical facilities for one week)
3- (Complete shutdown of critical facilities for at least two weeks)
4- (Complete shutdown of critical facilities for 30 days or more)

Impact on Human (People):

This factor relates to the number of lives potentially lost to a particular hazard agent. This factor can vary between jurisdictions based on economic, geographic, and demographics of the particular populations. Therefore, some generalization need be inflected on this factor. This factor was developed and in keeping with the hazard analysis in the Ohio Standard Mitigation Plan developed by the Ohio EMA Mitigation Branch.

1	2	3	4
Minimum	Low	Medium	High
(Minor injuries)	(Some injuries)	(Multiple severe injuries)	(Multiple deaths)

Impact on Property:

This factor relates to the amount of property potentially lost to a particular hazard agent. This factor can vary between jurisdictions based on economics, geographic amount owned, and demographics of

the particular populations. Therefore, some generalization need be inflected on this factor. This factor was developed and in keeping with the hazard analysis in the Ohio Standard Mitigation Plan developed by the Ohio EMA Mitigation Branch.

1	2	3	4

1- (Less than 10% of property severely damaged)
2- (More than 10% of property severely damaged)
3- (More than 25% of property damaged)
4- (More than 50% of property severely damaged)

Tab 7 Community Hazard Assessment

Winter Storms							
					Impact on…		
Community	Frequency	Response Time	Onset Time	Impact	Business	Humans	Property
Akron	5	1	2	4	1	2	1
Barberton	4	3	2	4	2	2	1
Bath Township Twinsburg CERT	1	1	2	1	1	1	1
Boston Township	4	2	2	4	1	2	1
Clinton	5	3	1	4	1	1	2
Copley Township	1	1	1	1	1	1	1
Coventry	5	1	2	4	1	2	1
Cuyahoga Falls	1	2	3	4	1	2	1
Fairlawn	2	1	1	1	1	1	1
Green	5	2	3	2	1	1	1
Hudson	1	2	2	4	1	2	1
Lakemore	3	1	1	2	1	1	1
Macedonia	2	2	2	4	1	2	1
Mogadore	3	2	2	2	1	1	1
Munroe Falls	3	1	1	2	1	1	1
New Franklin	4	3	1	3	1	2	1
Northfield Center	4	2	2	4	1	2	1
Northfield Village	4	2	2	4	1	2	1
Northwest/Central Summit County	1	1	2	1	1	1	1
Norton	4	3	2	4	2	2	1

ODNR Parks and Watercraft	4	2	1	2	1	1	1
Peninsula	4	2	2	4	1	2	1
Reminderville/Twinsburg	2	1	2	4	1	1	1
Richfield	3	2	3	1	1	2	1
Sagamore Hills Township	3	2	2	4	1	2	1
Silver Lake	1	2	3	4	1	2	1
Springfield Township	3	1	1	2	1	1	1
Stow	1	2	2	4	1	2	1
Tallmadge	3	2	1	2	1	1	1
Twinsburg	3	2	3	2	1	1	1
University of Akron	1	2	1	1	1	1	1
Summit County	35%	2	2.5	4	1	2	1

Transportation Incidents							
					Impact on…		
Community	Frequency	Response Time	Onset Time	Impact	Business	Humans	Property
Akron	2	1	4	2	1	2	1
Barberton	2	2	4	2	1	2	1
Bath Township Twinsburg CERT	1	1	4	1	1	1	1
Boston Township	2	1	4	1	1	2	1
Clinton	2	1	4	1	1	4	1
Copley Township	3	2	4	2	1	4	1
Coventry	2	1	4	2	1	2	1

Cuyahoga Falls	1	1	4	2	1	2	1
Fairlawn	3	2	4	1	1	4	1
Green	3	2	4	4	1	2	1
Hudson	2	1	4	3	1	2	1
Lakemore	2	1	4	1	1	2	1
Macedonia	2	1	4	1	1	2	1
Mogadore	2	2	4	1	1	1	1
Munroe Falls	2	1	4	1	1	2	1
New Franklin	2	4	4	2	2	3	1
Northfield Center	1	1	4	1	1	2	1
Northfield Village	1	1	4	1	1	2	1
Northwest/Central Summit County	1	1	4	1	1	1	1
Norton	3	2	4	2	2	2	1
ODNR Parks and Watercraft	2	2	4	1	1	1	1
Peninsula	1	1	4	1	1	2	1
Reminderville	1	1	4	1	1	1	1
Richfield	3	2	4	2	1	3	2
Sagamore Hills Township	1	1	4	1	1	2	1
Silver Lake	1	1	4	1	1	1	1
Springfield Township	2	1	4	1	1	2	1
Stow	1	1	4	1	1	1	1
Tallmadge	1	1	4	1	2	2	1
Twinsburg	2	1	4	2	1	1	1
University of Akron	1	3	4	3	1	3	2
Summit County	20%	1	4	1	1	4	2

Hazardous Materials							
					Impact on…		
Community	Frequency	Response Time	Onset Time	Impact	Business	Humans	Property
Akron	2	3	4	2	1	3	1
Barberton	3	3	4	2	2	1	1
Bath Township Twinsburg CERT	1	1	4	2	1	1	1
Boston Township	1	1	4	2	1	2	1
Clinton	2	1	4	1	1	2	1
Copley Township	3	2	4	2	1	2	1
Coventry	2	3	4	2	1	3	1
Cuyahoga Falls	1	1	4	1	1	2	1
Fairlawn	3	1	4	1	1	1	1
Green	3	3	4	3	1	2	1
Hudson	2	1	4	1	1	2	1
Lakemore	2	1	4	2	1	2	1
Macedonia	1	1	4	2	1	2	1
Mogadore	2	3	4	1	1	1	1
Munroe Falls	1	1	4	2	1	2	1
New Franklin	3	2	4	1	1	2	1
Northfield Center	1	1	4	2	1	2	1
Northfield Village	1	1	4	2	1	2	1
Northwest/Central Summit County	1	1	4	2	1	1	1

Norton	3	2	4	2	1	2	1
ODNR Parks and Watercraft	3	3	4	2	1	2	1
Peninsula	1	1	4	2	1	2	1
Reminderville	1	1	4	1	1	1	1
Richfield	3	3	4	3	2	2	2
Sagamore Hills Township	1	1	4	2	1	2	1
Silver Lake	1	1	4	1	1	1	1
Springfield Township	2	1	4	2	1	2	1
Stow	2	2	4	1	1	1	1
Tallmadge	2	1	4	1	1	2	1
Twinsburg	2	1	4	3	1	1	1
University of Akron	1	2	4	2	1	2	2
Summit County	2.25%	1	4	2	1	1	1

Civil Disturbance/Terrorism							
					Impact on…		
Community	Frequency	Response Time	Onset Time	Impact	Business	Humans	Property
Akron	3	3	3	1	2	3	1
Barberton	1	4	4	2	1	4	2
Bath Township Twinsburg CERT	1	1	4	1	1	1	1
Boston Township	1	1	4	1	1	2	1

Clinton	2	1	4	2	2	4	1
Copley Township	1	1	1	1	1	1	1
Coventry	2	3	3	1	2	3	1
Cuyahoga Falls	1	1	4	2	1	2	1
Fairlawn	1	1	4	1	1	1	1
Green	2	3	4	2	1	2	1
Hudson	1	1	4	1	1	2	1
Lakemore	2	1	4	2	2	3	1
Macedonia	1	1	4	1	1	2	1
Mogadore	2	3	4	2	2	2	2
Munroe Falls	1	1	4	2	2	3	1
New Franklin	1	2	4	1	1	2	1
Northfield Center	1	1	4	1	1	2	1
Northfield Village	1	1	4	1	1	2	1
Northwest/Central Summit County	1	1	4	1	1	1	1
Norton	1	1	4	2	1	2	1
ODNR Parks and Watercraft	2	3	3	2	1	2	1
Peninsula	1	1	4	1	1	2	1
Reminderville	2	1	4	2	1	1	1
Richfield	2	1	2	3	1	1	1
Sagamore Hills Township	1	1	4	1	1	2	1
Silver Lake	1	1	4	1	1	1	1
Springfield Township	1	1	4	2	2	3	1
Stow	2	1	3	1	1	1	1
Tallmadge	1	1	4	2	2	3	1
Twinsburg	1	1	4	1	1	1	1

University of Akron	1	2	4	3	1	2	2
Summit County	10%	1	4	2	1	1	1

Tornado/Severe Storms							
					Impact on…		
Community	Frequency	Response Time	Onset Time	Impact	Business	Humans	Property
Akron	4	3	3	2	2	3	2
Barberton	4	2	4	2	1	2	2
Bath Township Twinsburg CERT	1	1	4	1	1	1	1
Boston Township	3	1	3	2	1	2	3
Clinton	5	3	4	2	2	4	2
Copley Township	3	2	4	4	1	1	3
Coventry	4	3	3	2	1	3	2
Cuyahoga Falls	2	3	4	2	1	2	1
Fairlawn	2	1	4	2	1	2	1
Green	3	4	3	2	1	2	1
Hudson	2	1	4	1	1	2	1
Lakemore	2	1	4	2	2	2	2
Macedonia	3	1	3	2	1	2	3
Mogadore	2	3	4	3	3	3	3
Munroe Falls	2	1	4	2	2	2	2
New Franklin	4	4	2	2	3	2	1
Northfield Center	3	1	3	2	1	2	3

Northfield Village	3	1	3	2	1	2	3
Northwest/Central Summit County	1	2	4	1	1	1	1
Norton	4	2	4	2	1	2	3
ODNR Parks and Watercraft	4	3	2	2	2	3	3
Peninsula	3	1	3	2	1	2	3
Reminderville	2	3	3	3	2	2	2
Richfield	3	3	3	2	1	2	1
Sagamore Hills Township	3	1	3	2	1	2	3
Silver Lake	2	3	2	2	1	2	1
Springfield Township	2	1	4	2	2	2	2
Stow	2	2	2	2	1	2	1
Tallmadge	3	2	4	2	2	3	2
Twinsburg	4	1	3	2	1	2	2
University of Akron	1	2	4	3	1	2	2
Summit County	1.9%	1	4	1	1	1	1

Flood/Dam Failures							
					Impact on…		
Community	Frequency	Response Time	Onset Time	Impact	Business	Humans	Property

Akron	5	5	3	2	2	2	N/A
Barberton	5	3	2	3	2	2	3
Bath Township Twinsburg CERT	2	2	3	1	1	1	1
Boston Township	3	2	3	2	1	2	2
Clinton	5	3	1	3	2	1	3
Copley Township	5	3	3	4	1	2	4
Coventry	4	5	2	2	2	2	3
Cuyahoga Falls	2	4	4	2	1	1	1
Fairlawn	1	1	4	1	1	1	1
Green	2	3	4	2	1	1	1
Hudson	2	4	4	1	1	1	2
Lakemore	2	1	3	2	1	1	2
Macedonia	3	2	3	1	1	1	1
Mogadore	3	3	3	2	2	2	3
Munroe Falls	2	1	3	1	3	3	2
New Franklin	4	3	1	2	2	2	1
Northfield Center	3	2	3	1	1	2	1
Northfield Village	1	2	3	1	1	1	1
Northwest/Central Summit County	2	2	3	1	1	1	1
Norton	5	3	2	3	2	2	3
ODNR Parks and Watercraft	3	3	2	3	2	4	4
Peninsula	3	2	3	2	1	2	2
Reminderville	4	1	3	2	1	1	2
Richfield	2	2	2	1	1	1	1
Sagamore Hills Township	3	2	3	1	1	2	1

Silver Lake	2	3	4	2	1	1	1
Springfield Township	2	1	3	1	2	1	1
Stow	2	4	3	1	2	1	2
Tallmadge	1	1	3	1	1	1	1
Twinsburg	2	1	2	2	1	1	1
University of Akron	1	1	3	1	1	1	1
Summit County	84%	2	2.5	1	1	1	1

Subsidence and Landslides							
					Impact on…		
Community	Frequency	Response Time	Onset Time	Impact	Business	Humans	Property
Akron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barberton	2	3	4	1	1	2	1
Bath Township Twinsburg CERT	1	1	4	1	1	1	1
Boston Township	2	1	4	2	1	1	1
Clinton	2	3	3	1	2	1	1
Copley Township	1	1	1	1	1	1	1
Coventry	1	1	1	1	1	1	1
Cuyahoga Falls	2	4	4	1	1	1	1
Fairlawn	1	1	4	1	1	1	1
Green	1	3	4	2	1	1	1
Hudson	1	2	4	1	1	1	1
Lakemore	1	1	4	1	1	1	1

Macedonia	1	1	4	1	1	1	1
Mogadore	2	4	3	2	2	2	2
Munroe Falls	1	1	3	2	2	2	2
New Franklin	1	3	4	1	1	1	1
Northfield Center	1	1	4	1	1	1	1
Northfield Village	1	1	4	1	1	1	1
Northwest/Central Summit County	1	1	4	1	1	1	1
Norton	2	3	4	1	1	2	1
ODNR Parks and Watercraft	2	2	4	1	1	1	1
Peninsula	2	1	4	2	1	1	1
Reminderville	1	1	1	1	1	1	1
Richfield	2	2	4	2	1	1	1
Sagamore Hills Township	1	1	4	1	1	1	1
Silver Lake	1	1	4	1	1	1	1
Springfield Township	1	1	4	1	1	1	1
Stow	1	1	1	1	1	1	1
Tallmadge	1	2	4	1	1	1	1
Twinsburg	1	1	4	1	1	1	1
Summit County	2.75%	1	4	1	1	1	1

Infectious Diseases							
					Impact on…		
Community	Frequency	Response	Onset	Impact	Business	Humans	Property

		Time	Time				
Akron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barberton	2	5	1	4	4	4	1
Bath Township Twinsburg CERT	1	4	1	2	2	2	1
Boston Township	1	5	1	4	1	3	1
Clinton	2	5	1	4	1	4	1
Copley Township	2	4	4	2	1	4	1
Coventry	1	4	1	1	1	4	1
Cuyahoga Falls	2	5	4	3	1	4	1
Fairlawn	2	1	4	1	2	1	1
Green	2	4	3	2	1	1	1
Hudson	1	5	2	1	1	4	1
Lakemore	2	2	4	2	2	2	1
Macedonia	1	2	1	4	1	3	1
Mogadore	2	4	1	4	2	2	1
Munroe Falls	2	1	4	3	2	3	2
New Franklin	1	4	2	2	2	4	1
Northfield Center	1	3	1	4	1	3	1
Northfield Village	1	3	1	4	1	3	1
Northwest/Central Summit County	1	4	1	2	2	2	1
Norton	2	5	1	4	4	4	1
ODNR Parks and Watercraft	2	5	1	4	3	4	1
Peninsula	1	5	1	4	1	3	1
Reminderville	1	1	1	1	1	1	1
Richfield	1	1	1	1	1	1	1

Sagamore Hills Township	1	3	1	4	1	3	1
Silver Lake	1	5	4	3	1	4	1
Springfield Township	2	2	4	2	2	3	1
Stow	1	5	1	1	1	1	1
Tallmadge	2	2	4	3	2	3	1
Twinsburg	2	3	1	2	2	2	1
University of Akron	1	3	4	2	1	3	1
Summit County	22%	5	1	1	2	1	1

Tab 8 2003 Mitigation Action Plan Project Status

This plan includes hazard reduction and prevention strategies for projects that affect every community in the County. Projects are selected to be included in the Plan based on criteria set by the Summit County Emergency Management Executive Committee. The Executive Committee consists of local officials representing all levels of government. The Executive Committee evaluates and scores applications using a locally developed methodology based on criteria recommended by the Federal Emergency Management Agency (FEMA). This evaluation criteria focuses on maximizing the cost benefit of the project with particular emphasis on new and existing buildings and infrastructure. The filter criteria is available on the Summit County Emergency Management Agency Web Site at **www.co.summit.oh.us/executive/ema** Hazard Reduction and Prevention or see Section III C of this plan.

After evaluating and scoring the projects, the Executive Committee creates a list of high priority projects that are submitted to the Ohio Emergency Management Agency (OEMA). OEMA reviews the project selection and evaluation methodology used by the County for completeness and project eligibility. If all requirements are met on the state level, the project is then eligible for submission to FEMA when post and pre-mitigation funds become available. Projects that are included in the Hazard Reduction and Prevention Plan have first priority.

Annually, communities have the opportunity to submit projects that prevent or reduce damage or loss of life due to disasters. Applications are sent out the first of the year. Applicants have the opportunity to attend a workshop, which provides information and resources on filling out the application. The Hazard Reduction and Prevention Plan must maintain at least one project affecting each jurisdiction in Summit County.

The following projects are listed in priority order based on an evaluation by the Subcommittee and approved by the Emergency Management Executive Committee. Projects identified as "Countywide" refer to all municipalities, villages and townships within the borders of Summit County (Refer to Section V. A. 5. for a complete listing). All of these projects have been submitted to the Ohio Emergency Management Agency for HMGP funding. When a project is selected for development, a cost benefit analysis will be run by Ohio Emergency Management Agency. Project timelines are dependent on available funding.

We have had much success with the projects completed in the plan. 500 Weather Alert Radios where distributed to places where large groups of people gather and outdoor warning sirens in Silver Lake and Cuyahoga Falls have added to the community's ability to take shelter and reduce injuries during severe weather and tornado events. Summit County developed a blueprint for community growth identifying natural hazards, identifying riparian setbacks, and instituting new flood plain legislation. Silver Lake reduce flooding vulnerability was reduced in Silver Lake by acquisition, bank stabilization and stormwater wingwalls. The Village of Clinton reduced flooding by acquiring two

homes at North and Water Street to eliminate the repetitive loss to those structures. Flood Plan Mapping was done by USGS.

Action	Responsible	How	Where	Cost	Status
Alert Radios	Summit County Emergency Management Agency	Provide alert radios to buildings where large groups gather.	Countywide	$45,000	Completed
Flood Plain Re-mapping	Each jurisdictional Floodplain Administrator, Summit County Engineers' Office	Provide useful planning data to enable the avoidance of flood damage.	Cities of Akron, Barberton, Cuyahoga Falls, Fairlawn, Green, Hudson, Macedonia, Munroe Falls, New Franklin, Norton, Stow, Tallmadge, and Twinsburg; and the Villages of Boston Heights, Clinton, Lakemore, Mogadore, Northfield, Peninsula, Reminderville, Richfield, and Silver Lake	Existing budgets: ~$489,598 per phase there are 5 phases. Start date: April 1, 2007 End date: September 1, 2018	Completed By USGS

Natural Resources Education Outreach	Summit County Department of Community and Economic Development	Provide natural resources study to the community in order to prevent flooding and landslide disasters.	Countywide	$50,000	Completed
Summit County Comprehensive Plan	Summit County Department of Community and Economic Development	Develop a blueprint for community growth and development, taking identified natural hazards into account.	Countywide	$100,000	Completed
Landslide Mitigation Study	Each jurisdictional Service Department, Summit County Engineer`s Office	Develop a comprehensive and effective strategy for reducing risk from landslides and slope movement.	Bath Township, Boston Township, Richfield Township, Sagamore Hills Township. Cities of Fairlawn and Macedonia; Villages of Boston Heights, Northfield, Peninsula, and Richfield	Existing budget: $75,000 – 1 year, Start date: April 1, 2007 End date: September 1, 2018	Complete with annual review.

Action	Responsible	How	Where	Status
Acquisition	Village of Silver Lake	Acquire/demolish 2 residents to redesign stream bed for retention of storm water.	Village of Silver Lake	Completed
Warning Sirens	City of Cuyahoga Falls	7 Outdoor warning sirens	City of Cuyahoga Falls	Completed
Warning Sirens	Village of Silver Lake	Installation of a tornado warning siren system	Village of Silver Lake	Completed
Planning	City of Cuyahoga Falls	Develop a mitigation plan	City of Cuyahoga Falls	Completed
Retrofitting	City of Hudson	Retrofit existing plumbing/ 20 residences by installing suspended or “hung” plumbing	City of Hudson	Completed
	City of Cuyahoga Falls	Mobile generator	City of Cuyahoga Falls	Deferred due to lack of funding
	Hudson Library-Historical	Replace rust damaged exterior door	City of Hudson	Completed
Storm Water Control	Metro Parks	Stream bank stabilization along Sand Run Creek	Summit County	Ongoing, Keep project in plan
	City of Munroe Falls	Installation of backup generator to provide for city water pump facility	City of Munroe Falls	Ongoing, Keep project in plan
Storm Water Control	Village of Silver Lake	Construction of “wingwalls” to control flow of	Village of Silver Lake, 3129 Dover	Completed

		storm water	Road	
	Village of Silver Lake	Emergency 200 amp generator for town hall building	Village of Silver Lake	Completed
	Village of Silver Lake	Purchase portable generator w/trailer for water pump house	Village of Silver Lake	Deleted, not a priority at this time.
Storm Water Control	Village of Silver Lake	Bank stabilization by reinforcing with concrete blocks	Village of Silver Lake 3130 Dover Road	Completed
Debris	City of Stow	Debris removal throughout the city	City of Stow	Completed
Storm Water Control	Twinsburg Twp. City of Twinsburg and Village of Reminderville	Storm water drainage improvement	Twinsburg Twp. Marwell and Darrow Roads	90% Complete Start date: April 1, 2007 End date: 2018
Storm	Twinsburg Twp. City of Twinsburg and Village of Reminderville	Study lower streets, adding	Twinsburg Twp.	Ongoing Start date: April 1, 2007 End date: 2023

2013 Flooding lead to the Wolf Creek Rehabilitation Study was done by the Summit County Engineer in 2015 to analyze the Wolf Creek Drainage. Since this study, the Summit County Engineer has created a stormwater utility with Bath Township as the piolet community. The Engineer will make the stormwater utility available to all Summit County Communities. Summit County currently manages drainage through the Joint County Ditch Process.
Flooding in the western part of the county has prompted communities in that area to create The Yellow Creek Watershed. Studies are ongoing.

City of Fairlawn:

(1) The City of Fairlawn has 2 projects for future consideration, the Schocalog Creek improvements and the Smith Ditch Improvements. Schocalog Creek has been studied, and a plan has been devised in the event that funding becomes available. The Smith Ditch project will be studied this year to devise a plan. The concerns with both areas are flooding and loss of land. No cost estimate currently exists, but intentions are to have a cost estimate once the second study is completed.

Lead Agencies: Fairlawn Public Service Dept.
Start Date: September 1, 2013
End Date: Complete; The wetland oxbow in Fairlawn took three years from idea to completion in 2016. The project started with the initiative of the Service Director and Mayor to reduce local flooding in the southern portion of the city. The intersection of Brunsdorph and Ridgewood Road had historically flooded and so had the homes nearby. Sediment reduction is especially important for this project in Fairlawn due to its location along Smith Ditch.

Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match

City of Cuyahoga Falls:

(1) Purchasing several homes in an effort to reclaim land and prevent future flooding. Addresses estimated costs to be supplemented at a later time.

Lead Agencies: Cuyahoga Falls Fire Dept.
Start Date: September 1, 2013
End Date: ongoing, as funding becomes available.
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: Ongoing, the city will continue to seek out properties.
The acquisition of four properties between 6th and 7th Street and Lincoln and Silver Lake in Cuyahoga Falls and the construction of a rain garden has resolved the repetitive

loss to those structures and decreasing the vulnerability of surrounding home. There were two additional homes that were not acquired and those home no longer flood due to the mitigation project. In 2019 the garden to schedule for replanting due to overgrowth.

(2) Looking into constructing a holding tank to secure flood water and prevent ongoing damages.

Lead Agencies: Cuyahoga Falls Fire Dept.
Start Date: September 1, 2013
End Date: Deferred, current budget cannot support this project.
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match

(3) Improving emergency generation capacity of the city for critical infrastructure buildings.

Lead Agencies: Cuyahoga Falls Fire Dept.
Start Date: September 1, 2013
End Date: ongoing, as funding becomes available.
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match

Township of Coventry: (City of Akron, Coventry Twp.)

(1) Brewster Creek flooding project (located near Penguin Apartment complex): buyout of approximately two 4-unit buildings to return to open space; buyout of five 7-unit buildings and two 10-unit buildings. Additionally, there are three 7 unit and one 4-unit buildings that are experiencing chronic flooding. This project would be a joint effort between the Township of Coventry and Muskingum Watershed Conservancy District. The plan is to utilize a buyout program and return the aforementioned areas to open space. The physical addresses will be supplemented along with the estimated cost of the project(s).

Lead Agencies: Township of Coventry (Trustees`, Road Dept.), Muskingum Watershed Conservancy District
Start Date: September 1, 2013
End Date: ongoing, as funding becomes available.
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match

(2) Coventry Township is seeking the funds to complete phases 2 & 3 of a combined 5-phase storm water infrastructure improvement. The initial step (Phase 1) of this effort

was completed with the help of the CDBG grant program by funding a large portion of the replacement of Bender Ave. and Iris Ave. storm water culverts. It is important to note that each phase must be complete (from downstream, upstream) in order to achieve our mitigation goal. Completion of phase 2 within Cottage Grove park and phase 3 along Cosmos Ave will allow the Summit County Engineer's Office the opportunity to complete phase 4 (Killian Road culvert). When phases 1-4 are completed, Coventry Township will have drastically mitigated the flooding hazard on Killian Road and protected the low-income families within the drainage area. After resolving the majority of the hazard with phases 1-4, Coventry will continue to pursue Phase 5 (Buttercup Ave.), the last step. It will provide a finished modern, adequately sized, storm-water infrastructure plan for the entire drainage area.

It is the mission of Coventry Township and the County Engineer to see the full scope of this project completed, with full storm water drainage infrastructure upgrades throughout the entire area. If Coventry Township receives the needed external funding to complete phases 2 & 3, the Summit County Engineer's Office is committed to the 4th phase. Together, the finished projects will have drastically improved the quality of life for many low-income families, by mitigating this flooding problem. Coventry Township will continue its long-standing history of helping low and moderate-income families by enhancing and supporting any and all services that they possibly can within these areas.

Lead Agencies: Township of Coventry (Trustees`, Road Dept.)
Start Date: September 1, 2013
End Date: Phase 2 complete and phase 3 40% complete
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: Phase 1 of 5 complete, seeking funding for phases 2-3.

Township of Copley: (City of Barberton, City of Norton, Copley Township)

(1) Installation of 6 tornado sirens.

Lead Agencies: Barberton Service Dept., Norton Municipal Engineer, Copley Twp. Service Dept.
Start Date: September 1, 2013
End Date: Complete, tornado sirens will alert people to take protective action and reduce injuries from severe weather and tornados.
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match

(2) The development of a flood action plan for Barberton, Copley and Norton (BCN) that will mitigate storm water flooding. The target area to begin mitigation is in the Little Farms area of Copley. Research is being done to look into becoming a sub-region of the Muskingum Watershed District.

Lead Agencies: Barberton Service Dept., Norton Municipal Engineer, Copley Twp. Service Dept.
Start Date: September 1, 2013
End Date: Ongoing, a study was done but application to the Watershed is pending.
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match.

Village of Clinton:

(1) The Village would like to invest in a backup generator and kitchen appliances for the Village Hall. This would allow for the building to be used as a shelter for evacuees during inclement weather. The Hall is a former First National Bank with concrete block and brick construction, and a large basement area. The upstairs also has a banking vault that could be used for handicapped residents. This area is already handicapped accessible. The goal is to use the resources available as a cost effective measure, rather than building new structure.

Lead Agencies: Safety Office
Start Date: September 1, 2013
End Date: ongoing, as funding becomes available.
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match

(2) The Village is also interested in an early warning siren. Being located in a rural area, the Village does not yet have the same advanced notice as the more populated areas of the County.

Lead Agencies: Safety Office
Start Date: September 1, 2013
End Date: ongoing, as funding becomes available.
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match

City of Hudson:

(1) Hudson is interested in an acquisition/demolition project, with two cost alternatives. Cost Alternative #1: Culvert Replacements and Channel Improvements. Scope of project: Culvert replacement at two locations along this minor tributary for the Mudbrook Watershed. The culverts are located at two shared driveways for a total of five (5) residential properties. This drive is the only means of ingress and egress for emergency response vehicles, as well as, residents to use in order to get to the residential properties. Three of the residential properties are located within a FEMA Flood Zone AE and the elderly owners have been evacuated in the past by emergency personnel due to the high levels of storm runoff in the existing culverts. The properties currently have three (3) 36” circular storm culverts. Estimated cost: OEPA Permits and Engineering Design: $25,000.00, Construction: $100,000.00.

Total: $125,000.00. Description of how this project permanently reduces damages or losses: The culvert and channel improvements will insure that the primary driveways to five residential homes are passable for emergency response vehicles up to and including, larger storm events as described in the existing engineering study of this area.

Lead Agencies: City of Hudson Engineer`s Office
Start Date: September 1, 2013
End Date: ongoing, as funding becomes available.
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match

(2) Type of Project - Acquisition/Demolition: Cost Alternative #2: Acquisition and Demolition (3) Residential Homes. Scope of project: The acquisition and demolition alternative involves the three homes at 726, 730 and 736 Terex Road. Estimated project cost: Acquisition of three Properties: $867,000.00. Permits, Moving Fees & Demolition of three properties: $100,000.00. Total: $967,000.00. Description of how this project permanently reduces damages or losses: The acquisition of the properties will turn the area into an open space with no impervious surface area and no need to provide emergency response to the area.

Lead Agencies: City of Hudson Engineer`s Office
Start Date: September 1, 2013
End Date: ongoing, as funding becomes available.

<u>Summit Metro Parks</u>

(1) Sand Run stream flows through Sand Run Metro Park in the Cities of Fairlawn and Akron, Ohio. As the cities developed, stormwater was diverted into the stream which now suffers extreme flooding during storm events. The City of Akron has identified at least 50 stormwater outfalls to Sand Run with another possible 50 outfalls that are undocumented. Stream bank erosion is severe and threatens property, infrastructure (roads, buildings, lodges, utility ROW's) as well as the biodiversity and ecological integrity of the park. Summit Metro Parks has prepared an extensive plan to address flooding in a manner that will preserve, or improve, the existing ecology of the park and surrounding communities. The plan includes bank stabilization, grade control structures, and improved culverts.

Lead Agencies: Summit Metro Parks
Start Date: 2003
End Date: ongoing, as funding becomes available.

Tab 10 2018 Mitigation Projects

The following projects are listed in priority order based on an evaluation by the submitting jurisdiction and approved by the Emergency Management Executive Committee. The Planning Group was provided a copy of the STAPLEE Action Evaluation Table to help them prioritize their hazard mitigation actions.

STAPLEE ACTION EVALUATION TABLE:																									
Alternative Actions	**STAPLEE Criteria Considerations** + Favorable - Less favorable N Not Applicable																								
	S (Social)		**T** (Technical)			**A** (Administrative)			**P** (Political)			**L** (Legal)			**E** (Economic)				**E** (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	

All of these projects may be to the Ohio Emergency Management Agency for HMGP funding. When a project is selected for development, a cost benefit analysis will be run by Ohio Emergency Management Agency. Project timelines are dependent on available funding. All estimates are based on June, 2018 dollar values and the best information available at the time. Project cost may vary at the time of actual implementation of the project.

Priority	Jurisdiction	Project type	Contact	Status	Estimate	Project Description
1	Akron	Acquisition/Demolition	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Acquisition and demolition of repetitive loss structures located in floodplain/flood prone areas.
2	Akron	Bank Stabilization	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Stabilization and restoration of the Little Cuyahoga River where erosion of the bank is occurring near Lock 18, upstream of the Rack 26 overflow to protect electric utility structures, the Little Cuyahoga Interceptor sewer and the Towpath Trail.
3	Akron	Storm Water	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Repair of storm sewer outlets causing erosion to protect nearby structures and utilities.
4	Akron	Landslides	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Repair and stabilization of slopes and protection and repair of structures and utilities affected by landslides.
5	Akron	Structural	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Reinforcement of berms along the Ohio Canal.
6	Akron	Bank Stabilization	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Stabilization and restoration of the Little Cuyahoga River where erosion of the bank is occurring to protect storm sewer and manholes.
7	Akron	Bank Stabilization	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Stabilization and restoration of the Little Cuyahoga River where erosion of the bank is occurring near Cascade Village.
8	Akron	Dam Repair	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Construction of the Brittain Road Reservoir Replacement project to replace an existing water reservoir.
9	Akron	Generator	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Install and activate emergency generator at Municipal Service Garage which houses equipment and staff that would be utilized in a disaster situation.
10	Akron	Storm Water	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Acquisition of property for and construction of storm sewer and storm water management best management practices in floodplain/flood prone areas.
11	Akron	Bank Stabilization	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Protection of sanitary sewer located along Yellow Creek.
12	Akron	Study	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Develop floodplain mapping for Brewster Creek.
13	Akron	Bank Stabilization	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Stabilization and restoration of the Cuyahoga River where erosion of the bank is occurring near the Cascade Valley Park ballfields.

14	Akron	Property Protection	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Reclaim areas disturbed by mining operations and address problems including mine openings, landslide, highwalls, erosion and subsidence.
15	Akron	Emergency Service	Genny Hanna, P.E. City of Akron Engineering	2018-2023		Implement Area-wide Automatic Vehicle Location (AVL) System and Software. Each entity or jurisdiction would have their own account, but would utilize the same system/software throughout the region for coordinated responses and allow the Emergency Operations Center (EOC) location and data access to all jurisdictions responding to the incident.
1	Barberton	Acquisition/Demolition	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	1.7M	Acquire and Demolition 28 properties on near westside. All properties have experience repetitive flooding.
2	Barberton	Water Retention	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	300,000	By expanding the retention pond the City will be able to store excess water from Wolf Creek reducing the amount of water flooding nearby streets. Thereby reducing health and safety risks for property owners and future rescue workers. In addition, the project will reduce the need to provide emergency rescue services, flood insurance, and federal disaster assistance in the future.
3	Barberton	stormwater/restoration	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	950,000	Constructing sewers and curbs water will be directed and stored away from structures. Flood water will be contained in streets as a temporary storage area.
4	Barberton	Acquisition/Demolition	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	225,000	Acquiring the proposed properties, the City will remove flood-prone homes from the area, thereby eliminating health and safety risks for property owners and future rescue workers. In addition, the project will eliminate the need to provide emergency rescue services, flood insurance, and federal disaster assistance in the future.
5	Barberton	Property Protection	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	500,000	Residential construction in the South Barberton area prior to the July 2016 FEMA FIRM Map Revision was not in a 100 yr. Flood Zone. A number of post- 1990 residences, now in the flood zone, include basements that are subject to flooding. First floor elevations are generally above the Base Flood Elevation.

6	Barberton	Storage Basin	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	500,000	By creating the basin City will be able to store excess water from Wolf Creek reducing the amount of water flooding streets and homes downstream. Thereby reducing health and safety risks for property owners and future rescue workers. In addition, the project will reduce the need to provide emergency rescue services, flood insurance, and federal disaster assistance in the future. Wolf Creek and Pigeon Creek Confluence
7	Barberton	Storage Basin	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	850,000	Increasing the retention ponds storage capacity will reduce flooding downstream for residents. Thereby reducing health and safety risks for property owners. Robinson Avenue
8	Barberton	Storage Basin	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	400,000	Mud Run, on the City's NE side has experienced significant flooding over the past six years. Flooding affects an industrial section of the City. Barberton's Harter Park, north of the industrial area, has a large open area adjacent to Mud Run with a potential for floodwater storage.
9	Barberton	Increase Wetland	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	2M	The Trucen Farm area of southeast Barberton has over 50 acres of wetlands that are classified as Category 1, 2 & 3. The site also contains commercially developable sites. The area has the potential for additional stormwater storage by means of constructed wetlands for Class 1 & 2 Mitigation Projects. This potential project would store stormwater from the Austin Heights area that flows into the South Barberton Flood Zone.
10	Barberton	Acquisition/Demolition	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	2M	Property acquisition to remove affected property owners from floods on a voluntary basis. Near westside
11	Barberton	Acquisition/Demolition	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	250,000	Property acquisition to remove affected property owners from floods on a voluntary basis.
12	Barberton	Acquisition/Demolition	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	500,000	Hudson Run, on City's west side experiences moderate flooding for two apartment complexes and eight residences. The city is examining obtaining vacant floodplain property for additional flood improvements.

						Also, low lying residential property subject to repetitive flooding.
13	Barberton	Acquisition/Demolition	Caroline Crawford, Stormwater Manager, City of Barberton	2018-2023	500,000	Restoration and maintenance of drainage ditch that collects water from the Giant Eagle Plaza and Conservatory Dr. areas and drains to South Barberton.
1	Bath	Stormwater	Vito Sinopoli, Bath Township Administrator	2018-2023	1.7M	The Sanctuary proposal along Wye Road and unnamed stream enters Yellow Creek will prevent flooding and achieve water quality improvements by processing all the runoff from the project area through a to bio-infiltration system designed to accommodate up to the 10-Year storm.
2	Bath	Landslide	Vito Sinopoli, Bath Township Administrator	2018-2023		See Richfield
3	Bath	Safe Rooms	Vito Sinopoli, Bath Township Administrator	2018-2023		Support Residential and Community efforts to find locations for safe rooms.
1	Clinton	Warning Siren	Jason Popiel, Project Engineer, OHM Advisors	2018-2023	20,000	The siren would be located at the intersection of S. Cleveland Massillon Road and Main Street. This early warning system will protect critical facilities and mitigate loss of life.
2	Clinton	Safe Rooms	Jason Popiel, Project Engineer, OHM Advisors	2018-2023	50,000	Installation of a generator and kitchen appliances at Village Hall to be used as a community shelter.
1	Boston Heights	Acquisition/Demolition	Brian Gorog, Municipal Representative, OHM Advisors	2018-2023	TBD	Acquire, demolish and elevate flood-prone properties.
2	Boston Heights	Safe Rooms	Brian Gorog, Municipal Representative, OHM Advisors	2018-2023	TBD	Support Residential and Community efforts to find locations for safe rooms.
1	Boston Township	Landslide	Amy Anderson, President, Township Trustee	2018-2023		See Richfield
1	Copley	Study	Janice Marshall, Copley Township Administrator	2018-2023	50,000	Study of Parcels upstream of Pigeon Creek, Schocolog Run, Wolf Creek and Ditch 38 to determine which would be most advantageous to purchase to control flood waters.
2	Copley	Acquisition/Demolition	Janice Marshall, Copley Township Administrator	2018-2023	1M	Purchase those properties identified as most beneficial to restore or capture flood waters that ultimately flood subdivisions.

3	Copley	Acquisition/Demolition	Janice Marshall, Copley Township Administrator	2018-2023	500,000	Acquire, demolish and elevate flood-prone properties
4	Copley, Barberton, and Norton	Study	Janice Marshall, Copley Township Administrator	2013/ongoing		The development of a flood action plan for Barberton, Copley, and Norton that will mitigate stormwater flooding. The target area to begin in the Little Farms area of Copley.
1	Coventry	Acquisition/Demolition	Anna Bryant, Coventry Township Administrator	2013/ongoing		Acquire, demolish and elevate flood-prone properties with full stormwater drainage infrastructure upgrades.
2	Coventry	Public Water Extension	Anna Bryant, Coventry Township Administrator	2018-2013		There are at least four community wells in the Pace/Olden Avenue area. Frequent pipe failures leave people without water and undermine our roads. There needs to be a plan to extend Akron water to this area of the Township.
1	Cuyahoga Falls	Acquisition/Demolition	Paul Moledor, Cuyahoga Falls Fire Chief	2013/ongoing		Purchase several homes in an effort to reclaim land and prevent future flooding.
2	Cuyahoga Falls	Stormwater	Paul Moledor, Cuyahoga Falls Fire Chief	2018-2023	1M	Construction and improving storm water sewers in the Purdue/Graham Road area. This will control flooding and prevent ongoing damages from flooding
3	Cuyahoga Falls	Stormwater	Paul Moledor, Cuyahoga Falls Fire Chief	2018-2023		Improvements to the Mud Brook storm water management area. Specific address and estimated costs to be supplied at a later time as planning continues on this project.
4	Cuyahoga Falls	Generator	Paul Moledor, Cuyahoga Falls Fire Chief	2018-2023		Improving emergency generation capacity of the city for critical infrastructure buildings, including running redundant electrical lines.
5	Cuyahoga Falls	Landslide	Paul Moledor, Cuyahoga Falls Fire Chief	2018-2023		See Richfield
1	Fairlawn	Stormwater	Ernie Staten, Deputy Director of Public Service, City of Fairlawn	2019	$650,000	Storm Water Project – Omnova Steel Culvert which drains 400 acres but would flood the Fairlawn Business District north to south from Sand Run Parkway to West Market and east to west from Miller Road to Ghent Road
1	Green, New Franklin and ODNR	Water Pumps	Wayne Wiethe, Director of Planning, City of Green	2018-2023		This project would be in conjunction with the City of New Franklin and ODNR. The project consists of the purchase and installation of permanent pumps to remove flood waters on S. Main St. stemming from major rain events and legacy issues with the Nimisila Reservoir embankment along S. Main St. The roadway becomes impassable at times and poses a risk to

						homes located in New Franklin. See attached map for project location.
2	Green	Safe Rooms	Wayne Wiethe, Director of Planning, City of Green	2018-2023		This project consists of the construction of a structure able to withstand tornado conditions. The project is proposed to be located at Greensburg Park, which has 4 baseball fields and a multi-purpose field that provides for many flag football and lacrosse games, simultaneously. The safe zone building would need to be constructed to house a large number of people in the case of tornado warnings in the vicinity of the park during these events. See map for location.
3	Green	Acquisition/Demolition	Wayne Wiethe, Director of Planning, City of Green	2018-2023		The City of Green has two historically flood prone areas. One is located in the northeast quadrant of the City and is referred to as the headwaters of the Tuscarawas River. The second is located in the southwest quadrant of the City and is part of Nimisila Creek, which receives water from the Nimisila Reservoir Dam spillway. The number of structures within these flood areas is four (4). This would provide a mechanism to acquire the properties and demolish the structures if necessary to mitigate further loss of property and possibly life. See map for location.
4	Green	Reclamation of Mines	Wayne Wiethe, Director of Planning, City of Green	2018-2023		The City of Green has a number of abandoned mines (underground and surface). This project would address issues regarding proper closure of mine openings, subsidence issues, and reclamation of areas disturbed by surface mining, leaving highwalls and unsafe areas. This project is currently referenced in the Summit County Hazard Mitigation Plan.
1	Hudson	Dam Improvements	Bradley Kosco, City of Hudson Engineer	2018-2023	1.7M	The dam must be made to pass 50% of the probable Maximum Flood. Also, each dam must have an emergency Spill Way
2	Hudson	Acquisition/Demolition	Bradley Kosco, City of Hudson Engineer	2018-2023	1.275M	Acquisition and demolition of three residential homes on Terex Road.

3	Hudson	Stormwater	Bradley Kosco, City of Hudson Engineer	2018-2023	265,000	Acquisition/Demolition and culver removal and replacement at two driveways that are shared by five property owners. These properties sit within the FWMA 100 year flood plain.
1	Lakemore	Stormwater	Tracy Fast, Fiscal Officer, Village of Lakemore	2018-2023		The Village of Lakemore hopes to install a storm sewer for flood-prone properties. Installing lines or replacing failing lines is necessary as many properties are at elevations below the lake.
2	Lakemore	Generator	Tracy Fast, Fiscal Officer, Village of Lakemore	2018-2023		The Village would like to replace the generator at the sanitary sewer lift station to ensure the lift station is always pumping to force main.
3	Lakemore	Generator	Tracy Fast, Fiscal Officer, Village of Lakemore	2018-2023		The Village would like to install a generator at the public service garage where the jet truck and other vehicles are stored to hold water to ensure they do not freeze and batteries are always charged.
4	Lakemore	Safe Rooms	Tracy Fast, Fiscal Officer, Village of Lakemore	2018-2023		Many homes in the Village do not have a basement or safe area to take shelter during extreme weather.
1	Macedonia	Acquisition/Stormwater	Stan Kosilesky, P.E. MPA, Chagrin Valley Engineering	2018-2023	603,000	Acquire and install Stormwater management features, including the upsizing of an existing storm sewer and installation of a detention pond.
2	Macedonia	Acquisition/Stormwater	Stan Kosilesky, P.E. MPA, Chagrin Valley Engineering	2018-2023	1.3M	Acquire and install Stormwater management features, including the demolition of existing houses and upsizing the culvers under Ledge Road.
3	Macedonia	Study	Stan Kosilesky, P.E. MPA, Chagrin Valley Engineering	2018-2023	750,000	Crow Berkshire inflow and infiltration Study. The City of Macedonia is experience flooding problems in the Crow Berkshire area as identified in the various sub-watersheds. This study will assist the City in identifying the Inflow and Infiltration and potential cross connection problems with proposed solutions.
1	Mogadore	Acquisition/Demolition	Michael Rick, Mayor, Village of Mogadore	2018-2023	TBA	Acquire, demolish and elevate flood-prone properties
1	Munroe Falls	Pump Station Emergency Power	Jim Bowery, Service Director, City of Munroe Falls	2018-2023		Emergency power, upgrades to pump station controls and telemetry to allow adjustment of the booster pump operation and monitoring of station status.

2	Munroe Falls	Back-up Water line	Jim Bowery, Service Director, City of Munroe Falls	2018-2023		The new line would help with redundancy in the distribution system should the only line serving the North side of town have an issue. The addition of the replacement of the cement asbestos line and river crossing would also improve the water quality, the volume of water along South River for firefighting and the removal of the cement asbestos water main.
1	New Franklin	Acquisition/Stormwater	Paul Adamson, Mayor, City of New Franklin	2018-2023	4M	South Main Street experiences flooding approximately between Nimisila Road and Center Road. Numerous factors contribute to the flooding; aging/failing infrastructure, high groundwater, and inadequate stormwater management. The project will replace over 3,000' of failing and hydraulically inadequate storm sewer. Potentially storm water detention will be evaluated using an existing series of ponds and potential property acquisition.
2	New Franklin	Elevation	Paul Adamson, Mayor, City of New Franklin	2018-2023	1M	Benner Road bridge is structurally and hydraulically deficient. The bridge's current structural condition is inadequate for heavy emergency vehicles and further deterioration will eventually make the structure impassable. Additionally, the elevation of the bridge causes flooding of the creek and property damage to adjacent parcels. The project will reconstruct the bridge.
3	New Franklin	Elevation/Stormwater	Paul Adamson, Mayor, City of New Franklin	2018-2023	1M	The profile grade of Kepler Road will be re-aligned to raise the roadway above flood elevation to avoid road closure during rain events. A series of shallow culverts will maintain flow under the roadway.
4	New Franklin	Safe Rooms	Paul Adamson, Mayor, City of New Franklin	2018-2023	TBD	Construct safe rooms potentially at the Manchester Middle School and City Hall building to serve the occupants of the building.
5	New Franklin	Generator	Paul Adamson, Mayor, City of New Franklin	2018-2023	TBD	Install emergency backup generator at the Service Garage. The generator will ensure the continued function of the complex, which includes fueling for all City emergency vehicles. Additionally a keycard access system is to be installed to provide safe and swift access for emergency vehicles.

6	New Franklin	Mine Reclamation	Paul Adamson, Mayor, City of New Franklin	2018-2023	TBD	The City of New Franklin has abandon mines throughout the City. In particular, Lockhart Park has an abandoned mine entrance that appears to have experience settlement over the years. The project will reclaim areas disturbed by coal mining operations. Types of problems addressed include: mine openings, landslides, highwalls, erosion and subsidence.
7	New Franklin	Dam Pump	Paul Adamson, Mayor, City of New Franklin	2018-2023	TBD	See Green
	Northfield Center Township	Safe Rooms	Rich Reville, President, Northfield Center Township Trustee	2018-2023	75,000	Modifying the basement area of the town hall for a safe area for emergencies.
1	Northfield Village	Stormwater	Richard Wasosky, P.E., P.S., Euthenics Inc.	2019	$125,000	Install new underground stormwater system to prevent flooding and icy conditions on Houghton Road between State Route 8 and Bordeman Ave.
2	Northfield Village	Stormwater	Richard Wasosky P.E., P.S., Euthenics Inc.	2019	$50,000	Stormwater project to replace current stormwater system at Houghton and Victory to prevent flooding.
3	Northfield Village	Safe Rooms	Richard Wasosky P.E., P.S., Euthenics Inc.	2018-2023	TBA	Support Residential and Community efforts to find locations for tornado safe rooms.
1	Norton	Acquisition/Stormwater	Dave White, Engineer, City of Norton	2018-2023	131,000	This project will acquire land and create approximately 3 acre-feet of flood water storage to reduce flood damage to 12 downstream residential sites.
2	Norton	Acquisition/Stormwater	Dave White, Engineer, City of Norton	2018-2023	6M	This project will acquire approximately 140 acres of land for flood water storage to reduce severe flooding of industrial infrastructure.
	Peninsula	Safe Rooms	Doug Mayor, Mayor, Village of Peninsula	2018-2023	TBA	Support Residential and Community efforts to find locations for tornado safe rooms.
1	Reminderville	Stormwater	Terry Bowlin, Engineer, Village of Reminderville	2018-2023	300,000	Nautilus Trail floods with minimal rain events. The proposed project would convert the vacant lot to a storm water pump station in order to convey storm water to the existing channel. This project would allow for the water to be pumped out of the area prior to it backing up to our current temporary pumping location.
1	Richfield Joint Recreation District	Dam Improvements	Robert Becker, Richfield Joint	2018-2023	400,000	Bring dam up to a Class one rating will allow habitation of downstream house and prevent potential

			Recreation District			catastrophic damage to State Route 303.
2	Richfield Joint Recreation District	Dam Improvements	Robert Becker, Richfield Joint Recreation District	2018-2023	1.2M	Repair / Replacement of deteriorated concrete spillway and dam
3	Richfield Joint Recreation District	Dam Improvements	Robert Becker, Richfield Joint Recreation District	2018-2023	300,000	Hilaka Concrete Dam Spillway Rehabilitation
2	Richfield TWP	Safe Rooms	Mindy Remec, Richfield Township Administrator	2018-2023		Support Residential and Community efforts to find locations for safe rooms.
1	Richfield, Bath Township, Boston Township, the City of Cuyahoga Falls, Richfield Township, and Valley Fire District	Landslides	Bobbie Beshera, Mayor, Village of Richfield	2018-2023	1.75M	The roadway on Everet Road, east of Revere Road has been steadily deteriorating and was recently closed by the Summit County Engineer's Office. This roadway is a vital link connecting Richfield and Bath Township to Boston Township, Cuyahoga Falls and the Cuyahoga Valley National Recreation Area.
2	Richfield, Village and Township	Landslides	Bobbie Beshera, Mayor, Village of Richfield	2018-2023		With the recent closure of Everett Road, by Summit County Council this year and now with increased traffic on Wheatley Road, consideration should be given on the portion of Wheatley where Furnace Run is encroaching on the guardrail and right of way on the north side of Wheatley Road in Richfield Township. Our concern is if this erodes further, and water encroaches on the roadway, then we will have no access to our Richfield Township residents in case of an emergency or Riverview Road for mutual aid as there are more and more hikers and visitors to the National Park every day. As Fire Chief of the Village and the Township, Chief McLean would like this as another consideration in the Mitigation Program. I've also received the support of Mindy Remec, Richfield Township Administrator.
3	Richfield, Village	Safe Rooms	Bobbie Beshera, Mayor, Village of Richfield	2018-2023		Support Residential and Community efforts to find locations for safe rooms.
	Sagamore Hills	No new projects	David Hayes, Police Chief, Sagamore Hills	2018-2023		See Tab 8 just finishing Landslide Study with Engineer's Office.

1	Silver Lake	Elevation	Mark Lipan, Service Director, Village of Silver Lake	2018-2023	435,000	To raise 260 feet of roadway 18 inches to eliminate flooding of the roadway and preventing residents from traveling to and from their home during heavy rains. Underground utility service boxes will need to be raised, which include electric, phone, and cable. Two catch basins, 3 water service lines, 2 light poles, 1 manhole, and 1 fire hydrant will also have to be raised. 200 feet of Sidewalk, 3 driveway aprons and 8 street trees will have to be replaced.
1	Springfield	Stormwater	Ted Weinsheimer, Service Director, Village of Springfield	2018-2023		Restoration of the Springfield Lake outlet from Akron to Springfield Lake. Numerous factors contribute to the flooding; aging/failing infrastructure, high groundwater, and inadequate stormwater management. The project will replace failing and hydraulically inadequate storm sewer and bring it back to it's original elevation.
2	Springfield	Stormwater	Ted Weinsheimer, Service Director, Village of Springfield	2018-2023		Replace water level control system on Springfield Lake to allow for quick/automated response to significant rain events and prevent/lessen repetitive flooding in Lakemore. An automated system would keep water level at recommend levels and allow for quick response to rising water levels.
3	Springfield	Acquisition and Demolition	Ted Weinsheimer, Service Director, Village of Springfield	2018-2023		Springfield Township has several flood prone area. We will continue to explore and support acquisition, demolition and elevation of flood prone properties.
	Summit Soil and Water Conservation District	Study	Brian Prunty, District Program Administrator	2018-2023	TBD	Study possible water quality improvements and flood reduction measure within the Yellow Creek Watershed. This watershed is known to be flashy, with high potential of risks for loss of property, infrastructure and life. Our intentions to bring organization together to identify issues and sources.
1	Stow	Acquisition/Demolition	Mike Jones, Deputy City of Stow Engineer	2018-2023	350,000	Remove existing house to allow for emergency over flow of storm system during 100 year rain events.
2	Stow	Safe Rooms	Mike Jones, Deputy City of Stow Engineer	2018-2023	250,000	Provide a community safe rooms on Silver Springs Park Proper around existing camp site and baseball fields.

3	Stow	Safe Rooms	Mike Jones, Deputy City of Stow Engineer	2018-2023	250,000	Around the community dog park, basketball courts, kids play ground and lodging/reception hall.
1	Summit County Engineer	Landslide Stabilization	Heidi Swindell, Director of Administration, Government Affairs, Summit County Engineer's Office	2018-2023	10M	We have a list of 30 landslides we monitor on a periodic basis. The landslide areas can be classified as small (less than $150,000 to repair) medium (less than $2 million to repair) and large (up to $10 million to repair). Some of the sites have had the slides repaired in the past but once an area shows a tendency to move, it remains an active site to be monitored.
2	Summit County Engineer	Stormwater	Heidi Swindell, Director of Administration, Government Affairs, Summit County Engineer's Office	2018-2023		Summit County Engineer's Surface Water Management District, relative design, implementation, and maintenance of prioritized township stormwater projects to protect life, property and the environment from flooding.
1	Summit County Metro Parks	Stream Stabilization/Restoration	Mike Johnson, Chief of Conservation, Summit County Metro Parks	2013-2023	3M	Sand Run stream flows through Sand Run Metro Park in the Cities of Fairlawn and Akron, Ohio. As the cities developed, stormwater was diverted into the stream which now suffers extreme flooding during storm events. The City of Akron has identified at least 50 stormwater outfalls to Sand Run with another possible 50 outfalls that are undocumented. Stream bank erosion is severe and threatens property, infrastructure (roads, buildings, lodges, utility ROW's) as well as the biodiversity and ecological integrity of the park. Summit Metro Parks has prepared an extensive plan to address flooding in a manner that will preserve, or improve, the existing ecology of the park and surrounding communities. The plan includes bank stabilization, grade control structures, and improved culverts.
1	Summit County Public Health	Study	Jennifer Smith, Emergency Preparedness Coordinator, Summit County Public Health	2018-2023	TBD	Utilizes new technology and scientific and medical discoveries to meet the ever growing, ever changing needs of the communities. Partner with public safety and the public health and medical partners to ensure that Summit County is prepared and is protected from bio-terrorism, as well as other disasters.

1	Tallmadge	Generator	Ben Stasik, Deputy Fire Chief, City of Tallmadge	2018-2023	150,000	Acquisition of new Tallmadge City Building natural gas power generator establishing a redundant power source for the City's alternate Emergency Operations Center (EOC).
2	Tallmadge	Stormwater	Ben Stasik, Deputy Fire Chief, City of Tallmadge	2018-2023	750,000	Maca Ditch, currently the existing culvert is undersized that runs under Eastwood Ave. Due to installing a properly sized culvert the over topping of the roadway and flooding issues of several neighborhoods should be eliminated.
3	Tallmadge	Safe Rooms	Ben Stasik, Deputy Fire Chief, City of Tallmadge	2018-2023	1M	Tallmadge Lions Park has nearly 2,000 – 3,000 park visitors daily. This facility will provide the community and/or park visitors with an emergency safe shelter. The construction of a new Multi-Use Community Safe Shelter will serve as a center to provide shelter for the community the event of a 'natural' disaster. The facility is otherwise intended to be used for community activities.
4	Tallmadge	Stormwater	Ben Stasik, Deputy Fire Chief, City of Tallmadge	2018-2023	10.5M	Currently Kelsey Ditch has become very shallow due to silting in of its channel. This shallow stream channel has caused severe flooding. Clearing and re-grading of this stream channel should eliminate flooding issues in several neighborhoods throughout the Kelsey Ditch watershed.
5	Tallmadge	Mapping	Ben Stasik, Deputy Fire Chief, City of Tallmadge	2018-2023	1M	Several abandoned coal mines, seven known, are located throughout the western part of the City of Tallmadge. The potential for mine subsidence could cause damage to personal and private property within the City, as it has twice in the past. This project would allow for mapping of the mine structures, allowing for a true map of where the mines are which would lead to the creation of a mitigation plan including mine stabilization, filling, zoning restrictions etc. that would limit the potential for damage to persons or property.
6	Tallmadge	Communications	Ben Stasik, Deputy Fire Chief, City of Tallmadge	2018-2023	1M	Creating a redundant communication's pathway to our Police Department and City Hall.

7	Tallmadge	Safe Rooms	Ben Stasik, Deputy Fire Chief, City of Tallmadge	2018-2023	900,000	This proposal is to construct a multi-use shelter on property that connects both the City's outdoor athletic facility and the County's fairgrounds. The shelter would be designed for multi-use to allow for greater utilization of the facility and the monies being spent while offering safe sheltering locations for hundreds of City and County event goers.
1	Twinsburg	Acquisition/Demolition	Amy Mohr, City of Twinsburg Engineer	2018-2023	900,000	Continue to purchase and demolition homes in the Glenwood Acres Subdivision.
2	Twinsburg	Safe Rooms	Amy Mohr, City of Twinsburg Engineer	2018-2023	TBD	Support Residential and Community efforts to find locations for safe rooms.
1	Twinsburg TWP	Stormwater	Rob Kagler, Twinsburg Township Managmer	2018-2023	TBD	The Twinsburg heights allotment road reconstruction project is slated to be complete by 2023. When complete this will have included a 20-phase road reconstruction project, which will have been completed over a 20-year period using a combination of local (Township) and grant (various) funding.
2	Twinsburg TWP	Safe Rooms	Todd Johnson, Service Coordinator, Twinsburg Township	2018-2023	TBD	Support Residential and Community efforts to find locations for safe rooms.
3	Twinsburg TWP	Acquisition and Demolition	Todd Johnson, Service Coordinator, Twinsburg Township	2018-2023	TBD	Support Acquisition, Demolition or Elevation of flood prone properties in Twinsburg Township.
1	University of Akron	Safe Rooms	Mark Beers, Coordinator of Emergency Management, The University of Akron	2018-2023	TBD	Support the construction safe rooms to protect students, facility and visitors in the three University residence halls

Tab 11 Sample Resolution

RESOLUTION NO. _____

SPONSOR _____

DATE _____ COMMITTEE _____

A Resolution, (purpose) for (department or agency), and declaring an emergency.

WHEREAS ___; and

WHEREAS, ; and

(The amount of "whereas" clauses will depend on the amount of information or purpose provided)

NOW, THEREFORE, BE IT RESOLVED, by the ___, that:

SECTION 1

SECTION 2

(The amount of sections will depend on the amount of information or purpose provided) SECTION 3

This Resolution is hereby declared to be an emergency in the interest of the health, safety and welfare of the citizens of the County of Summit and for the further reason that it is necessary (state reason).

Tab 112 to the Summit County Hazard Reduction and Prevention Plan

RESOLUTION NO. _____
PAGE TWO

SECTION 4

Provided this Resolution receives the affirmative vote of eight members, it shall take effect immediately upon its adoption and approval by the Executive; otherwise it shall take effect and be in force at the earliest time provided by law.

SECTION 5

It is found and determined that all formal actions of this Council concerning and relating to the adoption of this Resolution were adopted in an open meeting of this Council, and that all deliberations of this Council and any of its committees that resulted in such formal action were in meetings open to the public, in compliance with legal requirements, including Section 121 .22 of the Ohio Revised Code.

INTRODUCED _____

ADOPTED _____

_____ _____

CLERK OF COUNCIL PRESIDENT OF COUNCIL

APPROVED _____

_____

EXECUTIVE

ENACTED EFFECTIVE _____

Tab 12 Community Zoning Code

Summit County General Plan
Summary Table
5-26-17

Community	Code Date	PUD/PRD clustering regulations	Minimum open space requirement	Natural Resource Preservation Regulations			Design guidelines/ review standards	Historic districts/ preservation regulations	Minimum SF residential lot sizes (sq. ft. unless otherwise indicated; if choice exists, lot size assumes sewer available)		
				Riparian Setbacks	Wetlands	Trees			Big	Medium	Small
Akron	2002	No	No	No	No	No	Hist. District	Yes	4,000	--	--
Barberton	2000	Yes	?	LC District		Yes	PO District	PO	90,000	20,000	3,600
Bath Township	2003	Yes	50%	Yes	No	No	Cleve-Mass Rd. corridor	No	5 ac	2.5 ac	1 ac
Boston Heights	2003	No	No	No	No	Yes	No	No	1.5 ac		
Boston Twp.	1996	No	No	No	No	No	No	No	2 ac	Health	Dept.
Clinton	1997	No	No	Yes	No	No	No	No	5 ac	2 ac	15,000
Copley Twp.	2000	Yes	15-20%	No	No	No	PD District	No	1.5 ac	.5 ac	10,000
Coventry Twp.	2001	Yes	20-25%	No	No	No	No	No	5 ac	30,000	20,000
Cuyahoga Falls	2002	Yes	15%	No	No	No	No	Yes	1.5 ac	20,000	10,000
Fairlawn	2002	Yes	20%	No	No	No	No	No	30,000	20,000	14,000
Franklin Twp.	2000	No	No	No	No	No	No	No	5 ac	1.5 ac	10,000
Green	2001	Yes	20%	No	No	No	Yes	No	1 ac	13,600	--
Hudson	1998	Yes	50%	Yes	Yes	Yes	Yes	Yes	2.5 ac	20,000	6,000
Lakemore	1998	Yes	25%	No	No	No	No	No	20,000	10,000	6,000
Macedonia	2003	Yes	20%	No	No	No	Yes	No	20,000	--	--
Mogadore	OCT			Yes							
Munroe Falls	DEC										
New Franklin	2000	No	No	No	No	No	No	No	5 ac	1.5 ac	10,000
Northfield Center Twp.	2001	Yes	25-50%	No	No	No	No	No	5 ac	25,000	--
Northfield Village	2002	No	No	No	No	No	No	No	15,000	8,400	--
Norton	1998	Yes	30%	Yes	No	No	No	No	45,000	25,000	10,500
Peninsula	2001	No	No	No	No	No	No	?	6 ac	4 ac	11,000
Reminderville	2003	Yes	15%	No	No	No	No	No	15,000	--	--
Richfield	2001	Yes	50%	No	No	No	CH District	CH	2 ac	1 ac	.5 ac
Richfield	2002	Yes	25-40%	No	No	No	No	No	5 ac	2 ac	--
Sagamore Hills Twp.	2000	Yes	40%	No	No	No	No	No	1 ac	--	--

Silver Lake	2002	No	No	No	No	No	Yes	No	20,000	--	--
Springfield Twp.	2000	Yes	25%	No	No	No	No	No	5 ac	30,000	22,000
Stow	2003	Yes	35%	No	No	No	Yes	No	5 ac	20,000	12,000
Tallmadge	2003	Yes	30%	No	No	No	DC District	DC	20,000	16,000	13,500
Twinsburg	2003	Yes	20%	No	No	Yes	No	Yes	1 ac	19,000	17,000
Twinsburg Twp.	2002	Yes	30%	No	No	No	No	No	5 ac	2 ac	.5 ac

Community	**Type**	Website	Codes Online
Akron	City	#http://ci.akron.oh.us/#	TRUE
Barberton	City	www.cityofbarberton.com	TRUE
Cuyahoga Falls	City	www.cityofcf.com#http://www.cityofcf.com#	TRUE
Fairlawn	City	www.cityoffairlawn.com#http://www.cityoffairlawn.com#	TRUE
Green	City	www.cityofgreen.org#http://www.cityofgreen.org#	TRUE
Hudson	City	www.ci.hudson.oh.us#http://www.ci.hudson.oh.us#	TRUE
Macedonia	City	www.macedonia.oh.us#http://www.macedonia.oh.us#	TRUE
Munroe Falls	City	www.munroefalls.com#http://www.munroefalls.com#	FALSE
Norton	City	www.cityofnorton.org#http://www.cityofnorton.org#	TRUE
Stow	City	www.stow.oh.us#http://www.stow.oh.us#	TRUE
Tallmadge	City	www.tallmadge-ohio.org#http://www.tallmadge-ohio.org#	TRUE
Twinsburg	City	www.twinsburg.oh.us#http://www.twinsburg.oh.us#	TRUE
Bath Township	Twp.	www.bathtownship.org#http://www.bathtownship.org#	TRUE
Boston Township	Twp.	http://www.bostontownship.org/	FALSE
Copley Township	Twp.	www.copley.oh.us#http://www.copley.oh.us#	FALSE
Coventry Township	Twp.	www.coventrytownship.com#http://www.coventrytownship.com#	FALSE
Franklin Township	Twp.	www.franklintownship-oh.gov#http://www.franklintownship-oh.gov#	TRUE
Northfield Center Township	Twp.	#http:/northfieldcenter.home.att.net#	TRUE
Richfield Township	Twp.	www.richfield-twp.org#http://www.richfield-twp.org#	TRUE
Sagamore Hills Township	Twp.	https://www.mysagamorehills.com/#2	FALSE
Springfield Township	Twp.	www.springtwp.com#http://www.springtwp.com#	FALSE
Twinsburg Township	Twp.	www.twinsburgtwp.com#http://www.twinsburgtwp.com#	TRUE
Boston Heights	Village	www.bostonheights.org#http://www.bostonheights.org#	TRUE
Clinton	Village	www.clintonoh.org#http://www.clintonoh.org#	FALSE
Lakemore	Village	www.lakemoreohio.org#http://www.lakemoreohio.org#	TRUE
Mogadore	Village	http://mogadorevillage.org/	FALSE
Northfield Village	Village	http://northfieldvillage-oh.gov/	FALSE
Peninsula	Village	http://villageofpeninsula-oh.gov/	FALSE
Reminderville	Village	www.reminderville.com#http://www.reminderville.com#	FALSE
Richfield	Village	www.richfieldvillageohio.org	TRUE
Silver Lake	Village	http://villageofsilverlake.com/	TRUE
New Franklin	Village	www.franklintownship- http://www.newfranklin.org/	FALSE

Political Subdivision	Codes Location	Comp Plan	Comp Plan Map	Comp Plan Date	Zoning Code
Akron	https://library.municode.com/oh/akron/codes/code_of_ordinances?nodeId=TIT15LAUS_CH153ZOCO	Received	FALSE	2013	ONLINE
Barberton	http://www.amlegal.com/codes/client/barberton_oh/	Received	TRUE	2016	ONLINE
Cuyahoga Falls	http://www.conwaygreene.com/Municipal-Codes.htm	Received	TRUE	1989	ONLINE
Fairlawn	http://www.amlegal.com/codes/client/fairlawn_oh	Received	FALSE	2002	Received
Green	http://www.amlegal.com/codes/client/green_oh/				
Hudson	website	Received -being updated	TRUE	1995	ONLINE
Macedonia	http://www.conwaygreene.com/Municipal-Codes.htm	ONLINE	FALSE	2002	ONLINE
Munroe Falls		Drafting	FALSE	in 2004	updating
Norton	website	Drafting	FALSE	in 2004	ONLINE
Stow	http://www.conwaygreene.com/Municipal-Codes.htm	ONLINE	TRUE	2001	ONLINE
Tallmadge	http://www.conwaygreene.com/Municipal-Codes.htm	Received	TRUE	1997	ONLINE
Twinsburg	http://www.conwaygreene.com/Municipal-Codes.htm	Received	TRUE	1998	Received
Bath Township	website	Received	TRUE	1997	ONLINE
Boston Township		don't have one	FALSE		Received
Copley Township		Received	TRUE	1997	Received

Political Subdivision	Code Location	Comp Plan	Comp Plan Map	Comp Plan Date
Coventry Township		don't have one	FALSE	
Franklin Township	website	Updating	FALSE	in 2004
Northfield Center Township	website	Received	FALSE	1998
Richfield Township	website	Drafting	FALSE	in 2004
Sagamore Hills Township		Received	FALSE	1990
Springfield Township		Received	TRUE	2002
Twinsburg Township	website	Received	TRUE	2003
Boston Heights	website	don't have one	FALSE	
Clinton		Received	TRUE	2000
Lakemore	website	don't have one	FALSE	
Mogadore		don't have one	FALSE	
Northfield Village		don't have one	FALSE	
Peninsula		Updating	FALSE	9/2003
Reminderville		don't have one	FALSE	
Richfield	website	Received	TRUE	1997
New Franklin	http://www.conwaygreene.com/Municipal-Codes.htm	Received	FALSE	2004

Tab 13 National Flood Insurance Program (NFIP) Information

The Federal Emergency Management Agency Community Status Book Report was utilized in conjunction with phone calls placed to each jurisdiction to confirm participation, as well as, continued compliance in the National Flood Insurance Program. Northfield Center Village is the only community not in compliance. The compliance methods are combined through legislation and active enforcement through the communities' respective building and zoning departments. The County legislation, Chapter 1345, has been included on page 3 (Inter-Jurisdictional Authority).

The following list represents those communities: Akron (City of), Barberton (City of), Boston Heights (Village of), Clinton (Village of), Cuyahoga Falls (City of), Fairlawn (City of), Green (City of), Hudson (City of), Lakemore (Village of), Macedonia (City of), Mogadore (Village of), Munroe Falls (City of), New Franklin (City of), Norton (City of), Peninsula (Village of), Reminderville (Village of), Richfield (Village of), Silver Lake (Village of), Stow (City of), Tallmadge (City of), Twinsburg (City of); Summit County is responsible for the following Townships: Bath, Boston, Copley, Coventry, Northfield Center, Richfield, Sagamore Hills, Springfield and Twinsburg. Unable to confirm Northfield (Village of).

2018 NFIP Repetitive Loss for Summit County, Ohio as provided by Ohio EMA:
The highlighted rows are severe repetitive loss properties.

Community Name	Zip Code	Occupancy	Losses	Total Paid	Average Pay
SUMMIT COUNTY *	443332838	SINGLE FMLY	5	134274.5	26854.89
MUNROE FALLS, CITY OF	442621027	OTHER RESID	4	84274.84	21068.71
SUMMIT COUNTY *	443210000	SINGLE FMLY	4	41293.5	10323.38
SUMMIT COUNTY *	443130000	OTHR-NONRES	5	405504.2	81100.84
MUNROE FALLS, CITY OF	442621031	SINGLE FMLY	5	126393.5	25278.7
AKRON, CITY OF	443142534	SINGLE FMLY	2	11360.91	5680.46
AKRON, CITY OF	443142544	SINGLE FMLY	2	38326.45	19163.23
AKRON, CITY OF	443142544	SINGLE FMLY	3	19938.63	6646.21
AKRON, CITY OF	443141806	SINGLE FMLY	3	10225.6	3408.53
AKRON, CITY OF	443141806	SINGLE FMLY	2	10907.72	5453.86
AKRON, CITY OF	443134594	SINGLE FMLY	2	11421.61	5710.81
AKRON, CITY OF	443141808	SINGLE FMLY	2	15904.2	7952.1
AKRON, CITY OF	443142532	SINGLE FMLY	2	14799.59	7399.8
AKRON, CITY OF	443136739	SINGLE FMLY	2	128922.7	64461.33
AKRON, CITY OF	443142215	SINGLE FMLY	2	24781.67	12390.84
AKRON, CITY OF	443140000	SINGLE FMLY	2	21338.23	10669.12
AKRON, CITY OF	443140000	SINGLE FMLY	2	37270.57	18635.29
AKRON, CITY OF	443140000	SINGLE FMLY	2	13632.91	6816.46
AKRON, CITY OF	443140000	SINGLE FMLY	2	12906.8	6453.4

AKRON, CITY OF	443142223	SINGLE FMLY	2	12979.4	6489.7
AKRON, CITY OF	443142223	SINGLE FMLY	3	24360.26	8120.09
AKRON, CITY OF	443142515	SINGLE FMLY	3	91594.65	30531.55
AKRON, CITY OF	443054255	OTHR-NONRES	2	27200.81	13600.41
AKRON, CITY OF	443333917	SINGLE FMLY	3	14142.89	4714.3
BARBERTON, CITY OF	44203	SINGLE FMLY	3	13572.45	4524.15
BARBERTON, CITY OF	442034040	SINGLE FMLY	2	18520.06	9260.03
BARBERTON, CITY OF	442034040	SINGLE FMLY	2	10981.81	5490.91
BARBERTON, CITY OF	442034040	SINGLE FMLY	2	18690.25	9345.13
BARBERTON, CITY OF	442034078	SINGLE FMLY	2	7316.61	3658.31
BARBERTON, CITY OF	442030000	SINGLE FMLY	2	13700.53	6850.27
BARBERTON, CITY OF	442031221	SINGLE FMLY	2	13413.61	6706.81
BARBERTON, CITY OF	442031603	OTHR-NONRES	3	210852.3	70284.11
BARBERTON, CITY OF	442031604	OTHR-NONRES	2	30765.35	15382.68
BARBERTON, CITY OF	442030000	SINGLE FMLY	2	17534	8767
BARBERTON, CITY OF	442032774	OTHR-NONRES	3	248608.6	82869.54
BARBERTON, CITY OF	442031969	SINGLE FMLY	2	6275.61	3137.81
BARBERTON, CITY OF	442034052	SINGLE FMLY	3	19487.98	6495.99
BARBERTON, CITY OF	442034018	SINGLE FMLY	2	9673.96	4836.98
BARBERTON, CITY OF	442037136	OTHR-NONRES	2	34042.8	17021.4
BARBERTON, CITY OF	442037018	OTHR-NONRES	2	14188.47	7094.24
BARBERTON, CITY OF	442037019	SINGLE FMLY	2	24406.98	12203.49
BARBERTON, CITY OF	442030000	SINGLE FMLY	2	15114.67	7557.34
BARBERTON, CITY OF	442037018	SINGLE FMLY	3	20393.18	6797.73
BARBERTON, CITY OF	442030000	SINGLE FMLY	2	10159.55	5079.78
BARBERTON, CITY OF	442037018	SINGLE FMLY	3	24571.54	8190.51
BARBERTON, CITY OF	442037019	SINGLE FMLY	4	27678.86	6919.72
BARBERTON, CITY OF	442037019	SINGLE FMLY	4	25487.57	6371.89
BARBERTON, CITY OF	442037018	SINGLE FMLY	2	5363.46	2681.73
BARBERTON, CITY OF	442037018	SINGLE FMLY	2	4863.72	2431.86
BARBERTON, CITY OF	442037020	SINGLE FMLY	2	11009.73	5504.87
BARBERTON, CITY OF	442037020	SINGLE FMLY	2	7225.27	3612.64
BARBERTON, CITY OF	442037020	SINGLE FMLY	3	8276.51	2758.84
BARBERTON, CITY OF	442037131	SINGLE FMLY	3	35924.41	11974.8
BARBERTON, CITY OF	442037131	SINGLE FMLY	2	10982.22	5491.11
BARBERTON, CITY OF	442037122	OTHR-NONRES	3	68106.13	22702.04
BARBERTON, CITY OF	442030000	SINGLE FMLY	3	20337.5	6779.17

BARBERTON, CITY OF	442037023	SINGLE FMLY	2	12109.82	6054.91
CLINTON, VILLAGE OF	442160000	SINGLE FMLY	3	14483.25	4827.75
CLINTON, VILLAGE OF	442169499	SINGLE FMLY	2	9910.49	4955.25
CLINTON, VILLAGE OF	442169499	SINGLE FMLY	4	13906.8	3476.7
FAIRLAWN, CITY OF	44313	SINGLE FMLY	2	4342.16	2171.08
HUDSON, CITY OF	442361642	SINGLE FMLY	2	51313.98	25656.99
NORTON, CITY OF	44203	OTHR-NONRES	2	559354	279677.02
NORTON, CITY OF	442030000	OTHR-NONRES	2	1443954	721977.2
NORTON, CITY OF	442031049	OTHR-NONRES	2	226578.4	113289.19
NORTON, CITY OF	442030000	SINGLE FMLY	3	59094.75	19698.25
PENINSULA, VILLAGE OF	444309778	SINGLE FMLY	2	57036.09	28518.05
REMINDERVILLE, VILLAGE OF	442029026	SINGLE FMLY	2	4599.19	2299.6
STOW, CITY OF	442241115	SINGLE FMLY	3	13951.68	4650.56
STOW, CITY OF	442241102	SINGLE FMLY	2	5959.94	2979.97
STOW, CITY OF	442241725	OTHR-NONRES	4	39137.66	9784.42
STOW, CITY OF	442240000	SINGLE FMLY	2	25026.75	12513.38
SUMMIT COUNTY *	443202404	SINGLE FMLY	3	69729.86	23243.29
SUMMIT COUNTY *	443123258	SINGLE FMLY	2	50340.24	25170.12
SUMMIT COUNTY *	443123258	SINGLE FMLY	4	101910.8	25477.71
SUMMIT COUNTY *	443331167	SINGLE FMLY	2	20134.83	10067.42
SUMMIT COUNTY *	443193281	SINGLE FMLY	2	2954.13	1477.07
SUMMIT COUNTY *	443212208	SINGLE FMLY	2	5146.08	2573.04
SUMMIT COUNTY *	443203111	SINGLE FMLY	2	31038.37	15519.19
SUMMIT COUNTY *	443211445	SINGLE FMLY	2	43031.42	21515.71
SUMMIT COUNTY *	442363839	OTHR-NONRES	2	24230.63	12115.32
SUMMIT COUNTY *	443211105	SINGLE FMLY	2	7941.64	3970.82
SUMMIT COUNTY *	443202423	SINGLE FMLY	3	10779.42	3593.14
SUMMIT COUNTY *	443191208	SINGLE FMLY	2	9248.15	4624.08
SUMMIT COUNTY *	443191249	SINGLE FMLY	2	17125.68	8562.84
SUMMIT COUNTY *	443203137	SINGLE FMLY	3	64216.29	21405.43
SUMMIT COUNTY *	443212331	SINGLE FMLY	2	63605.18	31802.59
SUMMIT COUNTY *	443210000	SINGLE FMLY	2	12287.55	6143.78
TALLMADGE, CITY OF	442782813	OTHR-NONRES	2	101704.8	50852.42

Type(s) of properties (residential, commercial etc…) have been determined to the best of our ability based off of addresses provided by the State and NFIP.

By law, the information provides only a count of structures per political subdivision, types of properties, and payment information. Specifics, such as name and address, have been omitted for privacy protection purposes. (**Note)** Summit County has 31 political subdivisions. If a subdivision is not mentioned, there are no NFIP Repetitive Loss structures identified for that community.

Current floodplain maps were the result of the map modernization process by the County, ODNR and USGS. These maps became effective as of April 19, 2016 and were adopted by the County on the same day. Summit County has a Floodplain Administrator, as defined in the Codified Ordinances of Summit County (Part Thirteen "Building Code," Title Five "Local Provisions," Chapter 1345.03(a)). A copy of the floodplain regulations is provided in detail on the following page(s). These regulations are enforced by the Floodplain Administrator, who conducts routine monitoring of the floodplain and provides community assistance, including promotion of maintaining flood insurance policies.

June 22, 2017, two Flood Mitigation Meetings where facilitated by Ohio Emergency Management Agency, Mitigation Branch Chief, Steve Ferryman. Local Elected Officials where the target audience for the first meeting and property owners of repetitive loss structures were invited to the second meeting. Presenters explained the National Flood Insurance Program(NFIP), NFIP Reform, Mitigation Best Practices and the Mitigation Grant Program.

There was a review of the local Mitigation Plan Status and an explanation of FEMA's Risk MAP. The purpose of the meeting was to work with communities in attendance to develop mitigation actions identified in local hazard mitigation plans into project applications.

The meeting with the property owners was to explain the NFIP program and encourage them to sell their property or elevate to prevent future losses.

ELECTED OFFICIALS WORKSHOP

NAME	ORGANIZATION	SESSION
Chris Brewer	Akron Police	10/3/2017
Jeff Funai	Green Fire	10/3/2017
Helen Humphrys	Copley Twnshp Trustee	10/3/2017
Gerard Neugebauer	Mayor, City of Green	10/3/2017
Kenneth Ball II	Chief of Police, Akron	10/3/2017
Jack Simone	Lt. Copley Police	10/3/2017
Todd Higgins	Mogadore Police	10/3/2017
Vickie Millender	Akron Safety	10/3/2017
David Kline	Tallmadge Mayor	10/3/2017
Steve Barry	Sheriff	10/3/2017
Ben Stasik	Tallmadge Fire Deputy Chief	10/3/2017
Al Bollas	New Franklin Mayor	10/3/2017
Diane Sheridan	Cuyahoga Falls CD Director	10/3/2017
William Roth	Fairlawn Mayor	10/3/2017
Russ Hose	Fairlawn Fire Chief	10/3/2017
Dave Mason	Fairlawn Police Lt	10/3/2017
Jesse Nehez	Northfield Village Mayor	10/3/2017
John Zolgus	Village of Northfield Police Chief	10/3/2017
Jason Buss	Village of Northfield Fire Chief	10/3/2017
Richard Reville	Northfield Center TWP Trustee	10/3/2017
Jeff Shupe	Richfield TWP Trustee	10/3/2017
James Armstrong	Munroe Falls Mayor	10/3/2017
David Hayes	Sagamore Hills Police Chief	10/3/2017
Joanne Taylor	Boston Township Adm	10/3/2017
Bobbie Beshara	Richfield Mayor	10/3/2017
Cathy Anson	Boston TWP Fiscal Officer	10/3/2017
Major Mike Caprez	City of Akron	10/6/2017
Janice Marshall	Copley Twnshp Adm	10/6/2017
Lt. Agostino Micozzi	Akron Police	10/6/2017
Sara Kline	Mayor, City of Stow	10/6/2017
Steven Swartz	Akron Police	10/6/2017
Brian Harding	Akron Police	10/6/2017
Art Dobbins	Akron Fire	10/6/2017
Russell Decker	OEMA Deputy Director	10/6/2017
Brett Reinbolt	Valley Fire Chief	10/6/2017

Richard Cole	Lakemore Council President	10/6/2017
John Conley	Silver Lake Chief Police	10/6/2017
Steve Justice	Silver Lake Lieutenant	10/6/2017
Ted Yates	Twinsburg Mayor	10/6/2017
John Pinter	Safter Comm Sup	10/6/2017
Amy Anderson	Boston Township Trustee	10/6/2017
Steve Fricker	City of Akron Deputy Finance	10/6/2017

Tab 15 Public Comment Notice for Draft Plan

The following message was emailed to the Emergency Management Executive Committee, Domestic Preparedness Steering Committee, Mitigation Planning Group, Police Chiefs, Fire Chiefs, Mayors and Trustees. It also went out on Summit County EMA's Facebook and Twitter.

Hazard Reduction and Prevention Plan Open for Public Comment

Notice of Public Review and Comment on Draft Hazard Reduction and Prevention Plan for Summit County

NOTICE IS HEREBY GIVEN THAT in accordance with the Code of Federal Regulations 44 Part 201.6 and the Disaster Mitigation Act, The Summit County Executive Board invites all interested stakeholders to review and comment on the Draft Hazards Reduction and Prevention Plan for the 31 political subdivisions in Summit County plus the University of Akron. This plan was prepared through the cooperative effort of community stakeholders in Summit County. The plan contains proposals to mitigate the effects of all hazards.

Public Review

We ask that all of our community partners share this link on their website, social media and email blast list to the public and their employees. The public review and comment period ends at 5:00 p.m. on July 31, 2018. The plan is available online at https://co.summitoh.net/index.php/hazard-reduction-a-prevention

Please submit all comments in writing to:
Tina Merlitti at tmerlitti@summitoh.net

Be sure to include your phone number for questions on your comments.
For more information call 330-643-8783.

The Summit County Emergency Management Executive Committee thanks you for taking the time to participate in this information-gathering process.