Summit County Hazard Mitigation Plan

Summit County Emergency Management Agency

2013

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2013 Summit County Hazard Mitigation Plan

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 in regard to 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 planning process many outside groups were solicited for their current, future and potential project ideas in the area of hazard prevention. Two telephone surveys, a certified mailing, published information on the Emergency Management Agency`s website and in the "Common Vision" newsletter, were all methods used to gather information. The Subcommittee members also solicited comment from the groups they represented. The drafted plan was sent to the chief elected official of each of the political subdivisions for comment in June of 2003. Following the comment period, the Hazard Prevention Plan was voted on and approved by the Emergency Management Executive Committee in September of 2003.

The Emergency Management Executive Committee will conduct an annual review of the Hazard Prevention projects. The Hazard Prevention Subcommittee will be reconvened 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.

Valerie A. DeRose

Date 8/1/2013 **Director**

Risk Assessment Summary

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 and have been evaluated based upon the worst-case scenario. The Hazard Identification for Summit is based on hazards which may affect all 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. The results of this identification were used as the basis for developing the Vulnerability Mapping (attached), Historic Hazard Profile and Vulnerability Assessment. There is the potential for unforeseen hazards that may not be identified in this document. The purpose of the Hazard Identification is to provide a framework for developing the rest of the hazard assessment.

The 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 **www.co.summit.oh.us/executive/ema -** Hazard Reduction and Prevention.

1. Winter Storms: The Midwest is known for heavy snow, strong winds/blizzards, extreme wind chill, lake-effect snow and ice storms. Severe winter storms are destructive to buildings and utilities and may lead to extensive mass sheltering or statewide response and recovery efforts. Winter storms include heavy snow with extreme cold temperatures and ice or a combination of those elements. 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 35 years Summit County has experienced 13 major storms. 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 or destroying 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 (adjusted to 2003). 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 probability of future events is high and the severity will vary. Historical winter storm information is detailed on Tab 73 of this plan.

2. 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 10 large scale incidents. Two past incidents have been identified as the most costly. The crash of a passenger plane, in 1993, causing 134 injuries and 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 74 of this plan.

3. 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 is extensive. There is no one predominate chemical produced in Summit County. In addition to the extremely hazardous substance facilities, Summit County's Local Emergency Planning Committee maintains files on over 377 facilities holding reportable chemicals known as extremely hazardous substances. Current cost data, consists of the reimbursement obtained by the Local Emergency Planning Committee (LEPC) from the State Emergency Response Commission in the amount of $66,388.00. Attached maps identify the extremely hazardous substance facilities in Summit County and their corresponding watersheds. Historical hazardous material incident information is detailed on Tab 75 of this plan.

4. 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 number 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). Historical civil disturbance and terrorism information is detailed on Tab 79 of this plan. Attached maps describe areas of population concentration according to the 2010 census, as well as, identifying emergency response facilities, churches, schools and tourist attractions.

5. Tornadoes and Severe Storms: 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 300 mph. Tornadoes and 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. The State of Ohio ranks 16th in the nation in tornado occurrences, experiencing an average of 15 tornados a year. Summit County has experienced 11 tornados and the 26 severe storms in the past 50 years. Total damages and loss of life could be severe and could overwhelm the ability of local responders to address the emergency. The impact can be unpredictable, sudden, and severe. Some storms are not officially classified as tornadoes, but can be severe with damaging consequences. 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 2002 costing over $9 million (adjusted to 2003). Historical tornado and severe storm information is detailed on Tab 76 of this plan. A few examples of public assistance received as a result of tornados and other severe storms are listed below:

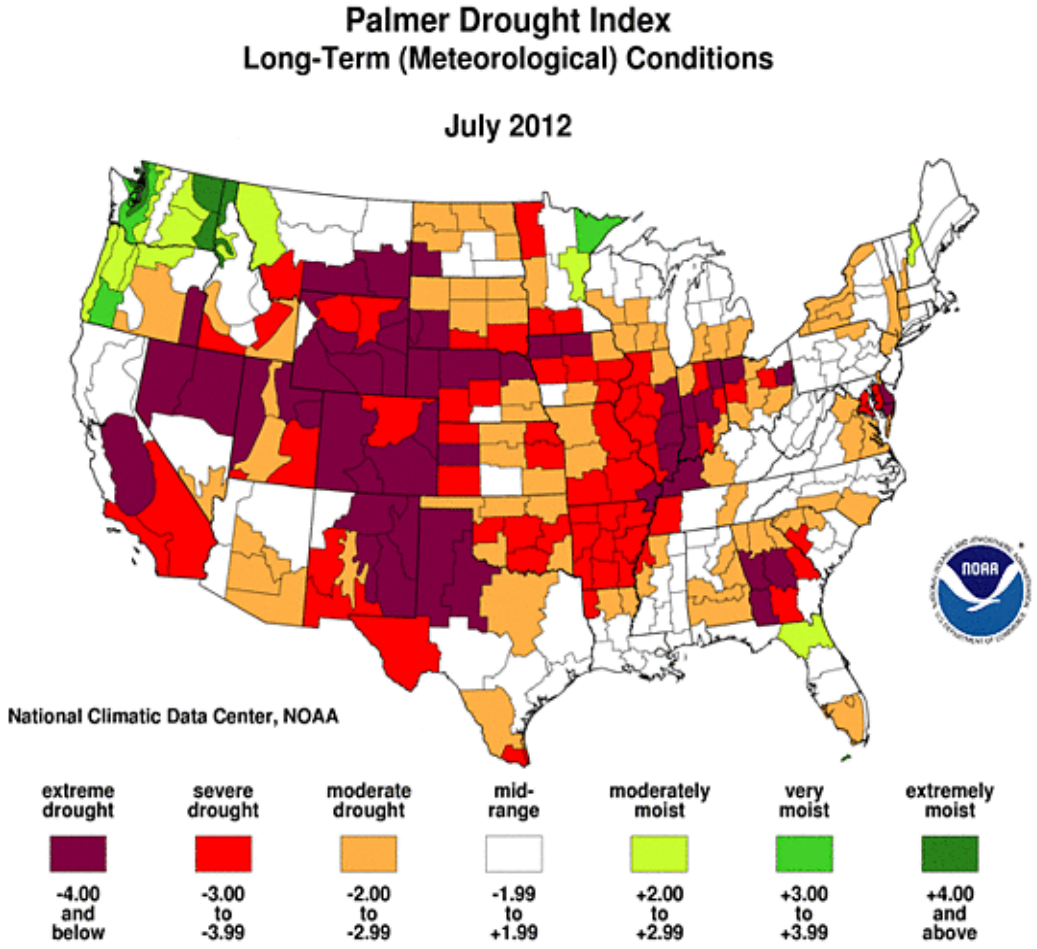
Disaster Number	Date Declared	Amount of Public Assistance
DR-1484	8/1/2003	$2,386,187.56
DR-1519	6/3/2004	$1,125,122.24
DR-1805	10/24/2008	$1,316,376.26

An example of the Enhanced Fujita Scale can be found on the next page:

Scale	Wind speed (Estimated)[3]		Example of damage
	mph	km/h	
EF0	65–85	105–137	
EF1	86–110	138–178	
EF2	111–135	179–218	
EF3	136–165	219–266	
EF4	166–200	267–322	
EF5	>200	>322	

6. 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. Droughts usually occur in the summer months, but can last past the traditional summer season. During known drought incidents in Summit County from January of 1953 to December of 2012 an average of 25.8 inches of precipitation was recorded during these drought periods. Drought affects both rural and urban areas throughout the County, causing significant social and economic distress in response to agricultural losses, dangerously high temperatures, and water shortages. For instance, due to historic drought conditions, the 2012 corn and soybean crop productions were significantly lower than the previous year. According to the 2012 Annual Summary, released by the U.S. Department of Agriculture's National Agricultural Statistic Service, (NASS) the corn crop in 2012 was 10.8 billion bushels, 13 percent below the 2011 crop. The soybean crop was 3.01 billion bushels down 3 percent from the 2011 harevst. Production for other crops declined as well. The production of all dry hay was estimated to be 120 million tons, the lowest level since 1964. 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. Many of the attached maps identify water sources and usage, areas that are more susceptible to drought, agricultural land use, and ground water yields. Historical drought information is detailed on Tab 77 of this plan. The next page includes an example of the Palmer Drought Severity Index:

   *We were unable to obtain any robust crop loss data at this time. This would include information such as, types of crop, acres planted, loss percentages, and shared assistance numbers. This type of specific information will most certainly be included in future versions of this plan.



7. Flood and Dam Failures: Flood and dam failures threaten many political subdivisions in the County. The severity of flooding in Summit County has been minor; however, flood events may also cause secondary problems, such as landslides and subsidence. The extent of dam failure could be significant for certain communities with dams, but is not expected to contribute to County wide flooding. 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, corresponding building values, dams, Summit County's Riparian Corridor, impervious surfaces and bodies of water. The property damage for two floods, in 1994, resulted in over $11 million in damages (adjusted to 2003). From 2002-2011 Summit County experienced 21 flooding events. There are only 3 communities in the 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 July 10, 2013. This flooding is discussed in the historical summary portion of this plan (beginning on Tab 78), and cost estimates are still pending.

A. Types of floods:

1. Riverine flooding: results from the overflow of rivers and streams from rain or melt water.
2. Flash flooding: results from fast rising streams after heavy rain or snowmelt.
3. Urban flooding: results from the overflow of storm sewers and streets after heavy rainfall.
4. Dam failure: is a gradual or immediate collapse of a water impounding system, which results in downstream damages.

    a) 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.

8. Subsidence and Landslides:

A. Terms Defined

1. 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.
2. 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.

B. Types

1. *Rotational Slump*: occurs when weak rock or sediment move as a mass in slow or imperceptible movement
2. *Earthflow*: involves rock/sediment, or weathered surface materials flowing downslope in a mass
3. *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.

C. History

1. 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. 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. Specific occurrences of this are documented on Tab 25.
2. 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. Specific occurrences of this are documented on Tab 25.

D. 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.

E. 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.

9. 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. Summit County recently created a combined health district. Summit County Public Health serves all of Summit County. 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.

Hazard Reduction and Prevention

I. 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.

II. Situation and Assumption

A. Situations

1. According to the 2010 census, Summit County contains a total land area of 412.75 square miles and is home to 541,781 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.
2. Summit County contains terrain comprised of plateaus and rolling hills. The vegetation for the area is considered Beech Forest. Approximately 60 percent of Summit County lies in the Cuyahoga River basin, which drains into Lake Erie. The average annual precipitation is 40 inches, and the average annual temperature is 58°F.
3. 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 "Rubber Capital of the World," Akron is now highly recognized as a world 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 Health Systems, Children's Hospital Medical Center, Akron General Health System, University of Akron, Daimler Chrysler Corp., First Energy Corp., Goodyear Tire and Rubber Co., Newel Rubbermaid/Little Tikes Co., Roadway Inc., and McDermott Int'l/Babcock & Wilcox. The County of Summit budget for 2012 is about $488 million with a total estimated private and public building value of $32 billion.

4. 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, 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.
5. The Wheeling and Lake Erie Railway, a regional-sized railroad, and its subsidiary, the Akron-Barberton Cluster Railway, also provide service in the area. Amtrak provides daily inter-city passenger rail service from its station in downtown Akron, and the Cuyahoga Valley Scenic Railroad operates seasonal excursion rail service through the National Park.

B. Assumptions

1. 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.
2. 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.

III. Concept of Operations

A. Authority by Law

1. 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.
2. 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.

3. 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.
4. 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.
5. Summit County Emergency Management Agency will pursue pre- and post-disaster mitigation projects in accordance with the Hazard Reduction and Prevention Plan.

B. 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 action plans as resource become available.

1. 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. Also described in (III.A.2-3)
2. 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.
3. The Summit County Department of Community and Economic Development develops and promotes 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.
4. 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.

5. 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.
6. County of Summit Engineer's Office duties include plan, design, construct and maintain 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.
7. 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 focus on serving Northeast Ohio. Section 306 of the ORC allows for services via railways, tramlines, subways, rapid transit, monorails and busses.
8. 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.
9. Summit County Department of Environmental 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.
10. Summit-Akron Solid Waste Management District provides for waste management and the coordination of local solid waste activities for all land in Summit County.

11. Metro Parks Serving Summit County 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.
12. The mission of the Summit County Public Health District 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 District 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.
13. Ohio State University Extension serving Stark and Summit Counties provides information and educational materials to farmers and rural residents in order to protect persons, livestock, facilities and equipment from possible destruction or damage from 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.
14. 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.
15. 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.

16. Northeast Ohio for 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.

C. Mitigation Goals and Priorities

1. Mitigation goals and priorities are based on a multi-jurisdictional, all-hazard approach. The annual project gathering process will create an environment where participants can submit various project ideas with traditional and non-traditional methods of mitigation. Projects adopted by Summit County Emergency Management Executive Committee will be included in the plan.

IV. Organization and Assignment of Responsibilities

A. General

1. 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.
2. The Summit County Hazard Prevention Subcommittee was appointed by the Executive Committee to be representative of government, businesses and the community. These groups represent a regional approach in an effort to work in conjunction with all of the surrounding communities. The following groups were represented in the maiden Subcommittee. Similar configurations may be called upon for future plan updates.

    a) Summit County Office of Community and Economic Development
    b) Summit County Engineer's Office
    c) Summit County Building Department
    d) Summit County Health Department
    e) Summit County Township Trustee`s Association
    f) Northeast Ohio Four County Regional Planning and Development Organization (serving Portage, Stark, Summit and Wayne Counties)
    g) Akron Metropolitan Area Transportation Study (serving Portage and Summit Counties)
    h) Home Builders Association (serving Portage and Summit Counties)

i) Summit County Housing Network
j) Greater Akron Chamber (serving Medina, Portage and Summit Counties)
k) The Ohio State University Extension (serving Stark and Summit Counties)
l) League of Women Voters-Akron Area (serving parts of Medina and Summit Counties)
m) Environmental Protection Agency (serving Adams, Stark, Trumbull, Mahoning, Columbiana, Summit, Geauga, Wayne, Portage, Loraine, Cuyahoga, Lake, Ashtabula, Medina, Summit, Carroll counties.
n) Summit County Soil and Water Conservation District

3. 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.

B. Responsibilities

1. Summit County Emergency Management Agency

a) Facilitate the Hazard Prevention Subcommittee, as needed.
b) Develop, maintain, and distribute the Hazard Reduction and Prevention Plan.
c) Continue to update hazard prevention needs and opportunities.
d) Annually identify mitigation projects that increase the resiliency of Summit County.

2. Summit County Emergency Management Executive Committee

a) Identify the hazards that affect Summit County
b) Identify hazard prevention needs and opportunities
c) Identify projects that increase the resiliency of Summit County Action Plan.

V. Plan Development and Maintenance

A. Plan Development

1. The Subcommittee`s mission:

The Subcommittee was established to identify the hazards that affect Summit County, determine which hazards pose the County the greatest risk, and work through hazard prevention needs and opportunities to prevent and reduce the effects of a disaster and increase the resiliency of Summit County.

2. 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, and the assessment of the historic data. Some hazards had limited data available for the Hazard Identification.

a) The Hazard Identification involved a process of determining what hazards have the potential to affect Summit County. A list of 12 hazards were identified as being of some inherent risk to the County: civil disturbance, terrorist incidents, flood and dam failures, drought, earthquake, utility disruption, transportation, winter storms, hazardous material incidents, nuclear attack, tornados, wildfires and structural fire. The purpose of the Hazard Identification is to provide a framework for developing the rest of the hazard assessment. The hazard identification takes into account:

(1) "…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."

b) After completing the Hazard Identification and The University of Akron inter 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,

(1) "a threat to lives, property, and the environment depletes the resources of a community beyond ordinary practice."

c) 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 72 for historical detail).

3. Risk Assessment:

   After compiling the historic hazard data, a Subcommittee was formed to conduct the Risk Assessment by analyzing and rating all the hazards according to their history and emerging trends. The Subcommittee discussed adding the following hazards to the 12 hazards previously identified: landslide and subsidence, global warming as it pertains to heat emergencies, cyber terrorism, disruptions in communications, biological terrorism and epidemics to be considered for assessment. * Infectious disease, landslides and subsidence, and communications were officially added to the list. Hazards were identified in detail and Summit County's overall risks to those hazards were determined through this evaluation process.

***The Summit County Hazard Vulnerability Assessment criteria can be found on Tab 113.**

4. Hazard Ranking:

   The Summit County Emergency Management Agency assisted the Subcommittee in prioritizing the hazard by using a Risk Matrix to anticipate losses and evaluate potential impacts of each hazard. Following the Risk Matrix, hazards were ranked based on historical frequency and severity as of April 30, 2003. (Refer to Tabs 1 and 2) Part III Risk Assessment Approaches, (James Lee Witt, Director, FEMA) Testimony Before U.S. Congress, October 27,1993.

Hazards	**Frequency**	**Severity**
Winter Storms	High	Extensive
Transportation Incidence	High	Extensive
Hazardous Material Incidence	High	Extensive
Civil Disturbance and Terrorism	High	Serious
Tornados and Sever Storms	High	Minor
Drought	High	Minor
Flood and Dam Failure	High	Extensive
Landslides/ Subsidence	Moderate	Minor
Infectious Disease	Very Low	Minor

This ranking is based on data gathered from September 2002 to August 2013. We have identified hazards with the greatest potential to affect lives and property. We recognize that we cannot foresee every possible hazard that may affect Summit County. 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.

5. Public Outreach

    a) 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.
    b) Published information on the Emergency Management Agency's website is available for public review and comment. New information will be added as reviews are conducted.
    c) The Summit County Emergency Management Newsletter "Common Vision" featured and article about the Mitigation Planning Process and invited comment.
    d) Talking points were developed for the Subcommittee members in order to solicit comment from the community through the various groups they represent.
    e) Public Outreach will continue to be an important part of the implementation and maintenance of this plan.

6. 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 and in writing to provide historical information, current plans and possible mitigation projects. The following plans and/or projects were provided by the communities and agencies of Summit County. The level of participation in the planning process varied thoughout.

    Current projects submitted by the communities where taken into consideration during the creation of this Hazard Reduction and Prevention Plan and are listed in this section. Communities will be encouraged to continue to submit action items and incorporate elements of this plan into their individual community plans.

    Community mitigation initiatives can be found on the next page:

Current Community Mitigation Initiatives:

CITIES

Akron
Current hazard mitigation initiatives for Akron include: Phase I of the Storm water Management Plan - currently working on hardening targets and implementing a security system including, identification badges. Akron has installed backup generators in 6 downtown buildings, contingencies in place to reroute traffic and the placing of portable stop signs. Akron has recently constructed a collation to address activities at the University of Akron that may end in a civil disturbance. This partnership has led to less damage to property, fewer injuries and a decrease in use of community resources. Akron is looking at adopting a Riparian Ordinance modeled after Cuyahoga County. Submitted the Land Use Plan

Barberton
Current hazard mitigation initiatives for Barberton include: making increases in security around the water and sewerage systems.

Cuyahoga Falls
Current hazard mitigation initiatives for Cuyahoga Falls include: the development of an extensive flood plain ordinance, and updating zoning regulations and developing an Emergency Operations Plan. Future projects would address security and hazard reduction. Cuyahoga Falls would also like to develop an Emergency Operations Center and harden infrastructure security.

Fairlawn
Current hazard mitigation initiatives for Fairlawn include: the purchasing of 12 sets of personal protective suits, the research of future WMD needs, the review of the 800 MHz Radio system and back up repeaters, the review of cell phones as a possible back up system, and security for the service garage to prevent dumping of hazardous materials. Fairlawn would also like to update internal emergency procedures and command structure, implement an annual training program, consider the reassessment of outdoor warning procedures, and the development of emergency power to the community center to use as an emergency shelter along with city hall. Fairlawn is also currently looking into drilling a well for back-up water and purchasing two portable water tanks, as well as, the purchasing of 15 to 20 chainsaws for storm debris clearance.

Green
Sent Emergency Operations Plan

Hudson
Current hazard mitigation initiatives for Hudson include: the development of contingency plans for events causing utility interruptions, which includes the purchase of emergency electric generators.

Macedonia
Current hazard mitigation initiatives for Macedonia include: providing senior citizens weather alert radios for early warning. Macedonia would like to expand this to a community-wide program, which would also include education and outdoor warning sirens for recreational areas. This would be in addition to their current quarterly education newsletter.

Munroe Falls
Current hazard mitigation initiatives for Munroe Falls include: the use of a quarterly newsletter to provide safety information to citizens within the jurisdiction.

Norton
Submitted copies of their Land Use Plan and their Zoning Plan. In the future they would like to do a Comprehensive Plan.

Stow
Current hazard mitigation initiatives for stow include: address concerns regarding the airport, the surrounding development and open space planning based on the Riparian Corridor. Future plans could include additional industrial safety measures, water safety and notification and outdoor warning systems.

Tallmadge
Current hazard mitigation initiatives for Tallmadge include: preparation and planning to update their public safety communications system.

Twinsburg
Current hazard mitigation initiatives for Twinsburg include: the planning involved to upgrade their outdoor warning system, public safety communications, and emergency operations center.

VILLAGES

Boston Heights
Sent Zoning Plan

Clinton
Current hazard mitigation initiatives for Clinton include: the placement of windsocks to strategically gauge wind direction for evacuation, participation in an information agreement with ODNR to notify the village when they are adjusting

the locks to release water downstream. Clinton would also like to build a level to protect historic downtown from future flooding.

Lakemore
Sent Zoning Map

Mogadore
Nothing to submit at this time

New Franklin
Current hazard mitigation initiatives for New Franklin include: planning to adopt the Riparian Ordinance, and will also be part of the Phase II Stormwater Management Plan. Comprehensive has been submitted.

Northfield
Current hazard mitigation initiatives for Northfield include: the establishment of shelters at Northfield Park, the Fire Department, and the Assisted Living Facility.

Peninsula
Nothing to submit at this time

Reminderville
Current hazard mitigation initiatives for Reminderville include: the planning and preparation involved in the purchasing of a siren in order to connect with Twinsburg, the planning involved in fixing a storm water issue with the potential for wide spread flooding if a 30-year- old storm drain fails, and has had a major problem with Cleveland water including wide spread leaking and shut off problems.

Richfield
Nothing at this time

Silver Lake
None at this time. Comprehensive Plan is on file with Summit County Planning and Economic Development.

TOWNSHIPS

Bath
Current hazard mitigation initiatives for Bath include: the Learn Not to Burn Program, CPR and AED, school security planning and training, advanced hostage negotiation training for officers, and planning and training for local businesses. Bath is currently updating disaster plans, and standardizing equipment among neighboring jurisdictions. Future plans include self-help and

survival lessons for families, in the case of a disaster, exercising their emergency operations center, implementation of a disaster call back system to alert citizens of disaster, and the continued support of Summit County Special Operations and anti-terrorism training.

Boston
Nothing to submit

Copley
Nothing to submit

Coventry
Current hazard mitigation initiatives for Coventry include: an on-going, multi-phased effort to improve the safety and quality of life of Coventry Township residents by improving the capacity of the storm drainage infrastructure within the Cottage Grove subdivision. 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. These culverts were replaced with enlarged culverts in order to protect the homes and roads in the immediate area, and also to accept the additional flow it will receive from the completed upstream improvements. Coventry Township is collaborating with the Summit County Engineer's Department to prevent low income families and their property from being repeatedly damaged by storm water and to also eliminate the serious traffic safety hazard when Killian Road floods.

As stated, Coventry is seeking the funds to complete phases 2 & 3 of a combined 5-phase storm water infrastructure improvement. 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 Department the opportunity to complete phase 4 (Killian Road culvert). When phases 1-4 are completed, the flooding hazard on Killian Road will be drastically mitigated. After resolving the majority of the hazard with phases 1-4, Coventry will continue to pursue Phase 5 (Buttercup Ave.), the last step, providing a finished modern, adequately sized, storm-water infrastructure plan for the entire drainage area.

Northfield Center
Comprehensive Plan is on file with Summit County Planning and Economic Development.

Richfield
Nothing to submit

Sagamore Hills
Nothing to submit. Comprehensive Plan is on file with Summit County Planning and Economic Development.

Springfield
Nothing to submit. Comprehensive Plan is on file with Summit County Planning and Economic Development.

Twinsburg
Comprehensive Plan is on file with Summit County Planning and Economic Development.

Planning Groups

Metro (County transit board)
Current hazard mitigation initiatives for Metro include: working on better communications between the station and the drivers to warn them during disasters, and the research of a vehicle locator system with panic button (Andy Ervin).

Airport
Nothing to submit at this time (Todd Lapps)

Environment Service
Nothing to submit at this time (Jim Dombroski)

Summit-Akron Solid Waste Management Authority
Current hazard mitigation initiatives for the Summit-Akron Solid Waste Management Authority include: responding to landfill space and recycling needs.

Waste Management District
Current hazard mitigation initiatives for the Waste Management District include: the interest in working on the Debris Management Plan.

Metro Parks Serving
Current hazard mitigation initiatives for Metro Parks include: The Regional Trail and Greenway Plan, which will increase and improve Summit County buffers and will benefit the riparian corridor (which includes the flood plains) identifying areas of environmental protection, conservation and restoration.

Summit County Office of Community and Economic Development
Current hazard mitigation initiatives for Summit County Office of Community and Economic Development include: the riparian corridor, natural resources project and creation of a concept plan. The entity is also working with Summit County Public Health on Phase II of the Stormwater Management Plan (septic tanks tie

into sewage ditches), to improve the quality of life for the citizens of Summit County, and to provided representation on the mitigation Subcommittee

NEOTEC
Nothing to submit

Planning Commission
Current hazard mitigation initiatives for the planning commission include: the presentation of the Hazard Mitigation Plan by the Summit County Emergency Management Agency.

Port Authority
Nothing to submit at this time (Pat Carano)

Summit County Engineer's Office
Current hazard mitigation initiatives for the Summit County Engineer`s Office include: a study to develop a comprehensive and effective strategy for reducing risks, damage, and losses from landslide hazards, flood plain mapping, development of the Stormwater Management Plan, and will also provide representation on the mitigation Subcommittee.

Summit County Building Department
Current hazard mitigation initiatives for the Summit County Building Department include: flood plain management and providing representation on the mitigation Subcommittee.

Summit County Public Health
Current hazard mitigation initiatives for Summit County Public Health include: the Smallpox vaccination program, public education program for safe water and food during disasters. Summit County Public Health also provides representation on the mitigation Subcommittee.

Northeast Ohio Four County Regional Planning and Development Organization
Current hazard mitigation initiatives for Northeast Ohio Four County Regional Planning and Development Organization include: providing statistical data for the planning process, and providing representation for the mitigation Subcommittee

Akron Metropolitan Area Transportation Study
Current hazard mitigation initiatives for the Akron Metropolitan Area Transportation Study include: working with ODOT on Interchange projects, which study`s areas where trucks tend to overturn, the Akron Incident Management Transportation Needs (ci.akron.oh.us/AMATS), and provides representation on the mitigation Subcommittee.

Home Builders Association
Current hazard mitigation initiatives for the Home Builders Association include: providing representation on the mitigation Subcommittee.

Summit County Housing Network
Current hazard mitigation initiatives for the Summit County Housing Network include: providing historical information on the Glendale Cemetery incident, and providing representation on the mitigation Subcommittee.

Greater Akron Chamber
Current hazard mitigation initiatives for the Greater Akron Chamber include: providing representation on the mitigation Subcommittee.

The Ohio State University Extension
Current hazard mitigation initiatives for The Ohio State University Extension include: providing representation on the mitigation Subcommittee, and information on crop loss and landslide references.

League of Women Voters Akron Area
Current hazard mitigation initiatives for the League of Women Voters Akron Area include: providing representation on the mitigation Subcommittee.

Environmental Protection Agency
Current hazard mitigation initiatives for the Environmental Protection Agency include: providing representation on the mitigation Subcommittee.

Summit County Soil and Water Conservation District
Current hazard mitigation initiatives for the Summit County Soil and Water Conservation District include: providing representation on the mitigation Subcommittee, data on landslide, and information regarding native plants for green space.

Ohio Department of Natural Resources
Current hazard mitigation initiatives for the Ohio Department of Natural Resources include: providing oral reports on landslide/subsidence statistics, possibilities within Summit County, soil types, areas of concern, and overall background data.

7. 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 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. Further updates in regards to the 2013 Mitigation Plan include an updated Fujita Scale graphic, an updated Palmer Drought Index graphic, updated historical hazard information, complete re-formatting, updated participant list, updated hazard definitions, new maps (tornado and landslides for example), updated public assistance figures, updated repetitive loss information, updated community mitigation statuses, information consolidation, reformatted rhetoric, and updated community projects.

The planning group discussed several plan maintenance initiatives, many of which have been discussed throughout this plan. To ensure that this plan will be reviewed and the mitigation actions will be evaluated for success on a regular basis, this plan will also be placed on the Summit County Planning Commission`s agenda. The will aid in ensuring a regular and thorough review of this plan. A complete listing of the planning participants can be found on Tab 110.

8. Goals

   Goals for the planning process were discussed based on the Vulnerability Assessment. The Subcommittee agreed that the overall goal of the Plan should be "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:

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

9. Project Proposals:

   Projects were submitted through the development of a project proposal form. Responses from the communities where reviewed by the Subcommittee and an Action Plan was established. The Subcommittee applied the filter criteria to the proposed projects and made recommendations to the Emergency Management Executive Committee as to project priority. All projects were submitted to Ohio Emergency Management Agency (OEMA) for consideration for Mitigation Grant monies. Following this initial application period, communities submitted various projects to OEMA for Mitigation Grant Consideration.

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 111.

There are no major changes in priorities except for new projects submitted by Summit County communities. The communities of Akron, Coventry, Fairlawn and Cuyahoga Falls were the only jurisdictions which submitted projects. These projects are prioritized based on the cost benefit analysis method. The plan update thereby validates the information previously approved in the plan.

The goals stated above will remain the same. In terms of the requested reasoning, the following should provide insight. The determination to reuse the goals resulted from the observation that they had never initially been attempted let alone implemented. Moving forward, this document and the

processes which accompany it will be actively addressed during the next 5-year revision cycle, as opposed to the previous passivity.

10. 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 County for completeness and project eligibility. After 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 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. Applications will be sent out the first of the year. Applicants will have the opportunity to attend a workshop to provide information and resources to assist in filling out the applications. The Hazard Reduction and Prevention Plan must maintain at least one project affecting each jurisdiction in Summit County.

a) Future projects may consist of:

(1) **Preventative** activities keep problems from getting worse. The use and development of hazard areas are limited through planning or regulations. Building, zoning, planning, and or code enforcement officials usually administer these activities.
(2) **Property protection** is usually undertaken by property owners on a building-by- building or parcel basis.
(3) **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.
(4) **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.
(5) **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.
(6) **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.

11. Plan Maintenance:

a) 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.
b) 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.
c) 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.
d) The Hazard Prevention Subcommittee 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.
e) 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.
f) 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.

VI. Authorities and References

A. Authorities

1. Federal

    a) Sec. 201.6, page 8851, Federal Register/Vol. 67, No.38/Tuesday, February 26, 2002/Rules and Regulations.

2. State

    a) Ohio Revised Code Section 5502.21 to 5502.51.

3. Local

    a) Summit County Emergency Management Agreement

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20. Summit Soil and Water Conservation District. (July 2013). Cuyahoga Falls, Ohio.
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Hazard Reduction and Prevention Action Plan

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.

Status of County Projects from the 2003 Hazard Mitigation Plan:

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	Deferred
Natural Resources Education Outreach	Summit County Department of Community and Economic Development	Provide natural resources study information 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	Ongoing

Status of Community Projects from the 2003 Hazard Mitigation Plan:

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
	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
	City of Munroe Falls	Installation of backup generator to provide for city water pump facility	City of Munroe Falls	Ongoing
Storm Water Control	Village of Silver Lake	Construction of “wingwalls” to control flow of storm water	Village of Silver Lake, 3129 Dover Road	Completed
	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
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	Ongoing
Storm Water Control	Twinsburg Twp. City of Twinsburg and Village of Reminderville	Storm water drainage improvement	Twinsburg Twp. Marwell and Darrow Roads	Ongoing Start date: April 1, 2007 End date: September 1, 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: September 1, 2018

Project Descriptions:

County:

Metro Parks:

Dave Whited at Summit County Metro Parks advised regarding the project mentioned in the current plan. He indicated that the work involving stream bank stabilization along Sand Run Creek is an ongoing project and occurs at various points on an *as needed* basis. The mitigation process involves utilizing large boulders to stabilize the banks, however they are becoming difficult to locate. He said the Army Corps of Engineers will likely be recommending an alternate method anyway. No permanent solution is currently available.

Summit County Emergency Management Agency:

The EMA project involved purchasing weather alert radios and distributing them among various buildings where large groups gather. This project was completed, and there are still radios available to be provided as needed.

Summit County Engineer's Office:

Continually monitoring known areas prone to landslides. Developing comprehensive and effective strategies for reducing risk from landslides and slope movement is an ongoing and reoccurring process. Flood plain re-mapping has currently been deferred, due to the minimal amount of funds available in the Engineer`s budget for storm water mapping.

Summit County Department of Community & Economic Development:

This department had two items mentioned. The first item concerned providing a natural resources study to the political subdivisions in order to prevent flooding and landslide disasters. The County hired Davey Resource Group Consultants to produce a Natural Resources Study Report in partnership with the Department of Community & Economic Development and Planning Division that was completed in 2003. Copies of the Natural Resources Study for Summit County and CD's of the Study were provided to our communities in 2003. In addition, a natural resources map was provided to each community as part of this project.

The second item dealt with developing a blueprint for community growth and development, while taking identified natural hazards into account. In speaking with representatives in this department, they confirmed that this action was completed and adopted by Summit County Council on June 19th, 2006, as Resolution No. 2006-166.

Political Subdivisions:

City of Cuyahoga Falls:

Fire Chief Paul Moledor advised regarding the projects mentioned for Cuyahoga Falls. The first one was implementing 7 outdoor warning sirens which were completed. These sirens are tied in to a local AM radio station. The next project was developing a mitigation plan for flooding and this too was completed. The City was contemplating obtaining a mobile generator but the acquisition was put on hold.

Village of Silver Lake:

The Village has completed the project dealing with the installation of 2 outdoor warning sirens. This project was completed concurrently with the siren project in Cuyahoga Falls and is tied into the City as well. One was installed in 1997 and the other which was obtained by a federal grant was installed in 2005, at a cost of $15,999.60. In 2008, both siren systems were upgraded at a cost of $5,700.00. Another project the Village provided was the purchase of a portable generator with a trailer for the water pump house. This project was cancelled. Along the same lines, the Village was looking to purchase a 200amp generator for the Town Hall Building. This has been completed. Silver Lake Village was also looking into acquiring and demolishing 2 residential properties in order to redesign the stream bed to better provide for retention of storm water to minimize flooding. This was completed. Another project that was previously mentioned dealt with a residential property on Dover Road in the Village and the need for bank stabilization by utilizing reinforced concrete blocks. This was completed. The last project mentioned also involved a residential property along Dover Road which was recommended to have wing walls constructed in an effort to control the flow of storm water. This was also completed.

Twinsburg Township:

The Township provided two projects that they wanted to pursue. First was improvement of storm water drainage around the intersection of Marwell and Darrow Roads. This project is ongoing, in that it is still in the planning stages. The other project they were working on was conducting a study of the lower streets in the Heights Allotment. This project went through an extensive study which determined the need to add sidewalks, curbs and storm sewers. It is still ongoing as it is a multiphase, multimillion dollar reconstruction project. As of this writing it is approximately halfway done.

City of Stow:

The City of Stow previously submitted a project described as debris removal through the City. This is an ongoing action and often done on an "as needed" basis.

City of Munroe Falls:

The City of Munroe Falls listed the purchase and installation of a backup generator to provide redundancy at the City's water pump facility. In speaking with them, they have said that this project is ongoing and has not been completed.

City of Hudson:

Hudson had two projects which were submitted for inclusion in the mitigation plan. The first was to retrofit existing plumbing in approximately 20 residences by installing suspended or "hung" plumbing. The other was the replacement of a rust damaged exterior door at the library. Both of these projects have been completed.

FUTURE MITIGATION PROJECTS AS SUBMITTED TO SUMMIT COUNTY EMERGENCY MANAGEMENT AGENCY FOR REVISED MITIGATION PLAN:

POLITICAL SUBDIVISIONS:

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: September 1, 2018 (Note: if funded, these projects could be completed in one year)
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: New

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: September 1, 2018
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: New

(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: September 1, 2018
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match
Status: New

(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: September 1, 2018
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match
Status: New

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: September 1, 2018
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: New

(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: September 1, 2018
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: September 1, 2018
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match
Status: New

(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: September 1, 2018
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: Ongoing, 60% complete

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: September 1, 2018
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match
Status: New

(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: September 1, 2018
Resources: FEMA Pre-Disaster Mitigation grant (PDM), existing budget as local match
Status: New

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: September 1, 2014 (Note: this project would take 4-6 weeks, which could be accomplished sometime within this time period)
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: New

(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: September 1, 2018
Resources: FEMA Flood Mitigation Assistance grant (FMA), existing budget as local match
Status: New

National Flood Insurance Progran (NFIP) Information for Summit County

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. 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 the next page(s).

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).

NFIP Repetitive Loss information for Summit County, Ohio as provided by Ohio EMA:

Community Name	Number of Properties	Number of Losses	Type of Properties	Building Payments	Contents Payments	Total Payments
Akron, City Of	15	34	14 Residential 1 Commercial	104,045.34	18,175.07	122,220.41
Barberton, City Of	14	29	12 Residential 2 Commercial	229,622.26	7,229.51	236,851.77
Clinton, Village Of	3	9	Residential	31,033.45	7,267.09	38,300.54
Copley	2	4	Residential	63,526.48	1,071.43	64,597.91
Fairlawn, City Of	1	2	Residential	2,887.79	1,454.37	4,342.16
Hudson, City Of	2	4	1 Residential 1 Commercial	24,382.92	26,931.06	51,313.98
Munroe Falls, City Of	2	9	Residential	192,756.60	17,911.74	210,668.34
Norton, City Of	1	2	Residential	36,084.60	.00	36,084.60
Stow, City Of	3	6	Residential	37,945.16	3,852.66	41,797.82

Summit County	12	27	1 Residential 1 Commercial	513,041.00	143,782.47	656,823.47

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 July 20th 2009 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.

Summit County Floodplain Legislation

Chapter 1345:

Flood Damage Reduction

1345.1.0 GENERAL PROVISIONS.

A. Statutory Authorization. This Chapter is adopted pursuant to authorization contained in Sections 307.37 and 307.85 of the Ohio Revised Code. This Chapter adopts regulations for areas of special flood hazard that are necessary for participation in the National Flood Insurance Program.

B. Findings of Fact. The County of Summit (Unincorporated Areas) has special flood hazard areas that are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base. Additionally, structures that are inadequately elevated, flood- proofed, or otherwise protected from flood damage also contribute to the flood loss. In order to minimize the threat of such damages and to achieve the purposes hereinafter set forth, these regulations are adopted.

C. Statement of Purpose. It is the purpose of these regulations to promote the public health, safety, general welfare, and to:

1. Protect human life and health
2. Minimize expenditure of public money for costly flood control projects
3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public
4. Minimize prolonged business interruptions
5. Minimize damage to public facilities/utilities, such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard
6. Help maintain a stable tax base, by providing for the proper use and development of areas of special flood hazard so as to protect property and minimize future flood blight areas
7. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions

8. Minimize the impact of development on adjacent properties within and near flood prone areas
9. Ensure that the flood storage and conveyance functions of the floodplain are maintained
10. Minimize the impact of development on the natural, beneficial values of the floodplain
11. Prevent floodplain uses that are either hazardous or environmentally incompatible
12. Meet community participation requirements of the National Flood Insurance Program

D. Methods of Reducing Flood Loss. In order to accomplish its purposes, these regulations include methods and provisions for:

1. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water hazards, or which result in damaging increases in flood heights or velocities;
2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
4. Controlling filling, grading, dredging, excavating, and other development which may increase flood damage; and,
5. Preventing or regulating the construction of flood barriers, which will unnaturally divert flood waters or which may increase flood hazards in other areas.

E. Lands to Which These Regulations Apply. These regulations shall apply to all areas of special flood hazard within the jurisdiction of the County of Summit (Unincorporated Areas) as identified in subsection (f) hereof, including any additional areas of special flood hazard annexed by the County of Summit (Unincorporated Areas).

F. Basis for Establishing the Areas of Flood Hazard. For the purposes of these regulations, the following studies and/or maps are adopted:

1. Flood Insurance Study The County of Summit, Ohio and Incorporated Areas and Flood Insurance Rate Map The County of Summit, Ohio and Incorporated Areas, both effective July 20, 2009.
2. Other studies and/or maps, which may be relied upon for establishment of the flood protection elevation, delineation of the 100-year floodplain, floodways or delineation of other areas of special flood hazard.
3. Any hydrologic and hydraulic engineering analysis authored by a registered Professional Engineer in the State of Ohio which has been

approved by the County of Summit (Unincorporated Areas) as required by Section 1345.04(c) Subdivisions and Large Scale Developments.

Any revisions to the aforementioned maps and/or studies are hereby adopted by reference and declared to be a part of these regulations. Such maps and/or studies are on file at the Department of Building Standards, 1030 East Tallmadge Avenue, Akron, Ohio 44310.

G. Abrogation and Greater Restrictions. These regulations are not intended to repeal any existing ordinances including subdivision regulations, zoning or building codes. In the event of a conflict between these regulations and any other ordinance, the more restrictive shall be followed. These regulations shall not impair any deed restriction, covenant or easement but the land subject to such interests shall also be governed by the regulations.
H. Interpretation. In the interpretation and application of these regulations, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally construed in favor of the governing body; and,
3. Deemed neither to limit nor repeal any other powers granted under state statutes.

Where a provision of these regulations may be in conflict with a state or Federal law, such state or Federal law shall take precedence over these regulations.

I. Warning and Disclaimer of Liability. The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. These regulations do not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damage. These regulations shall not create liability on the part of the County of Summit (Unincorporated Areas), any officer or employee thereof, or the Federal Emergency Management Agency, for any flood damage that results from reliance on these regulations or any administrative decision lawfully made thereunder.
J. Severability. Should any section or provision of these regulations be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof other than the part so declared to be unconstitutional or invalid.

(Ord. 2009-266. Adopted 6-29-09.)

1345.2.0 DEFINITIONS.

Unless specifically defined, words or phrases used in these regulations shall be interpreted so as to give them the meaning they have in common usage and to give these regulations the most reasonable application.

Accessory Structure
A structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal structure.

Appeal
A request for review of the floodplain administrator's interpretation of any provision of these regulations or a request for a variance.

Base Flood
The flood having a one percent chance of being equaled or exceeded in any given year. The base flood may also be referred to as the 1% chance annual flood or one hundred (100) year flood.

Base (100-Year) Flood Elevation (BFE)
The water surface elevation of the base flood in relation to a specified datum, usually the National Geodetic Vertical Datum of 1929 or the North American Vertical Datum of 1988, and usually expressed in Feet Mean Sea Level (MSL). In Zone AO areas, the base flood elevation is the natural grade elevation plus the depth from (1-3 feet.)

Basement
Any area of the building having its floor sub grade (below ground level) on all sides.

Development
Any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Enclosure Below the Lowest Floor
See "Lowest Floor."

Executive Order 11988 (Floodplain Management)
Issued by President Carter in 1977, this order requires that no federally assisted activities be conducted in or have the potential to affect identified special flood hazard areas, unless there is no practicable alternative.

Federal Emergency Management Agency (FEMA)
The agency with the overall responsibility for administering the National Flood Insurance Program.

Fill
A deposit of earth material placed by artificial means.

Flood or Flooding
A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters, and/or
2. The unusual and rapid accumulation or runoff of surface waters from any source

Flood Hazard Boundary Map (FHBM)
Usually the initial map, produced by the Federal Emergency Management Agency, or U.S. Department of Housing and Urban Development, for a community depicting approximate special flood hazard areas.

Flood Insurance Rate Map (FIRM)
An official map on which the Federal Emergency Management Agency or the U.S. Department of Housing and Urban Development has delineated the areas of special flood hazard.

Flood Insurance Risk Zones
Zone designations on FHBMs and FIRMs that indicate the magnitude of the flood hazard in specific areas of a community. Following are the zone definitions:

Zone A:
Special flood hazard areas inundated by the 1 00-year flood; base flood elevations are not determined.

Zones A1-30 and Zone AE:
Special flood hazard areas inundated by the 100-year flood; base flood elevations are determined.

Zone AO:
Special flood hazard areas inundated by the 1 00-year flood; with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths are determined.

Zone AH:
Special flood hazard areas inundated by the 100-year flood; flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations are determined.

Zone A99:
Special flood hazard areas inundated by the 1 00-year flood to be protected from the 100-year flood by a Federal flood protection system under construction; no base flood elevations are determined.

Zone B and Zone X (shaded):
Areas of 500-year flood; areas subject to the 1 00-year flood with average depths of less than 1 foot or with contributing drainage area less than 1 square mile; and areas protected by levees from the base flood.

Zone C and Zone X (unshaded):
Areas determined to be outside the 500-year floodplain.

Flood Insurance Study (FIS)
The official report in which the Federal Emergency Management Agency or the U.S. Department of Housing and Urban Development has provided flood profiles, flood way boundaries (sometimes shown on Flood Boundary and Flood way Maps), and the water surface elevations of the base flood.

Flood Protection Elevation
The Flood Protection Elevation, or FPE, is the base flood elevation. In areas where no base flood elevations exist from any authoritative source, the flood protection elevation can be historical flood elevations, or base flood elevations determined and/or approved by the floodplain administrator.

Floodway
A floodway is the channel of a river or other watercourse and the adjacent land areas that have been reserved in order to pass the base flood discharge. A floodway is typically determined through a hydraulic and hydrologic engineering analysis such that the cumulative increase in the water surface elevation of the base flood discharge is no more than a designated height. In no case shall the designated height be more than one foot at any point within the community.

The floodway is an extremely hazardous area, and is usually characterized by any of the following: Moderate to high velocity flood waters, high potential for debris and projectile impacts, and moderate to high erosion forces.

Freeboard
A factor of safety usually expressed in feet above a flood level for the purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, obstructed bridge openings, debris and ice jams, and the hydrologic effect of urbanization in a watershed.

Historic Structure
Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listings on the National Register;

2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; or,
3. Individually listed on the State of Ohio's inventory of historic places maintained by the Ohio Historic Preservation Office.
4. Individually listed on the inventory of historic places maintained by The County of Summit (Unincorporated Areas)' s historic preservation program, which program is certified by the Ohio Historic Preservation Office.

Hydrologic and Hydraulic Engineering Analysis

An analysis performed by a professional engineer, registered in the State of Ohio, in accordance with standard engineering practices as accepted by FEMA, used to determine flood elevations and/or floodway boundaries.

Letter of Map Change (LOMC)

A Letter of Map Change is an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, and Flood Insurance Studies. LOMCs are broken down into the following categories:

Letter of Map Amendment (LOMA)

A revision based on technical data showing that a property was incorrectly included in a designated special flood hazard area. ALOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property is not located in a special flood hazard area.

Letter of Map Revision (LOMR)

A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a LOMR-F, is a determination concerning whether a structure or parcel has been elevated by fill above the base flood elevation and is, therefore, excluded from the special flood hazard area.

Conditional Letter of Map Revision (CLOMR)

A formal review and comment by FEMA as to whether a proposed project complies with the minimum National Flood Insurance Program floodplain management criteria. A CLOMR does not amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies.

Lowest Floor

The lowest floor of the lowest enclosed area (including basement) of a structure. This definition excludes an "enclosure below the lowest floor" which is an unfinished or flood resistant enclosure usable solely for parking of vehicles, building access or storage, in an area other than a basement area, provided that such enclosure is built in accordance

with the applicable design requirements specified in these regulations for enclosures below the lowest floor.

Manufactured Home
A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle". For the purposes of these regulations, a manufactured home includes manufactured homes and mobile homes as defined in Chapter 3733 of the Ohio Revised Code.

Manufactured Home Park
As specified in the Ohio Administrative Code 3701-27-01, a manufactured home park means any tract of land upon which three or more manufactured homes used for habitation are parked, either free of charge or for revenue purposes, and includes any roadway, building, structure, vehicle, or enclosure used or intended for use as part of the facilities of the park. A tract of land that is subdivided and the individual lots are not for rent or rented, but are for sale or sold for the purpose of installation of manufactured homes on the lots, is not a manufactured home park, even though three or more manufactured homes are parked thereon, if the roadways are dedicated to the local government authority.

National Flood Insurance Program (NFIP)
The NFIP is a Federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal government that states if a community will adopt and enforce floodplain management regulations to reduce future flood risks to all development in special flood hazard areas, the Federal government will make flood insurance available within the community as a financial protection against flood loss.

New Construction
Structures for which the "start of construction" commenced on or after the initial effective date of the County of Summit (Unincorporated Areas) Flood Insurance Rate Map, April 15, 1981, and includes any subsequent improvements to such structures.

Person
Includes any individual or group of individuals, corporation, partnership, association, or any other entity, including state and local governments and agencies. An agency is further defined in the Ohio Revised Code Section 111.15 as any governmental entity of the state and includes, but is not limited to, any board, department, division, commission, bureau, society, council, institution, state college or university, community college district, technical college district, or state community college. “Agency” does not

include the general assembly, the controlling board, the adjutant general's department, or any court.

Recreational Vehicle
A vehicle which is (1) built on a single chassis, (2) 400 square feet or less when measured at the largest horizontal projection, (3) designed to be self-propelled or permanently towable by a light duty truck, and (4) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Registered Professional Architect
A person registered to engage in the practice of architecture under the provisions of Sections 4703.01 to 4703.19 of the Revised Code.

Registered Professional Engineer
A person registered as a professional engineer under Chapter 4733 of the Revised Code.

Registered Professional Surveyor
A person registered as a professional surveyor under Chapter 4733 of the Revised Code.

Special Flood Hazard Area
Also known as "Areas of Special Flood Hazard", it is the land in the floodplain subject to a one percent or greater chance of flooding in any given year. Special flood hazard areas are designated by the Federal Emergency Management Agency on Flood Insurance Rate Maps, Flood Insurance Studies, Flood Boundary and Floodway Maps and Flood Hazard Boundary Maps as Zones A, AE, AH, AO, Al-30, and A99. Special flood hazard areas may also refer to areas that are flood prone and designated from other federal, state or local sources of data including but not limited to historical flood information reflecting high water marks, previous flood inundation areas, and flood prone soils associated with a watercourse.

Start of Construction
The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any

wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of a building.

Structure
A walled and roofed building, manufactured home, or gas or liquid storage tank that is principally above ground.

Substantial Damage
Damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Substantial Improvement
Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include:

1. Any improvement to a structure that is considered "new construction,"
2. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified prior to the application for a development permit by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
3. Any alteration of a "historic structure," provided that the alteration would not preclude the structure's continued designation as a "historic structure"

Variance
A grant of relief from the standards of these regulations consistent with the variance conditions herein.

Violation
The failure of a structure or other development to be fully compliant with these regulations.

(Ord. 2009-266. Adopted 6-29-09.)

1345.3.0 ADMINISTRATION.

A. Designation of the Floodplain Administrator. The Chief Building Official is hereby appointed to administer and implement these regulations and is referred to herein as the Floodplain Administrator.

B. Duties and Responsibilities of the Floodplain Administrator. The duties and responsibilities of the Floodplain Administrator shall include but are not limited to:

1. Evaluate applications for permits to develop in special flood hazard areas.
2. Interpret floodplain boundaries and provide flood hazard and flood protection elevation information.
3. Issue permits to develop in special flood hazard areas when the provisions of these regulations have been met, or refuse to issue the same in the event of noncompliance.
4. Inspect buildings and lands to determine whether any violations of these regulations have been committed.
5. Make and permanently keep all records for public inspection necessary for the administration of these regulations including Flood Insurance Rate Maps, Letters of Map Amendment and Revision, records of issuance and denial of permits to develop in special flood hazard areas, determinations of whether development is in or out of special flood hazard areas for the purpose of issuing floodplain development permits, elevation certificates, variances, and records of enforcement actions taken for violations of these regulations.
6. Enforce the provisions of these regulations.
7. Provide information, testimony, or other evidence as needed during variance hearings.
8. Coordinate map maintenance activities and FEMA follow-up.
9. Conduct substantial damage determinations to determine whether existing structures, damaged from any source and in special flood hazard areas identified by FEMA, must meet the development standards of these regulations.

C. Floodplain Development Permits. It shall be unlawful for any person to begin construction or other development activity including but not limited to filling; grading; construction; alteration, remodeling, or expanding any structure; or alteration of any watercourse wholly within, partially within or in contact with any identified special flood hazard area, as established in Section 1345.01(f), until a floodplain development permit is obtained from the Floodplain Administrator. Such floodplain development permit shall show that the proposed development activity is in conformity with the provisions of these regulations. No such permit shall be issued by the Floodplain Administrator until the requirements of these regulations have been met.

D. Application Required. An application for a floodplain development permit shall be required for all development activities located wholly within, partially within, or in contact with an identified special flood hazard area. Such application shall be made by the owner of the property or his/her authorized agent, herein referred to as the applicant, prior to the actual commencement of such construction on a form furnished for that purpose. Where it is unclear whether a development site is in a special flood hazard area, the Floodplain Administrator may require an application for a floodplain development permit to determine the development's location. Such applications shall include, but not be limited to:

1. Site plans drawn to scale showing the nature, location, dimensions, and topography of the area in question; the location of existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing.
2. Elevation of the existing, natural ground where structures are proposed.
3. Elevation of the lowest floor, including basement, of all proposed structures.
4. Such other material and information as may be requested by the Floodplain Administrator to determine conformance with, and provide enforcement of these regulations.
5. Technical analyses conducted by the appropriate design professional registered in the State of Ohio and submitted with an application for a floodplain development permit when applicable:

    a) Floodproofing certification for nonresidential floodproofed structure as required in Section 1345.04(e).
    b) Certification that fully enclosed areas below the lowest floor of a structure not meeting the design requirements of Section 1345.04(d)(5) are designed to automatically equalize hydrostatic flood forces.
    c) Description of any watercourse alteration or relocation that the flood carrying capacity of the watercourse will not be diminished, and maintenance assurances as required in Section 1345.04(i)(3).
    d) A hydrologic and hydraulic analysis demonstrating that the cumulative effect of proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood by more than one foot in special flood hazard areas where the Federal Emergency Management Agency has provided base flood elevations but no floodway as required by Section 1345.04(i)(2).
    e) A hydrologic and hydraulic engineering analysis showing impact of any development on flood heights in an identified floodway as required by Section 1345.04(i)(l).
    f) Generation of base flood elevation(s) for subdivision and large-scale developments as required by Section 1345.04(c).

6. A floodplain development permit application fee set by the schedule of fees adopted by the County of Summit (Unincorporated Areas).

E. Review and Approval of Floodplain Development Permit Application.

1. Review.

a) After receipt of a complete application, the Floodplain Administrator shall review the application to ensure that the standards of these regulations have been met. No floodplain development permit application shall be reviewed until all information required in subsection (d) hereof has been received by the Floodplain Administrator.
b) The Floodplain Administrator shall review all floodplain development permit applications to assure that all necessary permits have been received from those federal, state or local governmental agencies from which prior approval is required. The applicant shall be responsible for obtaining such permits as required including permits issued by the U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, and the Ohio Environmental Protection Agency under Section 401 of the Clean Water Act.

2. Approval

a) Within thirty (30) days after the receipt of a complete application, the Floodplain Administrator shall either approve or disapprove the application. If an application is approved, a floodplain development permit shall be issued. All floodplain development permits shall be conditional upon the commencement of work within one (1) year. A floodplain development permit shall expire one (1) year after issuance unless the permitted activity has been substantially begun and is thereafter pursued to completion.

F. Inspections. The Floodplain Administrator shall make periodic inspections at appropriate times throughout the period of construction in order to monitor compliance with permit conditions.
G. Post-construction Certifications Required. The following as-built certifications are required after a floodplain development permit has been issued:

1. For new or substantially improved residential structures, or nonresidential structures that have been elevated, the applicant shall have a Federal Emergency Management Agency Elevation Certificate completed by a registered surveyor to record as-built elevation data. For elevated structures in Zone A and Zone AO areas without a base flood elevation, the elevation certificate may be completed by the property owner or owner's representative.
2. For all development activities subject to the standards of subsection G)(l) hereof, a Letter of Map Revision

H. Revoking a Floodplain Development Permit. A floodplain development permit shall be revocable, if among other things, the actual development activity does not conform to the terms of the application and permit granted thereon. In the event of the revocation of a permit, an appeal may be taken to the Appeals Board in accordance with Section 1345.05.

I. Exemption from Filing a Development Permit. An application for a floodplain development permit shall not be required for:

1. Maintenance work such as roofing, painting, and basement sealing, or for small nonstructural development activities (except for filling and grading) valued at less than $5,000.
2. Development activities in an existing or proposed manufactured home park that are under the authority of the Ohio Department of Health and subject to the flood damage reduction provisions of the Ohio Administrative Code Section 3 701.
3. Major utility facilities permitted by the Ohio Power Siting Board under Chapter 4906 of the Ohio Revised Code.
4. Hazardous waste disposal facilities permitted by the Hazardous Waste Siting Board under Chapter 3 734 of the Ohio Revised Code.
5. Development activities undertaken by a federal agency and which are subject to Federal Executive Order 11988 - Floodplain Management.
6. Any proposed action exempt from filing for a floodplain development permit is also exempt from the standards of these regulations.

J. Map Maintenance Activities. To meet National Flood Insurance Program minimum requirements to have flood data reviewed and approved by FEMA, and to ensure that the County of Summit (Unincorporated Areas) flood maps, studies and other data identified in Section 1345.01 (f) accurately represent flooding conditions so appropriate floodplain management criteria are based on current data, the following map maintenance activities are identified:

1. Requirement to Submit New Technical Data.

a) For all development proposals that impact flood way delineations or base flood elevations, the community shall ensure that technical data reflecting such changes be submitted to FEMA within six months of the date such information becomes available. These development proposals include:

(1) Floodway encroachments that increase or decrease base flood elevations or alter floodway boundaries.
(2) Fill sites to be used for the placement of proposed structures where the applicant desires to remove the site from the special flood hazard area;

(3) Alteration of watercourses that result in a relocation or elimination of the special flood hazard area, including the placement of culverts; and
(4) Subdivision or large scale development proposals requiring the establishment of base flood elevations in accordance with Section 1345.04(c).

b) It is the responsibility of the applicant to have technical data, required in accordance with this subsection (j)(1) hereof, prepared in a format required for a Conditional Letter of Map Revision or Letter of Map Revision, and submitted to FEMA. Submittal and processing fees for these map revisions shall be the responsibility of the applicant.
c) The Floodplain Administrator shall require a Conditional Letter of Map Revision prior to the issuance of a floodplain development permit for:

(1) Proposed floodway encroachments that increase the base flood elevation and;
(2) Proposed development that increases the base flood base elevation by more than one foot in areas where FEMA has provided base floodplain elevations but no flood way.

d) Floodplain development permits issued by the Floodplain Administrator shall be conditioned upon the applicant obtaining a Letter of Map Revision from FEMA for any development proposal subject to subsection (j)(1)A. hereof.

2. Right to Submit New Technical Data. The Floodplain Administrator may request changes to any of the information shown on an effective map that does not impact floodplain or floodway delineations or base flood elevations, such as labeling or planimetric details. Such a submission shall include appropriate supporting documentation made in writing by the County Executive of the County of Summit (Unincorporated Areas), and may be submitted at any time.
3. Annexation / Detachment. Upon occurrence, the Floodplain Administrator shall notify FEMA in writing whenever the boundaries of the County of Summit (Unincorporated Areas) have been modified by annexation or the community has assumed authority over an area, or no longer has authority to adopt and enforce floodplain management regulations for a particular area. In order that the County of Summit (Unincorporated Areas) Flood Insurance Rate Map accurately represents the County of Summit (Unincorporated Areas) boundaries, include within such notification a copy of a map of the County of Summit (Unincorporated Areas) suitable for reproduction, clearly showing the new corporate limits or the new area for which the County of Summit (Unincorporated Areas) has assumed or relinquished floodplain management regulatory authority.

K. Data Use and Flood Map Interpretation. The following guidelines shall apply to the use and interpretation of maps and other data showing areas of special flood hazard:

1. In areas where FEMA has not identified special flood hazard areas, or in FEMA identified special flood hazard areas where base flood elevation and floodway data have not been identified, the Floodplain Administrator shall review and reasonably utilize any other flood hazard data available from a federal, state, or other source.
2. Base flood elevations and floodway boundaries produced on FEMA flood maps and studies shall take precedence over base flood elevations and floodway boundaries by any other source that reflect a reduced floodway width and/or lower base flood elevations. Other sources of data, showing increased base flood elevations and/or larger floodway areas than are shown on FEMA flood maps and studies, shall be reasonably used by the Floodplain Administrator.
3. When Preliminary Flood Insurance Rate Maps and / or Flood Insurance Study have been provided by FEMA:

    a) Upon the issuance of a Letter of Final Determination by the FEMA, the preliminary flood hazard data shall be used and replace all previously existing flood hazard data provided from FEMA for the purposes of administering these regulations.
    b) Prior to the issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data shall only be required where no base flood elevations and /or floodway areas exist or where the preliminary base flood elevations or floodway area exceed the base flood elevations and/or floodway widths in existing flood hazard data provided from FEMA. Such preliminary data may be subject to change and / or appeal to FEMA.

4. The Floodplain Administrator shall make interpretations, where needed, as to the exact location of the flood boundaries and areas of special flood hazard. A person contesting the determination of the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 1345.05, Appeals and Variances.
5. Where a map boundary showing an area of special flood hazard and field elevations disagree, the base flood elevations or flood protection elevations (as found on an elevation profile, floodway data table, established high water marks, etc.) shall prevail.

L. Substantial Damage Determinations. Damages to structures may result from a variety of causes including flood, tornado, wind, heavy snow, fire, etc. After such a damage event, the Floodplain Administrator shall:

1. Determine whether damaged structures are located in special flood hazard areas;
2. Conduct substantial damage determinations for damaged structures located in special flood hazard areas; and
3. Make reasonable attempt to notify owners of substantially damaged structures of the need to obtain a floodplain development permit prior to repair, rehabilitation, or reconstruction.
4. Additionally, the Floodplain Administrator may implement other measures to assist with the substantial damage determination and subsequent repair process. These measures include issuing press releases, public service announcements, and other public information materials related to the floodplain development permits and repair of damaged structures; coordinating with other federal, state, and local agencies to assist with substantial damage determinations; providing owners of damaged structures materials and other information related to the proper repair of damaged structures in special flood hazard areas; and assist owners of substantially damaged structures with Increased Cost of Compliance insurance claims.

(Ord. 2009-266. Adopted 6-29-09.)

1345.4.0 USE AND DEVELOPMENT STANDARDS FOR FLOOD HAZARD REDUCTION.

The following use and development standards apply to development wholly within, partially within, or in contact with any special flood hazard area as established in Section 1345.01(f) or 1345.03(k)(1):

A. Use Regulations.

1. Permitted uses.

a) All uses not otherwise prohibited in this section or any other applicable land use regulation adopted by the County of Summit (Unincorporated Areas) are allowed provided they meet the provisions of these regulations.

2. Prohibited uses.

a) Private water supply systems in all special flood hazard areas identified by FEMA, permitted under Chapter 3701 of the Ohio Revised Code.
b) Infectious waste treatment facilities in all special flood hazard areas, permitted under Chapter 3734 of the Ohio Revised Code.

B. Water and Wastewater Systems. The following standards apply to all water supply, sanitary sewerage and waste disposal systems not otherwise regulated by the Ohio Revised Code:

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems;
2. New and replacement sanitary sewerage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and,
3. On-site waste disposal systems shall be located to avoid impairment to or contamination from them during flooding.

C. Subdivisions and Large Developments.

1. All subdivision proposals shall be consistent with the need to minimize flood damage and are subject to all applicable standards in these regulations;
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and
4. In all areas of special flood hazard where base flood elevation data are not available, the applicant shall provide a hydrologic and hydraulic engineering analysis that generates base flood elevations for all subdivision proposals and other proposed developments containing at least 50 lots or 5 acres, whichever is less.
5. The applicant shall meet the requirement to submit technical data to FEMA in Section (1345.03G)(l)A.4. when a hydrologic and hydraulic analysis is completed that generates base flood elevations as required by subsection (c)(4) hereof.

D. <u>Residential Structures.</u>

1. New construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Where a structure, including its foundation members, is elevated on fill to or above the base flood elevation, the requirements for anchoring (subsection (d)(1) hereof) and construction materials resistant to flood damage (subsection (d)(2) hereof) are satisfied.
2. New construction and substantial improvements shall be constructed with methods and materials resistant to flood damage.
3. New construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.
4. New construction and substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including

basement, elevated to or above the flood protection elevation. Where flood protection elevation data are not available, the structure shall have the lowest floor, including basement, elevated at least two feet above the highest adjacent natural grade.

5. New construction and substantial improvements, including manufactured homes, that do not have basements and that are elevated to the flood protection elevation using pilings, columns, posts, or solid foundation perimeter walls with openings sufficient to allow unimpeded movement of flood waters may have an enclosure below the lowest floor provided the enclosure meets the following standards:

    a) Be used only for the parking of vehicles, building access or storage.
    b) Be designed and certified by a registered professional engineer or architect to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters; or
    c) Have a minimum of two openings on different walls having a total net area not less than one square inch for every square foot of enclosed area, and the bottom of all such openings being no higher than one foot above grade. The openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

6. Manufactured homes shall be affixed to a permanent foundation and anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.
7. Repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure, shall be exempt from the development standards of subsection (d) hereof.
8. In AO Zones, new construction and substantial improvement shall have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.

E. Nonresidential Structures.

1. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet the requirements of subsection (d)(l) to (3) and (5) to (8) hereof.
2. New construction and substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated to or above the level of the flood protection elevation; or, together with attendant utility and sanitary facilities, shall meet all of the following standards:

a) Be dry flood proofed so that the structure is watertight with walls substantially impermeable to the passage of water to the level of the flood protection elevation;
b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and,
c) Be certified by a registered professional engineer or architect, through the use of a Federal Emergency Management Agency Floodproofing Certificate, that the design and methods of construction are in accordance with subsection (e)(2)A. and B. hereof.

3. Where flood protection elevation data are not available, the structure shall have the lowest floor, including basement, elevated at least two feet above the highest adjacent natural grade.

F. Accessory Structures. Relief to the elevation or dry floodproofing standards maybe granted for accessory structures containing no more than 600 square feet. Such structures must meet the following standards:

1. They shall not be used for human habitation;
2. They shall be constructed of flood resistant materials;
3. They shall be constructed and placed on the lot to offer the minimum resistance to the flow of floodwaters;
4. They shall be firmly anchored to prevent flotation;
5. Service facilities such as electrical and heating equipment shall be elevated or floodproofed to or above the level of the flood protection elevation; and
6. They shall meet the opening requirements of subsection (d)(5)C. hereof.

G. Recreational Vehicles. Recreational vehicles must meet at least one of the following standards:

1. They shall not be located on sites in special flood hazard areas for more than 180 days, or
2. They must be fully licensed and ready for highway use, or
3. They must meet all standards of subsection (d) hereof.

H. Above Ground Gas or Liquid Storage Tanks. All above ground gas or liquid storage tanks shall be anchored to prevent flotation or lateral movement resulting from hydrodynamic and hydrostatic loads.

I. Assurance of Flood Carrying Capacity. Pursuant to the purpose and methods of reducing flood damage stated in these regulations, the following additional standards are adopted to assure that the reduction of the flood carrying capacity of watercourses is minimized:

1. Development in flood ways.

   a) In floodway areas, development shall cause no increase in flood levels during the occurrence of the base flood discharge. Prior to issuance of a floodplain development permit, the applicant must submit a hydrologic and hydraulic analysis, conducted by a registered professional engineer, demonstrating that the proposed development would not result in any increase in the base flood elevation; or
   b) Development in floodway areas causing increases in the base flood elevation may be permitted provided all of the following are completed by the applicant:

      (1) Meet the requirements to submit technical data in Section 1345.030)(1);
      (2) An evaluation of alternatives, which would not result in increased base flood elevations and an explanation why these alternatives are not feasible;
      (3) Certification that no structures are located in areas that would be impacted by the increased base flood elevation;
      (4) Concurrence of the County Executive of the County of Summit.

2. Development in riverine areas with base flood elevations but no floodways.

   a) In riverine special flood hazard areas identified by FEMA where base flood elevation data are provided but no floodways have been designated, the cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the base flood elevation more than 1.0 (one) foot at any point. Prior to issuance of a floodplain development permit, the applicant must submit a hydrologic and hydraulic analysis, conducted by a registered professional engineer, demonstrating that this standard has been met; or
   b) Development in riverine special flood hazard areas identified by FEMA where base flood elevation data are provided but no floodways have been designated causing more than one foot increase in the base flood elevation may be permitted provided all of the following are completed by the applicant:

      (1) An evaluation of alternatives which would result in an increase of one foot or less of the base flood elevation and an explanation why these alternatives are not feasible;
      (2) Subsection (i)(l)B.l. and 3. to 5. hereof.

3. Alterations of a Watercourse. For the purpose of these regulations, a watercourse is altered when any change occurs within its banks. The extent of the banks shall be established by a field determination of the "bankfull

stage." The field determination of "bankfull stage" shall be based on methods presented in Chapter 7 of the USDA Forest Service General Technical Report RM-245, Stream Channel Reference Sites: An Illustrated Guide to Field Technique or other applicable publication available from a Federal, State, or other authoritative source. For all proposed developments that alter a watercourse, the following standards apply:

a) The bankfull flood carrying capacity of the altered or relocated portion of the watercourse shall not be diminished. Prior to the issuance of a floodplain development permit, the applicant must submit a description of the extent to which any watercourse will be altered or relocated as a result of the proposed development, and certification by a registered professional engineer that the bankfull flood carrying capacity of the watercourse will not be diminished.
b) Adjacent communities, the U.S. Army Corps of Engineers, and the Ohio Department of Natural Resources, Division of Water, must be notified prior to any alteration or relocation of a watercourse. Evidence of such notification must be submitted to the Federal Emergency Management Agency.
c) The applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of said watercourse so that the flood carrying capacity will not be diminished. The Floodplain Administrator may require the permit holder to enter into an agreement with The County of Summit (Unincorporated Areas) specifying the maintenance responsibilities. If an agreement is required, it shall be made a condition of the floodplain development permit.
d) The applicant shall meet the requirements to submit technical data in Section 1345.03G (1)A.3. When an alteration of a watercourse results in the relocation or elimination of the special flood hazard area, including the placement of culverts.

(Ord. 2009-266. Adopted 6-29-09.)

1345.4.0 APPEALS AND VARIANCES.

A. Appeals Board Established.

1. The County of Summit Board of Building Appeals is hereby appointed to serve as the Appeals Board for these regulations as established by County Code.
2. Records of the Appeals Board shall be kept and filed in the Department of Building Standards, 1030 East Tallmadge Avenue Akron, Ohio 44310.

B. Powers and Duties.

1. The Appeals Board shall hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by the

Floodplain Administrator in the administration or enforcement of these regulations.

2. Authorize variances in accordance with subsection (d) hereof.

C. Appeals. Any person affected by any notice and order, or other official action of the Floodplain Administrator may request and shall be granted a hearing on the matter before the Appeals Board provided that such person shall file, within 15 days of the date of such notice and order, or other official action, a brief statement of the grounds for such hearing or for the mitigation of any item appearing on any order of the Floodplain Administrator's decision. Such appeal shall be in writing, signed by the applicant, and be filed with the Floodplain Administrator. Upon receipt of the appeal, the Floodplain Administrator shall transmit said notice and all pertinent information on which the Floodplain Administrator's decision was made to the Appeals Board. Upon receipt of the notice of appeal, the Appeals Board shall fix a reasonable time for the appeal, give notice in writing to parties in interest, and decide the appeal within a reasonable time after it is submitted.

D. Variances. Any person believing that the use and development standards of these regulations would result in unnecessary hardship may file an application for a variance. The Appeals Board shall have the power to authorize, in specific cases, such variances from the standards of these regulations, not inconsistent with Federal regulations, as will not be contrary to the public interest where, owning to special conditions of the lot or parcel, a literal enforcement of the provisions of these regulations would result in unnecessary hardship.

1. Application for a Variance.

   a) Any owner or agent thereof, of property for which a variance is sought shall make an application for a variance by filing it with the Floodplain Administrator, who upon receipt of the variance shall transmit it to the Appeals Board.
   b) Such application at a minimum shall contain the following information: Name, address, and telephone number of the applicant; legal description of the property; parcel map; description of the existing use; description of the proposed use; location of the floodplain; description of the variance sought; and reason for the variance request.
   c) All applications for a variance shall be accompanied by a variance application fee set in the schedule of fees adopted by the County of Summit (Unincorporated Areas).

2. Public Hearing. At such hearing the applicant shall present such statements and evidence as the Appeals Board requires. In considering such variance applications, the Appeals Board shall consider and make findings of fact on all evaluations, all relevant factors, standards specified in other sections of these regulations and the following factors:

a) The danger that materials may be swept onto other lands to the injury of others.
b) The danger to life and property due to flooding or erosion damage.
c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
d) The importance of the services provided by the proposed facility to the community.
e) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage.
f) The necessity to the facility of a waterfront location, where applicable.
g) The compatibility of the proposed use with existing and anticipated development.
h) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area.
i) The safety of access to the property in times of flood for ordinary and emergency vehicles.
j) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
k) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

3. Variances Shall Only Be Issued Upon:

a) A showing of good and sufficient cause.
b) A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the property. Increased cost or inconvenience of meeting the requirements of these regulations does not constitute an exceptional hardship to the applicant.
c) A determination that the granting of a variance will not result in increased flood heights beyond that which is allowed in these regulations; additional threats to public safety; extraordinary public expense, nuisances, fraud on or victimization of the public, or conflict with existing local laws.
d) A determination that the structure or other development is protected by methods to minimize flood damages.
e) A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief. Upon consideration of the above factors and the purposes of these regulations, the Appeals Board may attach such conditions to the granting of variances, as it deems necessary to further the purposes of these regulations.

4. Other Conditions for Variances.

    a) Variances shall not be issued within any designated flood way if any increase in flood levels during the base flood discharge would result.
    b) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items in subsection (d)(2)A. to K. hereof have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.
    c) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

E. Procedure at Hearings.

1. All testimony shall be given under oath.
2. A complete record of the proceedings shall be kept, except confidential deliberations of the Board, but including all documents presented and a verbatim record of the testimony of all witnesses.
3. The applicant shall proceed first to present evidence and testimony in support of the appeal or variance.
4. The administrator may present evidence or testimony in opposition to the appeal or variance.
5. All witnesses shall be subject to cross-examination by the adverse party or their counsel.
6. Evidence that is not admitted may be proffered and shall become part of the record for appeal.
7. The Board shall issue subpoenas upon written request for the attendance of witnesses. A reasonable deposit to cover the cost of issuance and service shall be collected in advance.
8. The Board shall prepare conclusions of fact supporting its decision. The decision may be announced at the conclusion of the hearing and thereafter issued in writing or the decision may be issued in writing within a reasonable time after the hearing.

F. Appeal to Court. Those aggrieved by the decision of the Appeals Board may appeal such decision to the County of Summit Court of Common Pleas, as provided in Chapter 2506 of the Ohio Revised Code.

(Ord. 2009-266. Adopted 6-29-09.)

1345.06 ENFORCEMENT.

A. Compliance Required.

1. No structure or land shall hereafter be located, erected, constructed, reconstructed, repaired, extended, converted, enlarged or altered without full compliance with the terms of these regulations and all other applicable regulations which apply to uses within the jurisdiction of these regulations, unless specifically exempted from filing for a development permit as stated in Section 1345.03(i).
2. Failure to obtain a floodplain development permit shall be a violation of these regulations and shall be punishable in accordance with subsection (c) hereof.
3. Floodplain development permits issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the use, and arrangement, set forth in such approved plans and applications or amendments thereto. Use, arrangement, or construction contrary to that authorized shall be deemed a violation of these regulations and punishable in accordance with subsection (c) hereof.

B. Notice of Violation. Whenever the Floodplain Administrator determines that there has been a violation of any provision of these regulations, he shall give notice of such violation to the person responsible therefore and order compliance with these regulations as hereinafter provided. Such notice and order shall:

1. Be put in writing on an appropriate form;
2. Include a list of violations, referring to the section or sections of these regulations that have been violated, and order remedial action, which, if taken, will effect compliance with the provisions of these regulations;
3. Specify a reasonable time for performance;
4. Advise the owner, operator, or occupant of the right to appeal;
5. Be served on the owner, occupant, or agent in person. However, this notice and order shall be deemed to be properly served upon the owner, occupant, or agent if a copy thereof is sent by registered or certified mail to the person's last known mailing address, residence, or place of business, and/or a copy is posted in a conspicuous place in or on the dwelling affected.

C. Violations and Penalties. Violation of the provisions of these regulations or failure to comply with any of its requirements shall be deemed to be a strict liability offense, and shall constitute a first degree misdemeanor. Any person who violates these regulations or fails to comply with any of its requirements shall upon conviction thereof be fined or imprisoned as provided by the laws of the County of Summit (Unincorporated Areas) in accordance with Chapter 1301 of the Codified Ordinances. Each day that such violation continues shall be

considered a separate offense. Nothing herein contained shall prevent the County of Summit (Unincorporated Areas) from taking such other lawful action as is necessary to prevent or remedy any violation. The County of Summit (Unincorporated Areas) shall prosecute any violation of these regulations in accordance with the penalties stated herein.

(Ord. 2009-266. Adopted 6-29-09.)

Tab 1 to the Summit County Hazard Prevention Plan

RISK MATRIX APPROACH

The practice of risk management permits decision-makers to anticipate losses and to evaluate potential impacts to facilitate effective planning and management. It requires recognition of risks, evaluation of the frequency of those events and the related magnitude of consequences or potential losses, and determination of appropriate measures for prevention or reduction of these risks from a cost benefit point of view (Long and John, 1993).

The risk matrix approach, developed by Arthur D. Little, Cambridge, MA involves several continuous steps (Figure 25-1):

(1) Identify and Characterize Hazards. Define and describe hazards, measures of magnitude and severity, causative factors, and interrelations with other hazards.
(2) Screen Risk. Rank, or order, the identified hazards as a function of the relative degree of risk.
(3) Estimate Risk. Apply the process or methodology to evaluate risk.
(4) Assess Acceptability. Determine whether risks that have been identified and estimated in the previous steps can be tolerated.
(5) Develop Alternatives to Reduce Risk. Select cost-effective actions to reduce or mitigate unacceptable risks, including technological and management controls.
(6) Implement Necessary Mitigation Measures, Control, and Review. Implement mitigation measures to control risk to acceptable levels.
(7) Control and Review. Periodically monitor and review risks.

REGIONAL DIFFERENTIATION

Each region is unique because of such factors as climate, geography, and development. Therefore, the risks associated with hazards in each region are also relatively unique. Depending on the corresponding needs for risk assessment and associated costs, different levels of risk management can be conducted.

Levels of risk management can range from cursory risk screenings, where worst-case consequence assessments are assumed, to full-scale quantitative risk assessments, which are very analytical, formal and vigorous techniques used to numerically evaluate all credible hazards. An intermediate approach is a semi-quantitative risk survey, which facilitates the categorization and prioritization of hazards as the basis for mitigation and/or emergency management.

HAZARD IDENTIFICATION AND ASSOCIATED RISK

Both natural and technological hazard events can occur to various degrees. Defining categories for a risk matrix, and specifically for severity categories, is a catalyst for hazard definition (Long and John, 1993).

Criteria for severity categorization might include an examination of the potential for fatalities, injuries, property damage, business interruption, and environmental and economic impacts, rated in categories ranging from catastrophic to minor.

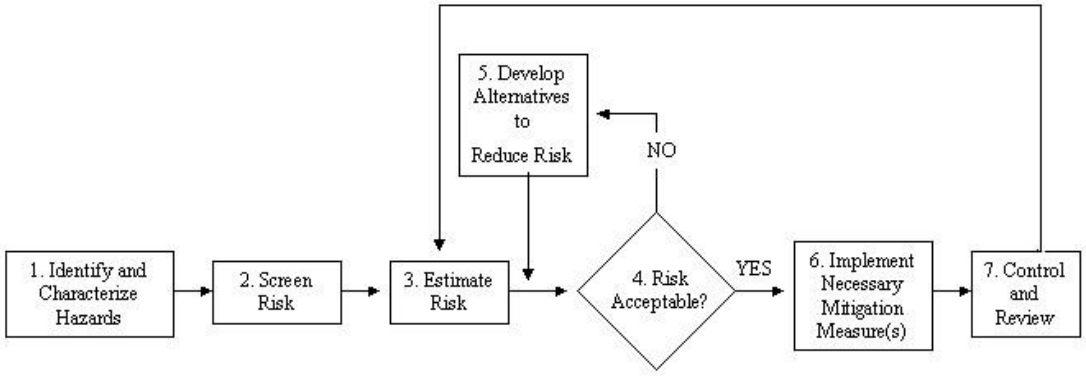


Figure 25-1 – A risk matrix approach

Source. Modified from Long and John, 1993

Tab 2 to the Summit County Hazard Prevention Plan

OTHER RISK ASSESSMENT APPROACHES

Criteria for frequency categorization might include:

- High frequency: events that occur more frequently than once in 10 years (0 to 10 yrs.)

- Moderate frequency: events that occur from once in 10 years to once in 100 years (10 to 100 yrs.)

- Low frequency: events that occur from once in 100 years to once in 1,000 years (100 to 1,000 yrs.)

- Very low frequency: events that occur less frequently than once in 1,000 years.

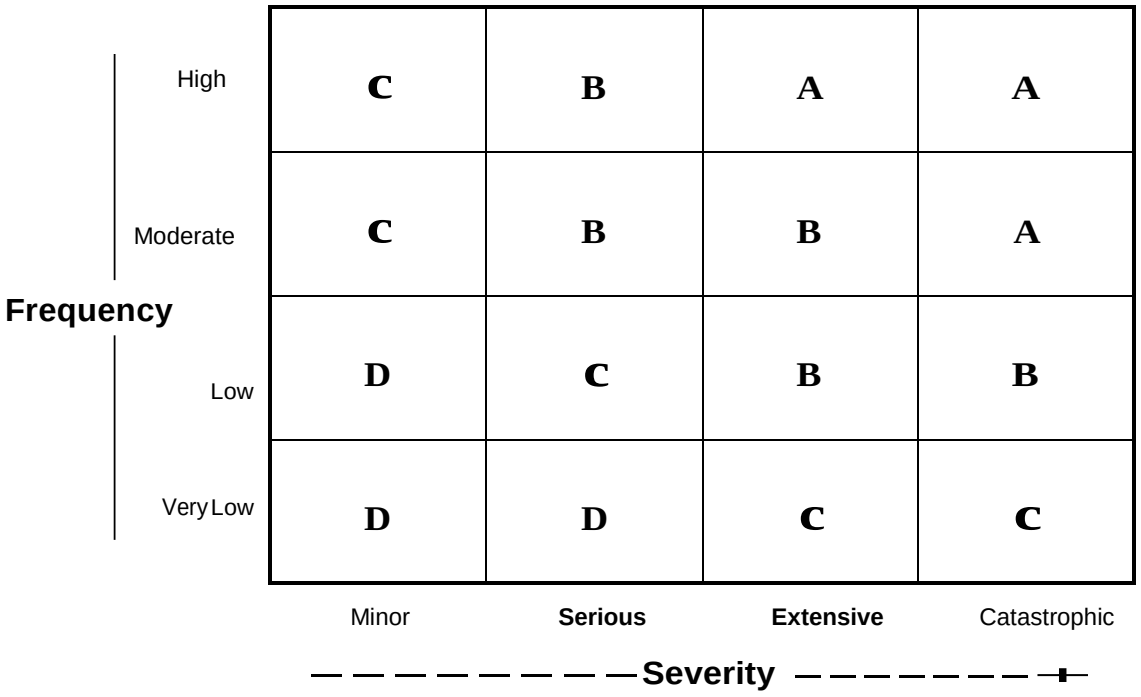
In the risk matrix approach, both the magnitude and frequency of occurrence of a hazard are given a qualitative measure that permits the prioritization of risk among multiple hazards (Figure 25-2):

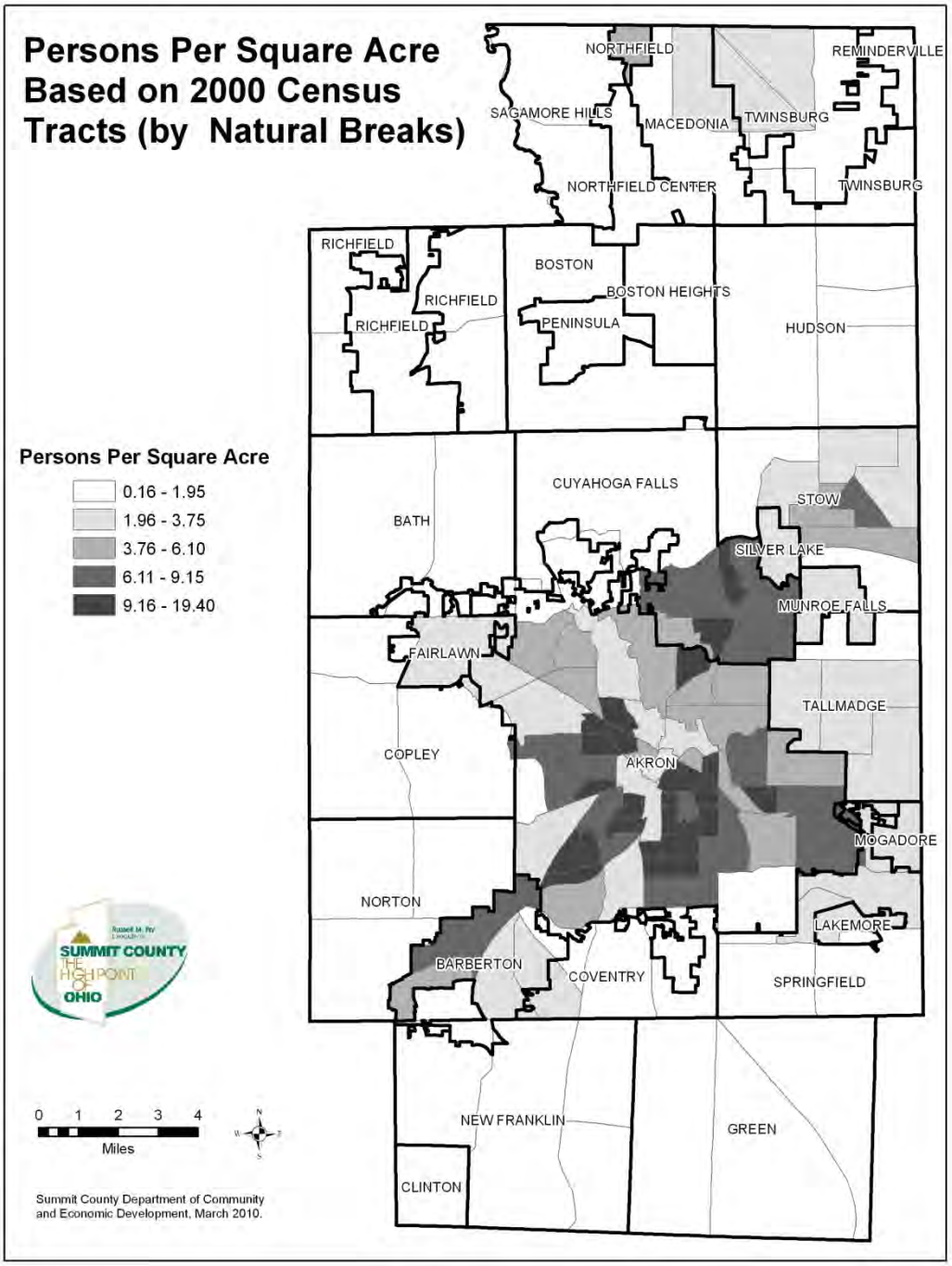
- Class A: High-risk condition with highest priority for mitigation and contingency planning (immediate action). Examples of losses: death or fatal injury, complete shutdown of facilities and critical services for more than one month, more than 50 percent of the property located in affected area is severely damaged.

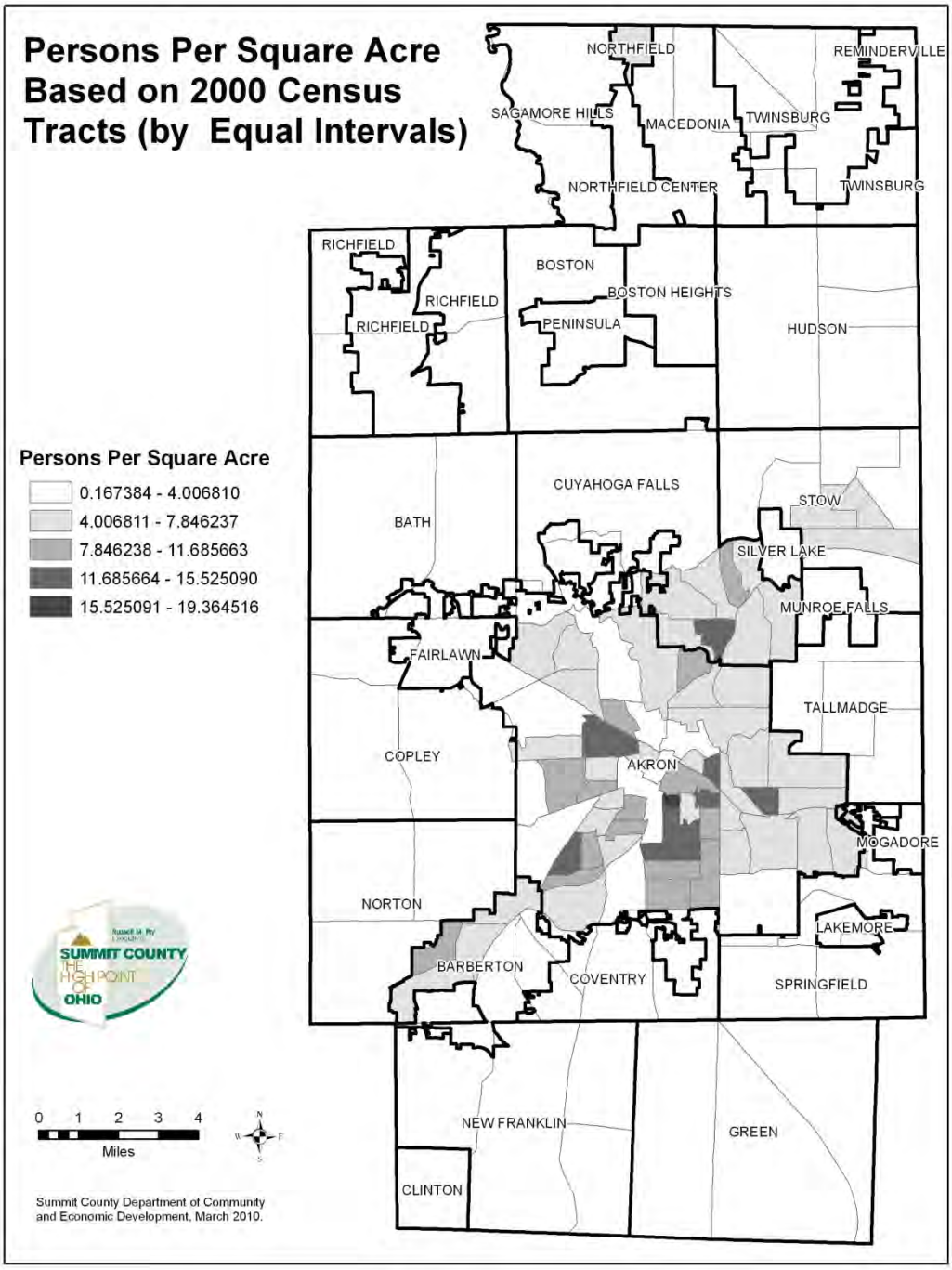
- Class B: Moderate-to-high-risk condition with risk addressed by mitigation and contingency planning (prompt action). Examples of losses: permanent disability, severe injury or illness, complete shutdown of facilities and critical services for more than 2 weeks, more than 25 percent of the property located in the affected area is severely damaged.

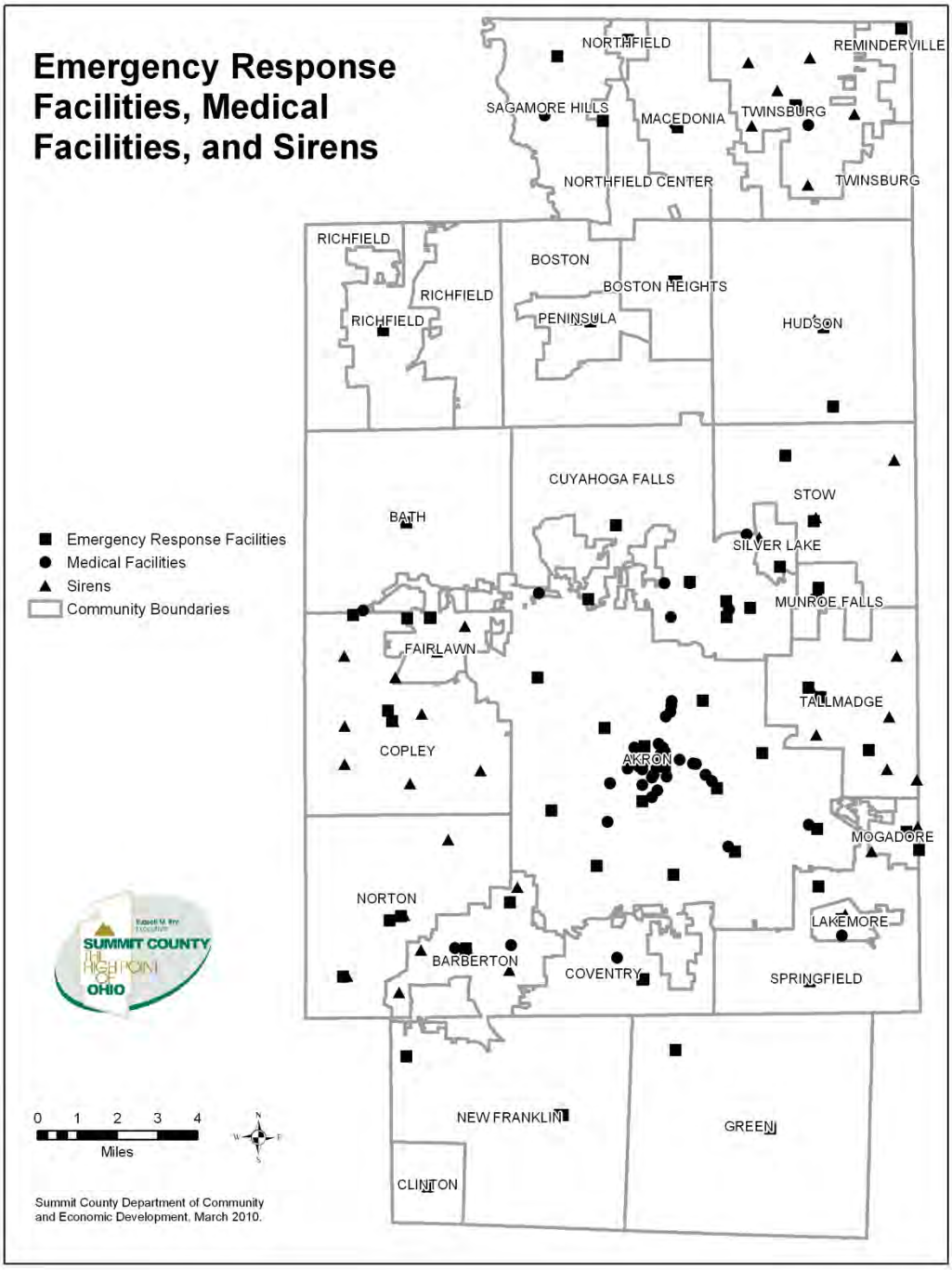
- Class C: Risk condition sufficiently high to give consideration for further mitigation and planning (planned action). Examples of losses: injury or illness not resulting in disability, complete shutdown of facilities and critical services for more than one week, more than 10 percent of the property located in the affected area is severely damaged, and

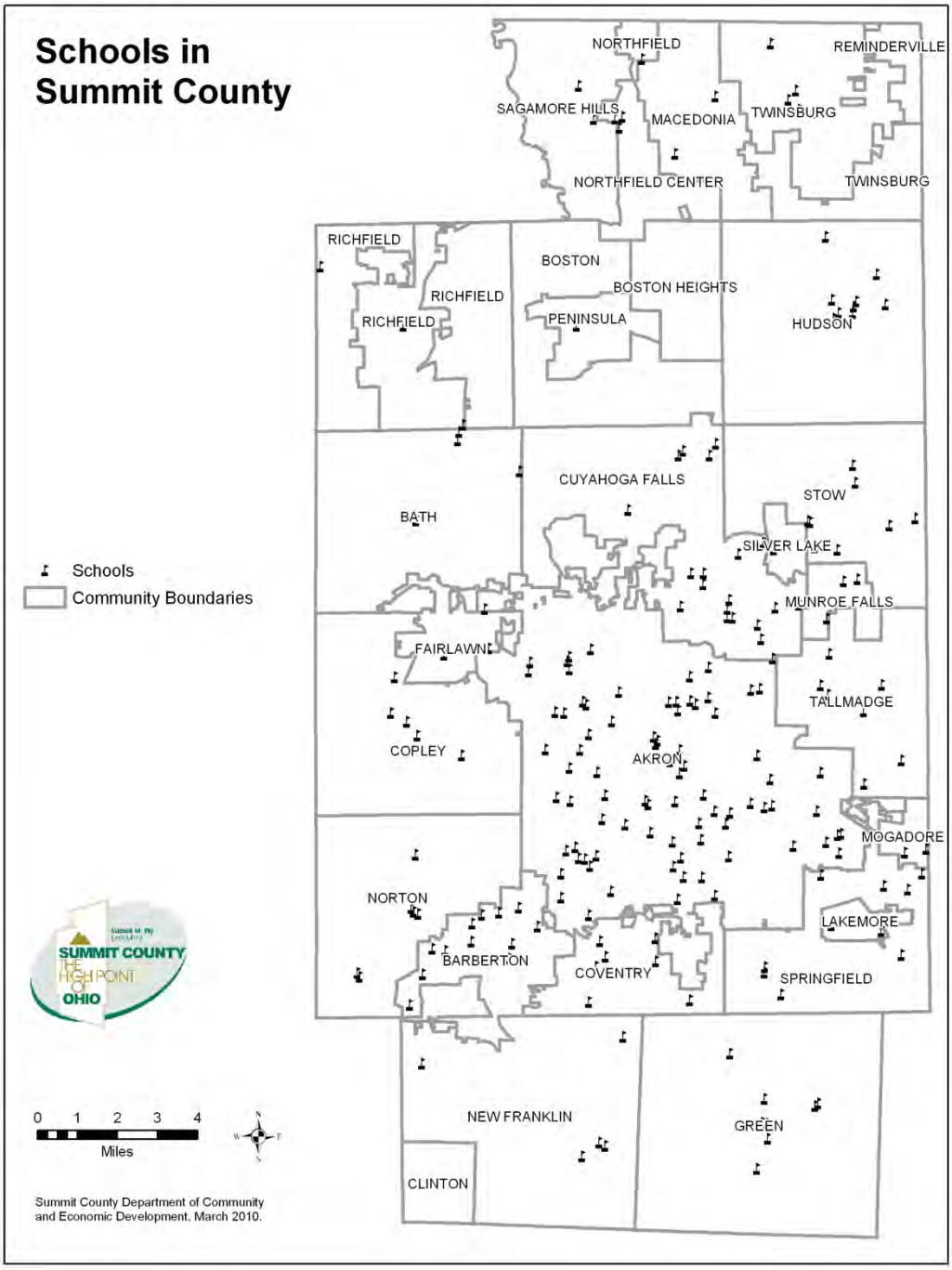
- Class D: Low-risk condition with additional mitigation contingency planning (advisory in nature). Examples of losses: treatable first aid injury, complete shutdown of facilities and critical services for more than 24 hours, no more than 1 percent of property located in the affected area is severely damaged.

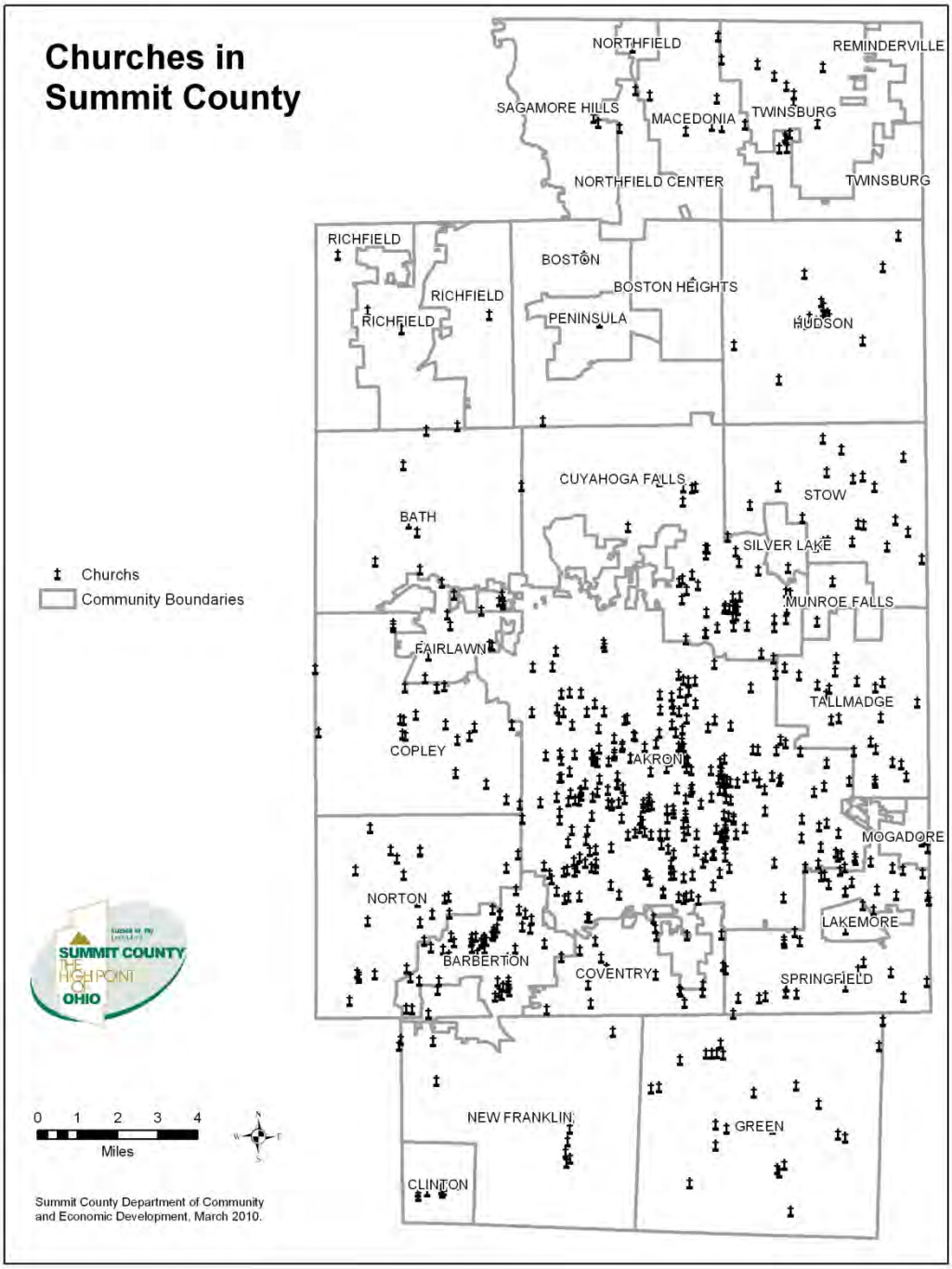

High
Moderate
Low
Very Low
Frequency
C
B
A
A
C
B
B
A
D
C
B
B
D
D
C
C
Minor
Serious
Extensive
Catastrophic
Severity


Persons Per Square Acre Based on 2000 Census Tracts (by Natural Breaks)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Persons Per Square Acre
0.16 - 1.95
1.96 - 3.75
3.76 - 6.10
6.11 - 9.15
9.16 - 19.40
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
E
S
Summit County Department of Community and Economic Development, March 2010.


Persons Per Square Acre Based on 2000 Census Tracts (by Equal Intervals)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
Persons Per Square Acre
0.167384 - 4.006810
4.006811 - 7.846237
7.846238 - 11.685663
11.685664 - 15.525090
15.525091 - 19.364516
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
SUMMIT COUNTY
THE HIGH POINT OF OHIO
NEW FRANKLIN
GREEN
CLINTON
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Emergency Response Facilities, Medical Facilities, and Sirens
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Emergency Response Facilities
Medical Facilities
Sirens
Community Boundaries
SUMMIT COUNTY
OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Schools in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Schools
Community Boundaries
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Churches in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Churchs
Community Boundaries
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
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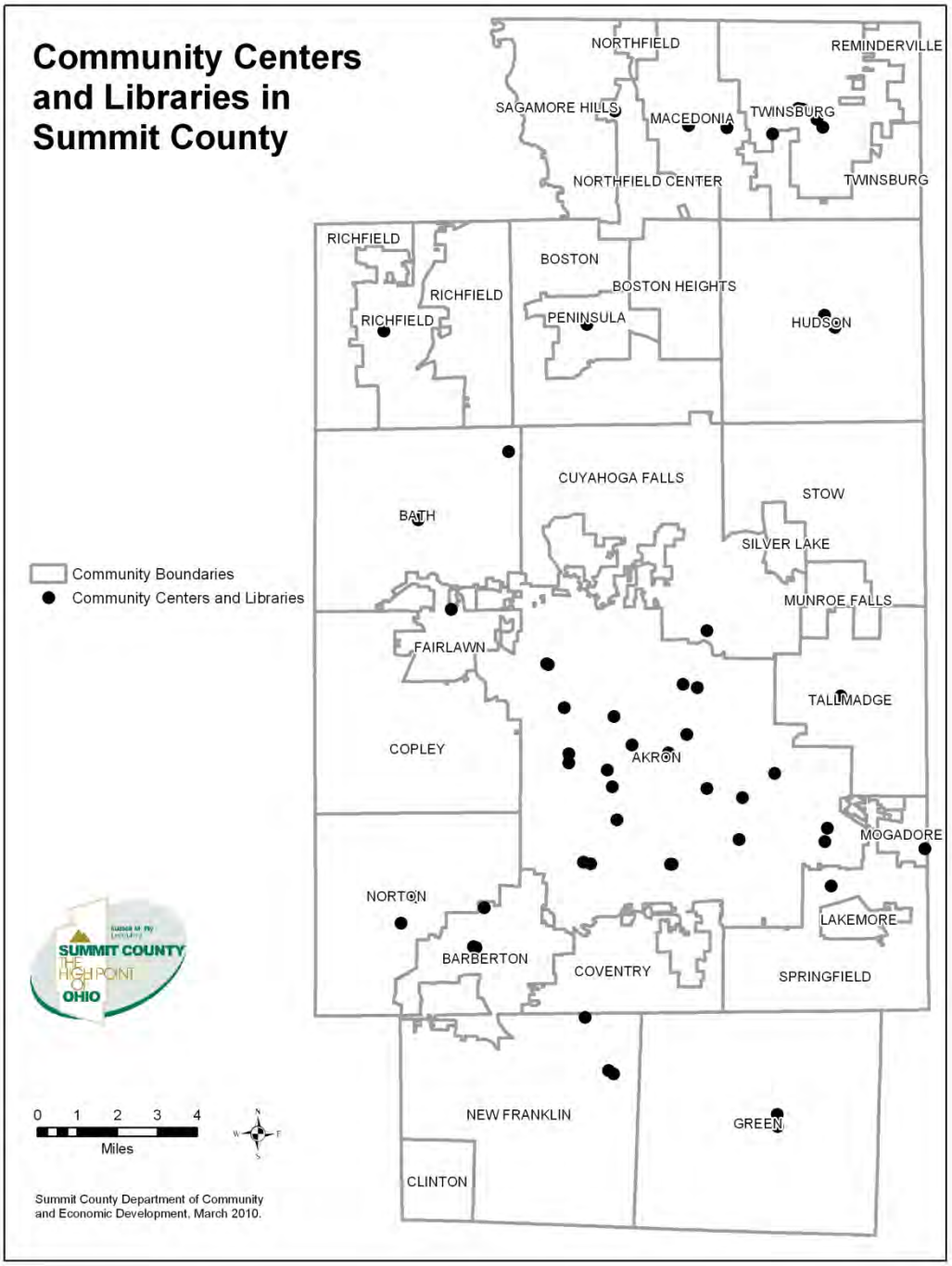
Summit County Department of Community and Economic Development, March 2010.


Community Centers and Libraries in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
Community Boundaries
Community Centers and Libraries
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
SUMMIT COUNTY
THE HIGH POINT OF OHIO
NEW FRANKLIN
GREEN
CLINTON
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

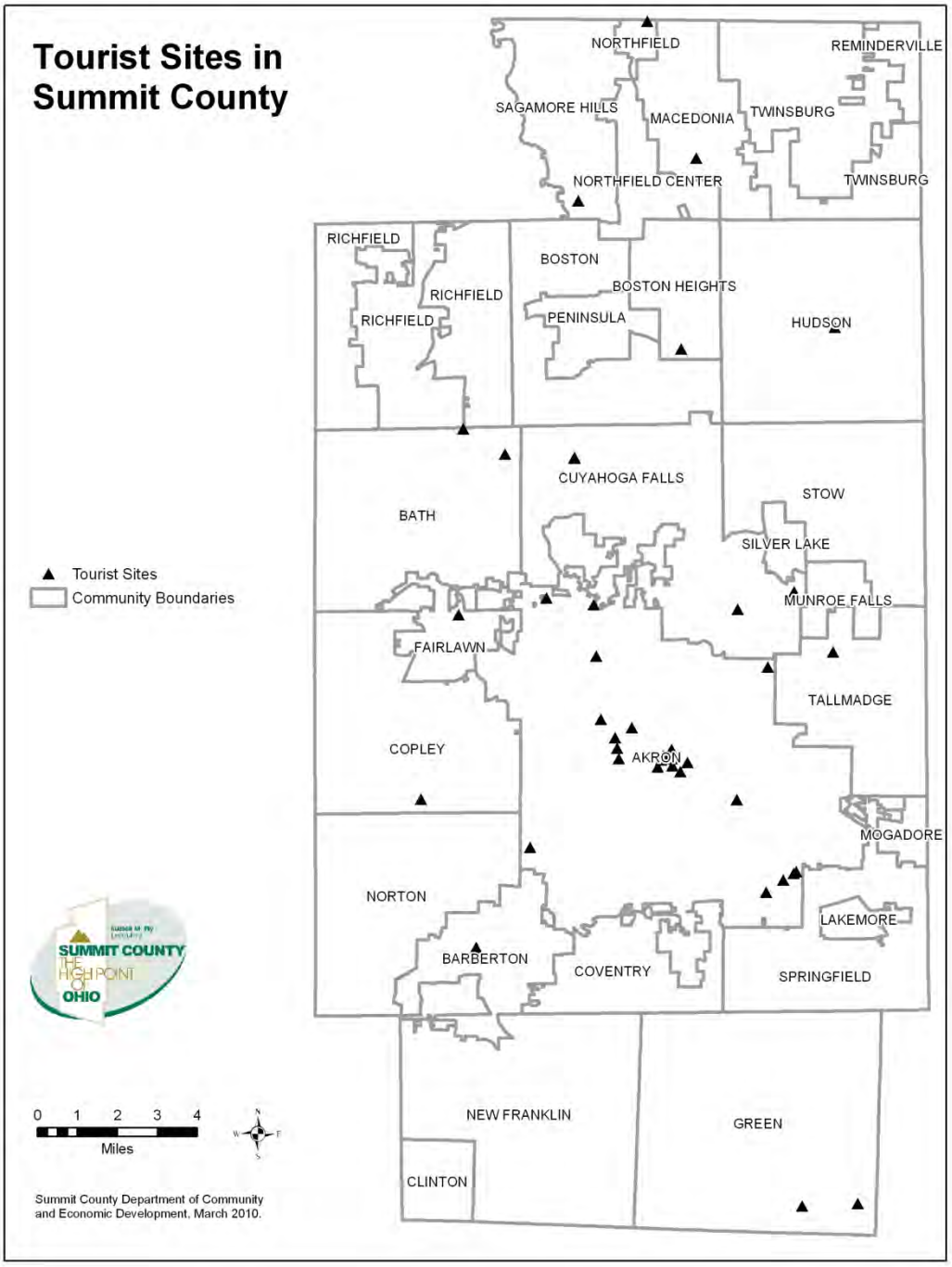

Tourist Sites in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Tourist Sites
Community Boundaries
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

Table 1. Water Use in Summit County, Ohio.[1]				
Public Water System	**Population Served**	**Primary Water Source**	**Water Usage (GPD)[2]**	**Treatment Plant Capacity (GPD)**
Akron[3]	223,019	Surface Water	47,600,000	67,000,000
Barberton	28,600	Surface Water	4,460,000	12,000,000
Copley Square	1,213	Ground Water	85,000	216,000
Cuyahoga Falls	48,000	Ground Water	6,600,000	14,000,000
Hudson Village	5,100	Ground Water	800,000	1,500,000
Lakemore Village	2,684	Ground Water	250,000	NA[4]
Munroe Falls[5]	5,300	Ground Water	480,000	3,800,000
Shepard Hills (Sagamore Hills)	863	Ground Water	60,000	227,000
Silver Lake5	3,000	Ground Water	250,000	1,000,000
Summit Co.-Brentwood	535	Ground Water	55,000	150,000
Summit Co.-Copley Meadows	368	Ground Water	34,000	162,000
Summit Co.-Country Club	1,600	Ground Water	260,000	0
Summit Co.-Hudson Township[6]	2,788	Surface Water	160,000	0
Summit Co.-Stow[6]	20,830	Surface Water	3,400,000	0
Summit Co.-Montrose	1,195	Ground Water	492,000	1,500,000
Tallmadge[6]	10,800	Surface Water	1,250,000	3,000,000
Other[7]	6,745	Ground Water	729,150	265,200

1 Estimates from Ohio EPA using 1993 data, adjusted by Leonard Black, ODNR Div. of Water.

2 GPD = gallons per day.

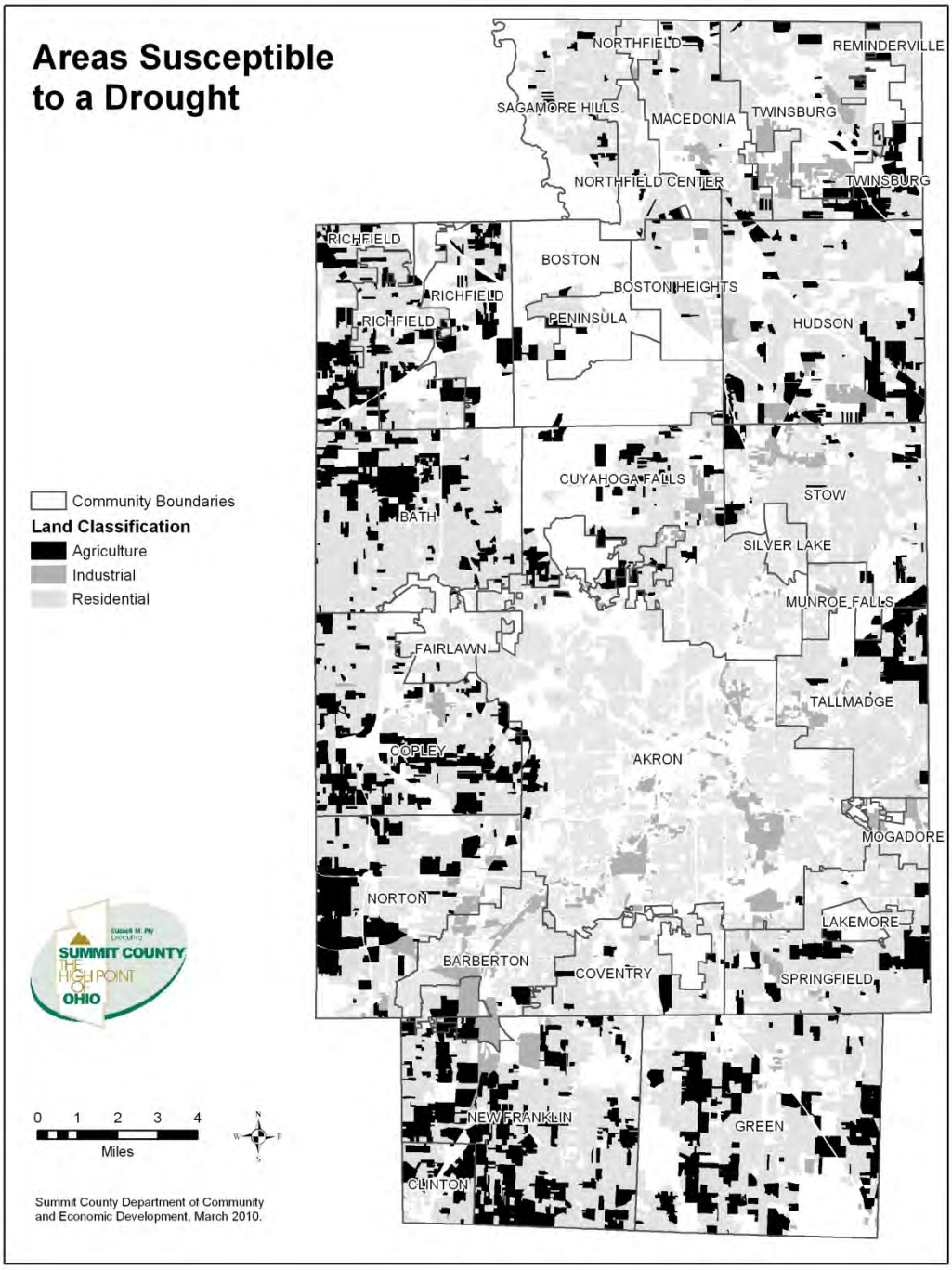
3 Source of water is Lake Rockwell in Portage County.

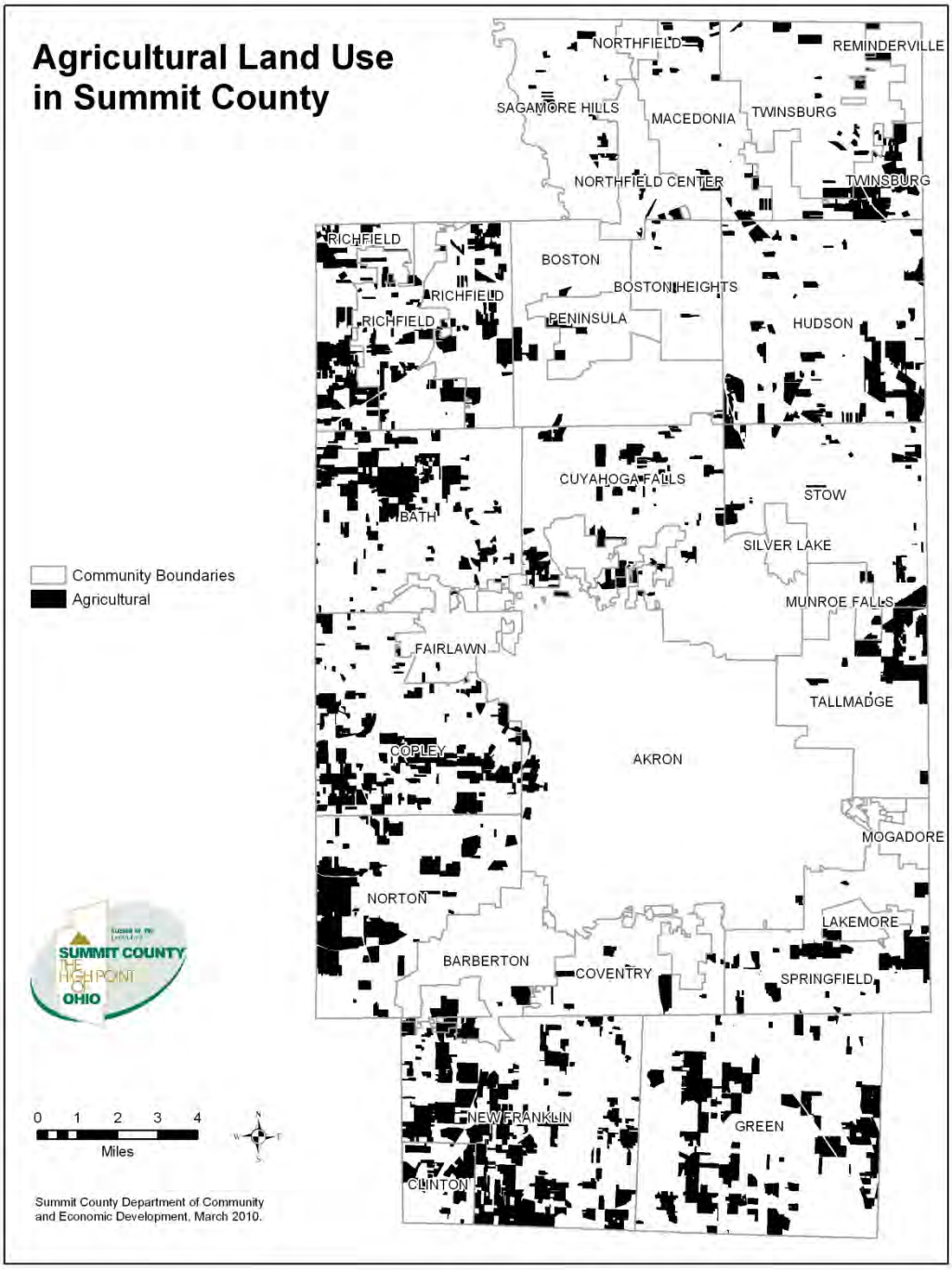
4 Information not available.

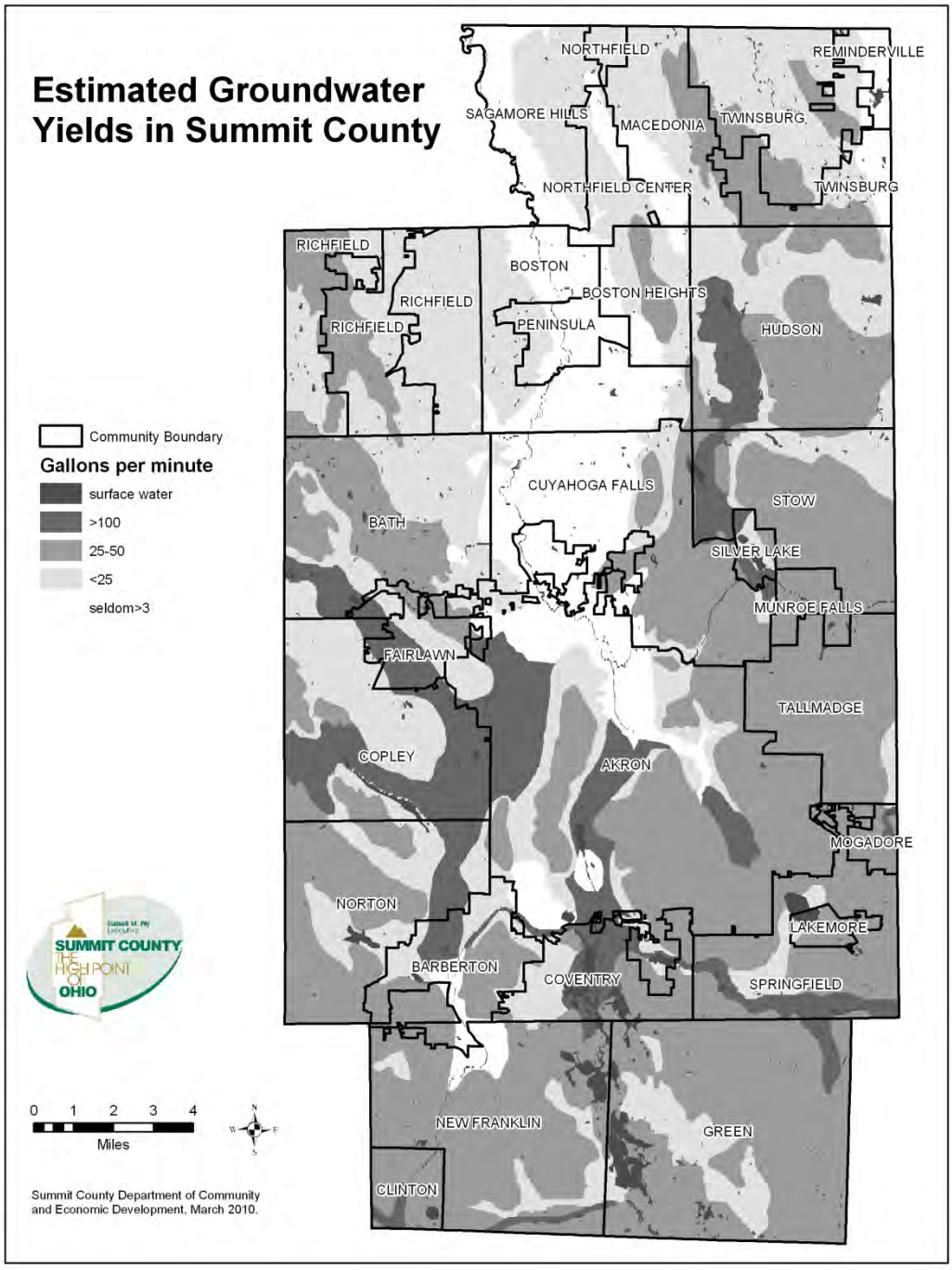
5 Water supplied by Cuyahoga Falls.

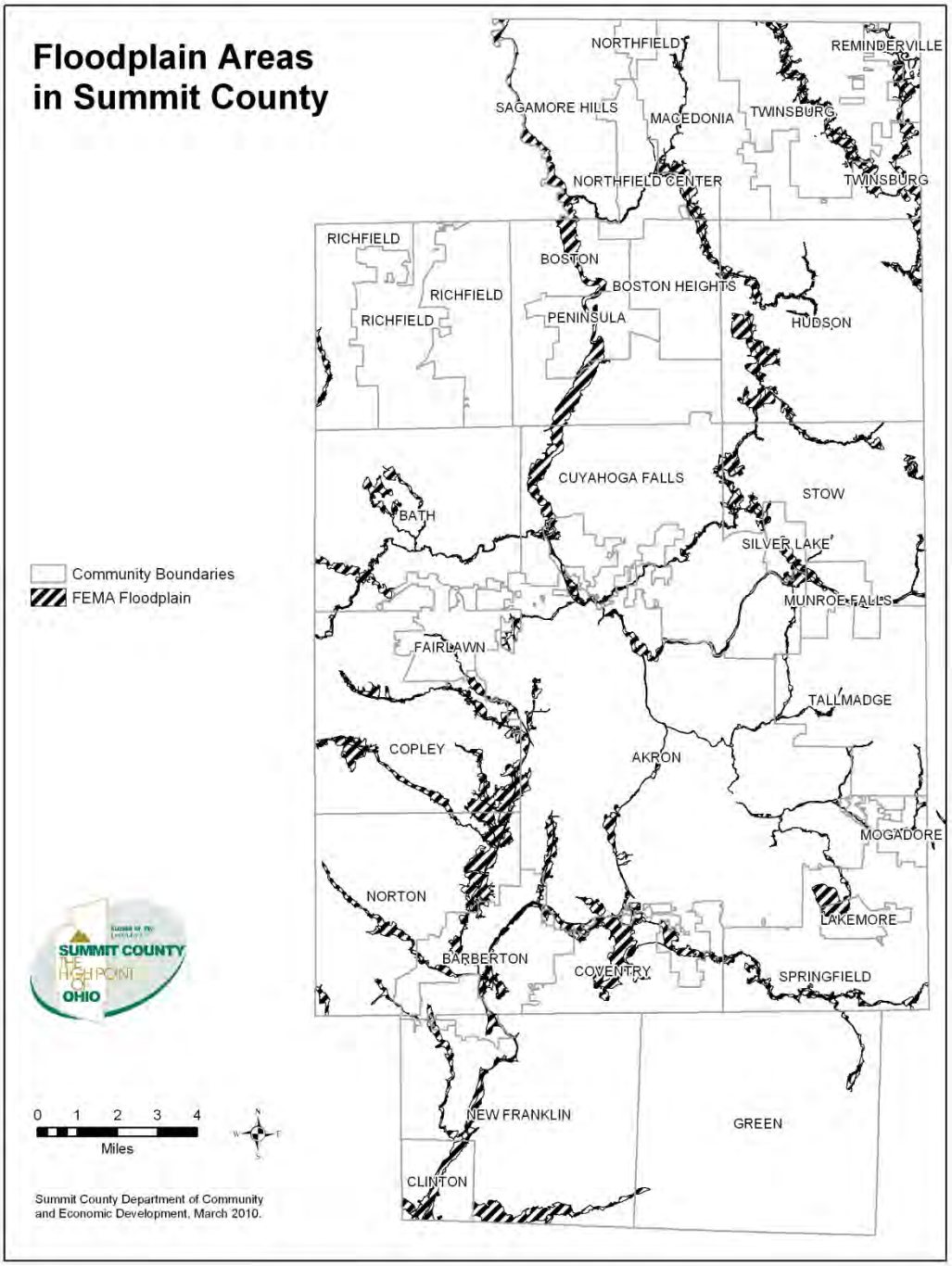
6 Water supplied by Akron PWS (Lake Rockwell, Portage County).

7 Other - includes Copley Meadows and approximately 47 other apartment, multiple-home, condominium, trailer park and nursing home systems.


Areas Susceptible to a Drought
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Land Classification
Agriculture
Industrial
Residential
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Agricultural Land Use
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
Community Boundaries
Agricultural
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community
and Economic Development, March 2010.


Estimated Groundwater Yields in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
Community Boundary
Gallons per minute
surface water
>100
25-50
<25
seldom>3
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
E
S
Summit County Department of Community and Economic Development, March 2010.


Floodplain Areas
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
FEMA Floodplain
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
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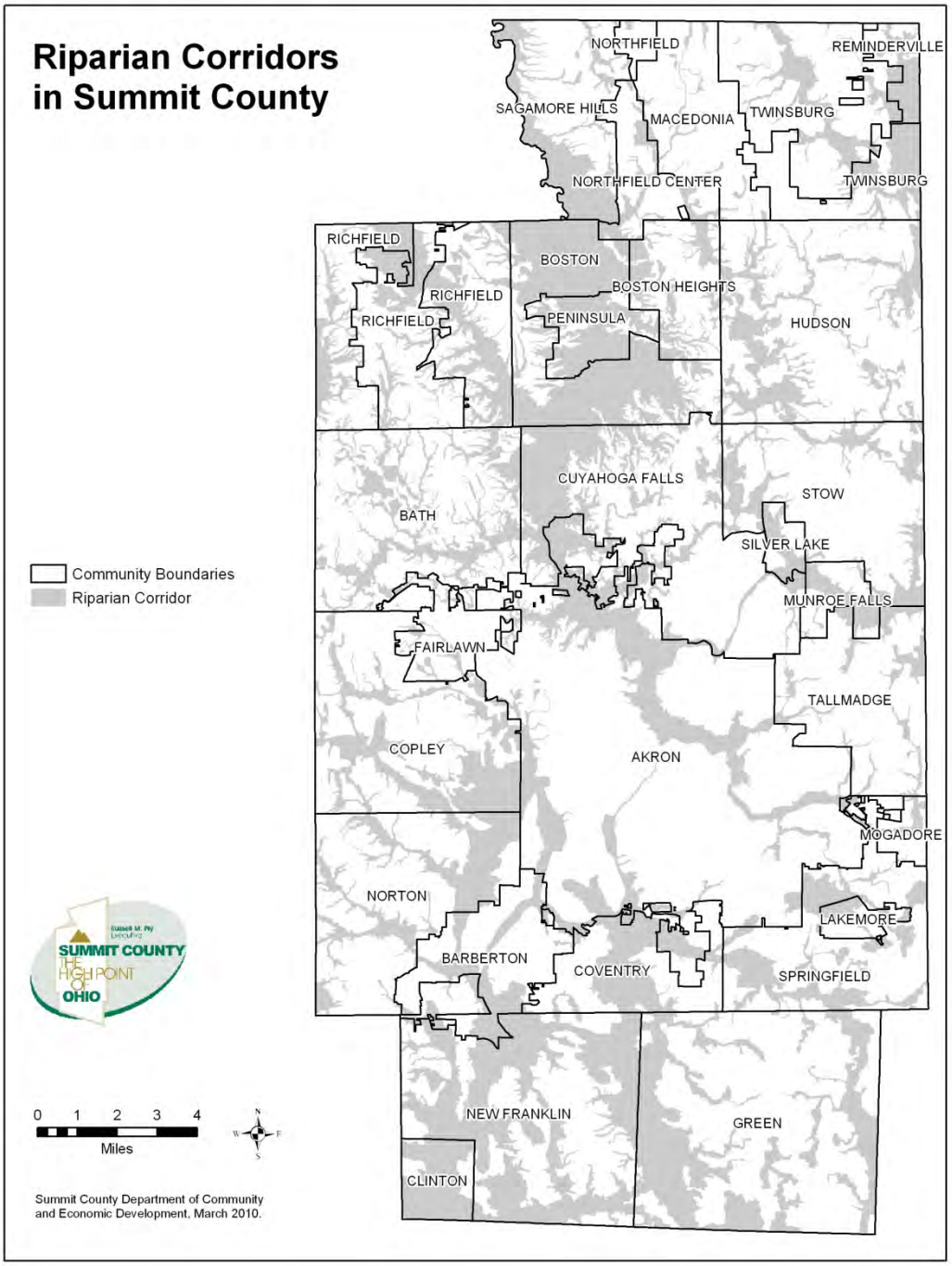
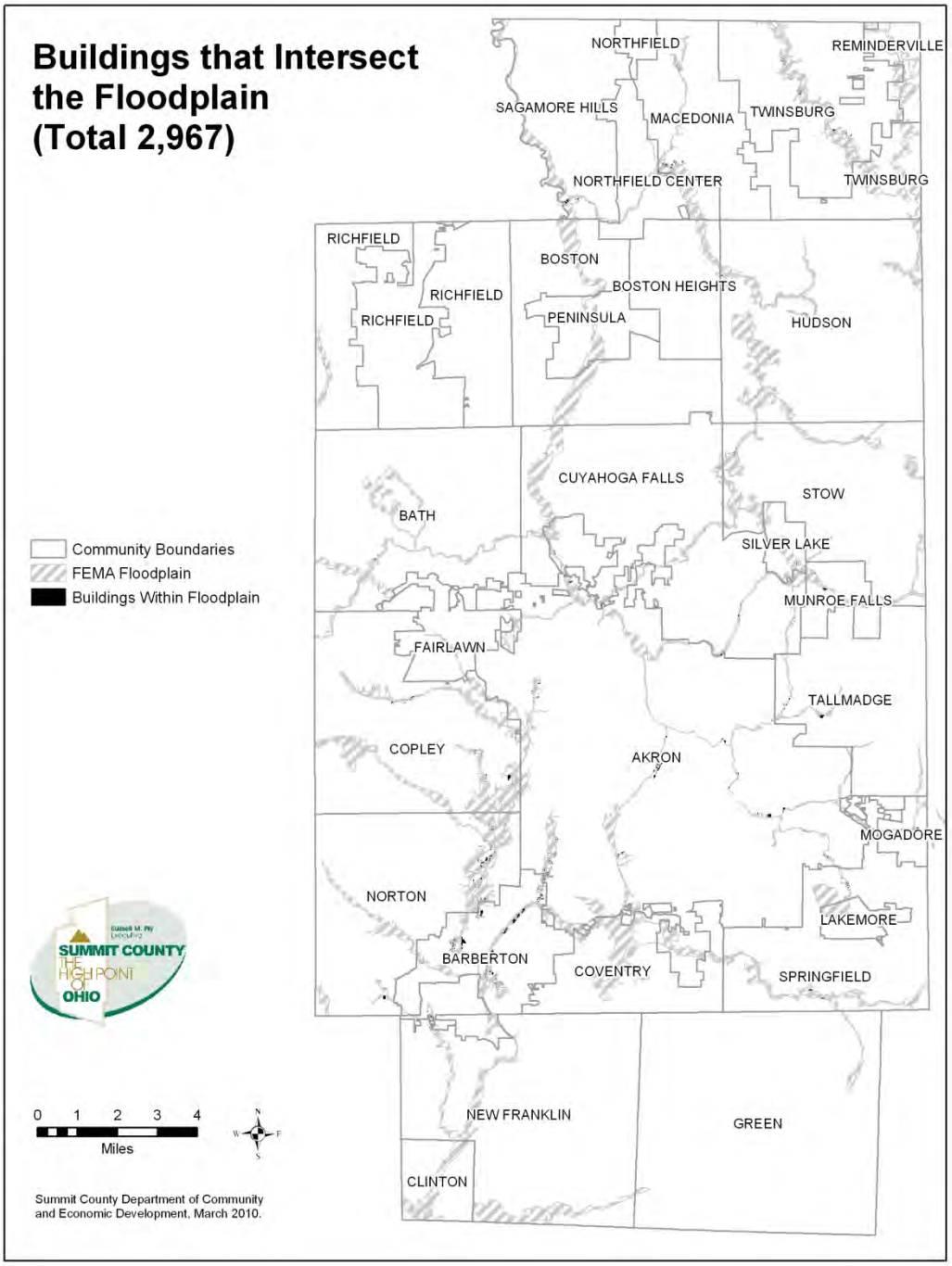
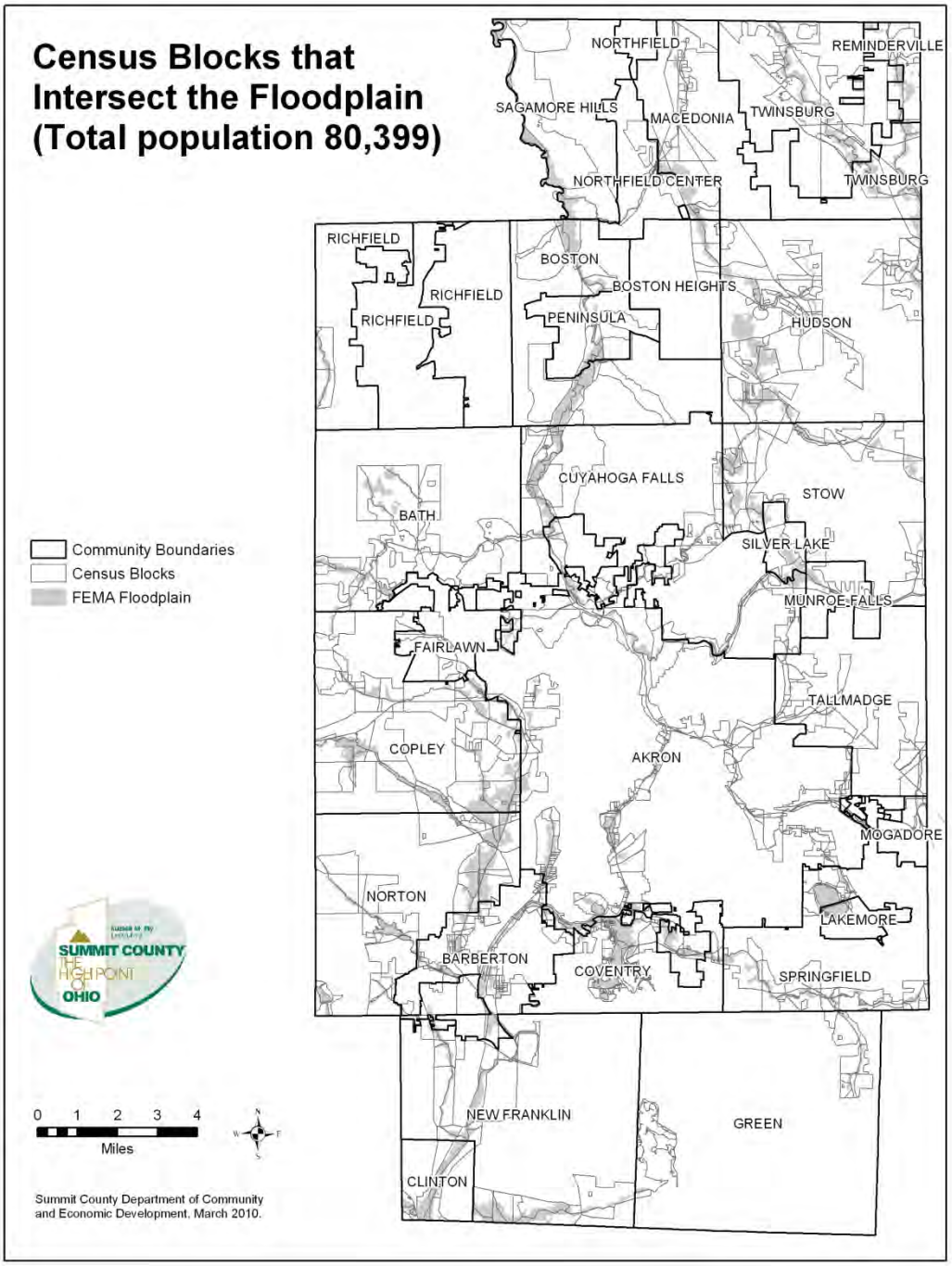
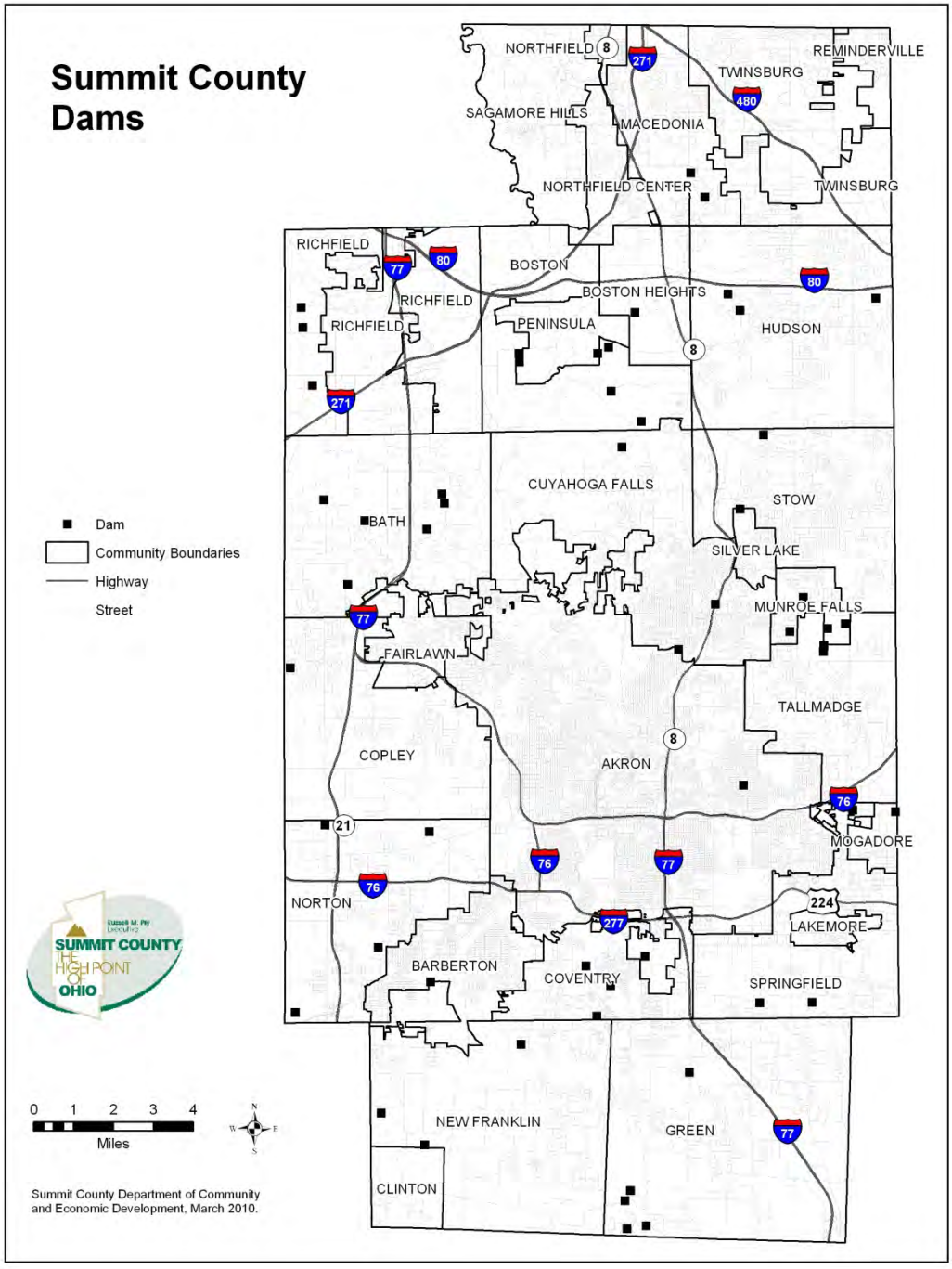
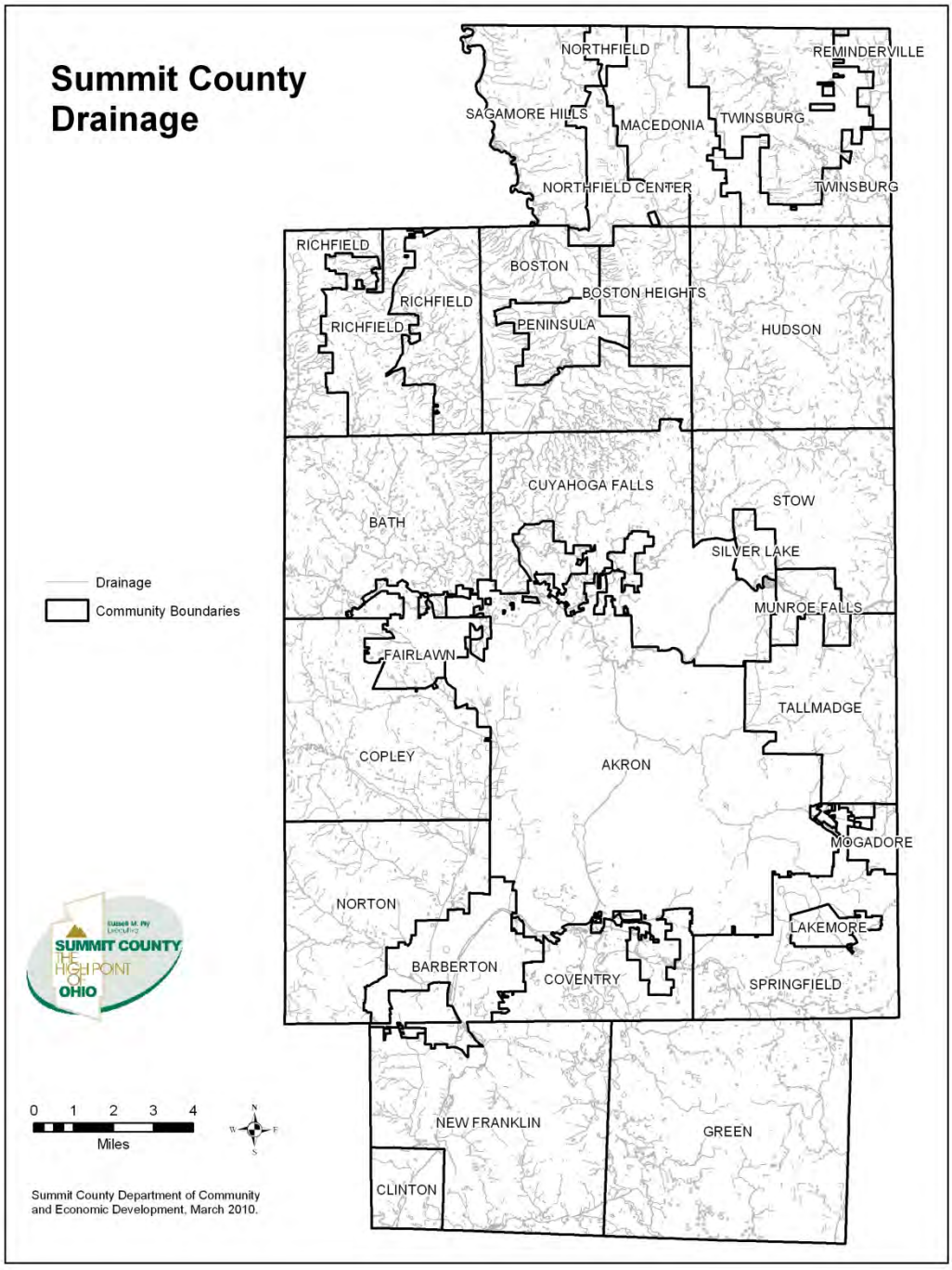
S
Summit County Department of Community
and Economic Development, March 2010.

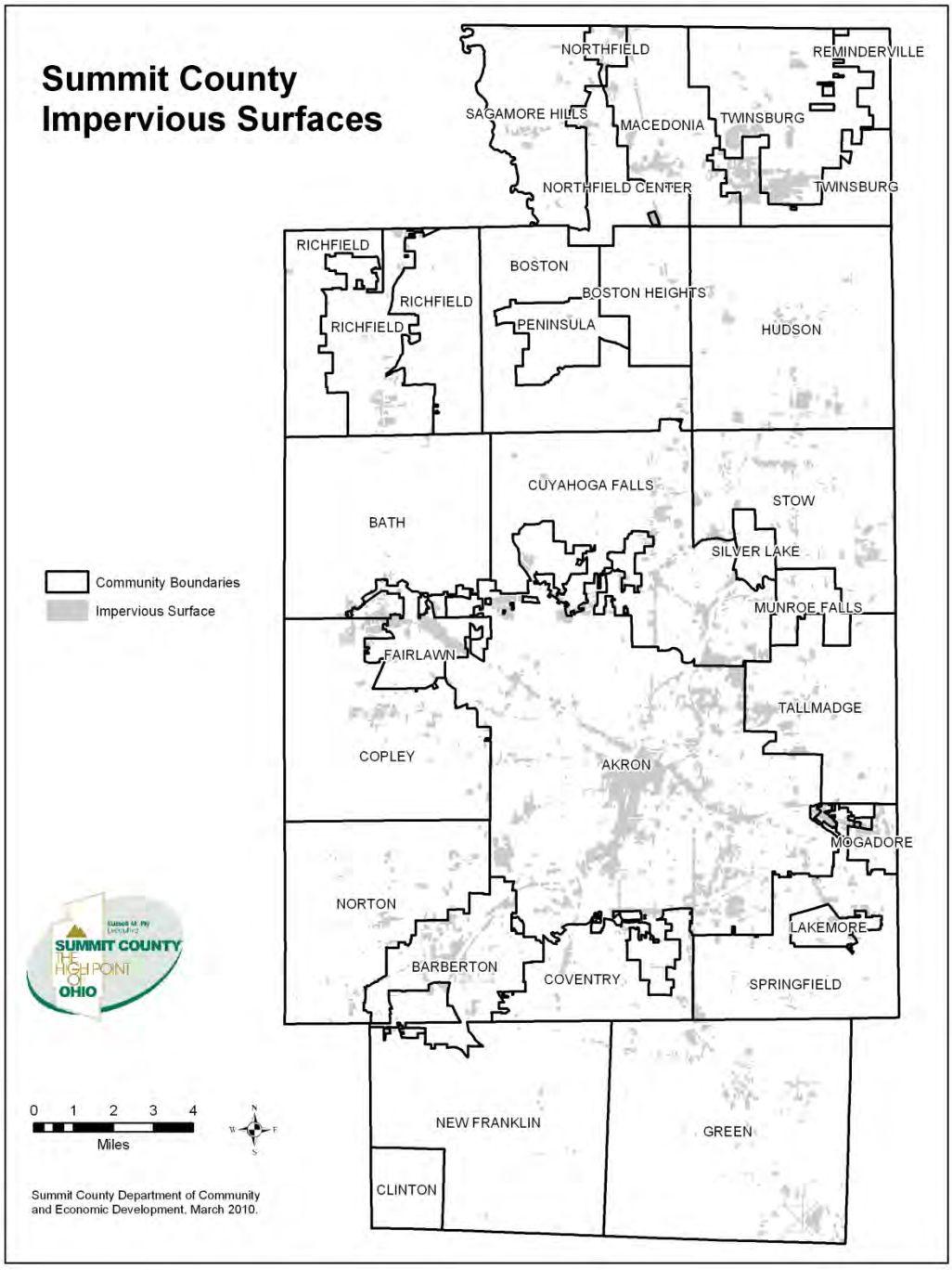

Riparian Corridors
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Riparian Corridor
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community
and Economic Development, March 2010.

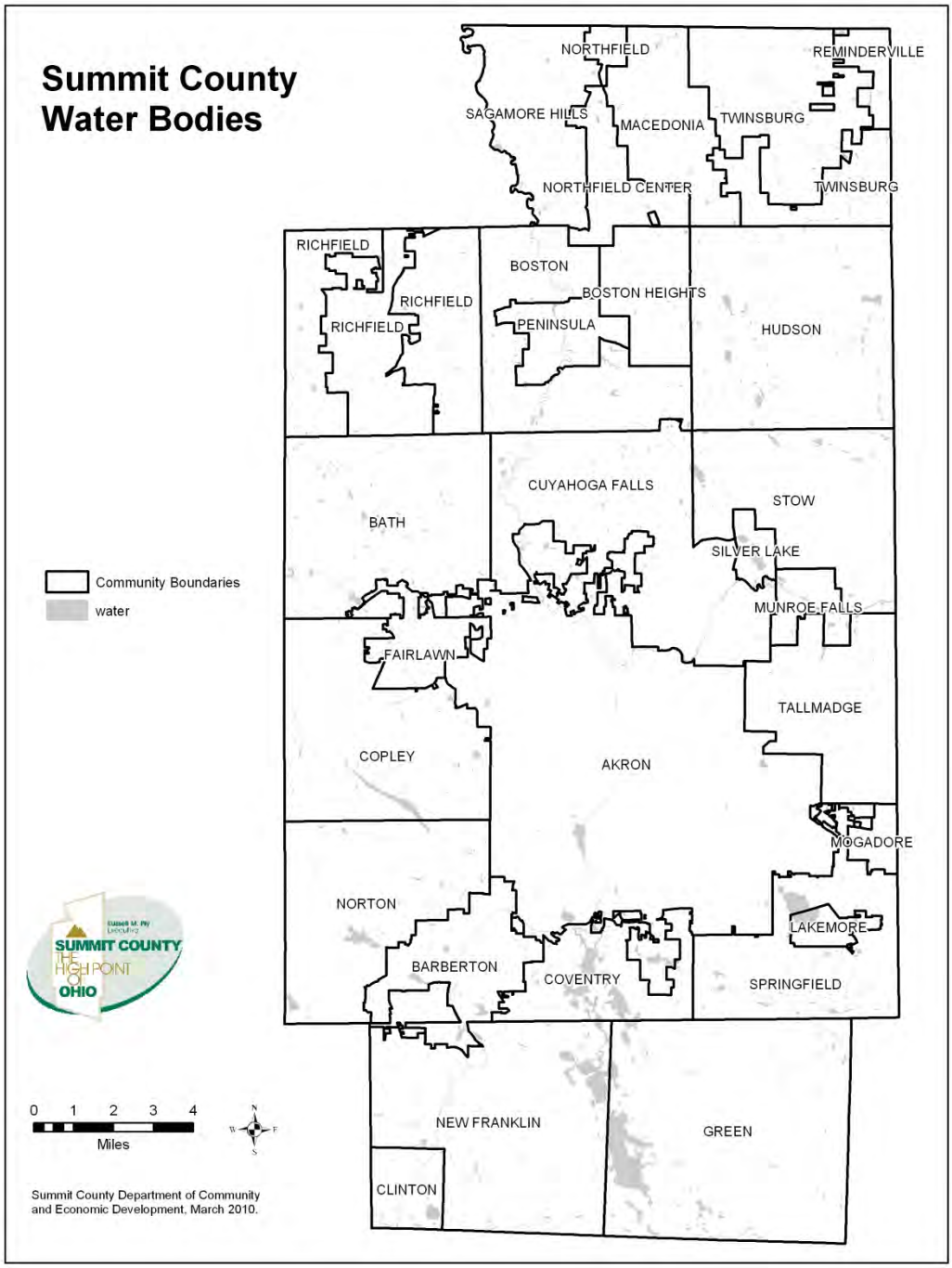

Buildings that Intersect the Floodplain (Total 2,967)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
FEMA Floodplain
Buildings Within Floodplain
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
E
S
Summit County Department of Community and Economic Development, March 2010.

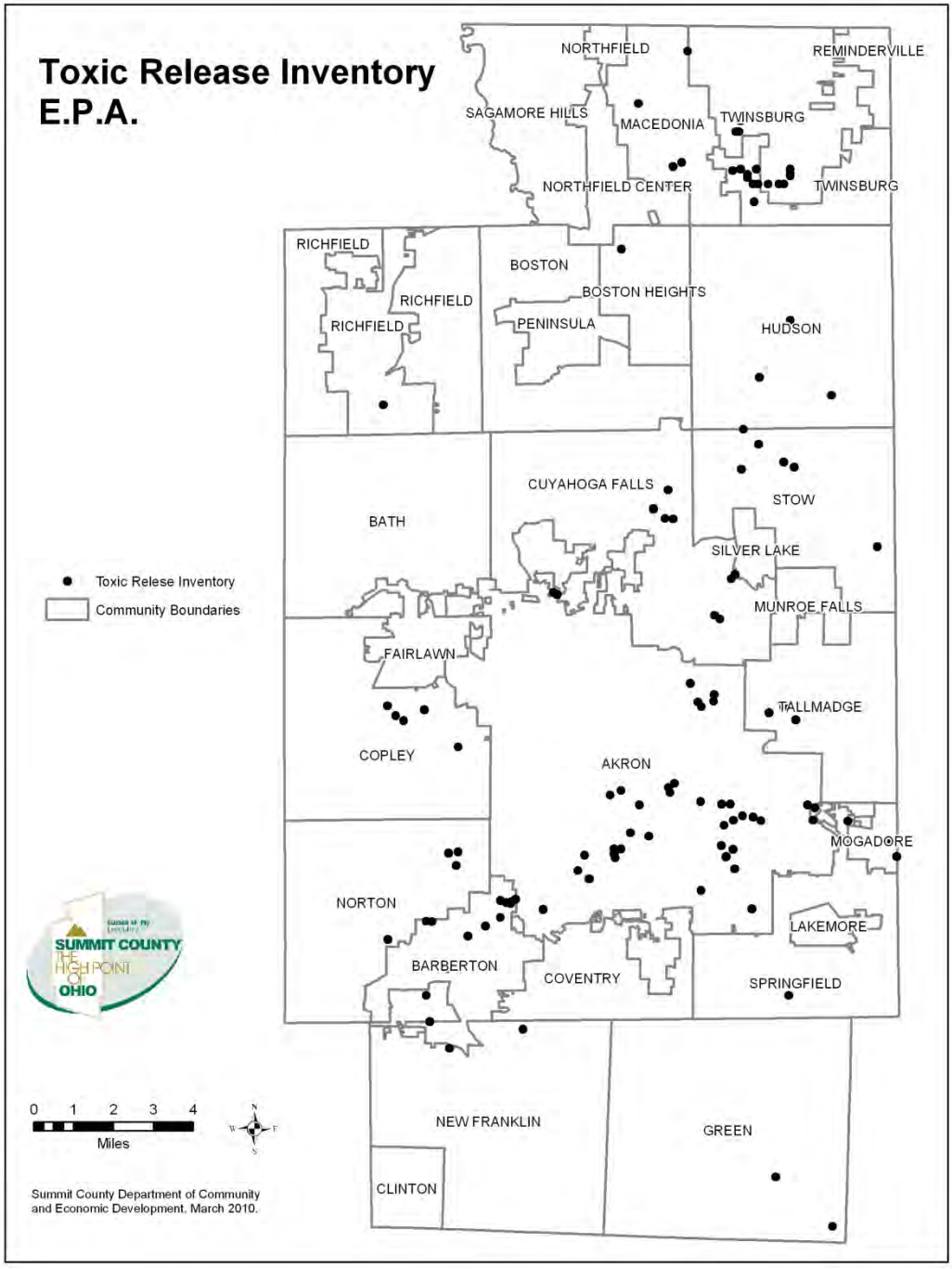

Census Blocks that Intersect the Floodplain (Total population 80,399)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Census Blocks
FEMA Floodplain
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

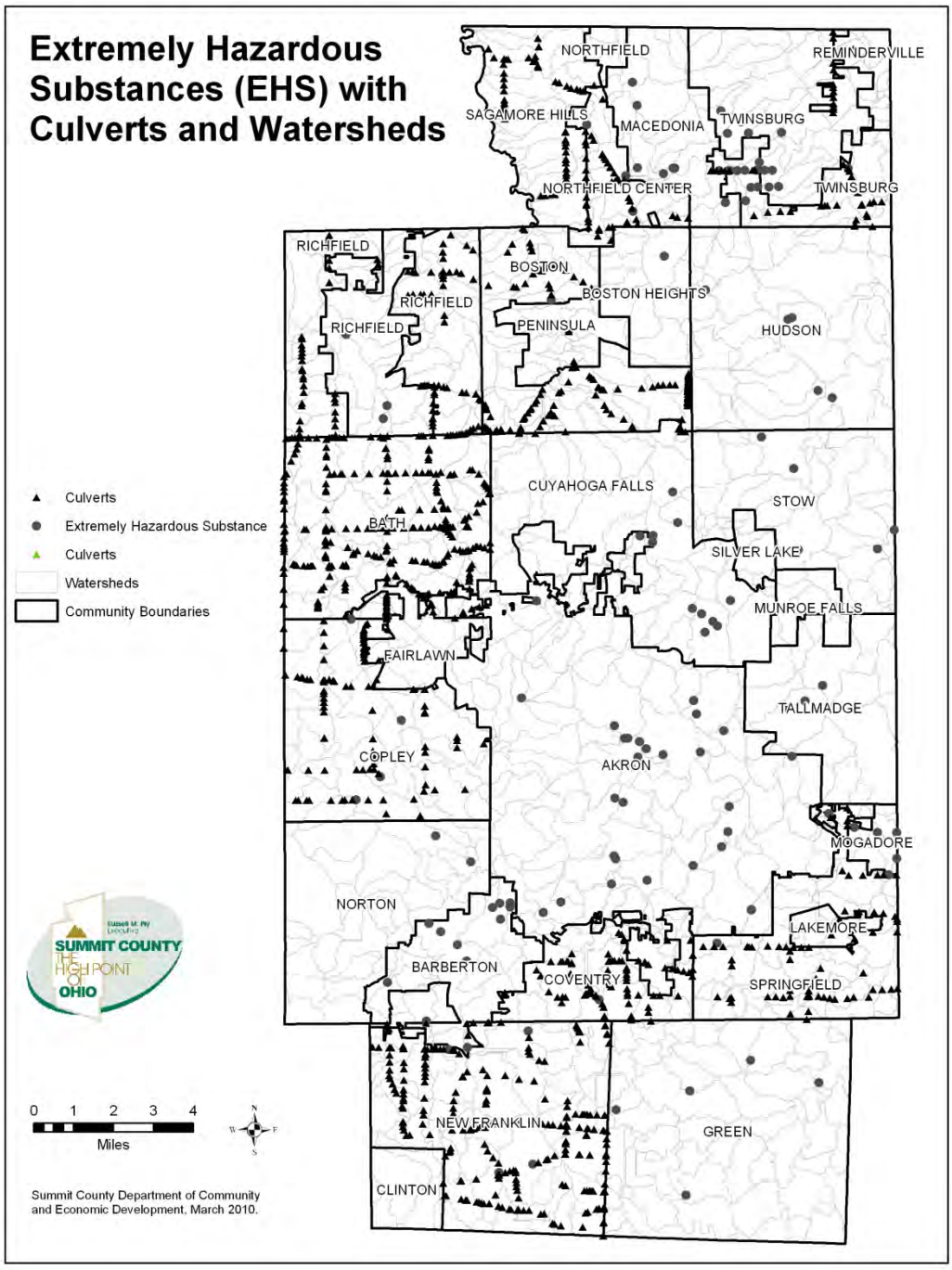

Summit County Dams
NORTHFIELD
REMINDERVILLE
TWINSBURG
SAGAMORE HILLS
MACEDONIA
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Dam
Community Boundaries
Highway
Street
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

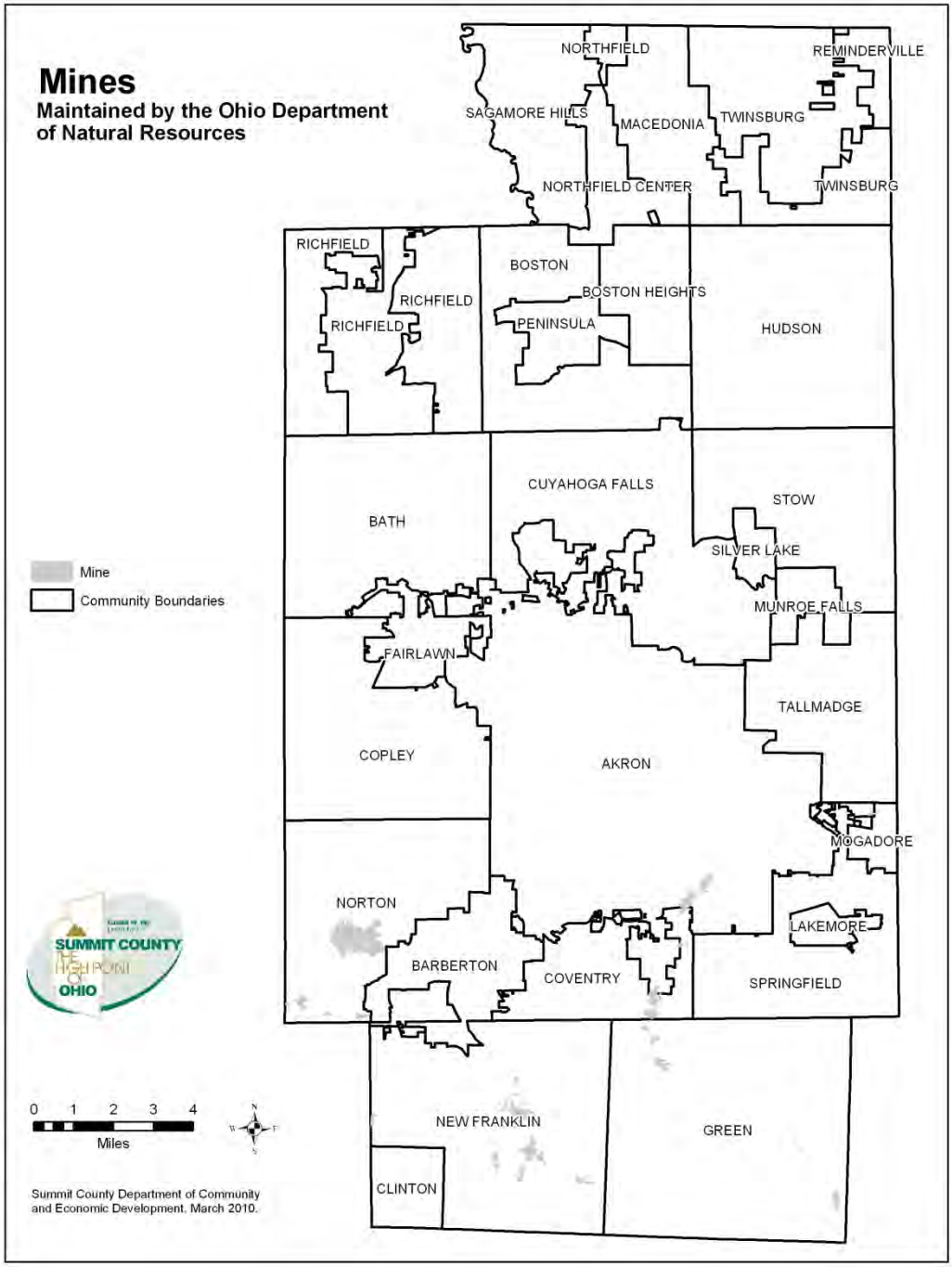

Summit County
Drainage
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Drainage
Community Boundaries
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
E
S
Summit County Department of Community
and Economic Development, March 2010.

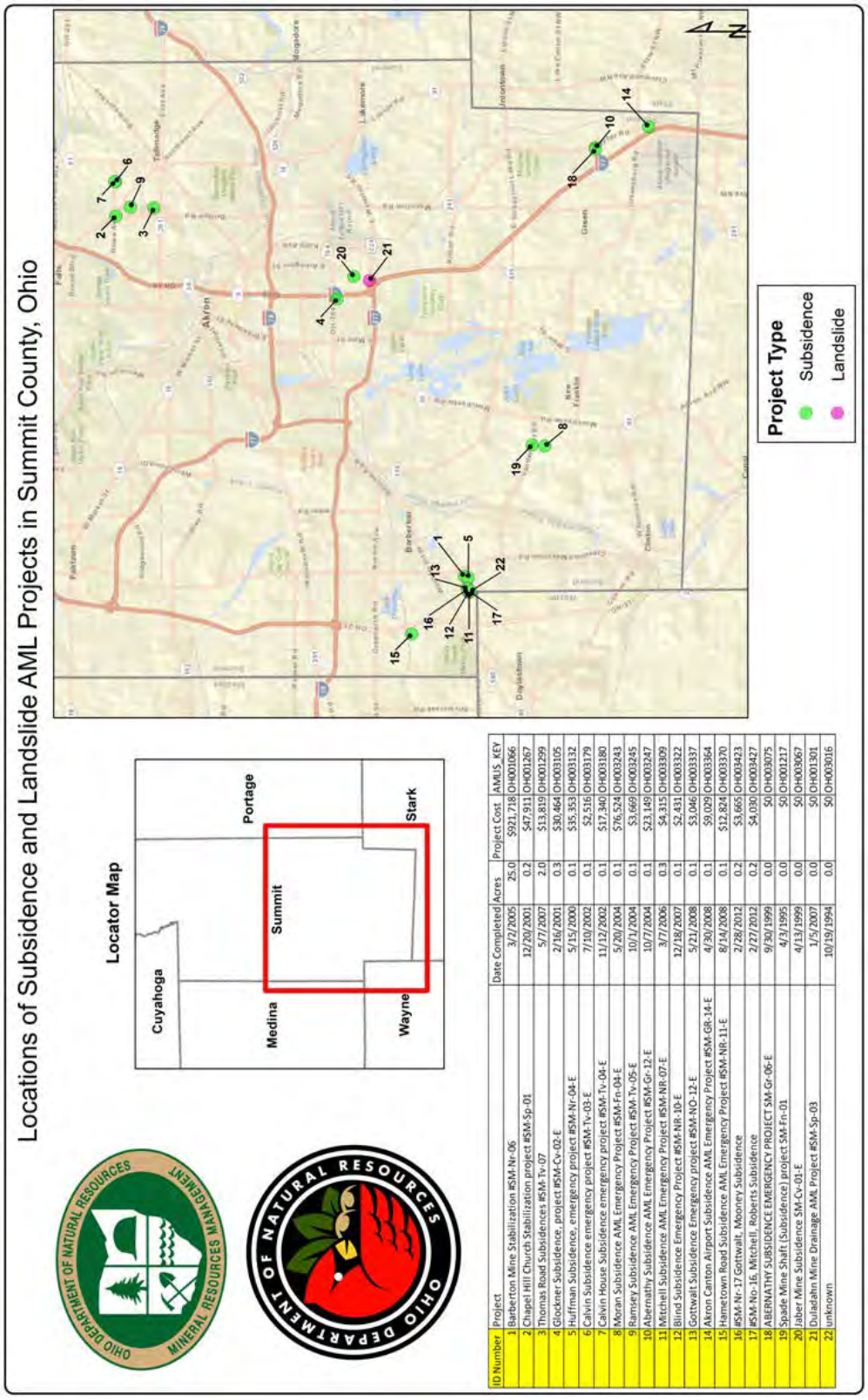

Summit County
Impervious Surfaces
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Impervious Surface
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Summit County
Water Bodies
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
water
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

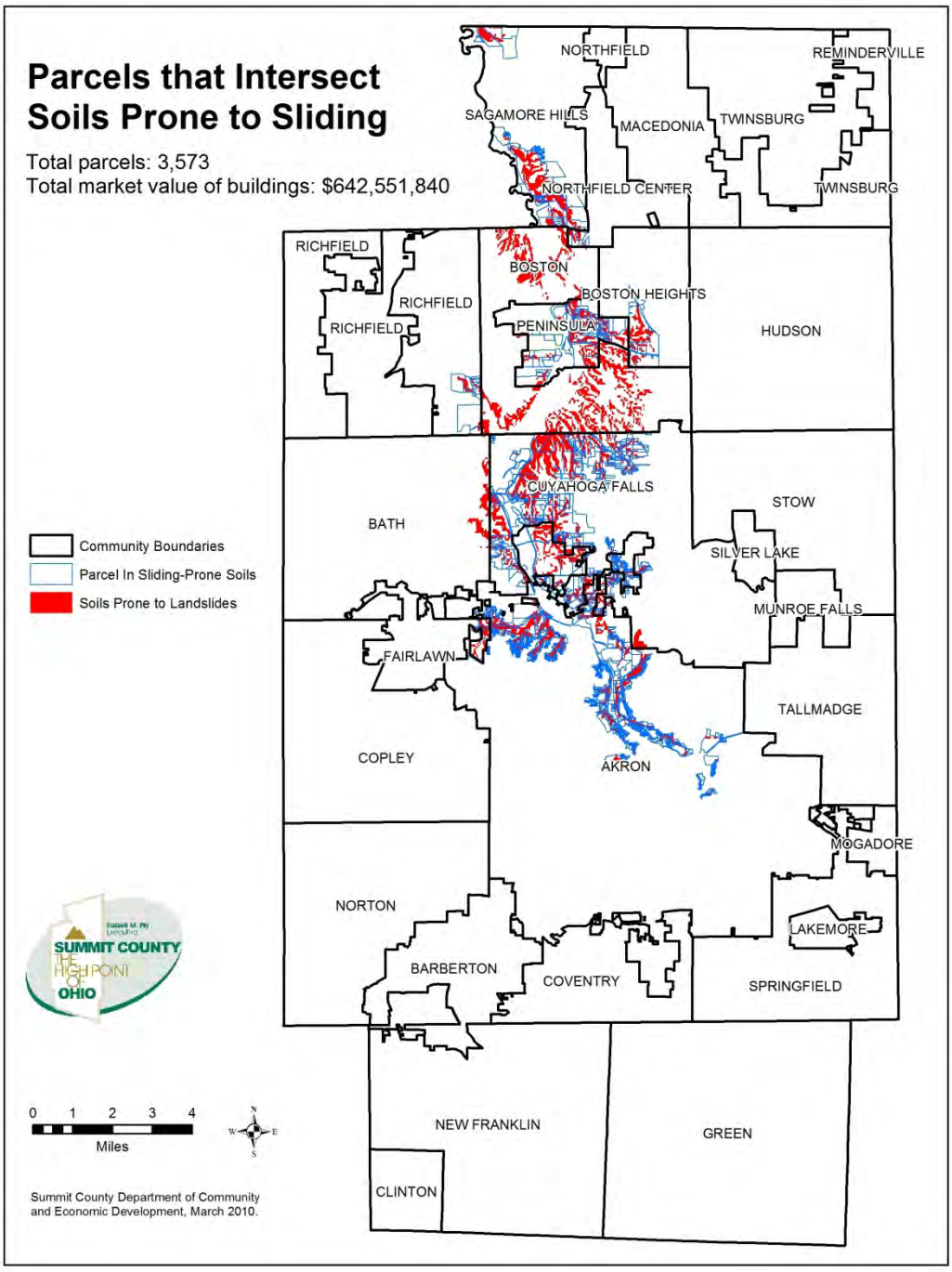

Toxic Release Inventory
E.P.A.
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Toxic Relese Inventory
Community Boundaries
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

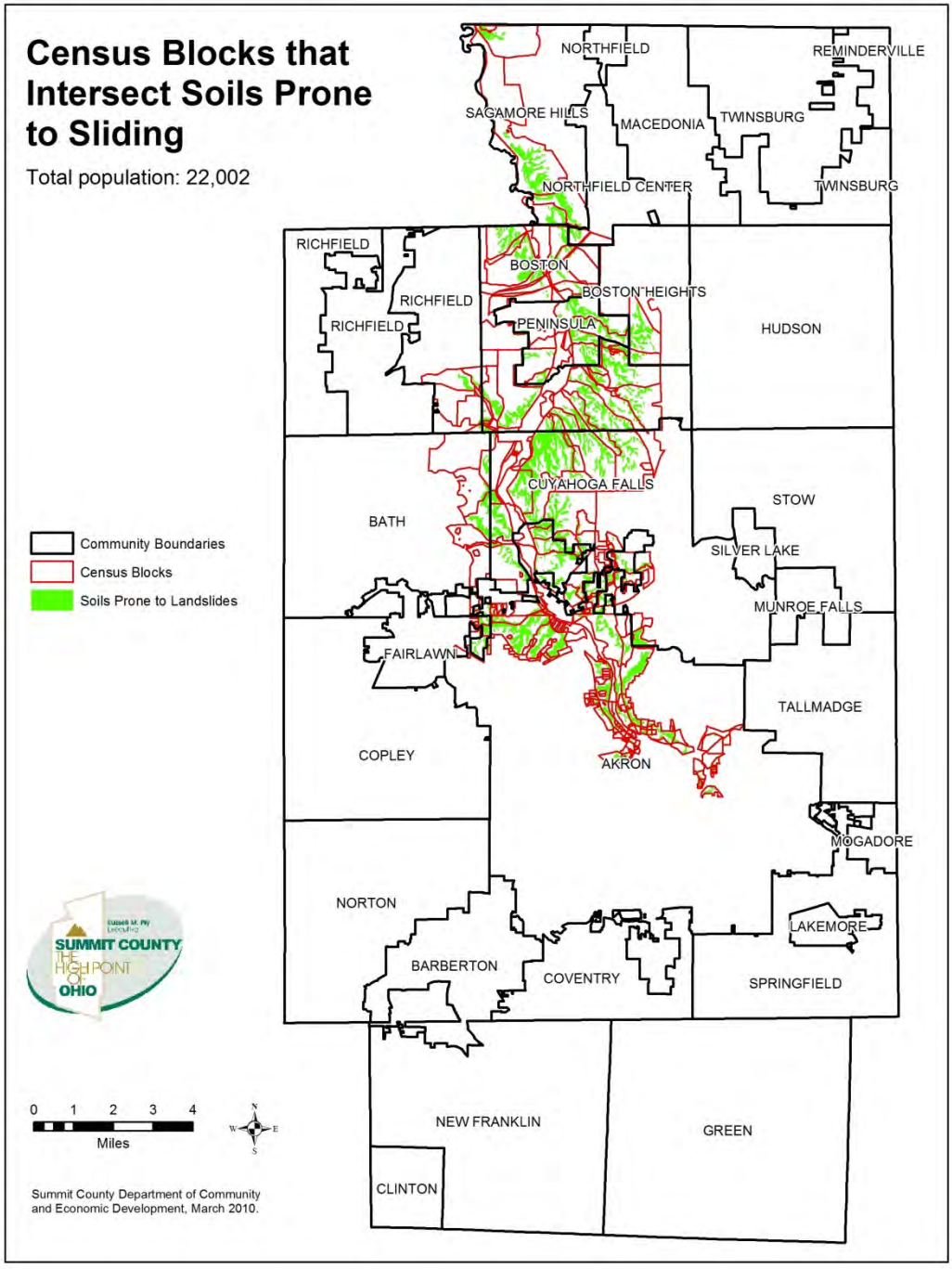

Extremely Hazardous Substances (EHS) with Culverts and Watersheds
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Culverts
Extremely Hazardous Substance
Culverts
Watersheds
Community Boundaries
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

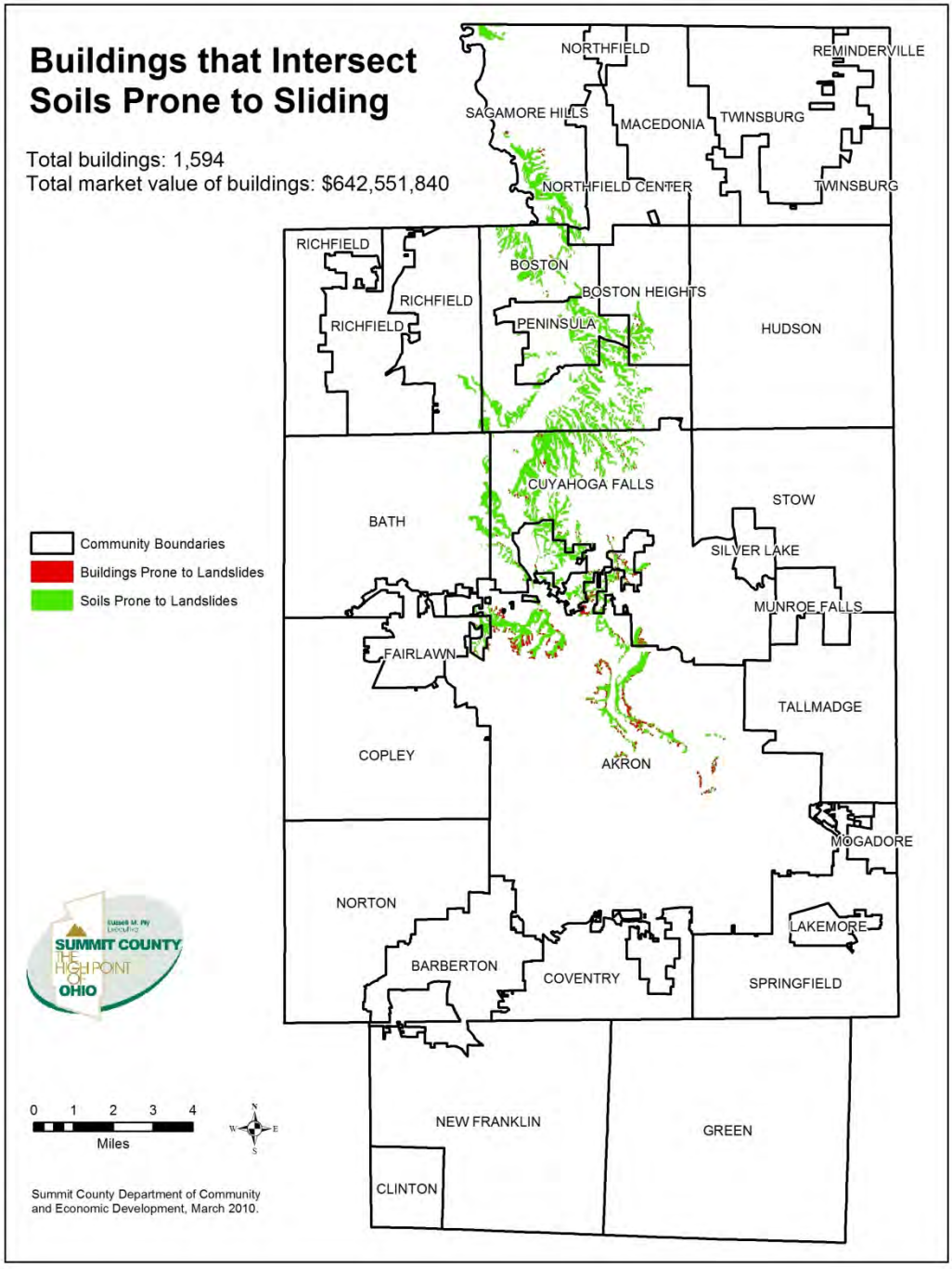

Mines
Maintained by the Ohio Department of Natural Resources
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Mine
Community Boundaries
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development. March 2010.



ID Number	Project	Date Completed	Acres	Project Cost	AMLIS_KEY
3	Barberton Mine Stabilization #SM-Nr-06	3/2/2005	25.0	$921,718	OH001066
2	Chapel Hill Church Stabilization project #SM-Sp-01	12/20/2001	0.2	$47,911	OH001267
3	Thomas Road Subsidences #SM-Tv-07	5/7/2007	2.0	$13,819	OH001299
4	Glockner Subsidence, project #SM-Cv-02-E	2/16/2001	0.3	$30,464	OH003105
5	Huffman Subsidence, emergency project #SM-Nr-04-E	5/15/2000	0.1	$35,353	OH003132
6	Calvin Subsidence emergency project #SM-Tv-03-E	7/10/2002	0.1	$2,516	OH003179
7	Calvin House Subsidence emergency project #SM-Tv-04-E	11/12/2002	0.1	$17,340	OH003180
8	Moran Subsidence AML Emergency Project #SM-Fn-04-E	5/28/2004	0.1	$76,524	OH003243
9	Ramsey Subsidence AML Emergency Project #SM-Tv-05-E	10/1/2004	0.1	$3,669	OH003245
10	Abernathy Subsidence AML Emergency Project #SM-Gr-12-E	10/7/2004	0.1	$23,149	OH003247
11	Mitchell Subsidence AML Emergency Project #SM-NR-07-E	3/7/2006	0.3	$4,315	OH003309
12	Blind Subsidence Emergency Project #SM-NR-10-E	12/18/2007	0.1	$2,431	OH003322
13	Gottwalt Subsidence Emergency project #SM-NO-12-E	5/21/2008	0.1	$3,046	OH003337
14	Akron Canton Airport Subsidence AML Emergency Project #SM-GR-14-E	4/30/2008	0.1	$9,029	OH003364
15	Hametown Road Subsidence AML Emergency Project #SM-NR-11-E	8/14/2008	0.1	$12,824	OH003370
16	#SM-Nr-17 Gottwalt, Mooney Subsidence	2/28/2012	0.2	$3,665	OH003423
17	#SM-No-16, Mitchell, Roberts Subsidence	2/27/2012	0.2	$4,030	OH003427
18	ABERNATHY SUBSIDENCE EMERGENCY PROJECT SM-Gr-06-E	9/30/1999	0.0	$0	OH003075
19	Spade Mine Shaft (Subsidence) project SM-Fn-01	4/3/1995	0.0	$0	OH001217
20	Jaber Mine Subsidence SM-Cv-01-E	4/13/1999	0.0	$0	OH003067
21	Duladahn Mine Drainage AML Project #SM-Sp-03	1/5/2007	0.0	$0	OH001301
22	unknown	10/19/1994	0.0	$0	OH003016


Parcels that Intersect Soils Prone to Sliding
Total parcels: 3,573
Total market value of buildings: $642,551,840
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Parcel In Sliding-Prone Soils
Soils Prone to Landslides
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
E
S
Summit County Department of Community and Economic Development, March 2010.


Census Blocks that Intersect Soils Prone to Sliding
Total population: 22,002
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Census Blocks
Soils Prone to Landslides
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
E
S
Summit County Department of Community and Economic Development, March 2010.


Buildings that Intersect Soils Prone to Sliding
Total buildings: 1,594
Total market value of buildings: $642,551,840
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Buildings Prone to Landslides
Soils Prone to Landslides
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
N
W
E
S
Summit County Department of Community and Economic Development, March 2010.

TornadoHistoryProject.com - Over 57,000 tornado maps. U.S. tornadoes 1950-2012.*

Search | Browse | Donate | FAQ | Blog | Links | About | Contact | Login | Register

Custom Search Results

Year: Any | Month: Any | Day: Any | State: Ohio | Fujita |?| : Any | County |?| : Summit | Per Page |?| : 250 | Submit | Lin

Map | Table | Export | Source

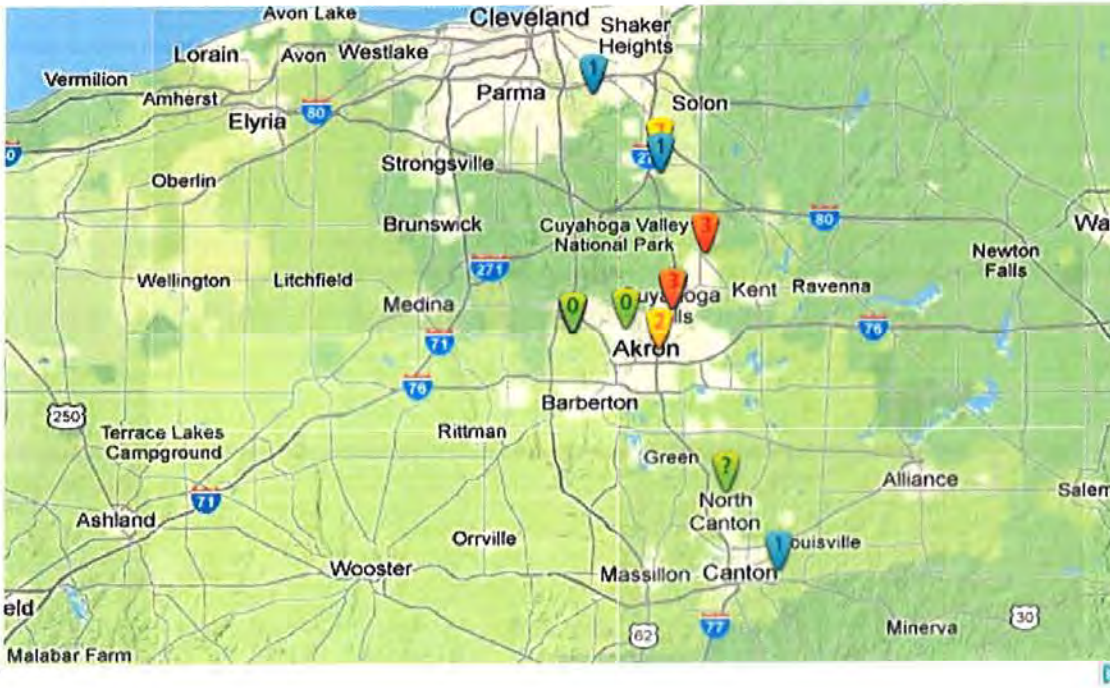
12 tornadoes found (showing

Custom Controls

Show Tornadoes ☑
Show Tornado Paths ☑
Show Polygons |?| ☑

Related Searches

Ohio



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Summary

Definitions |?|

Date(s) (yyyy-mm-dd)	Tornadoes	Fatalities	Highest Fatalities	Injuries	Highest Injuries	Longest Path
1963-04-19 - 2011-05-25	12	0 people	0 people	1 person	1 person	12 miles

User Comments

User comments are currently disabled for custom searches.

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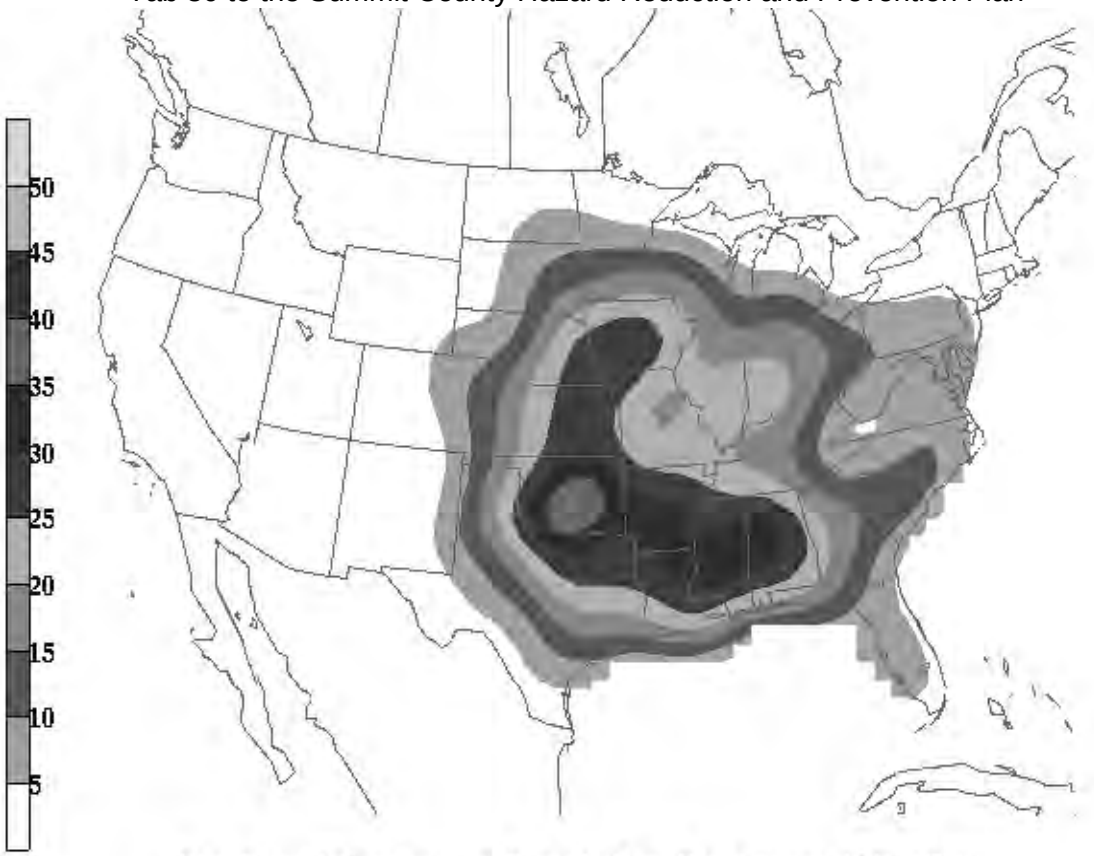
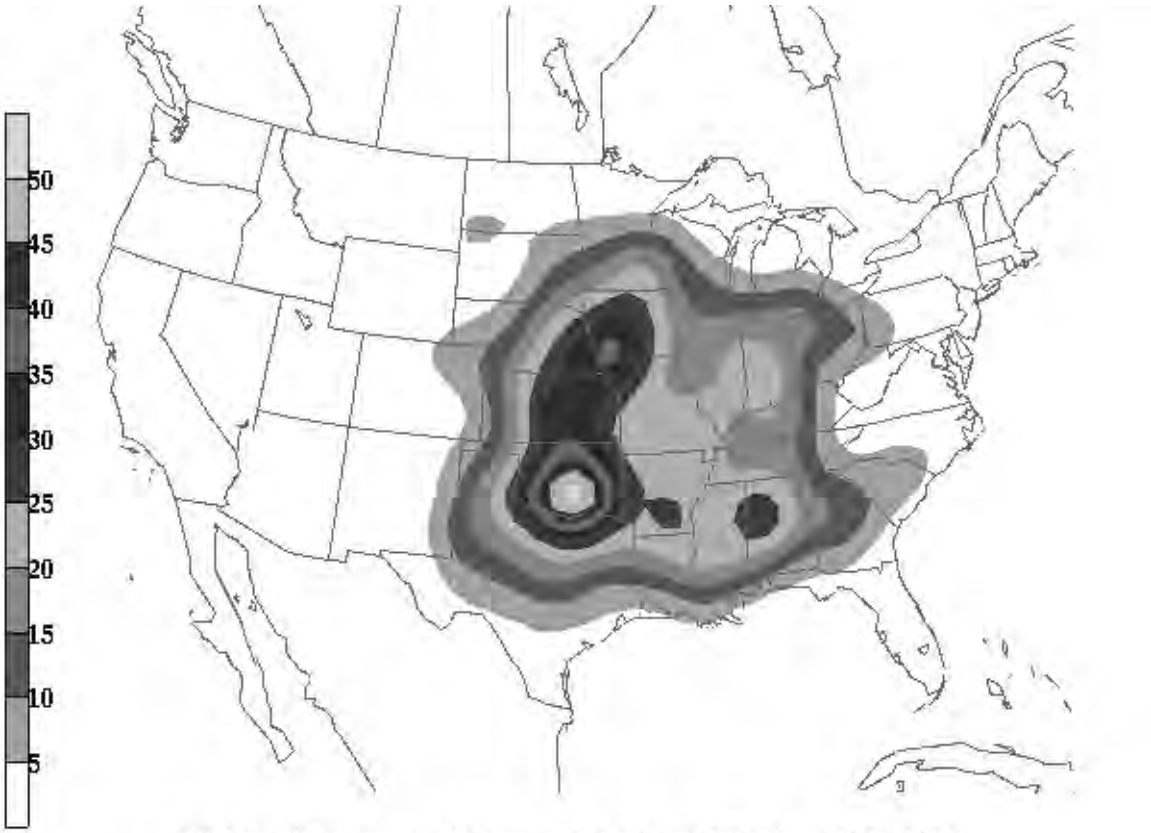
*Data within this database has been pulled from the Storm Prediction Center's (SPC) historical tornado data file
Thus, the data included here is only as accurate as the data in the official SPC archive.



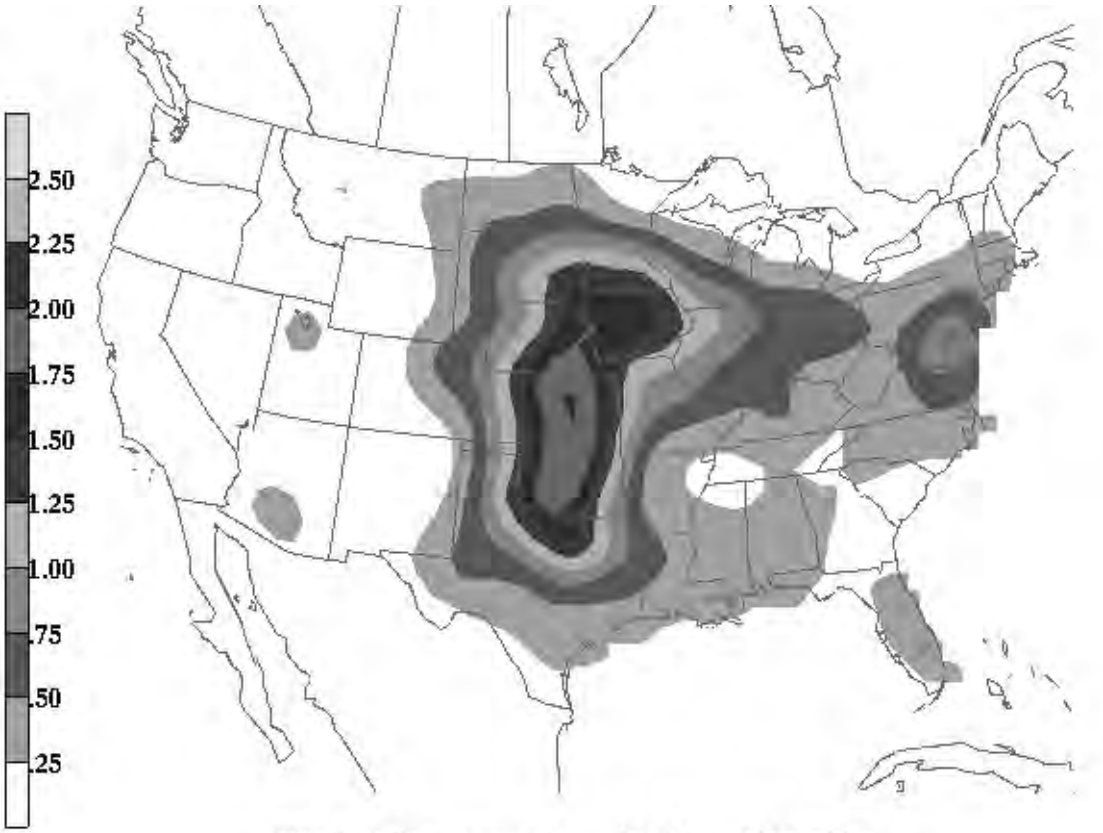
Significant (F2 or greater) Tornado Days Per Century (1921–1995)

Summit County falls between .5 and 10 tornado days per century (1921-1995)



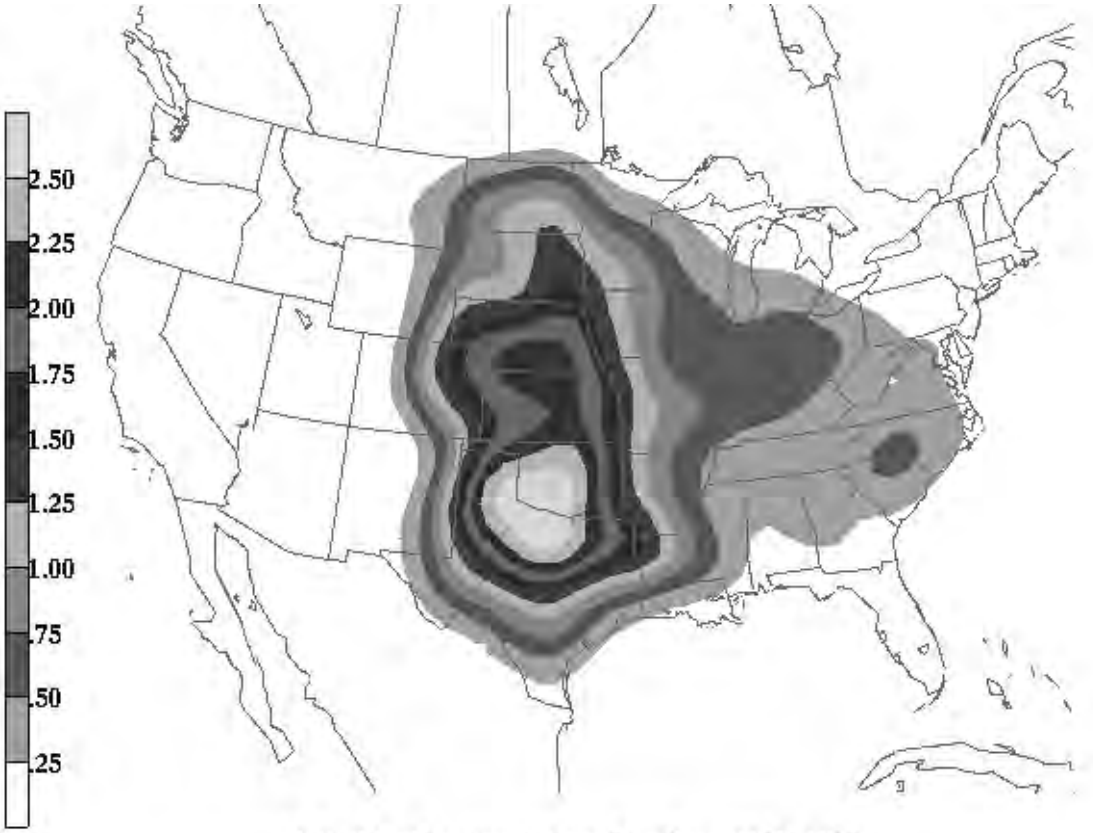
Violent (F4 or greater) Tornado Days Per Millenium (1921–1995)

Summit County averages between 0.5-10 violent tornado days per millennium (1921-1995)



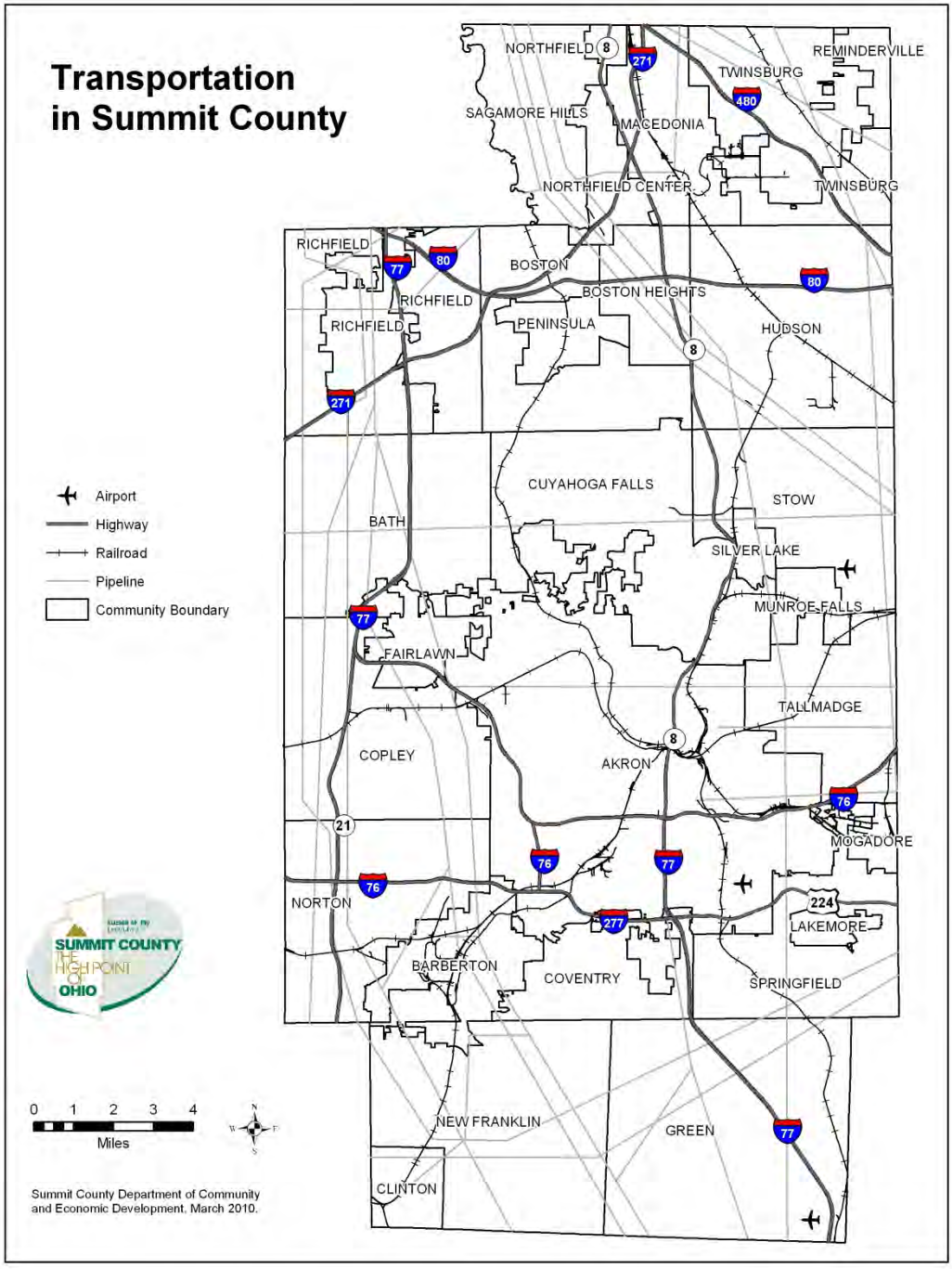
Wind (65 kts or more) Days Per Year (1980–1994)

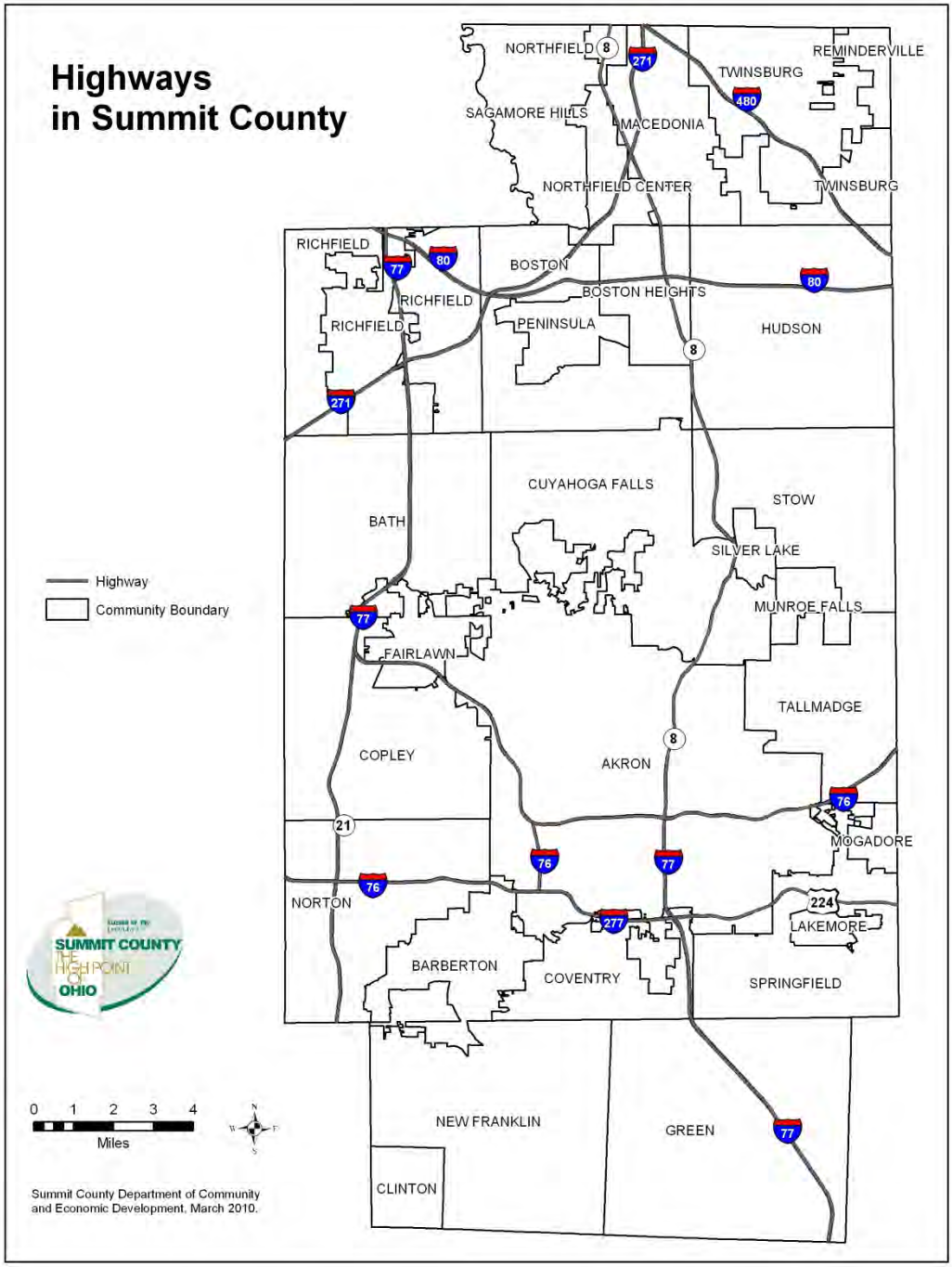
Summit County averages between .25-.75 wind days per year (1980-1994)

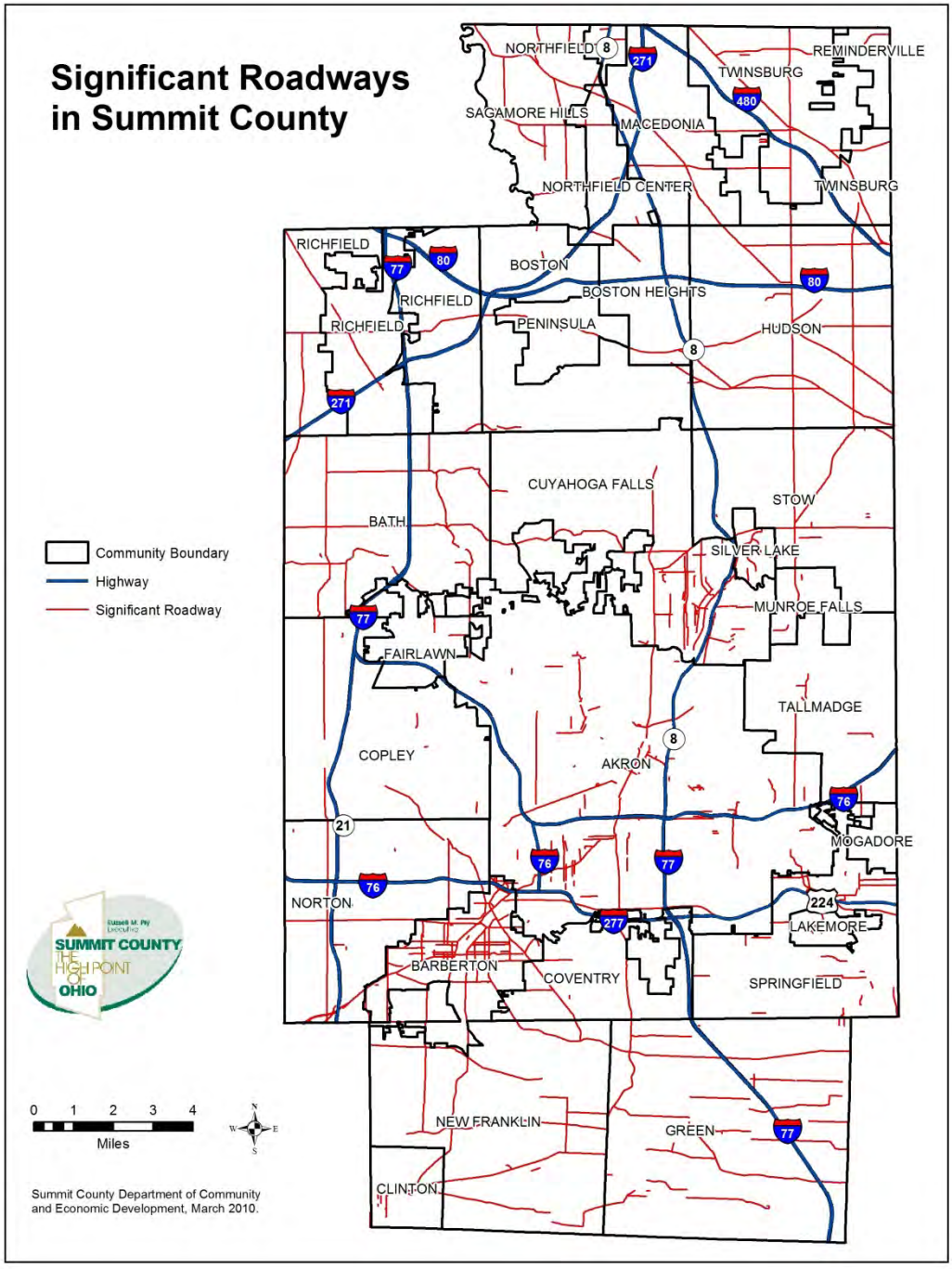


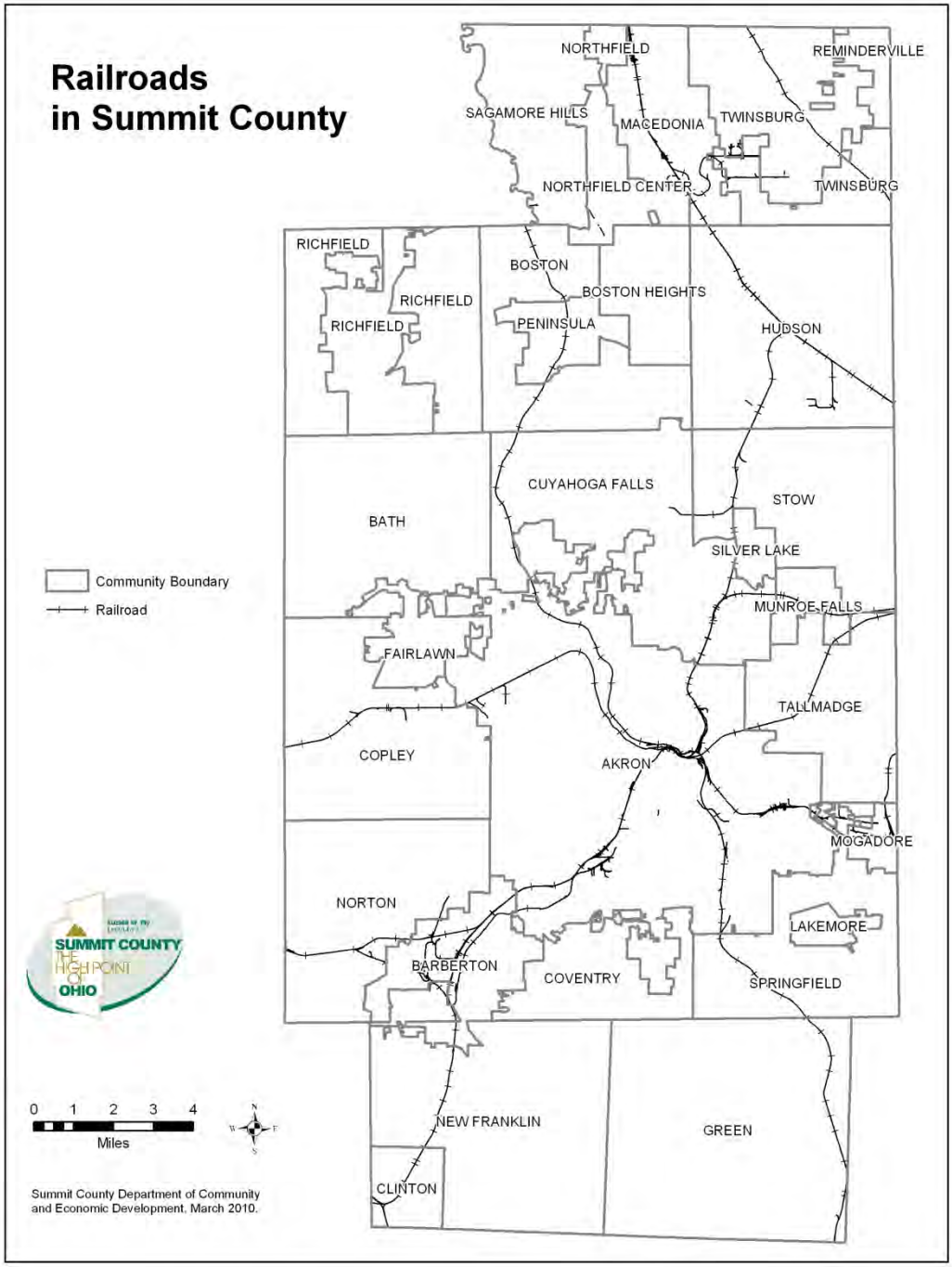
Hail (2 inch or more) Days Per Year (1980–1994)

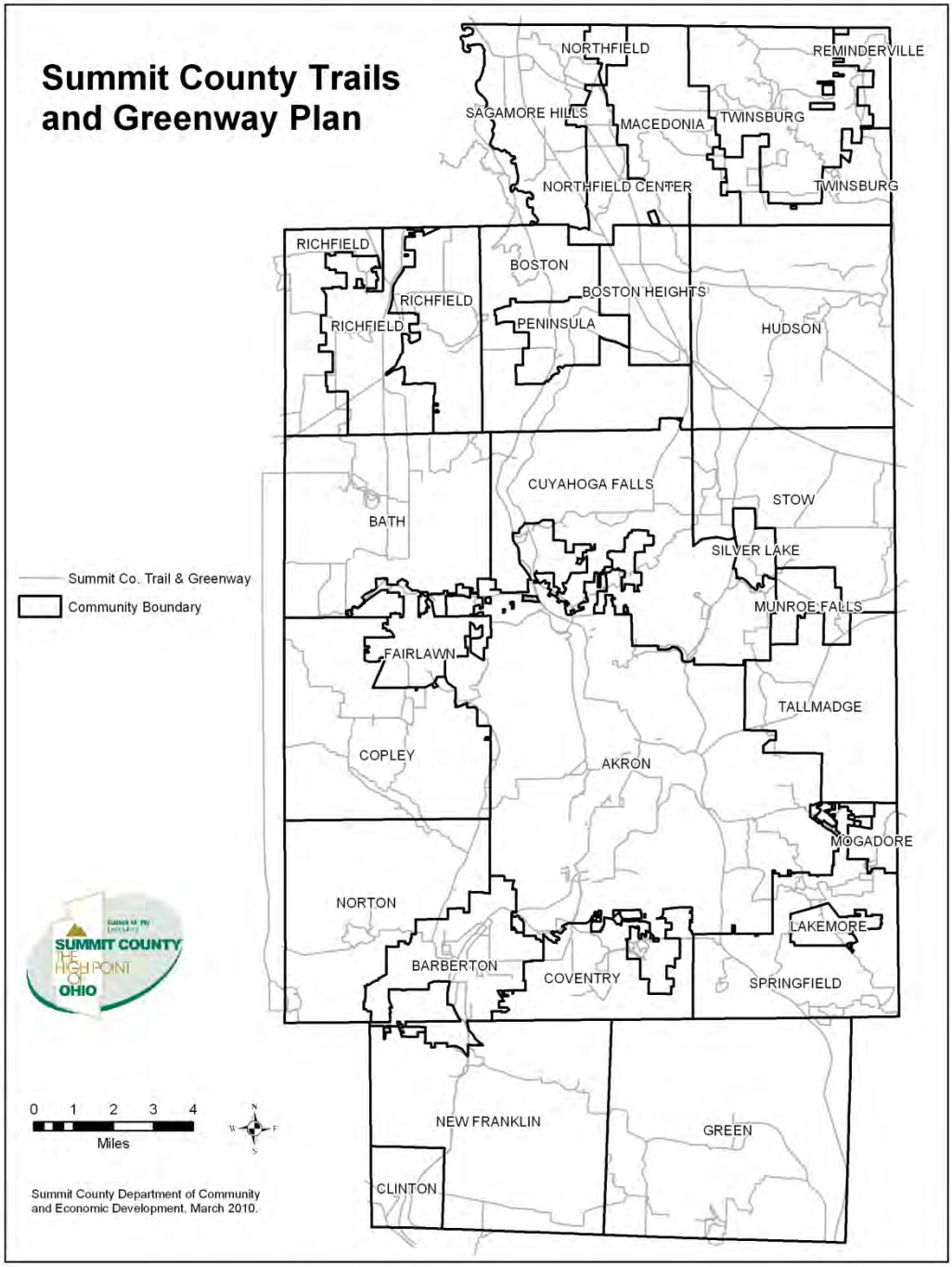
Summit County averages between .25-.50 hail days per year (1980-1994)


Transportation
in Summit County
NORTHFIELD
REMINDERVILLE
TWINSBURG
SAGAMORE HILLS
MACEDONIA
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Airport
Highway
Railroad
Pipeline
Community Boundary
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

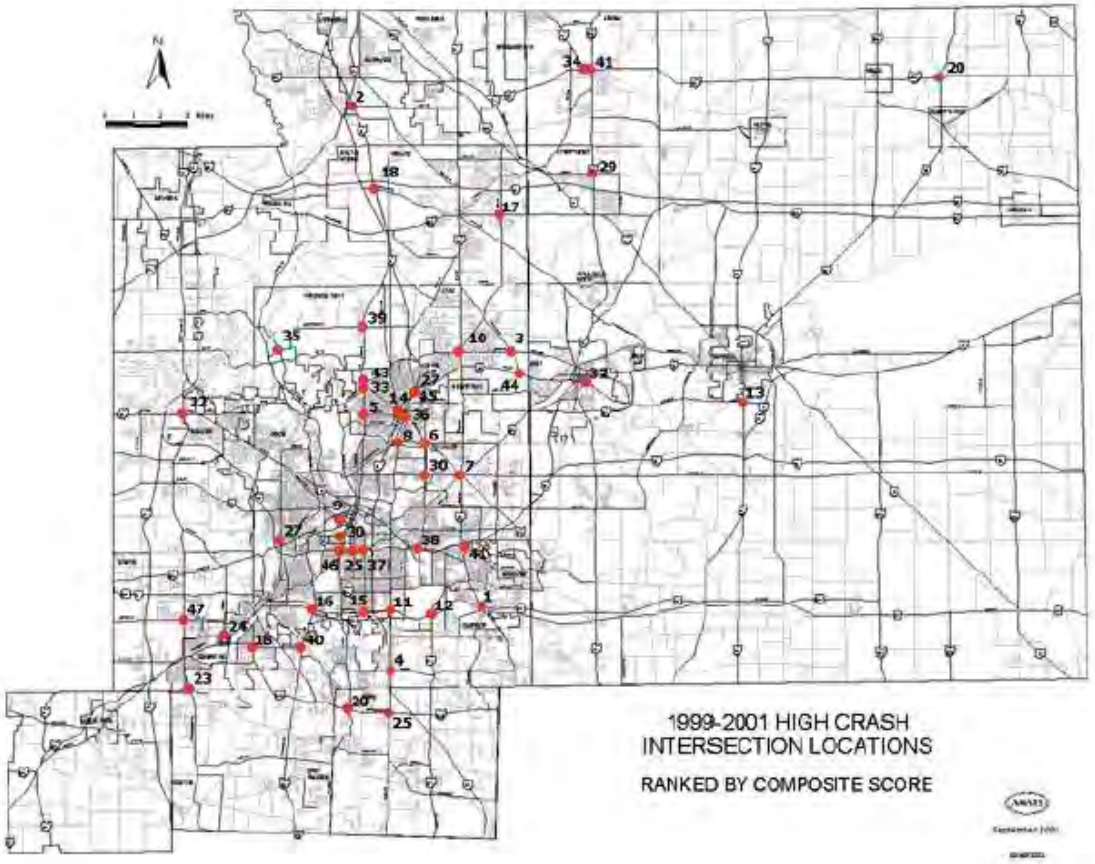

Highways
in Summit County
NORTHFIELD
REMINDERVILLE
TWINSBURG
SAGAMORE HILLS
MACEDONIA
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Highway
Community Boundary
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Significant Roadways in Summit County
NORTHFIELD
REMINDERVILLE
TWINSBURG
SAGAMORE HILLS
MACEDONIA
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Highway
Significant Roadway
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Railroads
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
Community Boundary
Railroad
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Summit County Trails and Greenway Plan
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Summit Co. Trail & Greenway
Community Boundary
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

Tab 39 to the Summit County Hazard Reduction and Prevention Plan




2000-2002 HIGH CRASH
FREEWAY LOCATIONS
N
1
2
3
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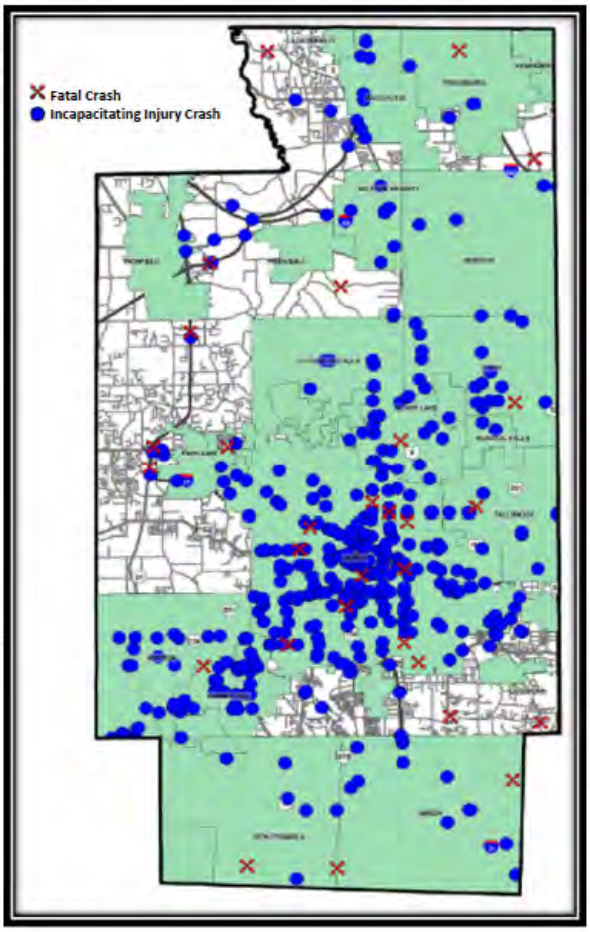
5
6
7
8
Segments with Crash Rate Greater than 2.0 Crashes per Million Vehicle Miles

Summit County Seat Belt Usage Rate: 61%

Summit County



Overview

In 2010, there were 299,918 crashes across Ohio: 1,076 people were killed and 10,175 people were seriously injured. The economic cost to Ohio was more than $8.7 billion.

Ohio's ultimate goal is to eliminate all fatalities. The short-term goal is to reduce the number of fatalities by 5 percent by 2015. By achieving this goal, more than 150 lives will be saved over five years. We can achieve this goal by targeting key crash types in each county.

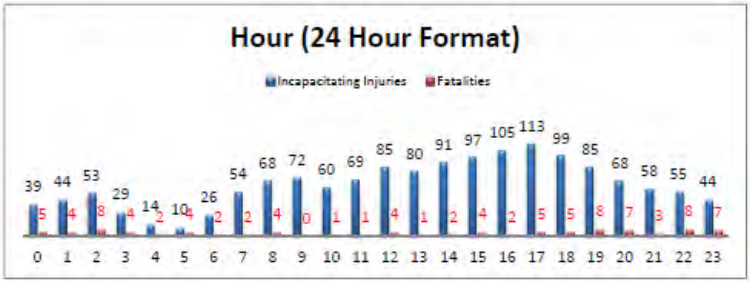
Many of the crashes that occur each year can be prevented through safer driving behavior. Many injuries and deaths can be prevented by increasing seat belt use, and decreasing speeds and alcohol use.

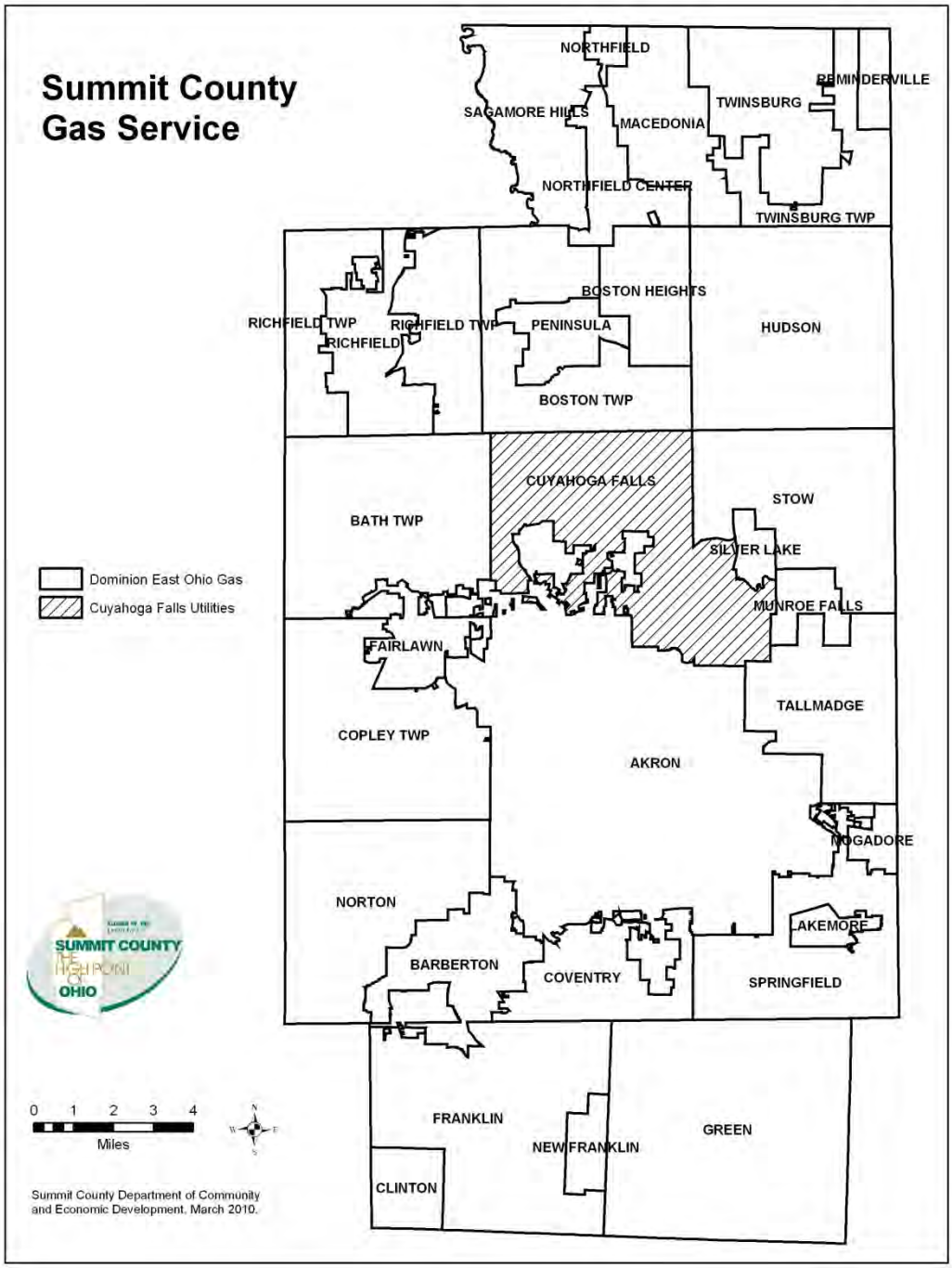
Local agencies can also help reduce crashes by developing and investing in education, enforcement and engineering strategies that target the worst crash types and driver behaviors in their county.

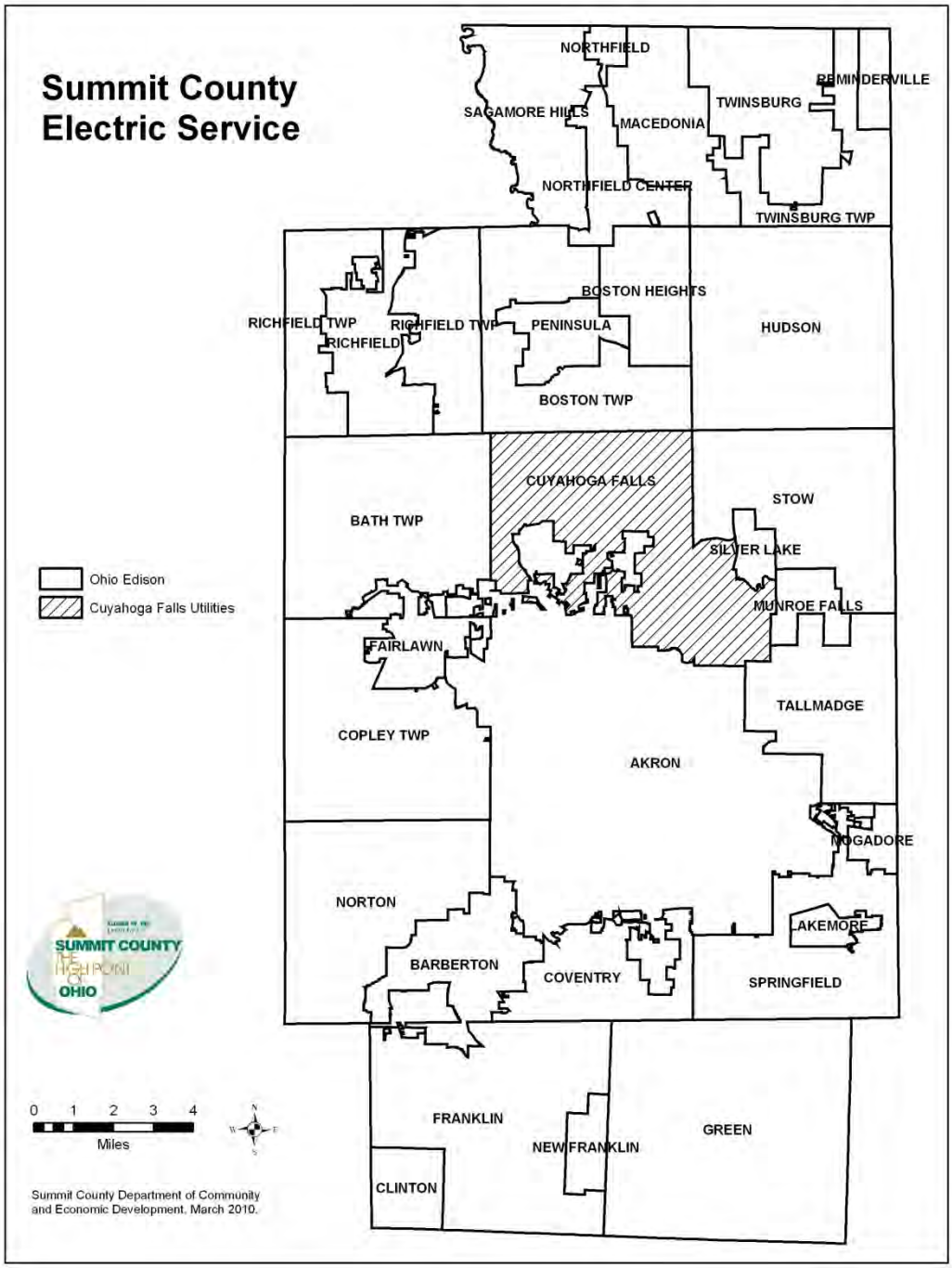
Summit County

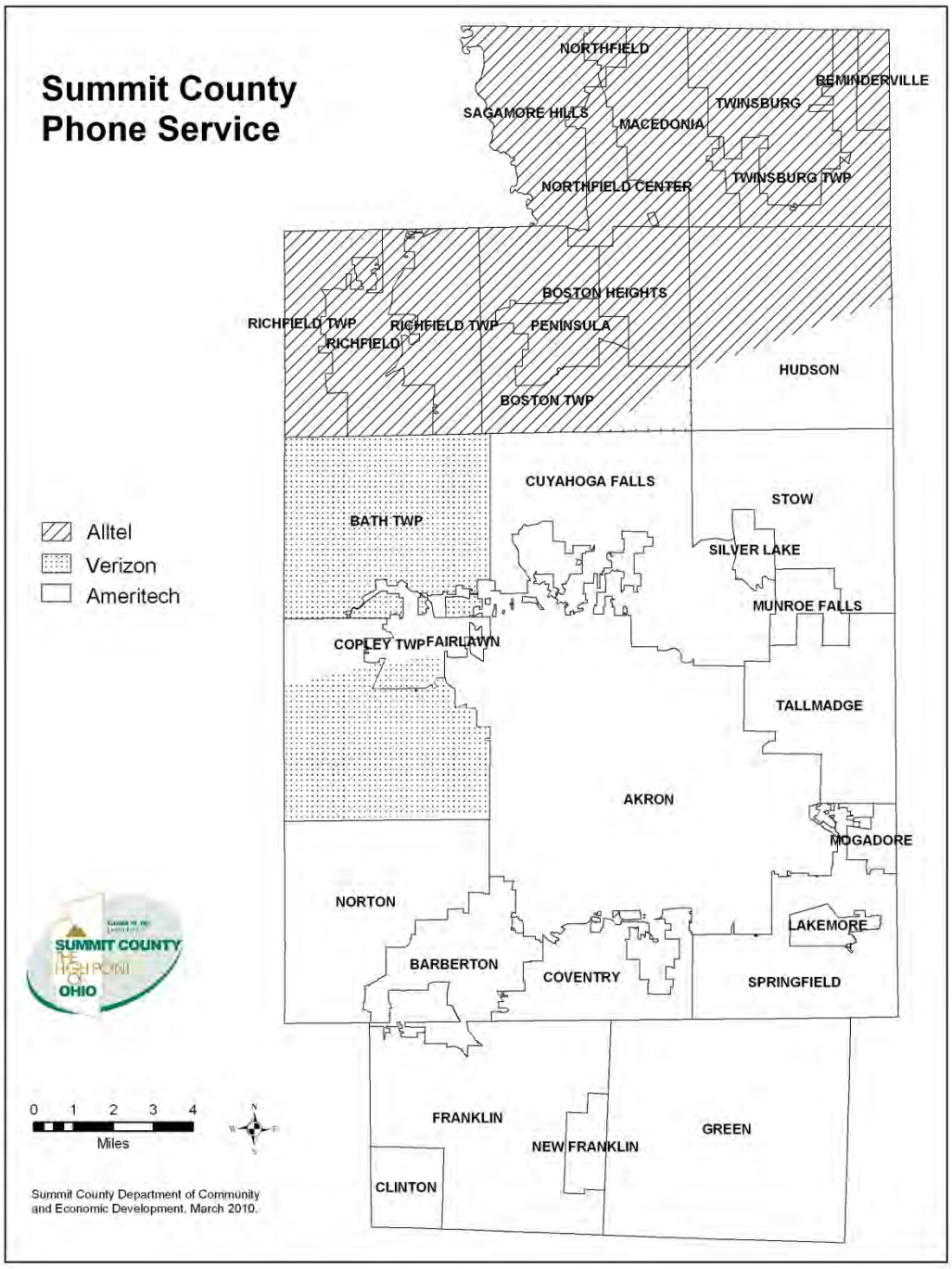
Between 2008 and 2010, there were 44,453 crashes in Summit County.

* Among these crashes, 93 people died and 1,518 people were seriously injured.
* Fixed object crashes were the #1 cause of death (45%) and intersection-related crashes were the #1 cause of serious injuries (47%).
* A significant percentage of fixed object crashes involved alcohol (35%). With the most common objects struck being a curb, utility pole, or tree (in that order).
* 23% of the intersection crashes had failure to yield as a contributing factor.
* There were a significant number of serious crashes involving young drivers, excessive speed, older drivers, and alcohol.
* Summit County has a high rate of serious motorcycle crashes.




Summit County
Gas Service
NORTHFIELD
REMINDERVILLE
TWINSBURG
SAGAMORE HILLS
MACEDONIA
NORTHFIELD CENTER
TWINSBURG TWP
BOSTON HEIGHTS
RICHFIELD TWP
RICHFIELD TWP
PENINSULA
HUDSON
RICHFIELD
BOSTON TWP
CUYAHOGA FALLS
STOW
BATH TWP
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY TWP
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
FRANKLIN
GREEN
NEW FRANKLIN
CLINTON
Dominion East Ohio Gas
Cuyahoga Falls Utilities
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Summit County
Electric Service
NORTHFIELD
REMINDERVILLE
TWINSBURG
SAGAMORE HILLS
MACEDONIA
NORTHFIELD CENTER
TWINSBURG TWP
BOSTON HEIGHTS
RICHFIELD TWP
RICHFIELD TWP
PENINSULA
HUDSON
RICHFIELD
BOSTON TWP
CUYAHOGA FALLS
STOW
BATH TWP
SILVER LAKE
Ohio Edison
Cuyahoga Falls Utilities
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY TWP
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
SUMMIT COUNTY
THE HIGH POINT OF OHIO
FRANKLIN
GREEN
NEW FRANKLIN
CLINTON
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development. March 2010.


Summit County
Phone Service
NORTHFIELD
REMINDERVILLE
TWINSBURG
SAGAMORE HILLS
MACEDONIA
TWINSBURG TWP
NORTHFIELD CENTER
BOSTON HEIGHTS
RICHFIELD TWP
RICHFIELD TWP
PENINSULA
RICHFIELD
HUDSON
BOSTON TWP
CUYAHOGA FALLS
STOW
BATH TWP
SILVER LAKE
MUNROE FALLS
COPLEY TWP
FAIRLAWN
TALLMADGE
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
FRANKLIN
GREEN
NEW FRANKLIN
CLINTON
Alltel
Verizon
Ameritech
SUMMIT COUNTY
THE HIGH POINT OF OHIO
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Summit County Department of Community and Economic Development, March 2010.

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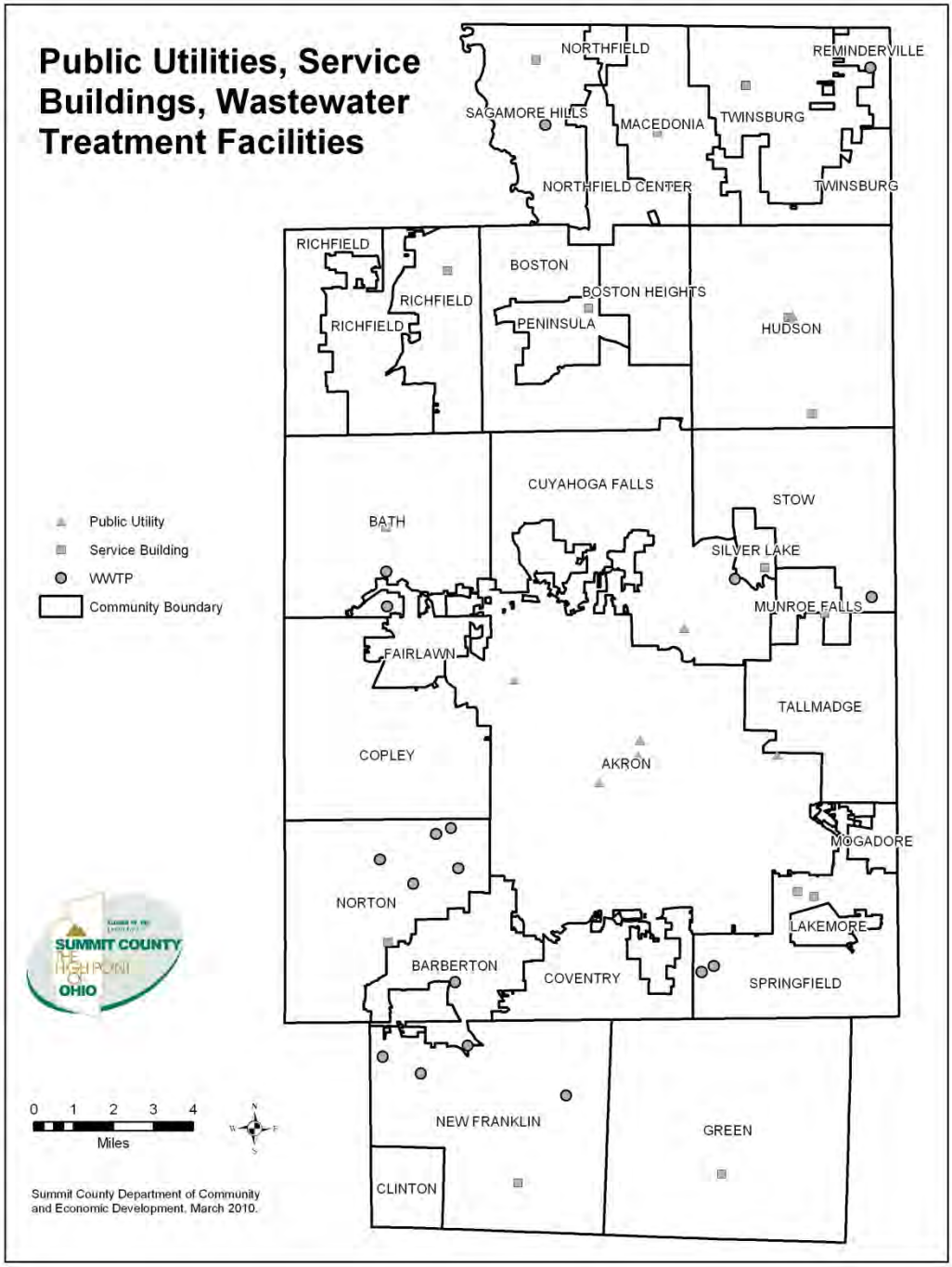
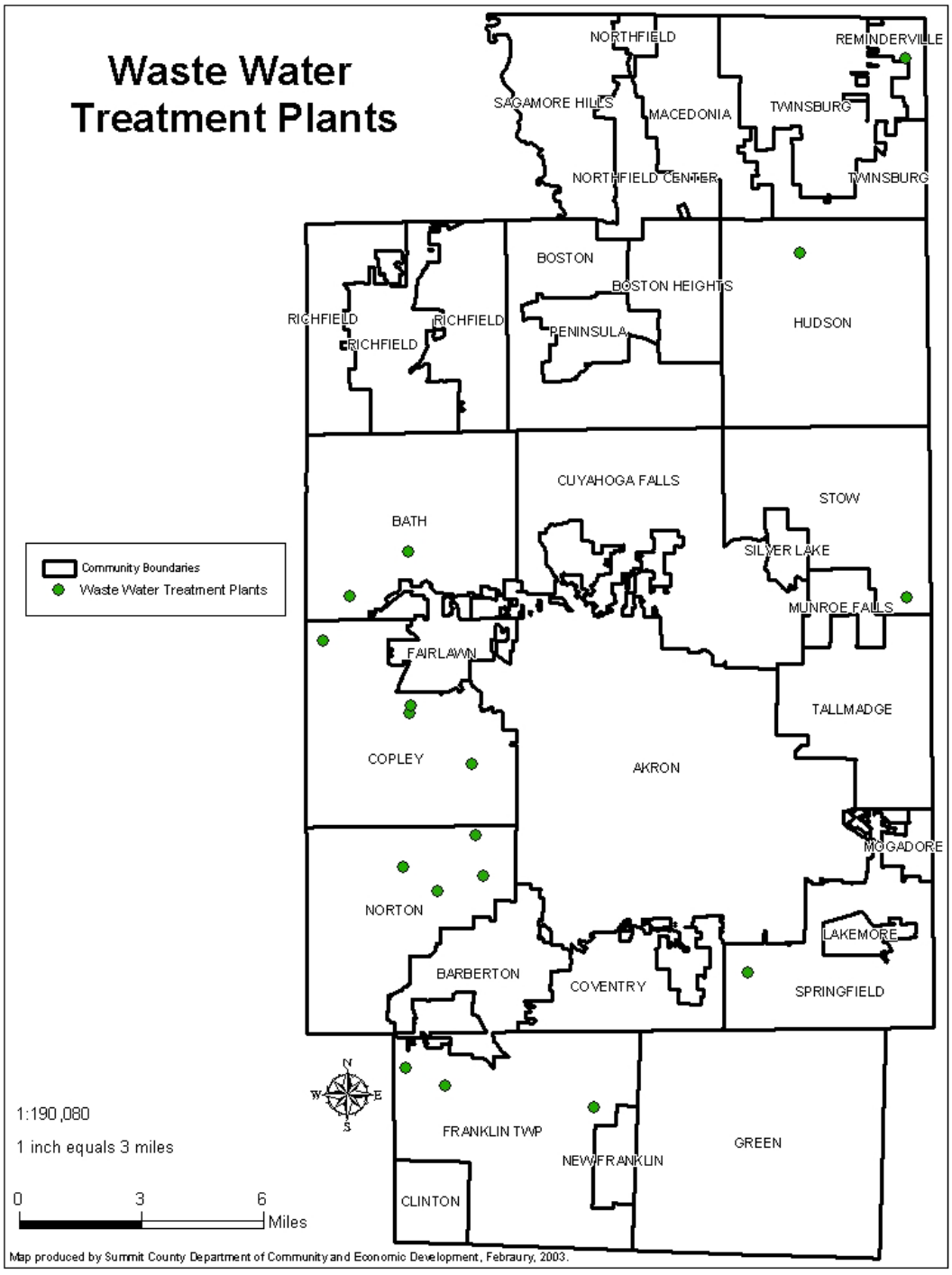

Public Utilities, Service Buildings, Wastewater Treatment Facilities
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Public Utility
Service Building
WWTP
Community Boundary
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development. March 2010.


Waste Water Treatment Plants
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
FRANKLIN TWP
NEW FRANKLIN
GREEN
CLINTON
Community Boundaries
Waste Water Treatment Plants
N
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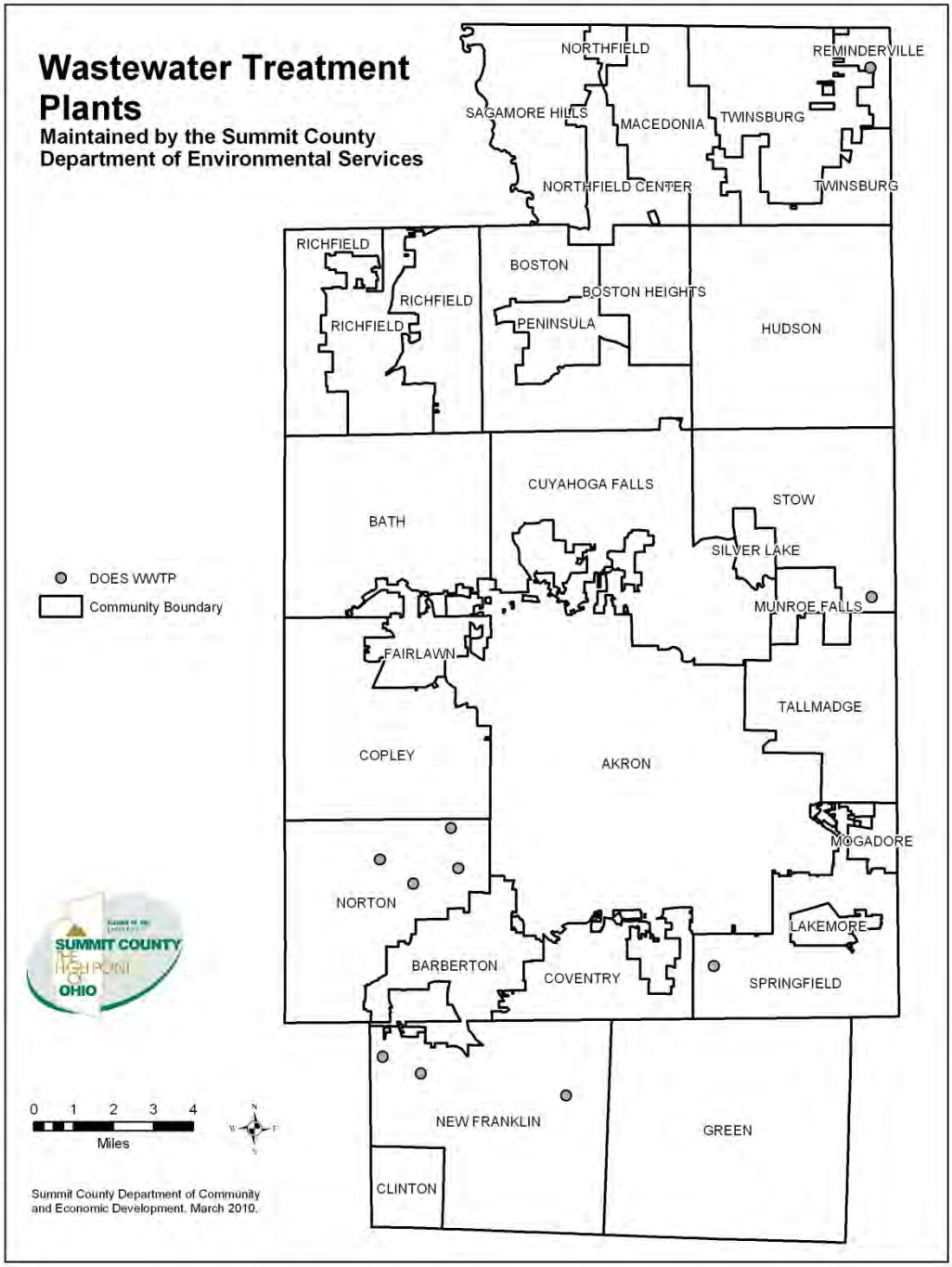
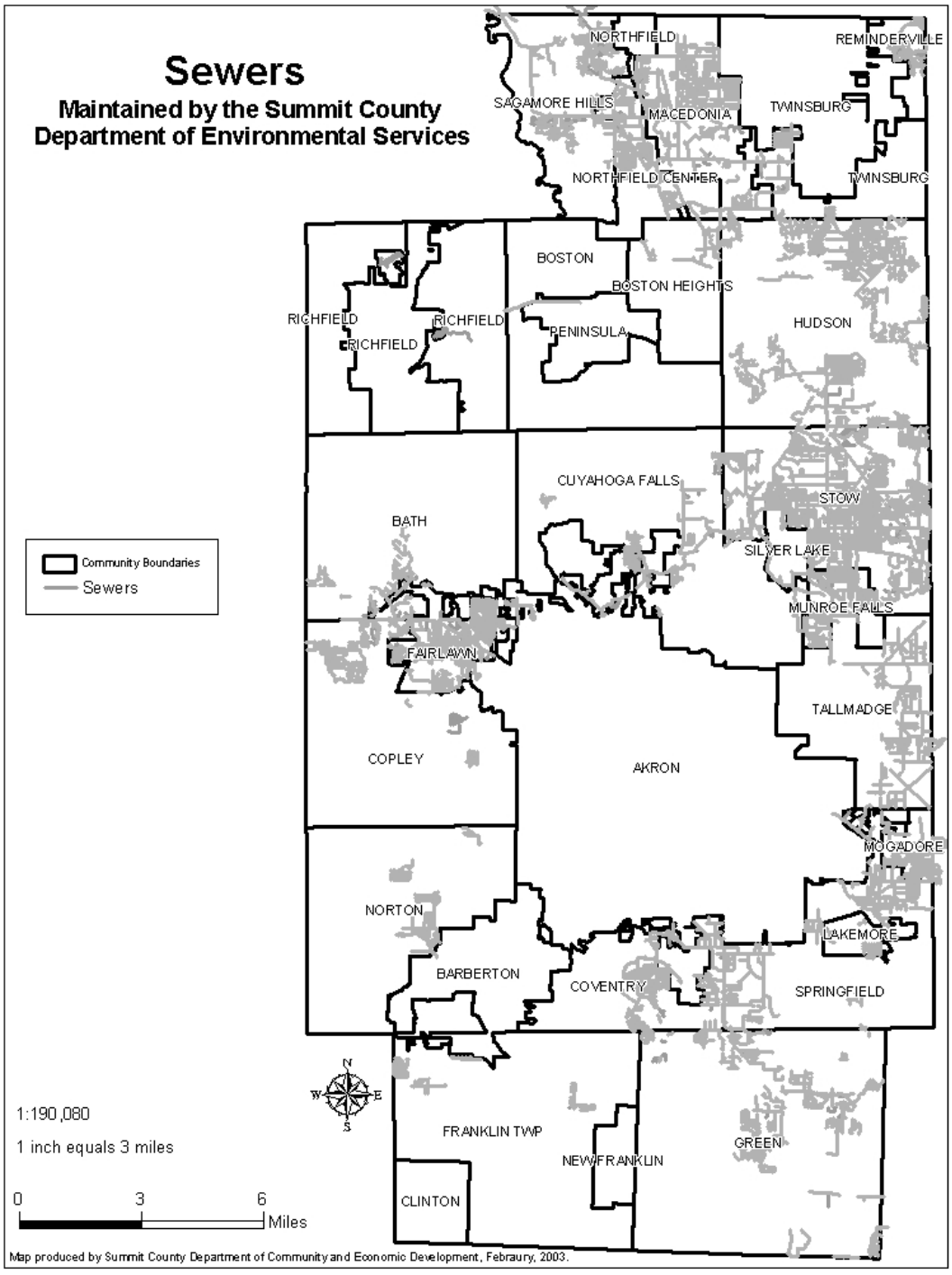
S
1:190,080
1 inch equals 3 miles
0
3
6
Miles
Map produced by Summit County Department of Community and Economic Development, Febraury, 2003.


Wastewater Treatment Plants
Maintained by the Summit County Department of Environmental Services
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
DOES WWTP
Community Boundary
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development. March 2010.


Sewers
Maintained by the Summit County Department of Environmental Services
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
FRANKLIN TWP
GREEN
NEW FRANKLIN
CLINTON
Community Boundaries
Sewers
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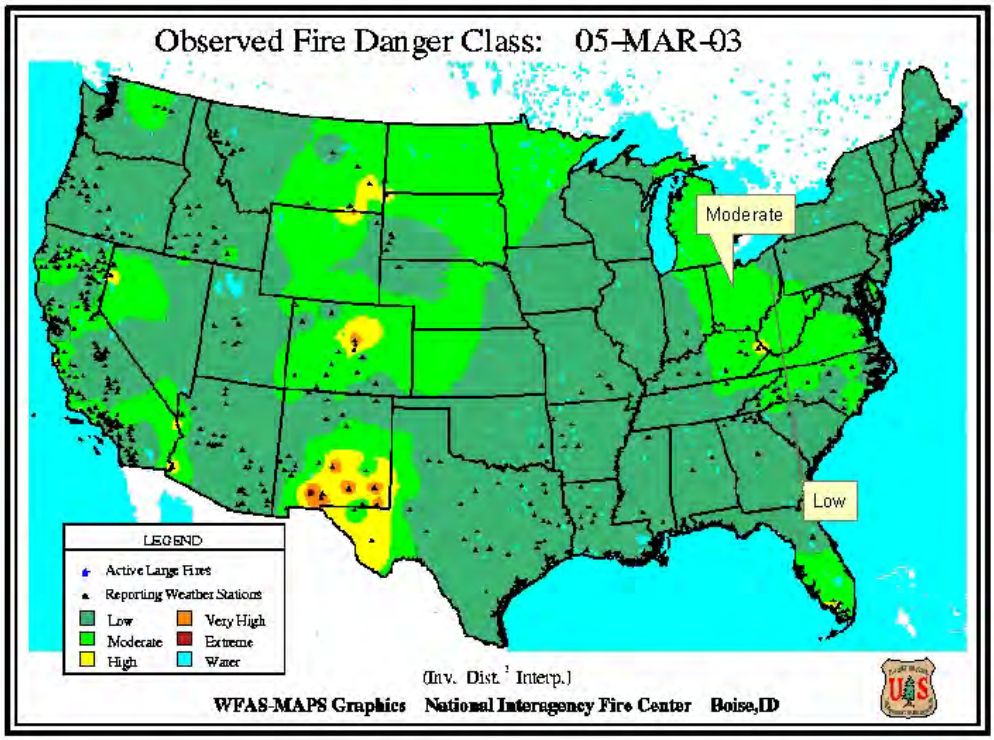
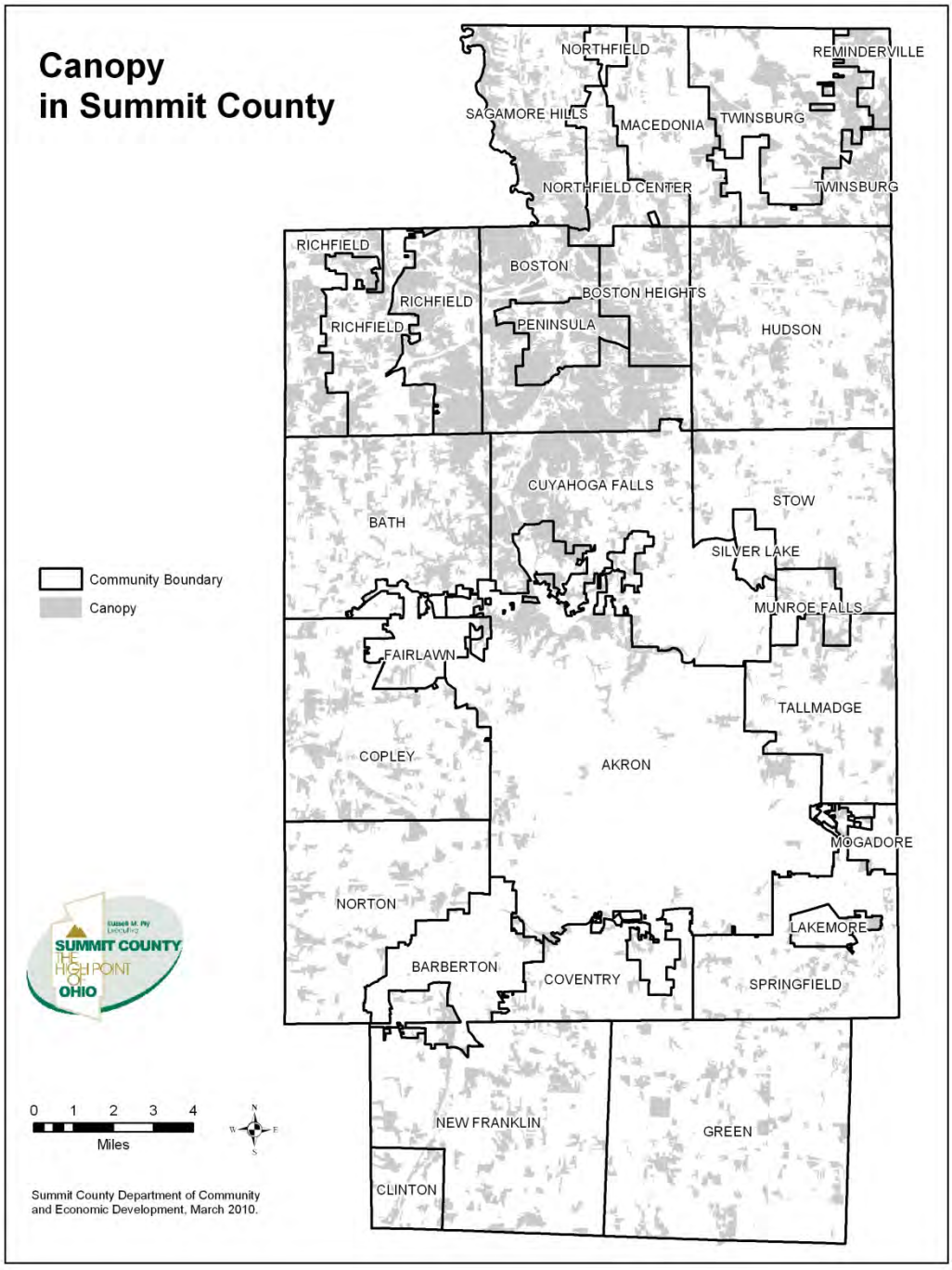
1:190,080
1 inch equals 3 miles
0
3
6
Miles
Map produced by Summit County Department of Community and Economic Development, Febraury, 2003.


Observed Fire Danger Class: 05-MAR-03
Moderate
Low
LEGEND
Active Large Fires
Reporting Weather Stations
Low
Moderate
High
Very High
Extreme
Water
(Inv. Dist.³ Interp.)
WFAS-MAPS Graphics National Interagency Fire Center Boise,ID


Canopy
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Canopy
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
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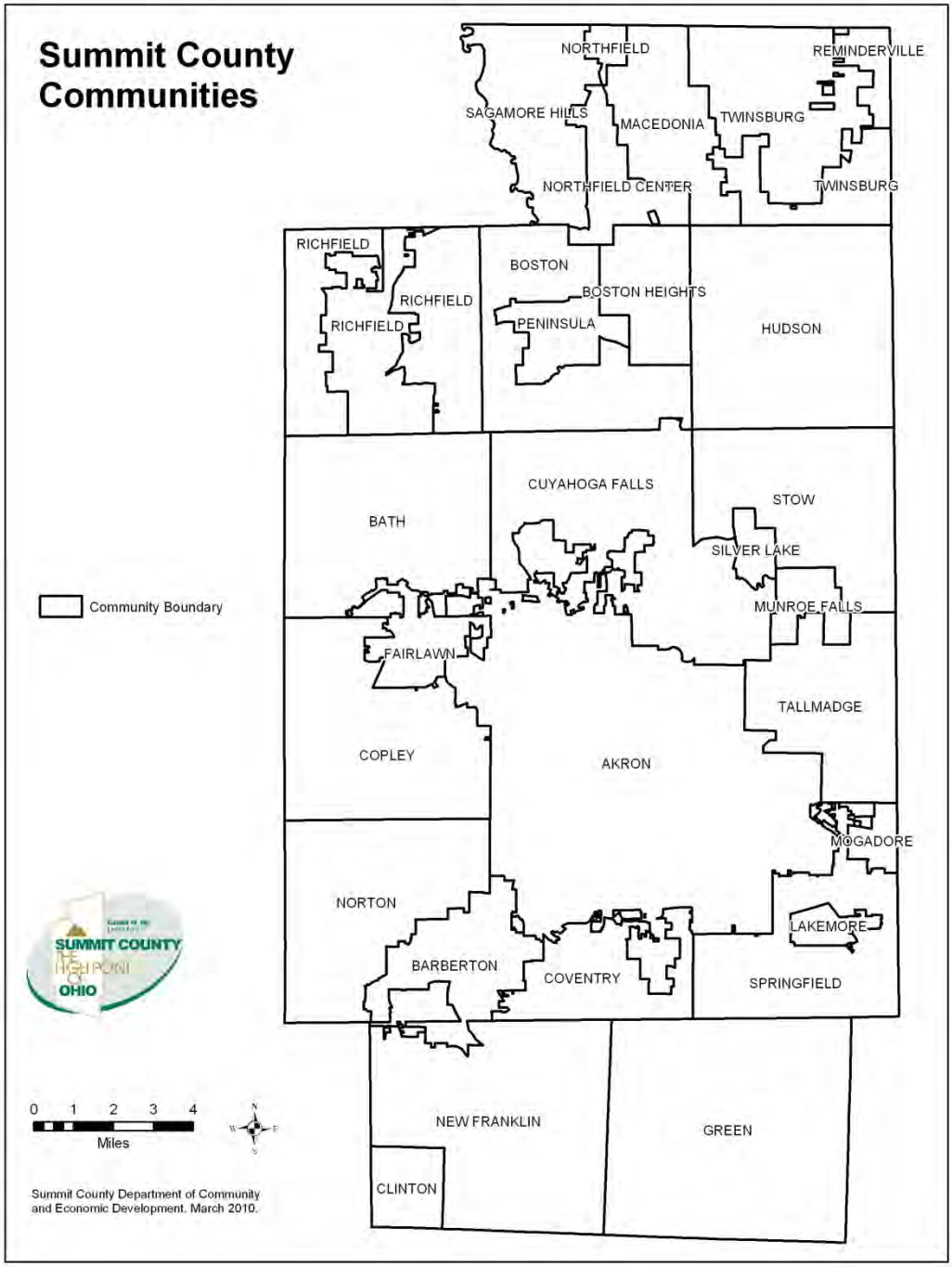
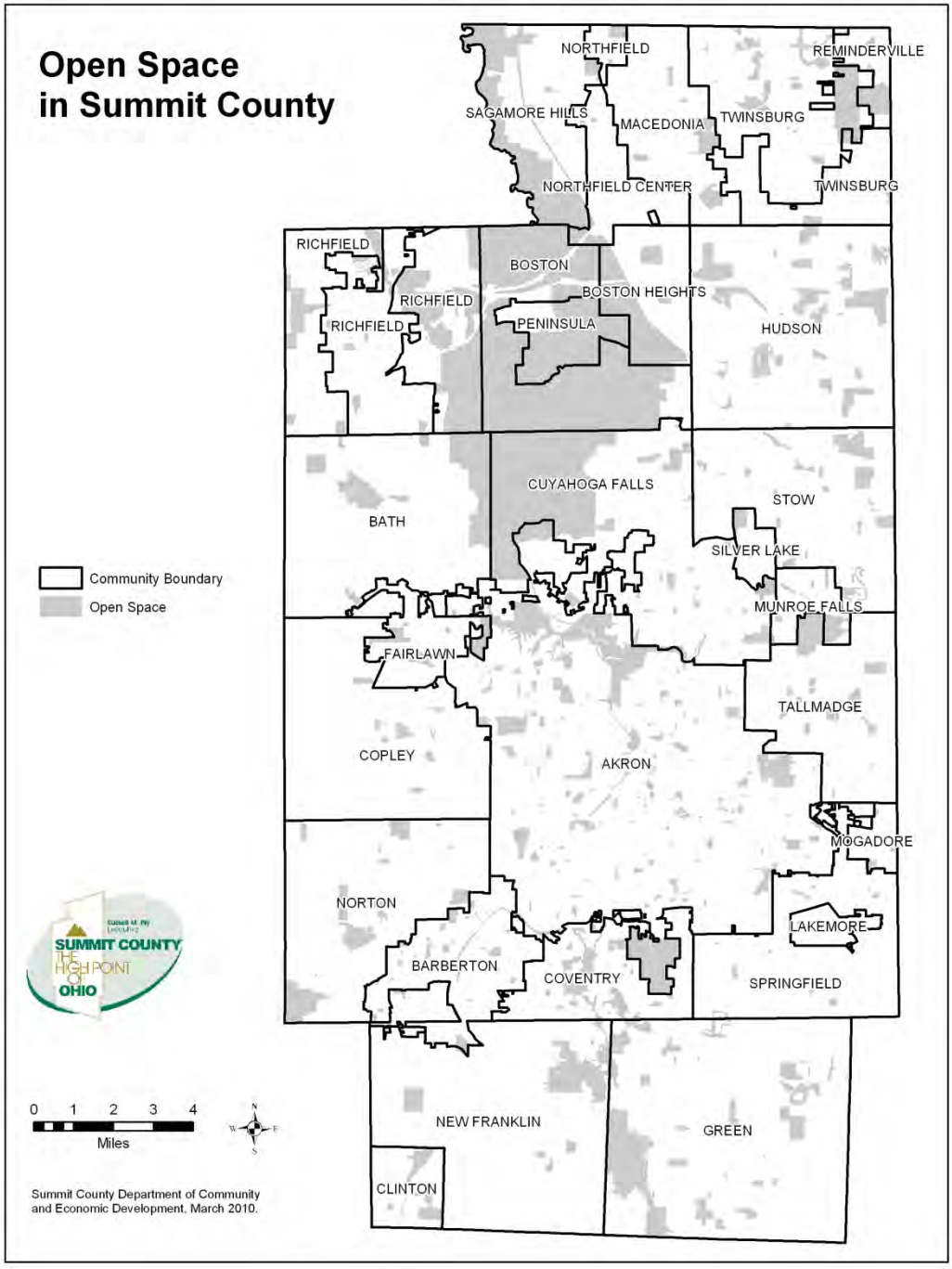
Summit County Department of Community and Economic Development, March 2010.


Summit County Communities
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
Community Boundary
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development. March 2010.


Open Space
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Open Space
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
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Summit County Department of Community
and Economic Development, March 2010.

Tab 53 to the Summit County Hazard Reduction and Prevention Plan

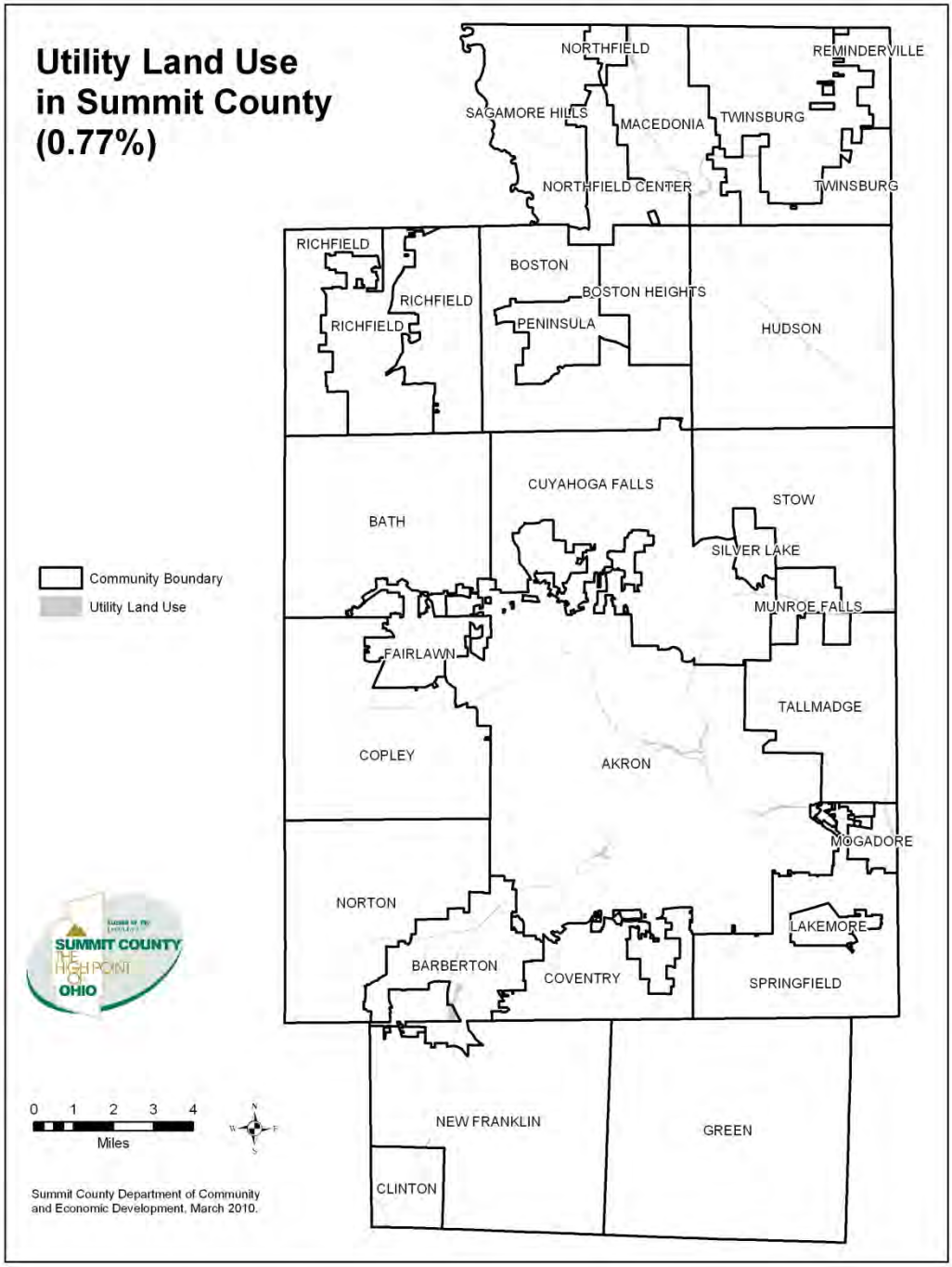
Summit County Land Use Changes From 2008 - 2013

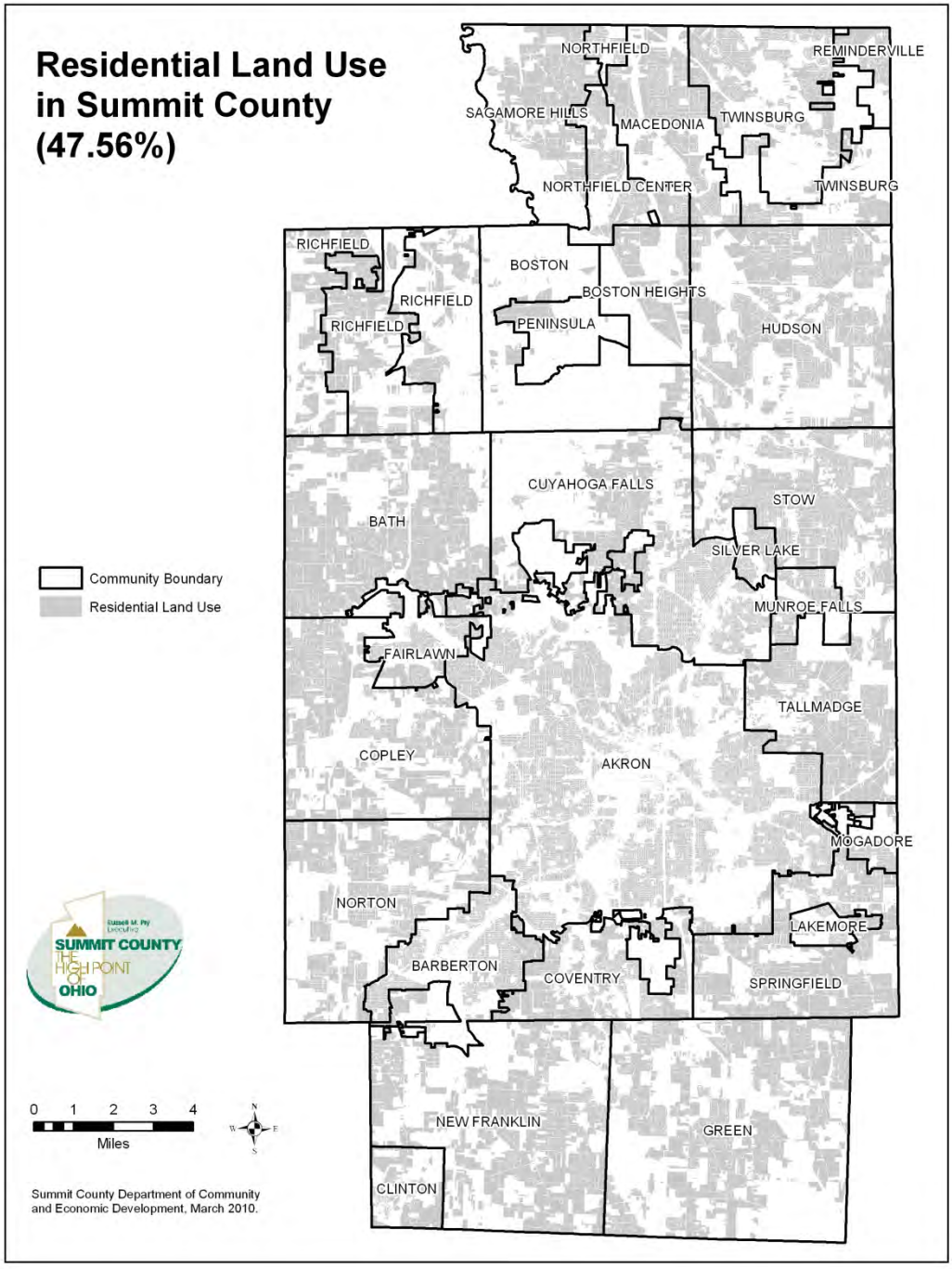
% of Land in Summit County

Land Use	2008	2013	Change in %
Agricultural	12.7	12.81	
	0.11		
Commercial	11	11.15	0.15
Tax Exempt	23	23.93	0.93
Coal Oil Gas			
Industrial	3.1	3.43	0.33
Public Utility and RailRoad	1.1	1.64	0.54
Residential	49.1	47.04	-2.06

#of Parcels in Summit County

Land Use	2008	2013	Change in %
Agricultural	1956	2165	209
Commercial	16884	17571	687
Tax Exempt	9328	10822	1494
Coal Oil Gas	1196	1651	455
Industrial	1756	1933	177
Public Utility and RailRoad	968	1072	104
Residential	228341	229487	1146


Utility Land Use
in Summit County
(0.77%)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Utility Land Use
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Residential Land Use
in Summit County
(47.56%)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Residential Land Use
SUMMIT COUNTY
THE HIGH POINT OF OHIO
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Miles
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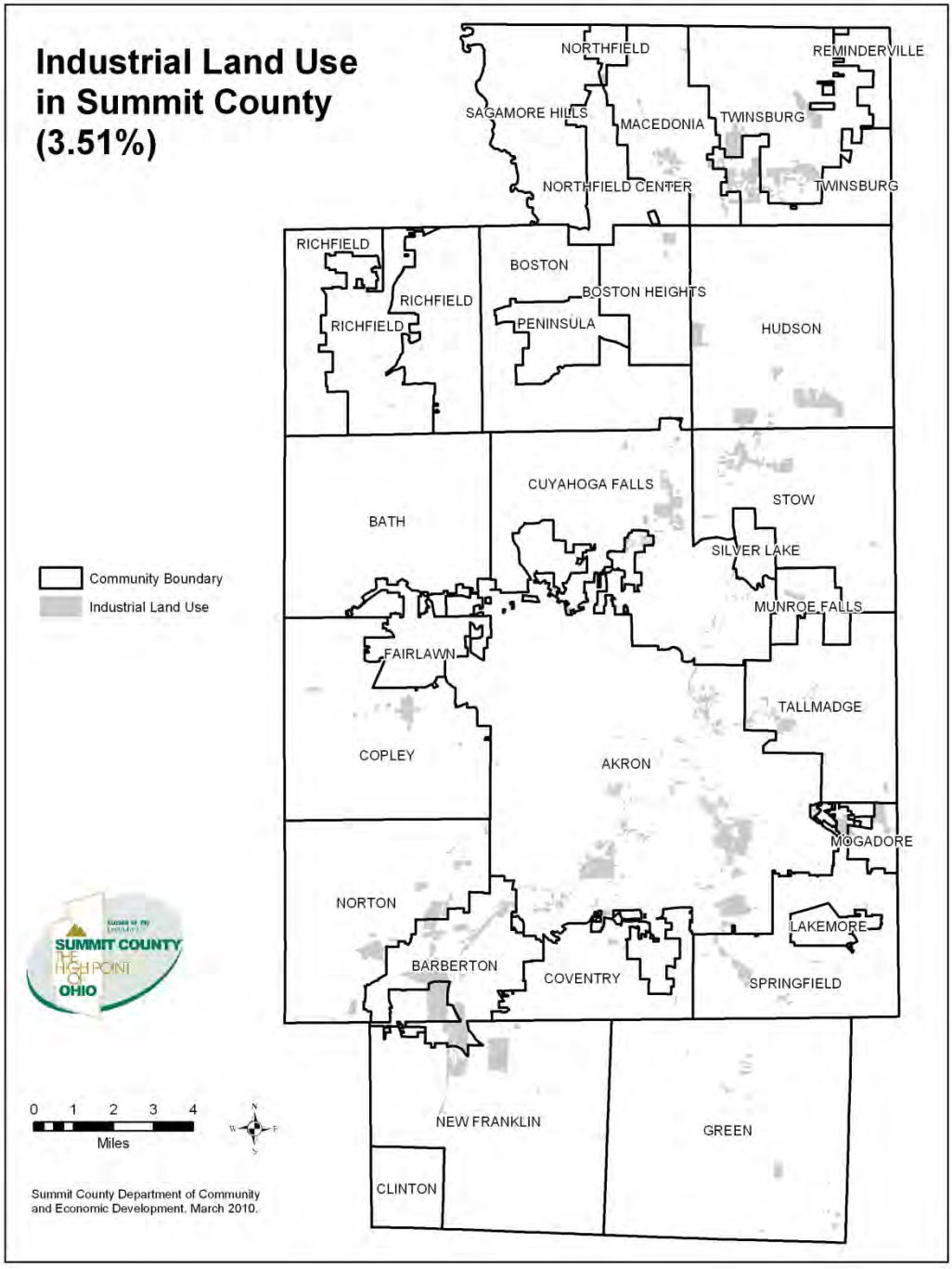
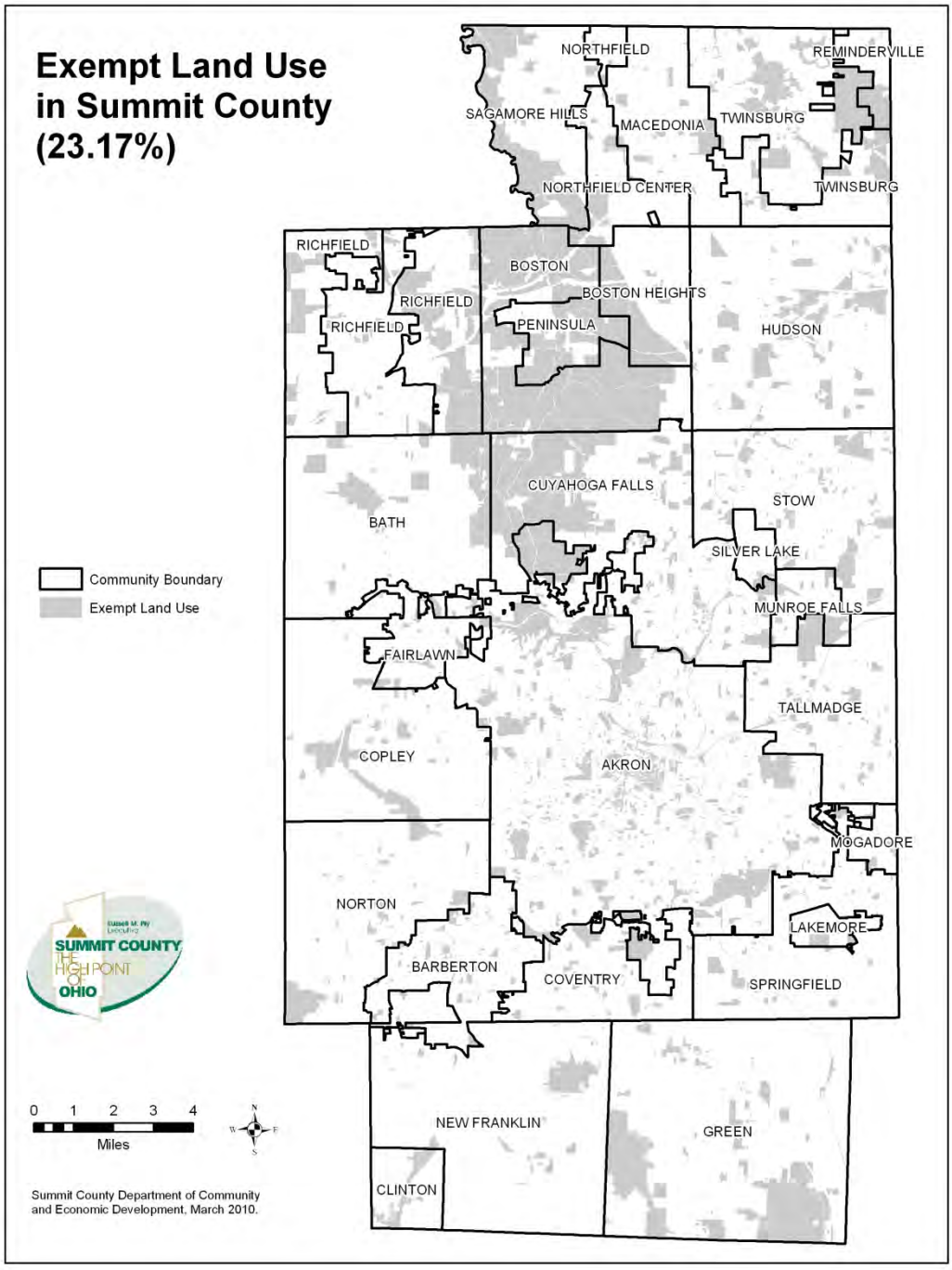
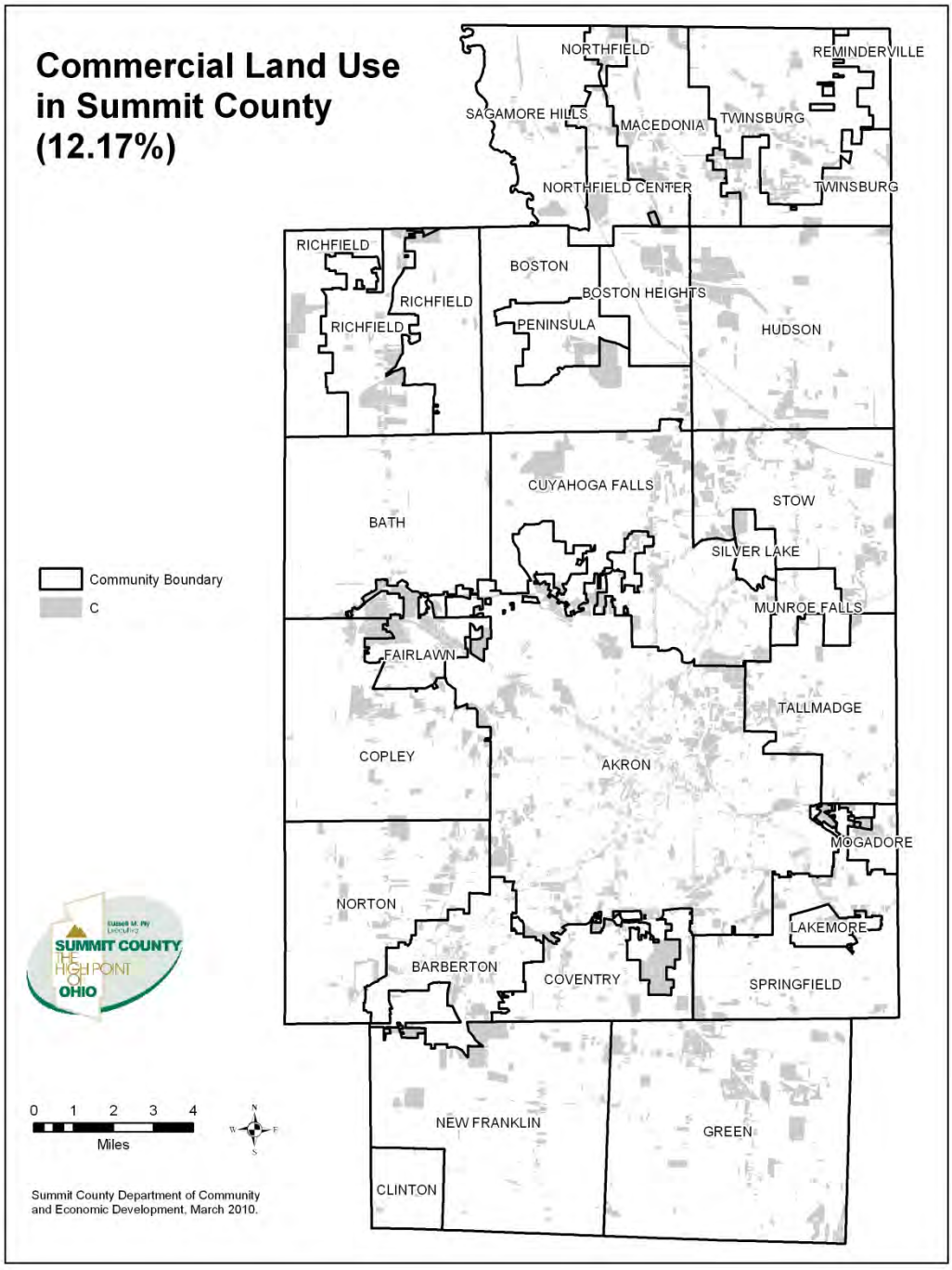
Summit County Department of Community
and Economic Development, March 2010.


Industrial Land Use
in Summit County
(3.51%)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Industrial Land Use
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community
and Economic Development, March 2010.


Exempt Land Use
in Summit County
(23.17%)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Exempt Land Use
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community
and Economic Development, March 2010.


Commercial Land Use in Summit County (12.17%)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
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SUMMIT COUNTY
THE HIGH POINT OF OHIO
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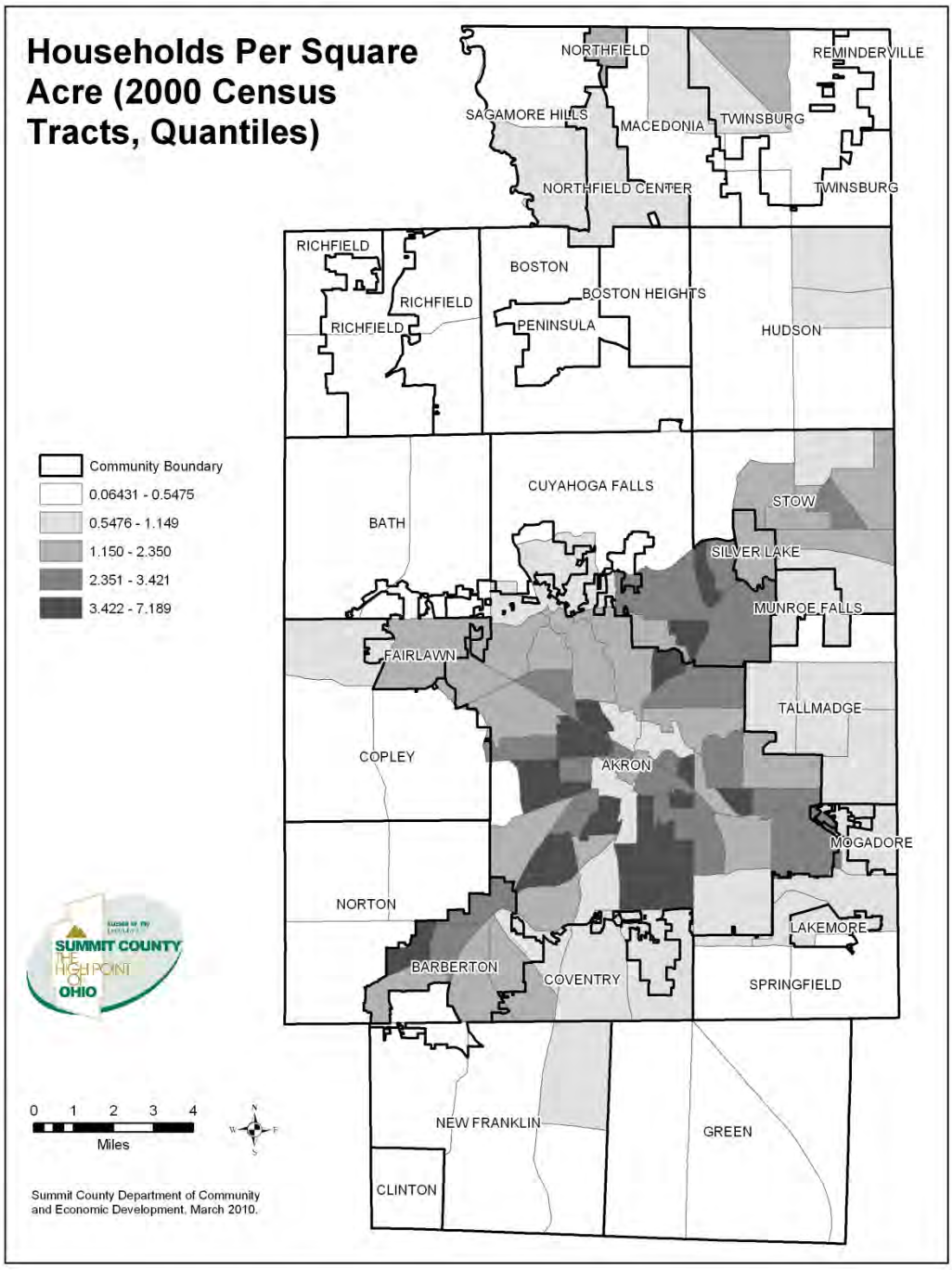
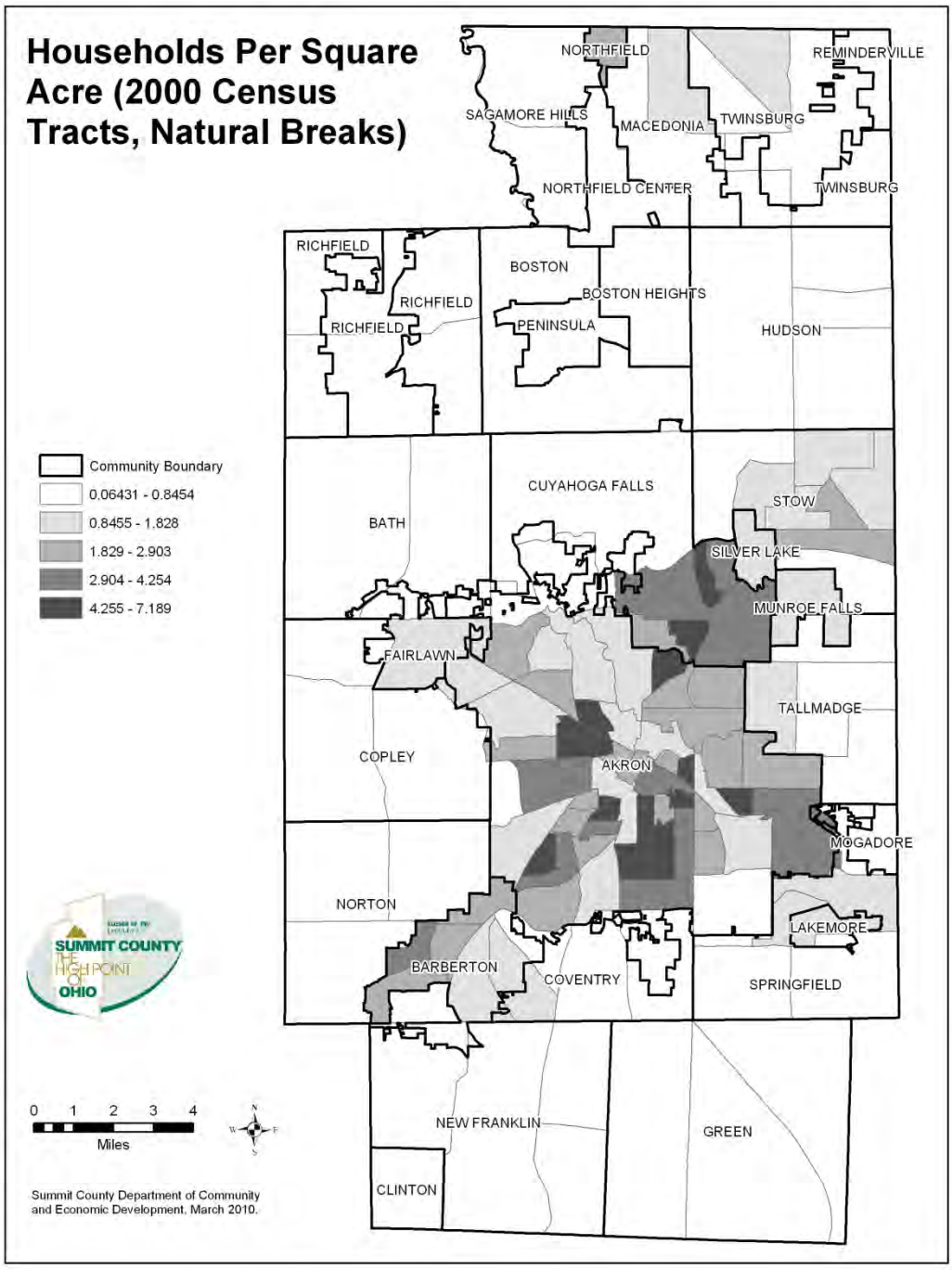
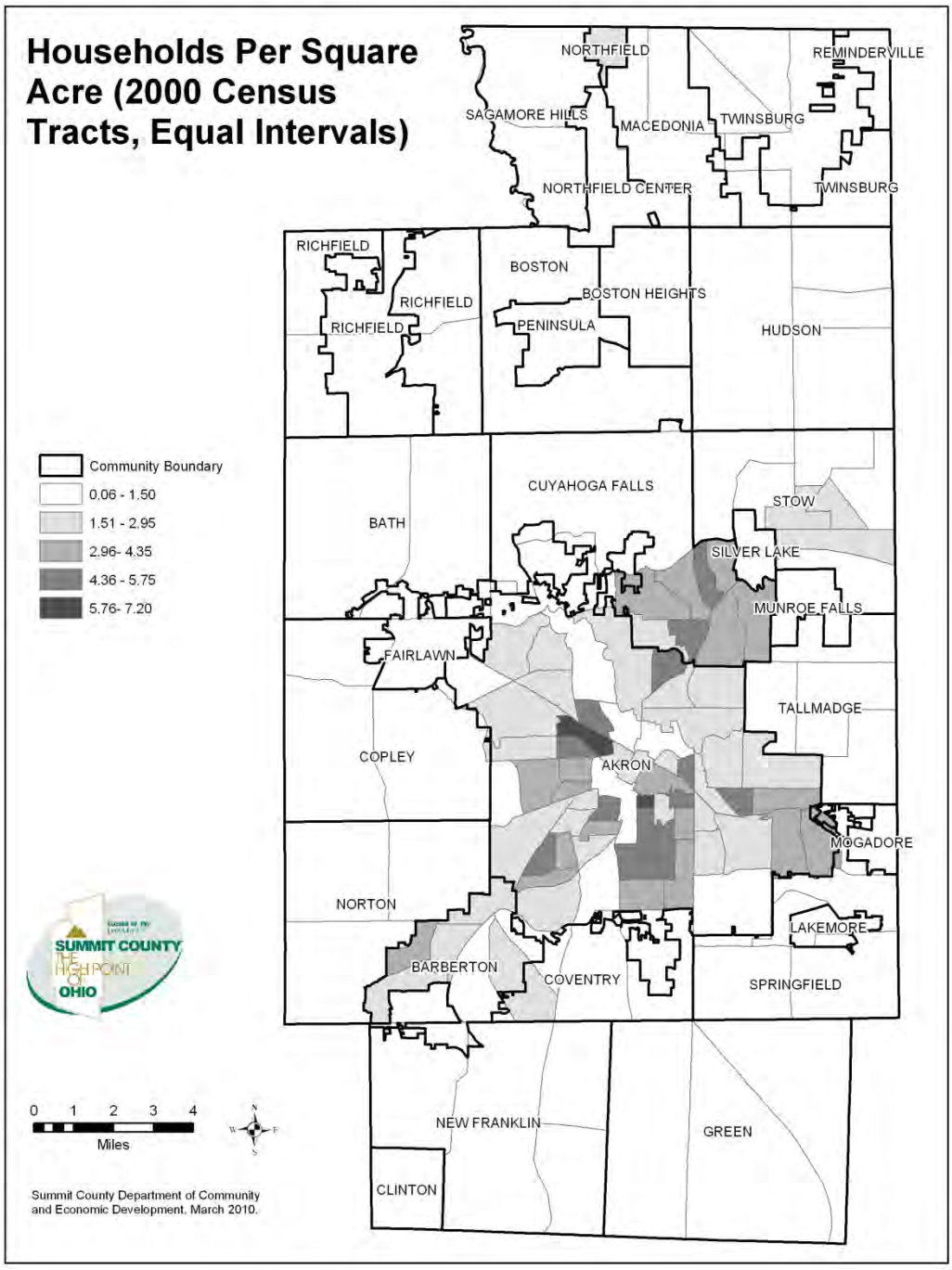
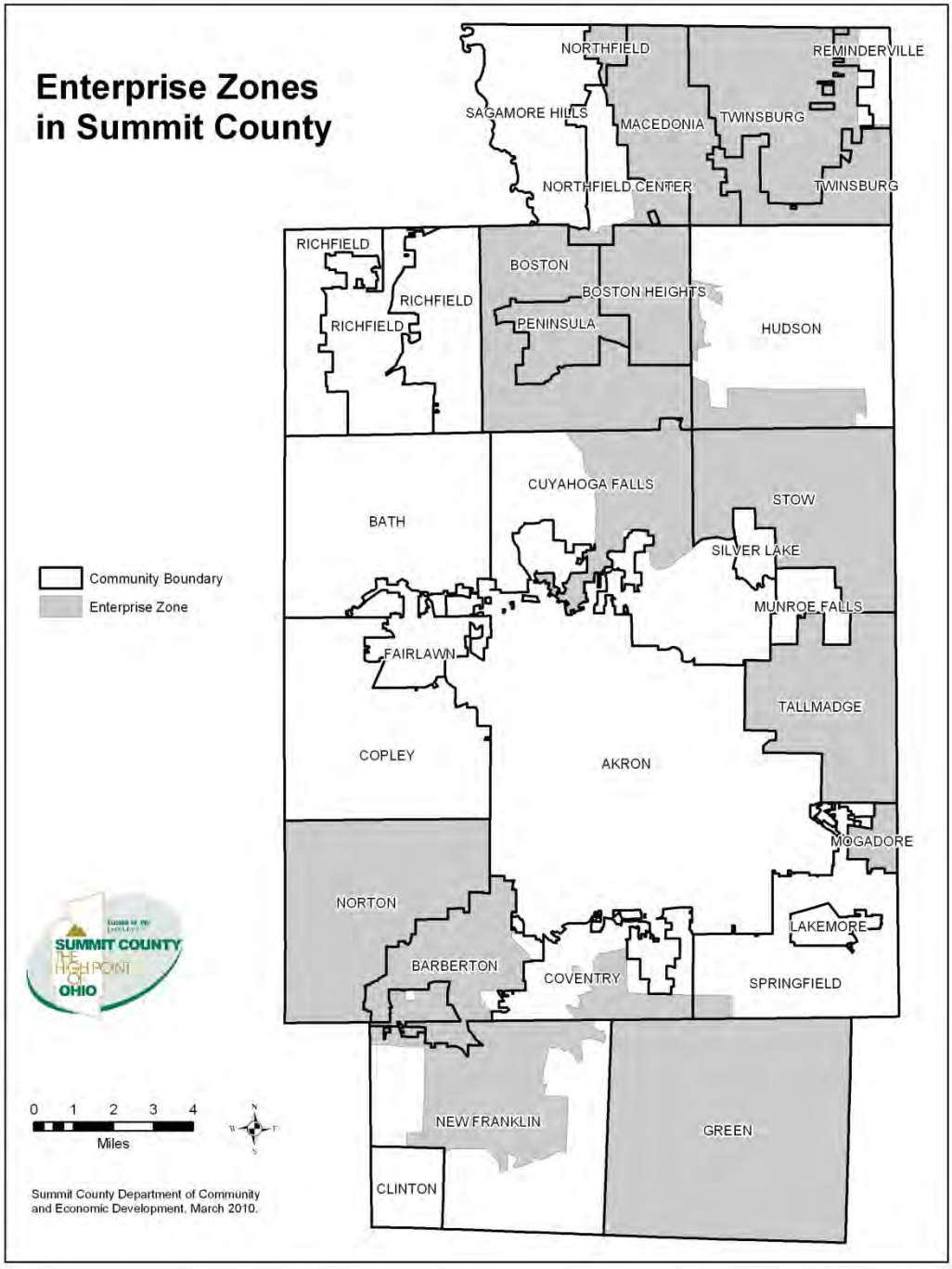
Summit County Department of Community and Economic Development, March 2010.


Households Per Square Acre (2000 Census Tracts, Quantiles)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
Community Boundary
0.06431 - 0.5475
0.5476 - 1.149
1.150 - 2.350
2.351 - 3.421
3.422 - 7.189
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Households Per Square Acre (2000 Census Tracts, Natural Breaks)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
Community Boundary
0.06431 - 0.8454
0.8455 - 1.828
1.829 - 2.903
2.904 - 4.254
4.255 - 7.189
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
NEW FRANKLIN
GREEN
CLINTON
Summit County Department of Community and Economic Development, March 2010.


Households Per Square Acre (2000 Census Tracts, Equal Intervals)
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
Community Boundary
0.06 - 1.50
1.51 - 2.95
2.96- 4.35
4.36 - 5.75
5.76- 7.20
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Enterprise Zones
in Summit County
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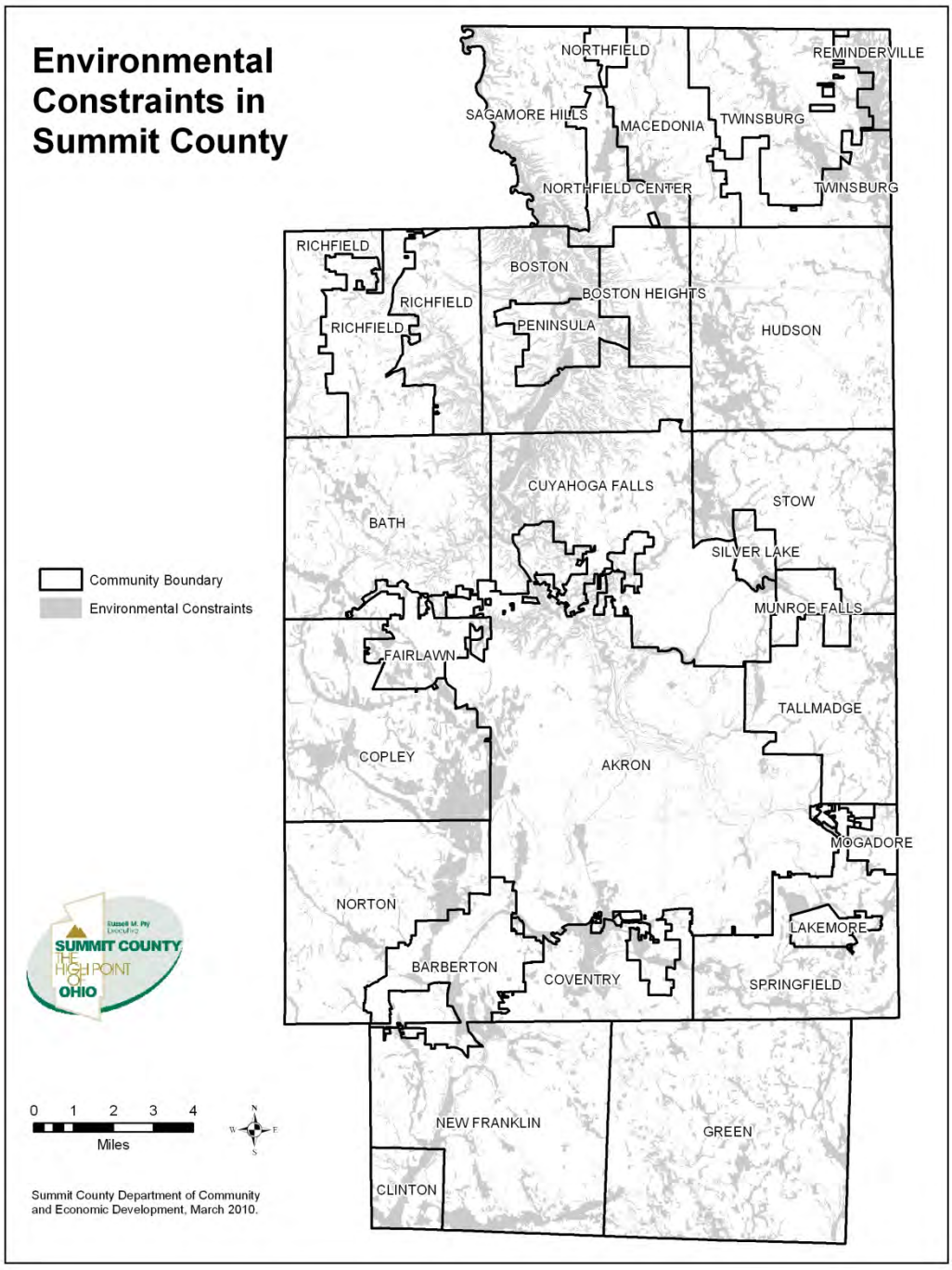
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Enterprise Zone
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Environmental Constraints in Summit County
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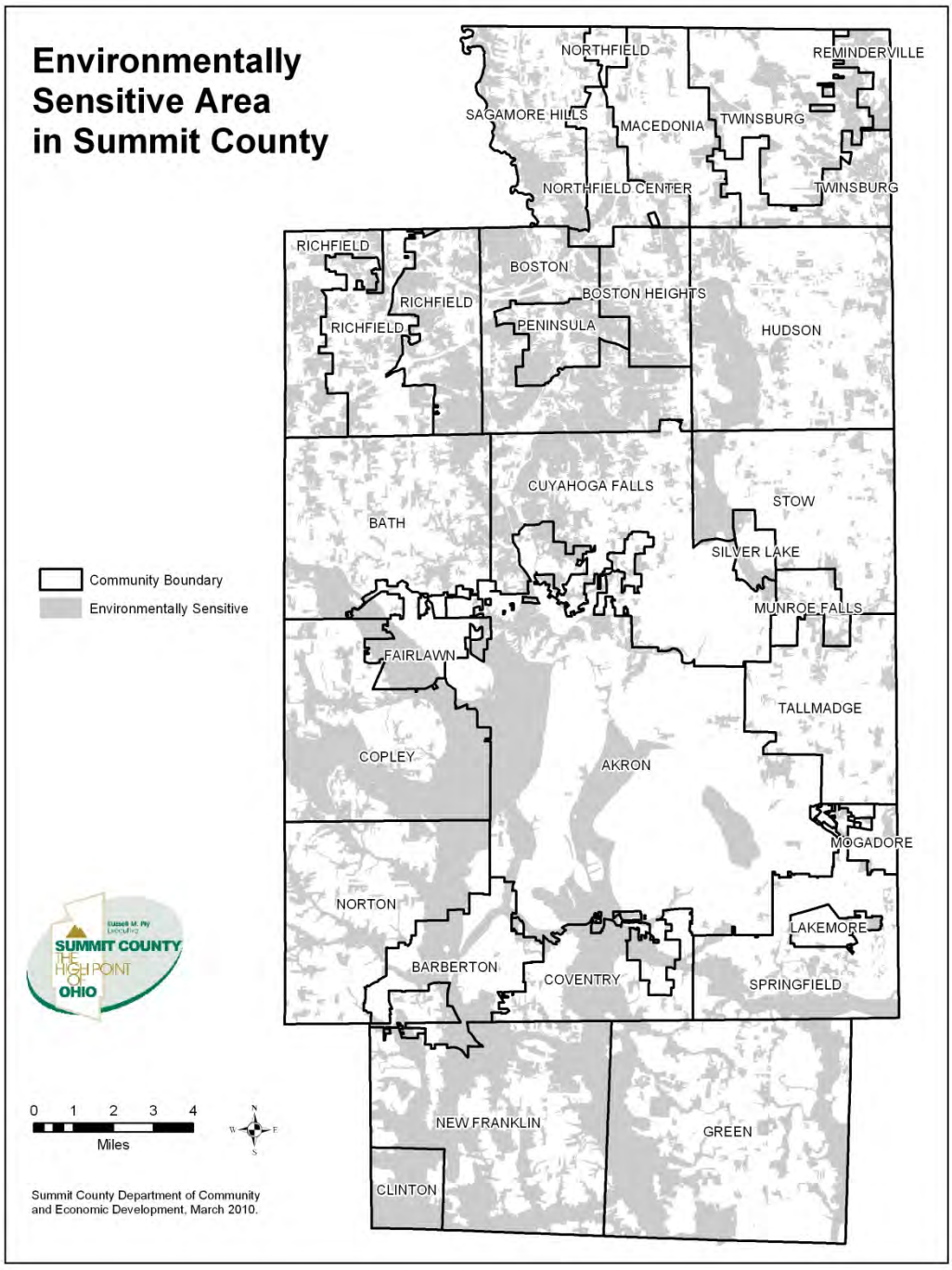
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Environmental Constraints
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Environmentally Sensitive Area in Summit County
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MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Environmentally Sensitive
SUMMIT COUNTY
THE HIGH POINT OF OHIO
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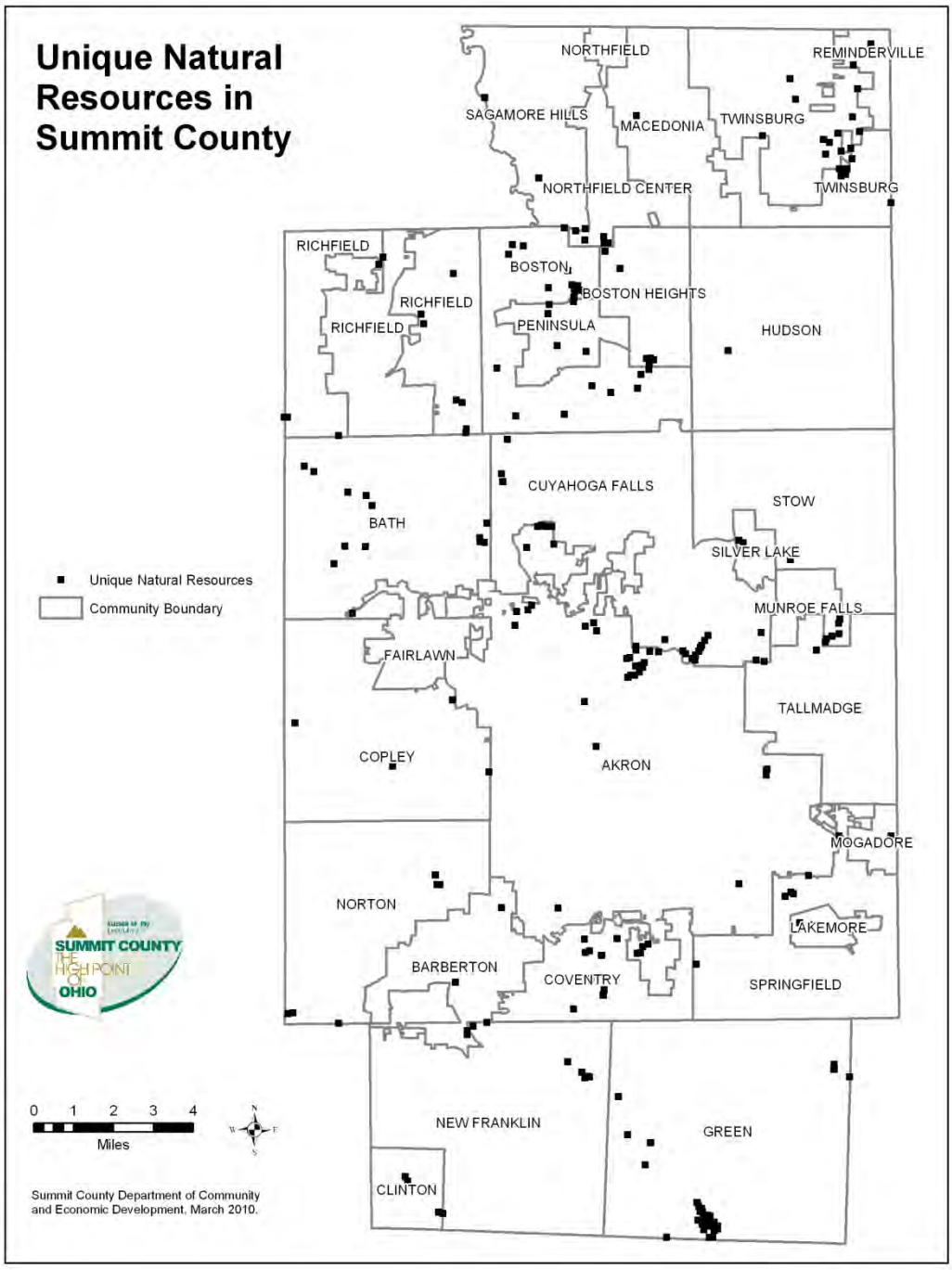
Summit County Department of Community and Economic Development, March 2010.


Unique Natural Resources in Summit County
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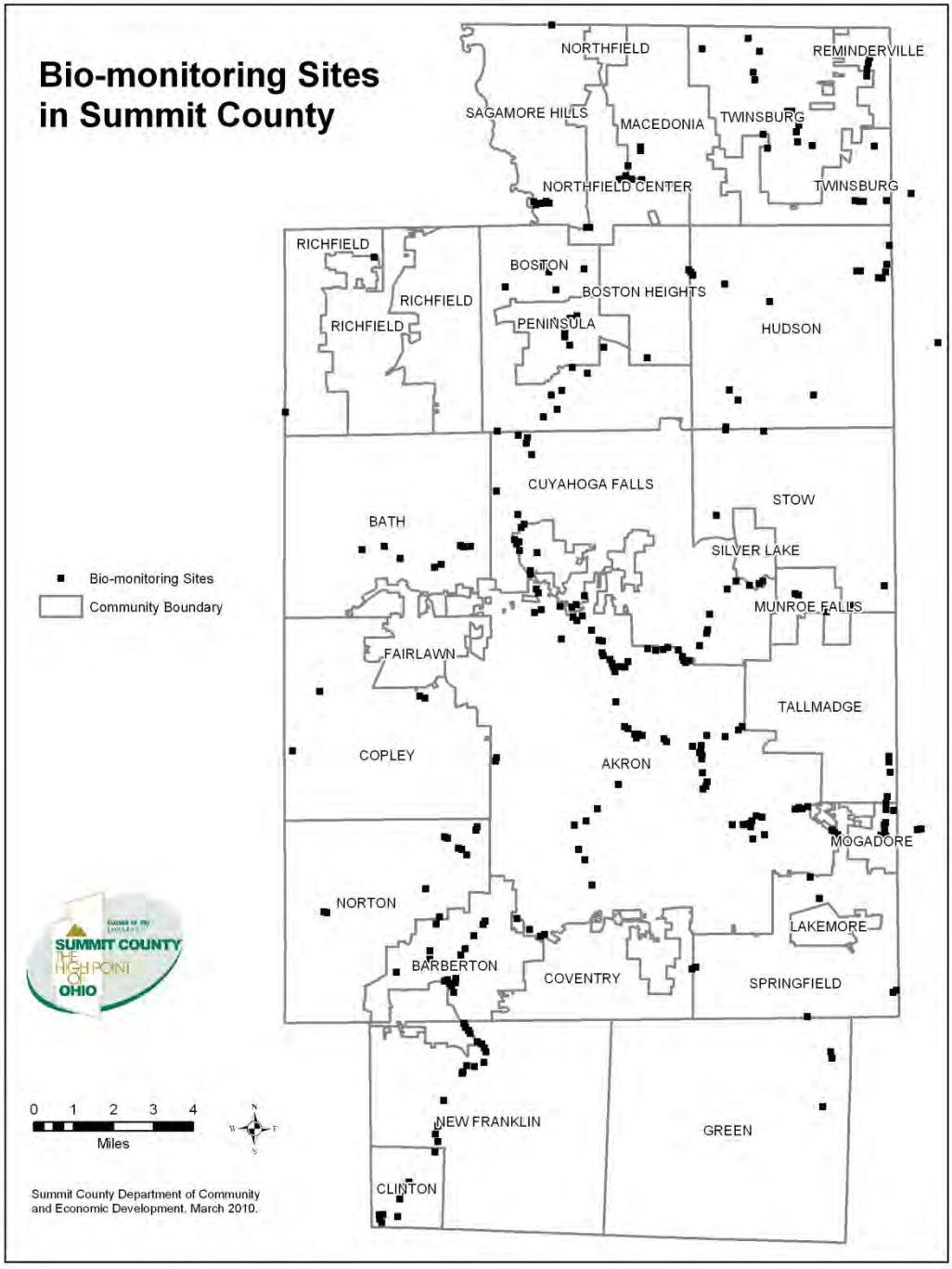
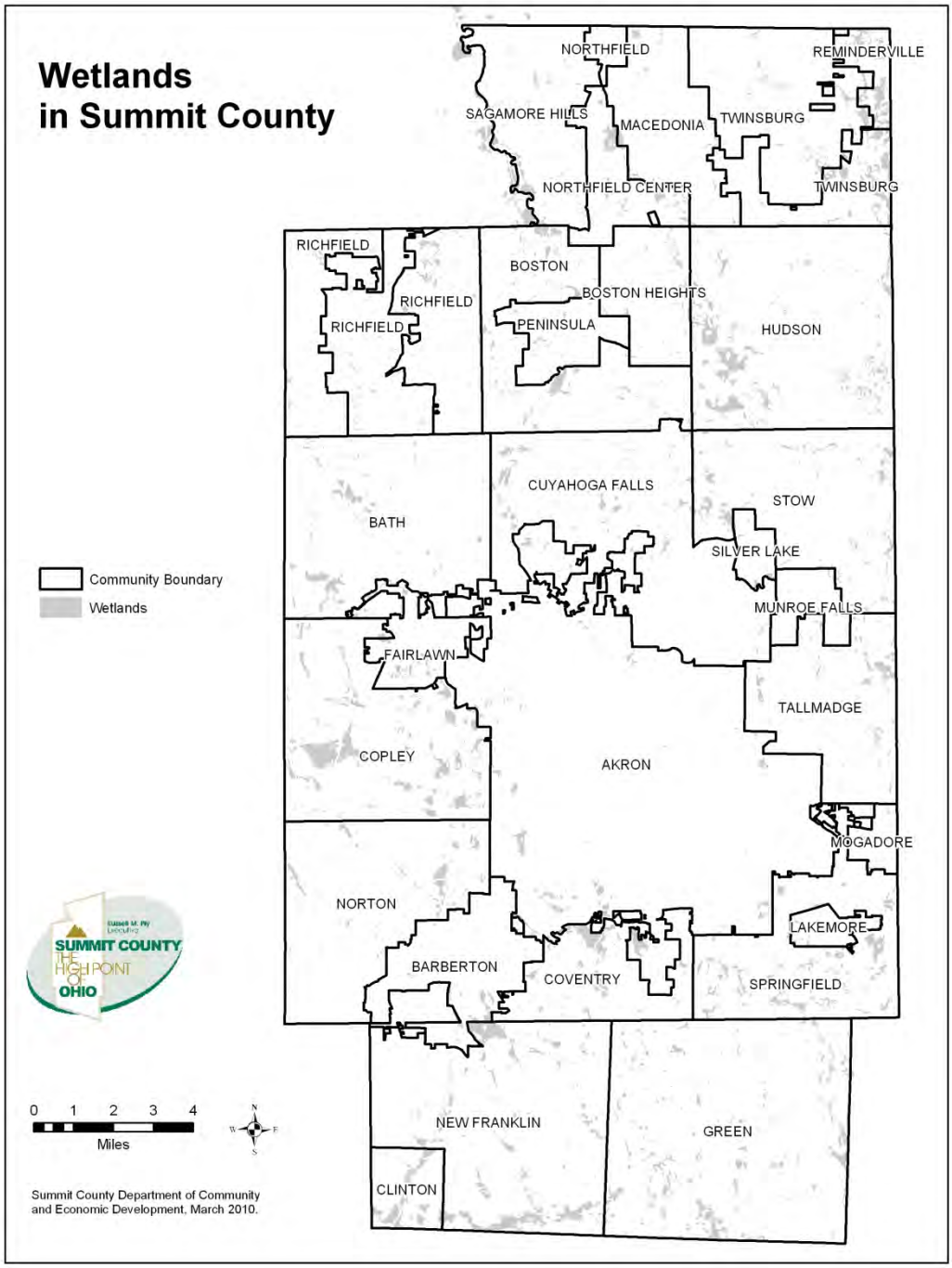
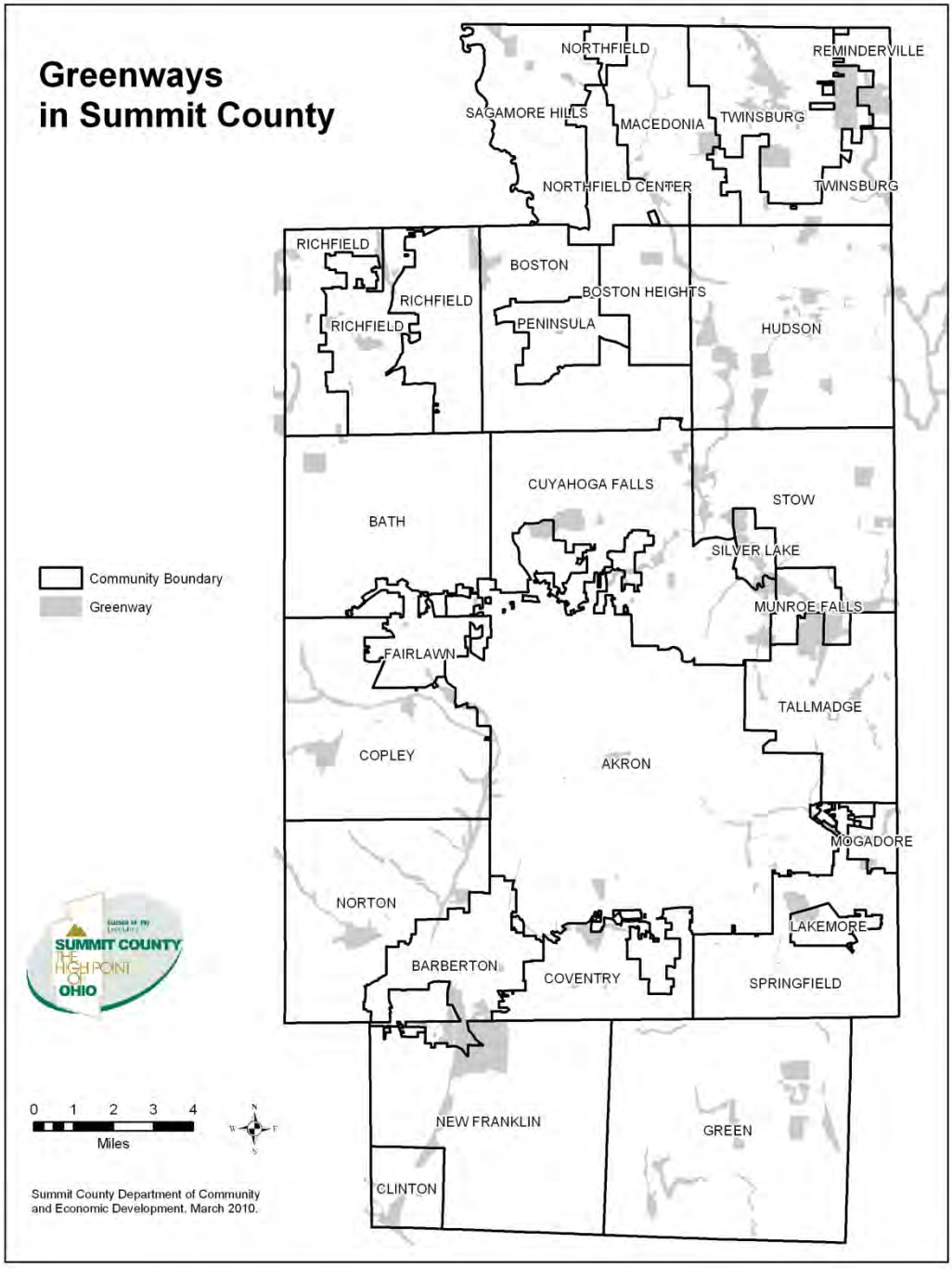
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Unique Natural Resources
Community Boundary
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Bio-monitoring Sites in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
BOSTON HEIGHTS
RICHFIELD
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Bio-monitoring Sites
Community Boundary
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Wetlands
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Wetlands
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.


Greenways
in Summit County
NORTHFIELD
REMINDERVILLE
SAGAMORE HILLS
MACEDONIA
TWINSBURG
NORTHFIELD CENTER
TWINSBURG
RICHFIELD
BOSTON
RICHFIELD
BOSTON HEIGHTS
RICHFIELD
PENINSULA
HUDSON
CUYAHOGA FALLS
STOW
BATH
SILVER LAKE
MUNROE FALLS
FAIRLAWN
TALLMADGE
COPLEY
AKRON
MOGADORE
NORTON
LAKEMORE
BARBERTON
COVENTRY
SPRINGFIELD
NEW FRANKLIN
GREEN
CLINTON
Community Boundary
Greenway
SUMMIT COUNTY
THE HIGH POINT OF OHIO
0 1 2 3 4
Miles
Summit County Department of Community and Economic Development, March 2010.

Summit County General Plan
Community Zoning Code
Summary Table
11-26-03

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	No	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										
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%	No	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 Twp	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

☐ Require contiguity and connectedness of open space in new developments & Subdivisions

☐ Require greenway linkages as part of site plan review & approval

☐ Utilize flexible zoning, clustering provisions and other mechanisms such as TDR to protect open space and natural areas

Tab 70 to the Summit County Hazard Reduction and Prevention Plan

Community	**Type**	Website	CodesOnline
Akron	City	#http://ci.akron.oh.us/#	TRUE
Barberton	City	http://www.cityofbarberton.com/	FALSE
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		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		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		FALSE
Northfield Village	Village		FALSE
Peninsula	Village		FALSE
Reminderville	Village	www.reminderville.com#http://www.reminderville.com#	FALSE
Richfield	Village	www.richfieldvillageohio.org#http://www.richfieldvillageohio.org#	TRUE
Silver Lake	Village		TRUE
New Franklin	Village	www.franklintownship-oh.gov/new_franklin.htm#http://www.franklintownship-oh.gov/new_franklin.htm#	FALSE

Tab 71 to the Summit County Hazard Reduction and Prevention Plan

Political Subdivision	Codes Location	Comp Plan	Comp Plan Map	Comp Plan Date	Zoning Code
Akron	http://www.clelaw.lib.oh.us/public/misc/Co_Ord.doc	Received	FALSE	1987	ONLINE
Barberton		Received	TRUE	1994	Received
Cuyahoga Falls	http://www.conwaygreene.com/Municipal-Codes.htm	Received	TRUE	1989	ONLINE
Fairlawn	http://www.amlegal.com/online_library.htm#Ohio	Received	FALSE	2002	ONLINE
Green	http://www.clelaw.lib.oh.us/public/misc/Co_Ord.doc	Received	TRUE	1996	ONLINE
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 Heirghts	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

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 50 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, July 2013. 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 12-13 1964	**Roads, airports, schools, and factories were closed after heavy snowfalls. 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**	**Occurred County wide to varying extents #**

	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.	
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 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.**	**County Wide to Varying Degrees # and ~**
January 26, 1978	**The Blizzard of 78 was the worst winter storm in Ohio History. Transportation, business, industry, and schools were closed statewide for two days with many being closed 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**	**County Wide to Varying Degrees # and ~**

	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 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.**	**County Wide to Varying Degrees #**

	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.	
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 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.**	**County Wide to Varying Degrees %**
January 14-17, 1999	**Heavy snow accumulated sixteen 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**	**County Wide to Varying Degrees %**

	damaged or destroyed.	
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 $300K in property damages.**	**Twinsburg** *****

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 ~**
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 ***

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. ***
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 ***
January 9, 1990	**Conrail train derailment causing a hazardous material spill of Diesel fuel. Cost for response and cleanup was 16, 680.24.**	**Hudson ***
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 barrel 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 Hampsher Rd. Franklin Township ***
Mid 1990's	**Gasoline tanker caught on fire on route 77. There was runoff**	**Bath ~**

	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.**	**Monroe Falls ~**

Hazardous Material Incidents

Date	Damage and Cost of Incident	Location of Incident
1970's	Gas leak from Shell Gas Station on Miller and Market. Chamberlen 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 ~**

Date	**Damage and Cost of Incident**	**Location of Incident**
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.***
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.***
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, Ohio ***
July 5, 2013	**Facility chemical leak No estimated cost yet.**	**Springfield ***
July 15, 2013	**Oil spill near waste management facility. Causing river contamination on the Tuscarawas River. No estimated cost yet.**	**Norton ***

Tornado and Severe Storm Incidents

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 ~
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 ~
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 %
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 damage from this incident reached $25,000.	Summit County 41° 12' N / 81° 26' W %

Late 1970's	**Large wind gusts affected the Stow Rd and Old Mill area of Twinsburg. There were residential property damage and downed trees.**	**Twinsburg ~**
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.**	
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	**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. It was the second Presidential Disaster Declaration ever to involve Summit County. Hundreds of people lost their jobs and damage from the storm reached $2,500,000.**	**Stow, Cuyahoga Falls, and Silver Lake ~ and #**

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 Franklin ~**
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 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 tornadic damage pattern. Property damage as a result of this incident reached $40,000.**	**Springfield Township %**
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 %**
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.**	**Copley Center %**

	Property damage from the incident reached $1.5 million.	
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 60 mph. 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 %**
August 21, 1996	**Lightning struck the town safety center and knocked out 911 service, half of the phones, the police department alarm panel, and computers. Property damage was established at $10,000.**	**Hudson %**
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**	**Cuyahoga Falls and Bath %**

	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.	
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 tornado was 25 yards. Property damage from this incident reached $2,000.**	**Copley % **
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 Portage Lakes, boats were ripped from their moorings and turned upside down. Property damage from this incident reached $500,000.**	**Southern Portion of Summit County % **
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**	**Countywide to Varying Degrees % **

	limbs were downed on at least two vehicles and through the roof of a house. Property damage from this incident reached $100,000.	
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 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.**	**Countywide to Varying Degrees % **
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**	**Northern Summit County ~ and %**

	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.	
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 reached $75,000 Countywide.**	**Countywide to Varying Degrees %**
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.**	**Akron and Coventry ~**

	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.	
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 measured in downtown Akron. Buildings under construction near Richfield were destroyed.**	**All of Summit County to Varying Degrees %**
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	**A small F0/F1 tornado touched down in Macedonia near the intersection of Valley View Drive (SR 631) and Aurora**	**Twinsburg and Macedonia**

	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 and a total of 45 homes damaged. Damage estimates in Twinsburg alone were well over $5 million. 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.	
August 1, 2003 **(Date Declared)**	**Disaster number: DR-1484. Tornadoes, flooding, severe storms, high winds. Public assistance: $2,386,187.56**	**All of Summit County ***
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 $3.0K in property damage.**	**Boston Heights**
June 8, 2007	**A severe thunderstorm moved across Summit County and 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.**	**All of Summit County to Varying Degrees %**

	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 $105M 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: $2K Hudson, $5K Macedonia, $25K Richfield.**	**Hudson, Macedonia, Richfield ***
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, Lakemore ***
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 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**	**Portage Lakes, Richfield, Barberton ***

	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 $250K in property damages.**	**Barberton** *****
Date	**Damage and Cost of**	**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 $6K in property damages.**	**Barberton** *****
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: $300K**	**Cuyahoga Falls** *****

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 $8K (Lakemore), $2K (Stow), $2K (Greensburg), $6K (East Liberty) in property damages.	Lakemore, Stow, Greensburg, East Liberty *

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 $5K 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 $5K (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. 1.75in of hail caused an estimated $1.5M 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 $100K 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. 1.25in of Half dollar size hail was observed. Estimated $50K 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 airmass 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 $15K 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 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. Thunderstorm winds downed a large tree.**	**All of Summit County to Varying Degrees %**

	The tree struck a home and caused enough damage for the house to be uninhabitable. Estimated $75K (Cuyahoga Falls) and $1K (Akron).	
Date	**Damage and Cost of Incident**	**Location of Incident**
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), $2K (Silver Lake), $2K (Stow), $2K (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 $10K in property damage.	Clinton *

Date	Damage and Cost of Incident	Location of Incident
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 $300K in property damages.	Twinsburg *

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 *
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. $168K 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 $500K 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 $1.5M in property damage and $75K 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 $7K.	Akron *
July 4, 2012	2.5in 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 $5M in property damage.	Tallmadge *
July 4, 2012	1.75in of hail. Hail as large as golf balls was reported. Many vehicles and a few homes were damaged by the hail. Estimated $750K in property damage.	Akron *
July 4, 2012	1.75in 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 $1.5M in property damage.	Mogadore *
September 7, 2012	Thunderstorm (up to 50kts) winds downed at least ten large tree limbs and a flag pole. Estimated $6K 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 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 %

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 to meet the water supple needs of the County.**	**All of Summit 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 drought began due to the lack of snow in the US, which caused very**	**All of Summit County ~**

	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 and Dam Failure Incidents

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 building on Bowery Street fell into the canal. Akron Savings and Loan had to be evacuated. Three deaths were	Downtown Akron and West Akron #

	attributed to the incident.	
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. Barber Rd. became flooded and could not support traffic.**	**Barberton #**
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**	**Barberton #**

	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.	
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 closed and at least four homes and the Town Hall had to be evacuated. Property damage from this incident reached $500,000.**	**Clinton %**
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 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**	**Akron**

	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.	**%**
June 27, 1995	**Heavy thunderstorm rains fell over areas that had received heavy rains the previous days and caused Countywide flooding of streets, basements, and low lying 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.**	**All of Summit County to varying degrees %**
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**	**All of Summit County to Varying Degrees %**

	in flood waters. Several basements were also flooded. Property damage from the incident reached $55,000.	
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 18 and I-77 in Fairlawn were flooded. Property damage from the incident was $30,000.**	**Countywide to Varying Degrees %**
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,**	**Southeast Portion of Summit County %**

	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.	
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 very 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**	**All of Summit County to Varying Degrees %**

	at Hudson High School record 3 inches of rain between 7:45 and 8:15 p.m. with a storm total of 7.5 inches. Five inches of rain was measured in Stow. Two men drown at approximately 8:50 p.m. in an underground parking garage at an condominium complex located along Atterbury Boulevard in 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 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. M?PH, M18PH, M53PH $15 million in the National Park. $500,000 July 22, 2003	
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 ***
July 27, 2003	**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**	**Southern Summit County ***

	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 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	**Nimisilla Dam tributaries need to be cleared to prevent damage to the dam.**	**Summit County ***
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 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**	**Countywide ***

	after the Cuyahoga River left its banks. Dozens of additional homes were damaged in Stow. Flood waters on some roads were over two feet in depth. Many cars became stranded in the flood waters. $2.4 Million Cuyahoga River flooding caused 2.9 Million in damage is 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 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**	**Countywide** *****

	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. $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 damage from either basement or lowland flooding. Cost to Cuyahoga, Holmes, Medina and Summit Counties combined were**	**Macedonia** *****

	$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 Apts, 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 $300K in property damages.**	**Twinsburg** *****
July 19, 2011	**Flash flood due to heavy rain. The maximum daily total precipitation that was reported by an official NWS cooperative**	**(CAK)CANTON ARPT, Bath Center** *****

	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 $500K in property damage.	
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 deployed on October 31 to support**	**All of Summit County to Varying Degrees %**

	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 ***

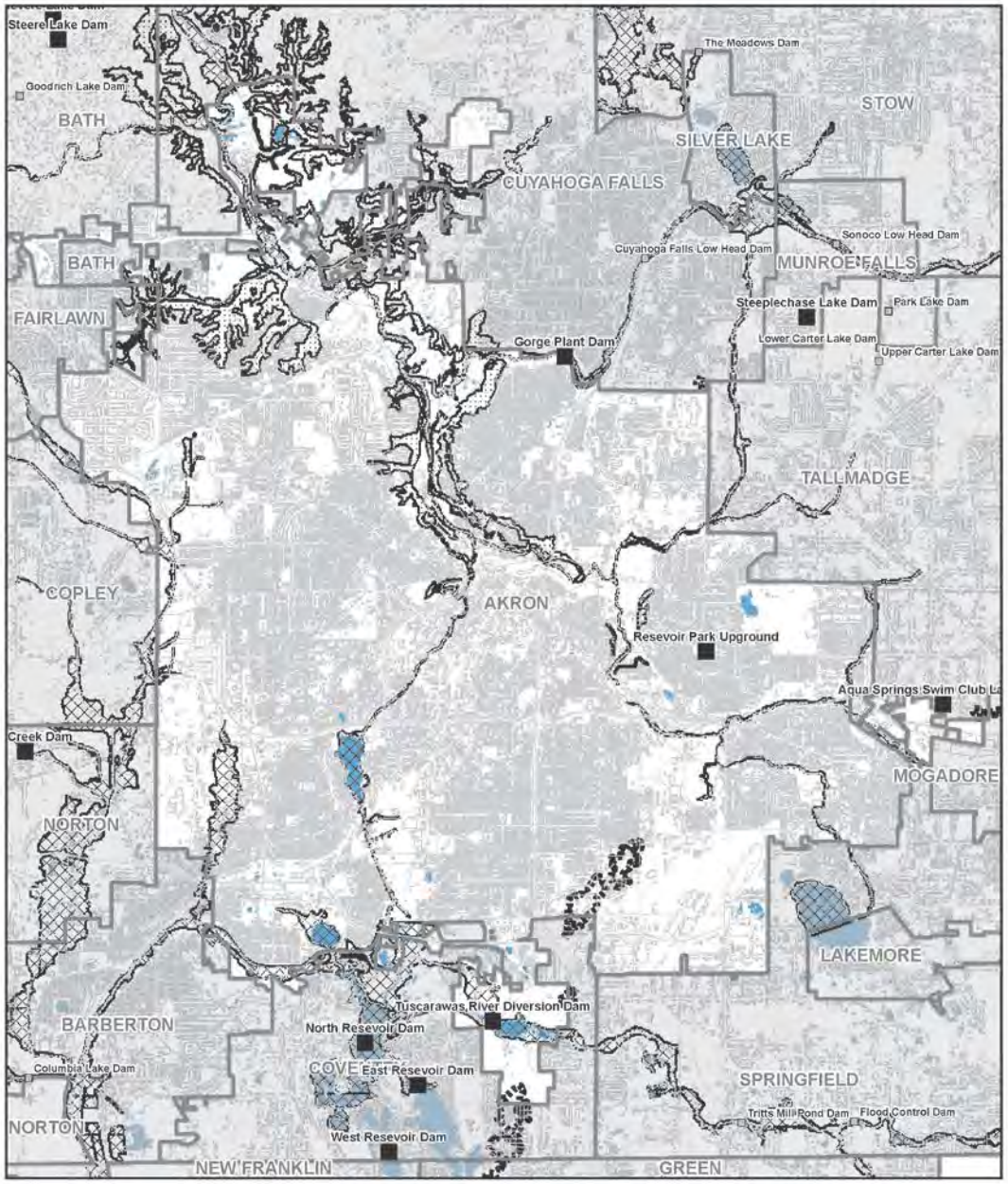
Terrorist Incidents

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 ~
Date	Damage and Cost of Incident	Location of
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 ~

Floodplain

NAME	TYPE	RESIDENTIAL	COMMERCIAL	GOVERNMENT
AKRON	CITY	$19,435,870	$5,802,800	$2,066,440
BARBERTON	CITY	$5,150,070	$7,980,640	$977,880
CUYAHOGA FALLS	CITY	$3,201,260	$28,280	$1,421,310
FAIRLAWN	CITY	$2,321,320	$0	$0
GREEN	CITY	$675,000	$0	$0
HUDSON	CITY	$9,006,290	$2,173,040	$47,920
MACEDONIA	CITY	$8,231,560	$3,233,820	$67,960
MUNROE FALLS	CITY	$4,572,560	$0	$0
NORTON	CITY	$3,785,120	$6,787,940	$1,329,160
STOW	CITY	$33,388,160	$2,384,090	$29,220
TALLMADGE	CITY	$1,070,400	$1,390,440	$9,970
TWINSBURG	CITY	$10,557,740	$6,088,920	$709,610
BOSTON HEIGHTS	VILLAGE	$1,005,300	$0	$0
CLINTON	VILLAGE	$343,090	$236,330	$50,450
FRANKLIN	VILLAGE	$2,446,020	$1,159,250	$5,230
LAKEMORE	VILLAGE	$0	$0	$0
MOGADORE	VILLAGE	$0	$0	$0
NORTHFIELD	VILLAGE	$0	$0	$0
PENINSULA	VILLAGE	$225,370	$57,460	$0
REMINDERVILLE	VILLAGE	$5,152,270	$0	$275,010
RICHFIELD	VILLAGE	$0	$0	$0
SILVER LAKE	VILLAGE	$2,553,600	$217,240	$397,430
BATH	TOWNSHIP	$10,135,410	$573,570	$817,520
BOSTON	TOWNSHIP	$993,190	$0	$78,330
COPLEY	TOWNSHIP	$2,520,870	$2,133,340	$120,010
COVENTRY	TOWNSHIP	$2,259,680	$1,709,020	$20,140
NORTHFIELD CENTER	TOWNSHIP	$4,516,640	$133,770	$0
RICHFIELD	TOWNSHIP	$245,850	$144,380	$0
SAGAMORE HILLS	TOWNSHIP	$0	$0	$9,670
SPRINGFIELD	TOWNSHIP	$4,389,770	$2,270,930	$330,630
TWINSBURG	TOWNSHIP	$881,440	$874,820	$0


Steerel Lake Dam
Goodrich Lake Dam
BATH
BATH
FAIRLAWN
The Meadows Dam
STOW
SILVER LAKE
CUYAHOGA FALLS
Cuyahoga Falls Low Head Dam
Sonoco Low Head Dam
MUNROE FALLS
Steeplechase Lake Dam
Park Lake Dam
Lower Carter Lake Dam
Upper Carter Lake Dam
Gorge Plant Dam
TALLMADGE
COPLEY
AKRON
Resevoir Park Upground
Aqua Springs Swim Club La
Creek Dam
MOGADORE
NORTON
LAKEMORE
Tuscarawas River Diversion Dam
BARBERTON
North Resevoir Dam
Columbia Lake Dam
COVE East Resevoir Dam
SPRINGFIELD
Tritts Mill Pond Dam
Flood Control Dam
NORTON
West Resevoir Dam
NEW FRANKLIN
GREEN
Soils Prone to Landslides
100 Year Floodplain
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Floodplain, Soils Prone to Landslides, Abandoned Mines, and Dams - Akron
Summit County Dept. of Community and Economic Development, May 2009
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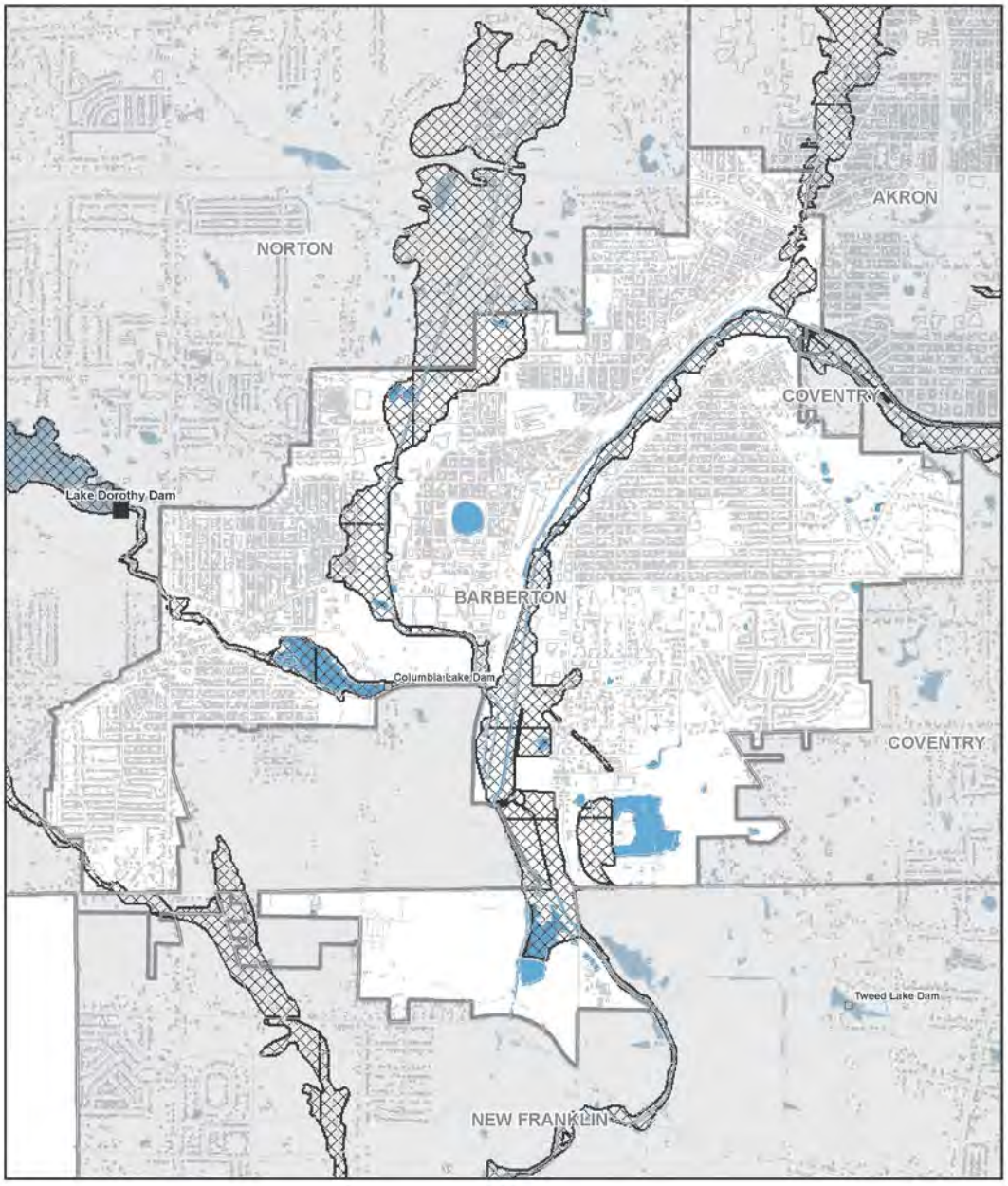
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AKRON
COVENTRY
Lake Dorothy Dam
BARBERTON
Columbia Lake Dam
COVENTRY
Tweed Lake Dam
NEW FRANKLIN
Soils Prone to Landslides
100 Year Floodplain
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Floodplain, Soils Prone to Landslides, and Dams - Barberton
Summit County Dept. of Community and Economic Development, May 2009
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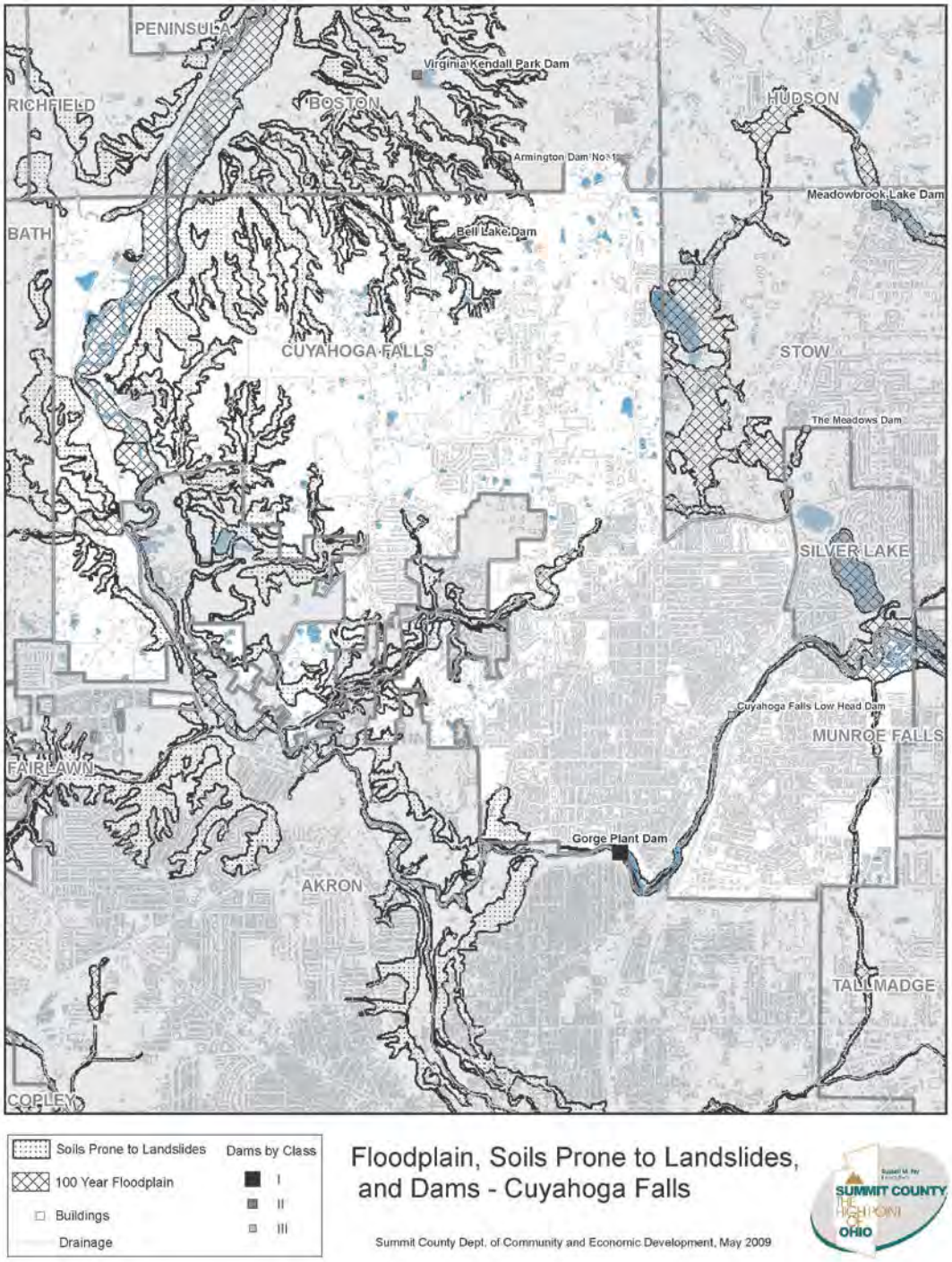
OHIO


PENINSULA
Virginia Kendall Park Dam
RICHFIELD
BOSTON
HUDSON
Armington Dam No 1
Meadowbrook Lake Dam
BATH
Bell Lake Dam
CUYAHOGA FALLS
STOW
The Meadows Dam
SILVER LAKE
Cuyahoga Falls Low Head Dam
MUNROE FALLS
FAIRLAWN
Gorge Plant Dam
AKRON
TALLMADGE
COPLEY
Soils Prone to Landslides
100 Year Floodplain
Buildings
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Dams by Class
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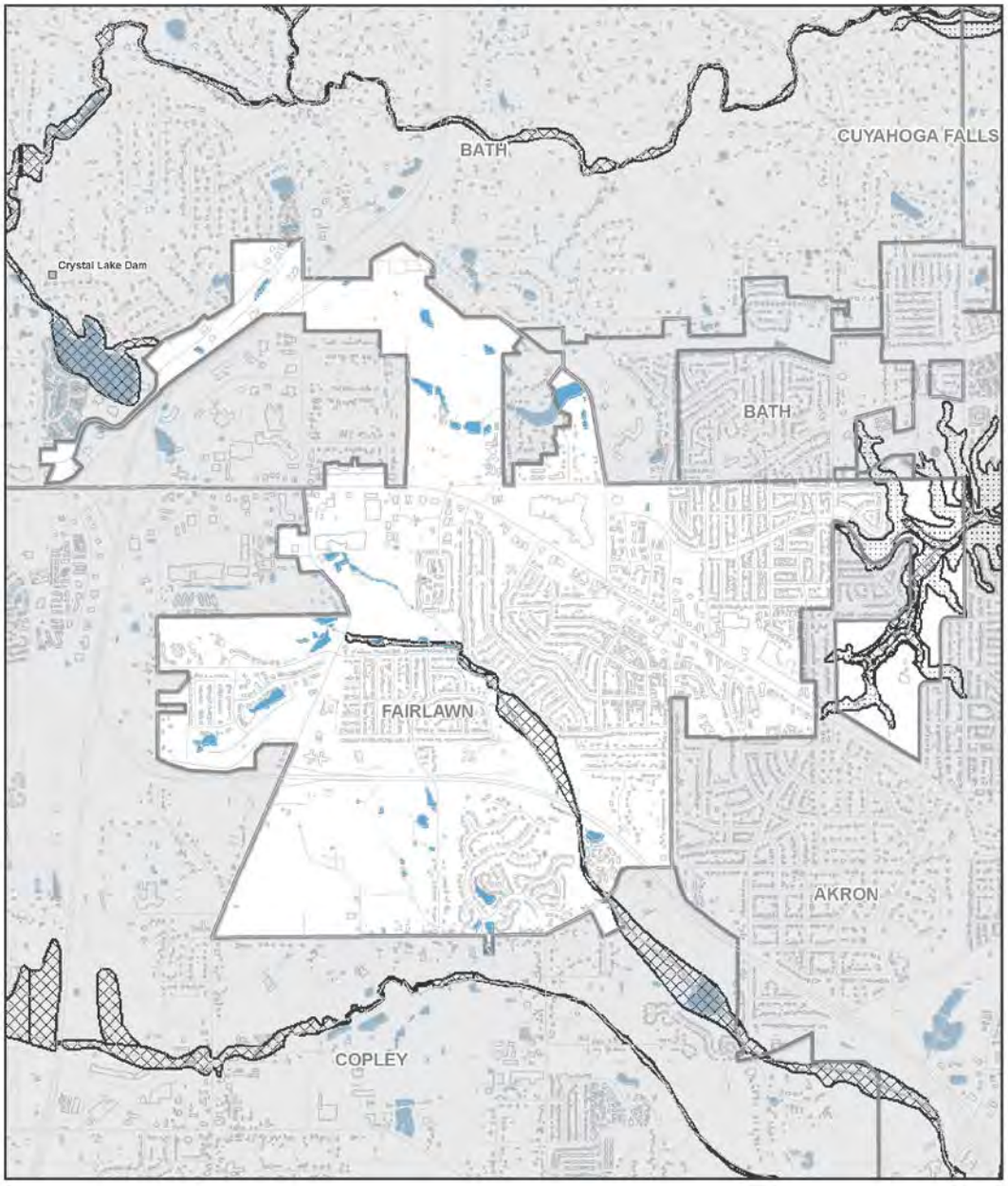
Floodplain, Soils Prone to Landslides, and Dams - Cuyahoga Falls
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
OHIO


BATH
CUYAHOGA FALLS
Crystal Lake Dam
BATH
FAIRLAWN
AKRON
COPLEY
Soils Prone to Landslides
100 Year Floodplain
Buildings
Drainage
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Floodplain, Soils Prone to Landslides, and Dams - Fairlawn
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
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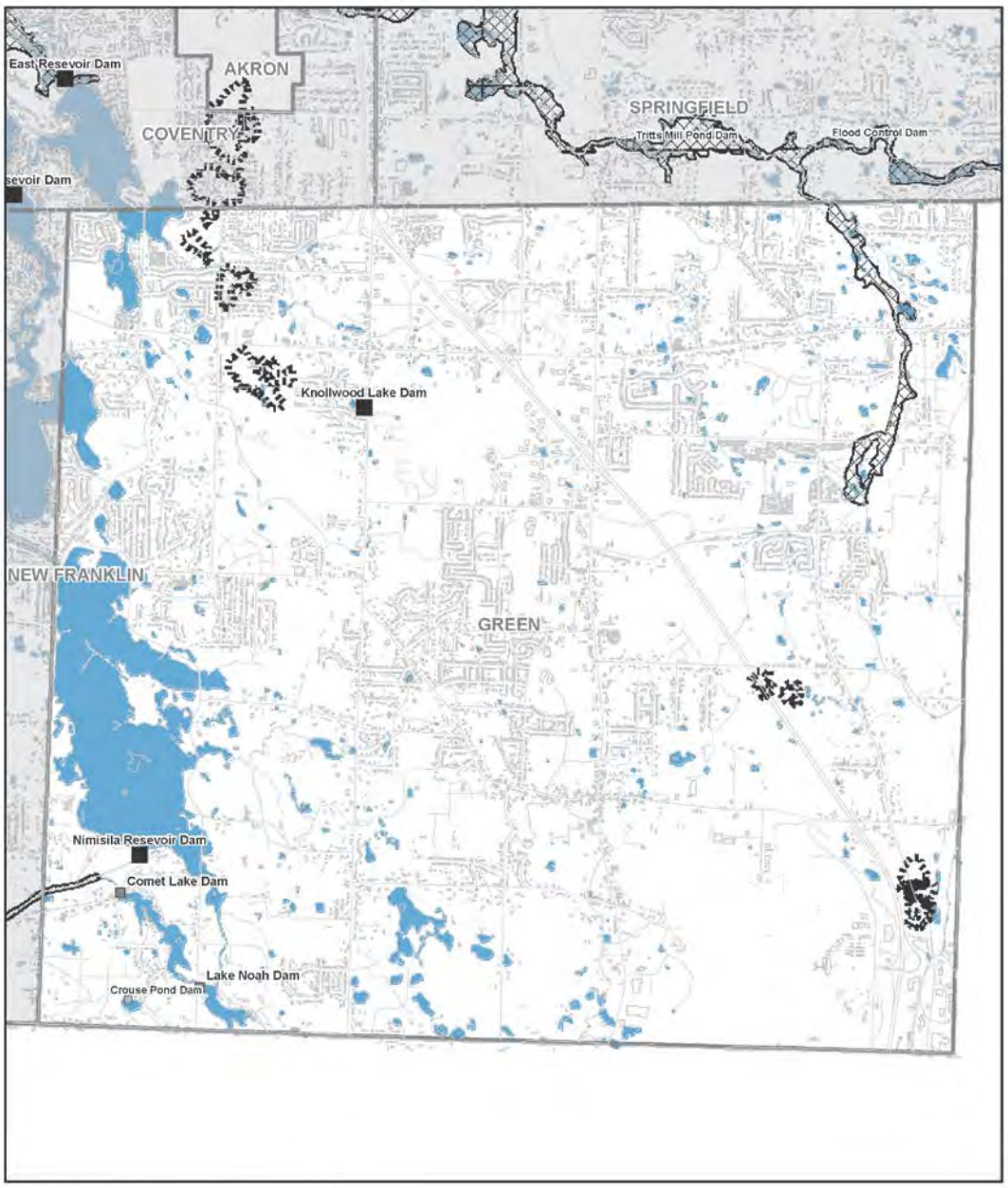
OHIO


East Resevoir Dam
AKRON
COVENTRY
SPRINGFIELD
Tritts Mill Pond Dam
Flood Control Dam
Knollwood Lake Dam
NEW FRANKLIN
GREEN
Nimisila Resevoir Dam
Comet Lake Dam
Lake Noah Dam
Crouse Pond Dam
Soils Prone to Landslides
100 Year Floodplain
Buildings
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Abandoned Mines
Dams by Class
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III
Floodplain, Soils Prone to Landslides, Abandoned Mines and Dams - Green
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
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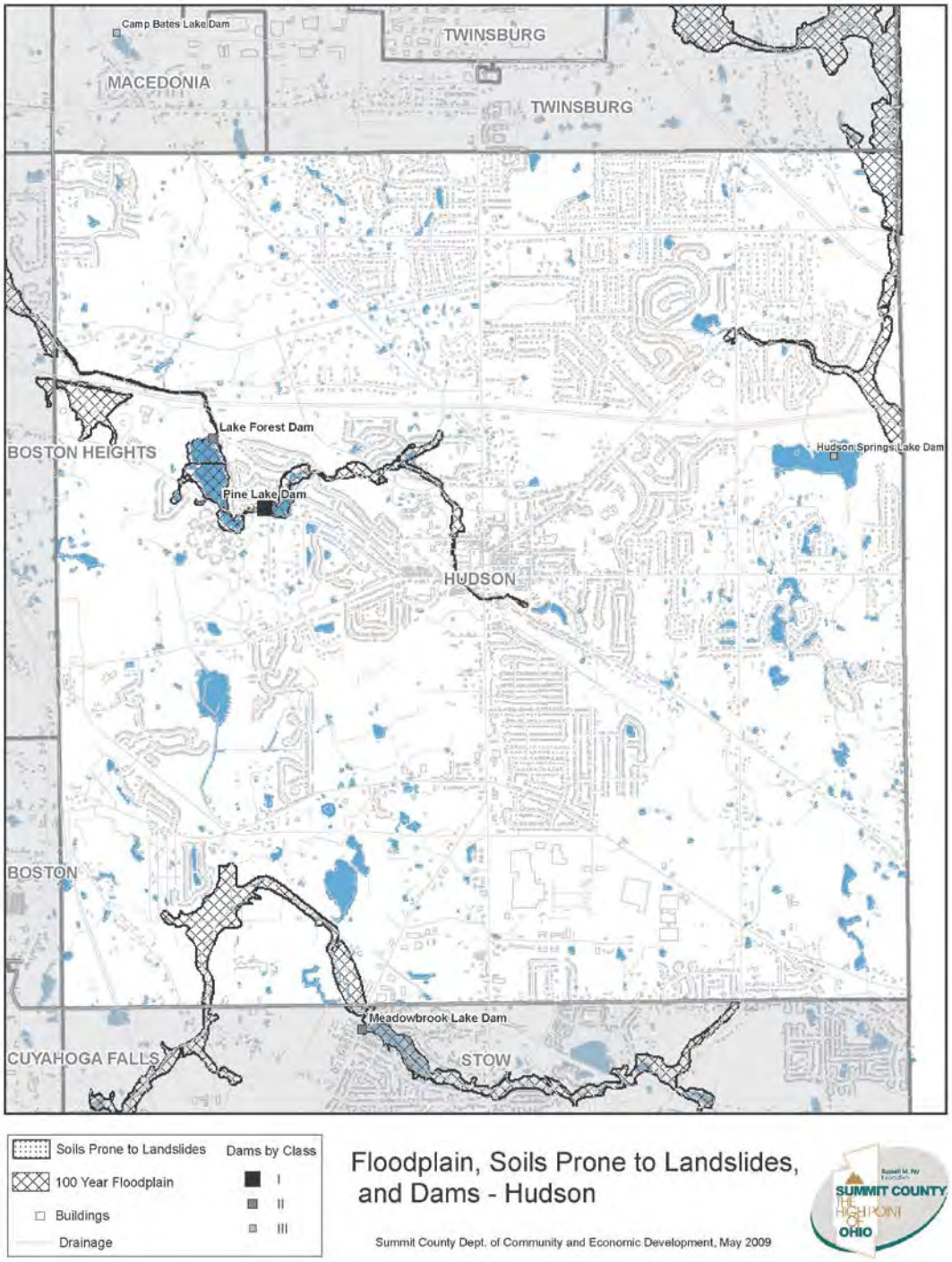
OHIO


Camp Bates Lake Dam
TWINSBURG
MACEDONIA
TWINSBURG
Lake Forest Dam
BOSTON HEIGHTS
Hudson Springs Lake Dam
Pine Lake Dam
HUDSON
BOSTON
Meadowbrook Lake Dam
CUYAHOGA FALLS
STOW
Soils Prone to Landslides
100 Year Floodplain
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Floodplain, Soils Prone to Landslides, and Dams - Hudson
Summit County Dept. of Community and Economic Development, May 2009
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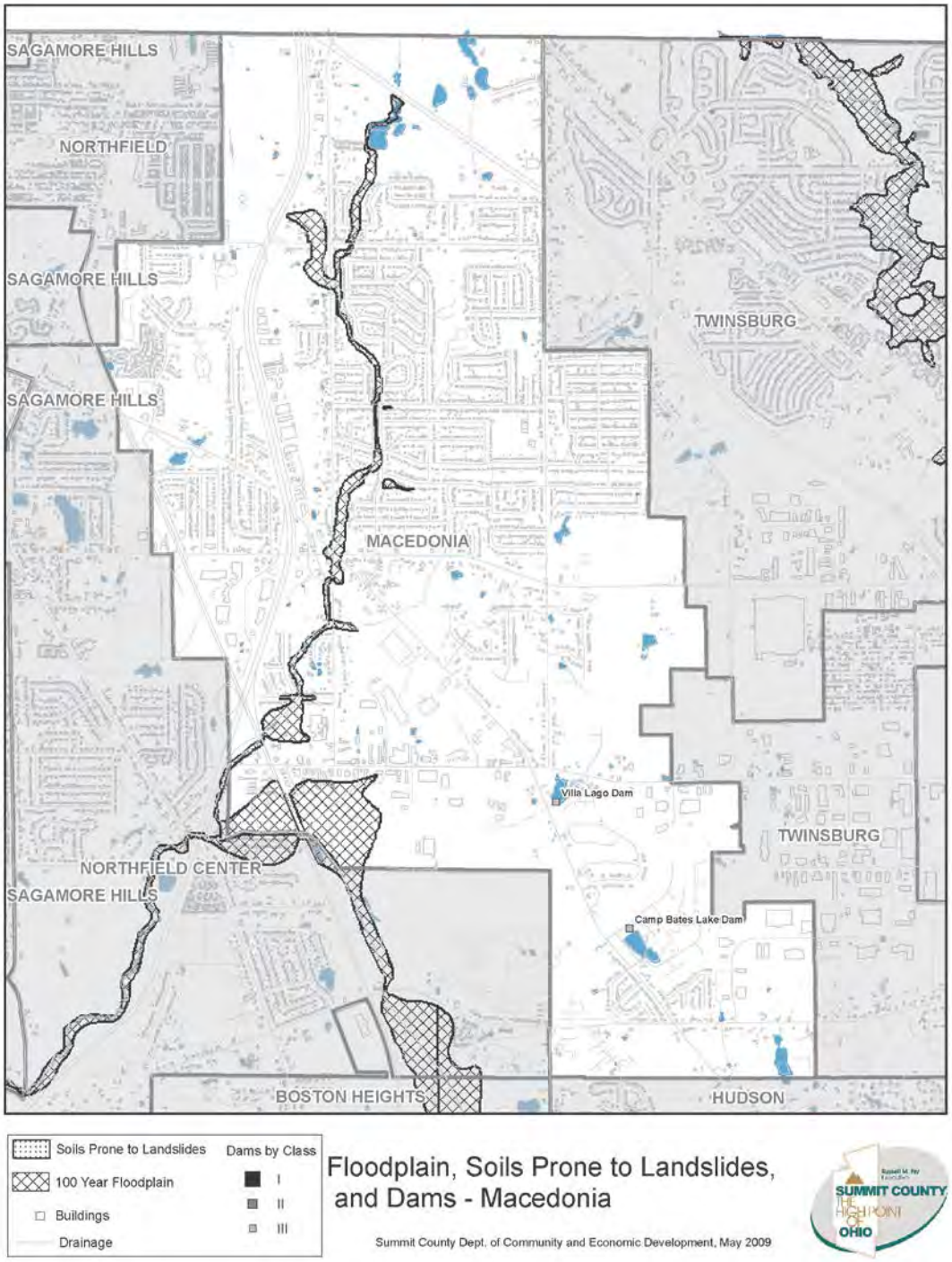
SAGAMORE HILLS
NORTHFIELD
SAGAMORE HILLS
SAGAMORE HILLS
TWINSBURG
MACEDONIA
Villa Lago Dam
TWINSBURG
NORTHFIELD CENTER
SAGAMORE HILLS
Camp Bates Lake Dam
BOSTON HEIGHTS
HUDSON
Soils Prone to Landslides
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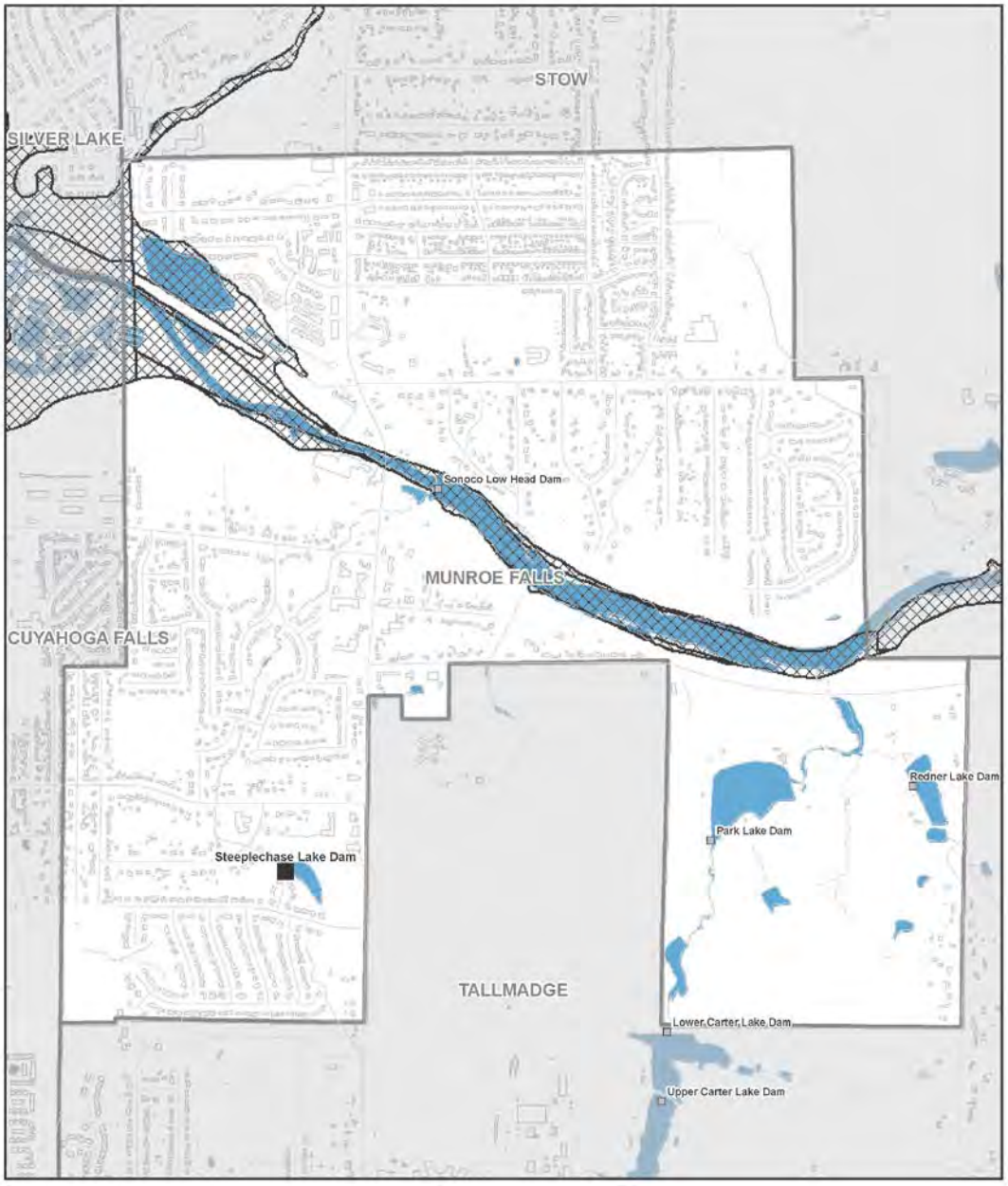
Floodplain, Soils Prone to Landslides, and Dams - Macedonia
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
OHIO


STOW
SILVER LAKE
Sonoco Low Head Dam
MUNROE FALLS
CUYAHOGA FALLS
Redner Lake Dam
Park Lake Dam
Steeplechase Lake Dam
TALLMADGE
Lower Carter Lake Dam
Upper Carter Lake Dam
Soils Prone to Landslides
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I
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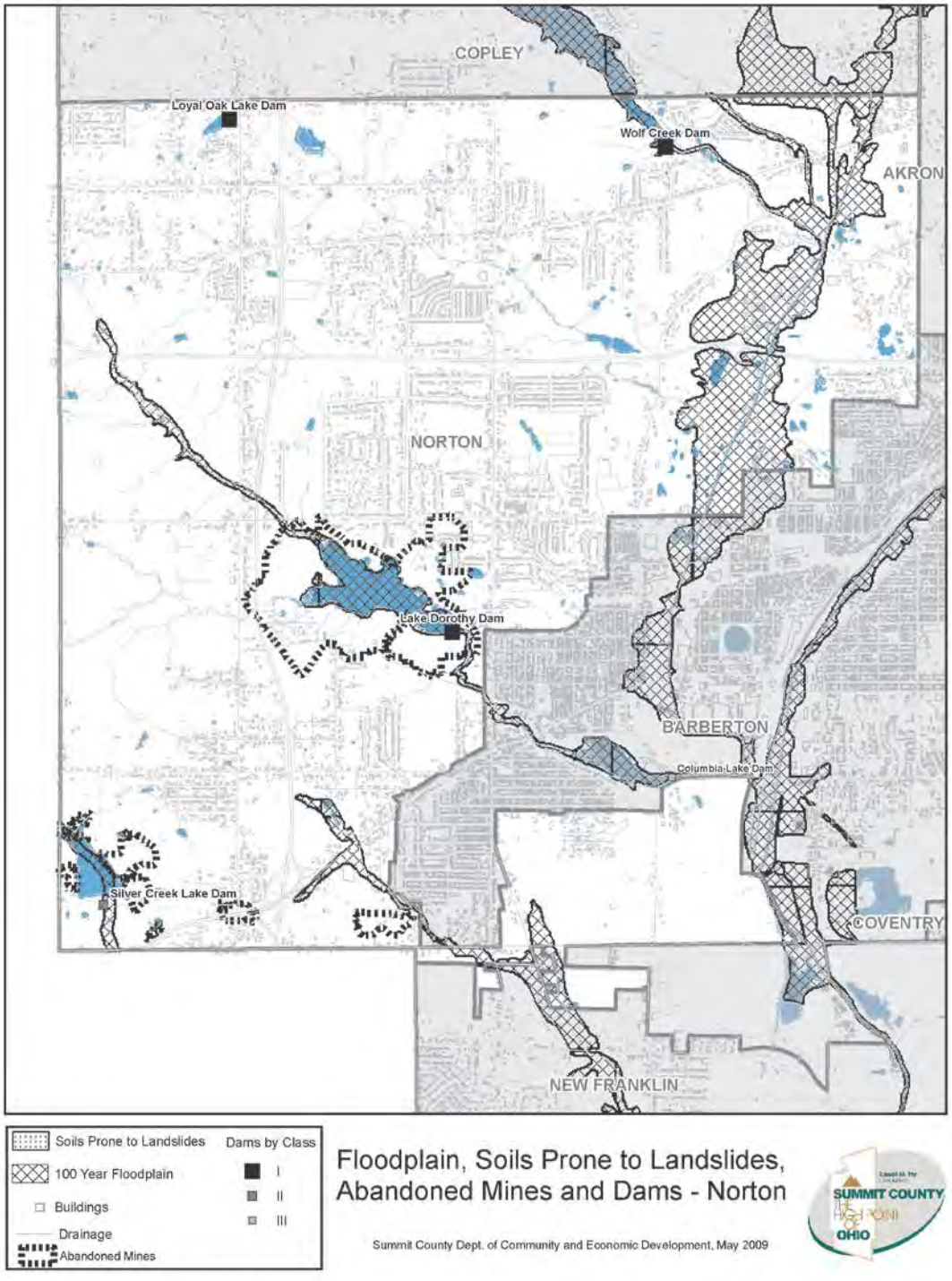
III
Floodplain, Soils Prone to Landslides, and Dams - Munroe Falls
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
OHIO


COPLEY
Loyal Oak Lake Dam
Wolf Creek Dam
AKRON
NORTON
Lake Dorothy Dam
BARBERTON
Columbia Lake Dam
Silver Creek Lake Dam
COVENTRY
NEW FRANKLIN
Soils Prone to Landslides
100 Year Floodplain
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I
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Floodplain, Soils Prone to Landslides, Abandoned Mines and Dams - Norton
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
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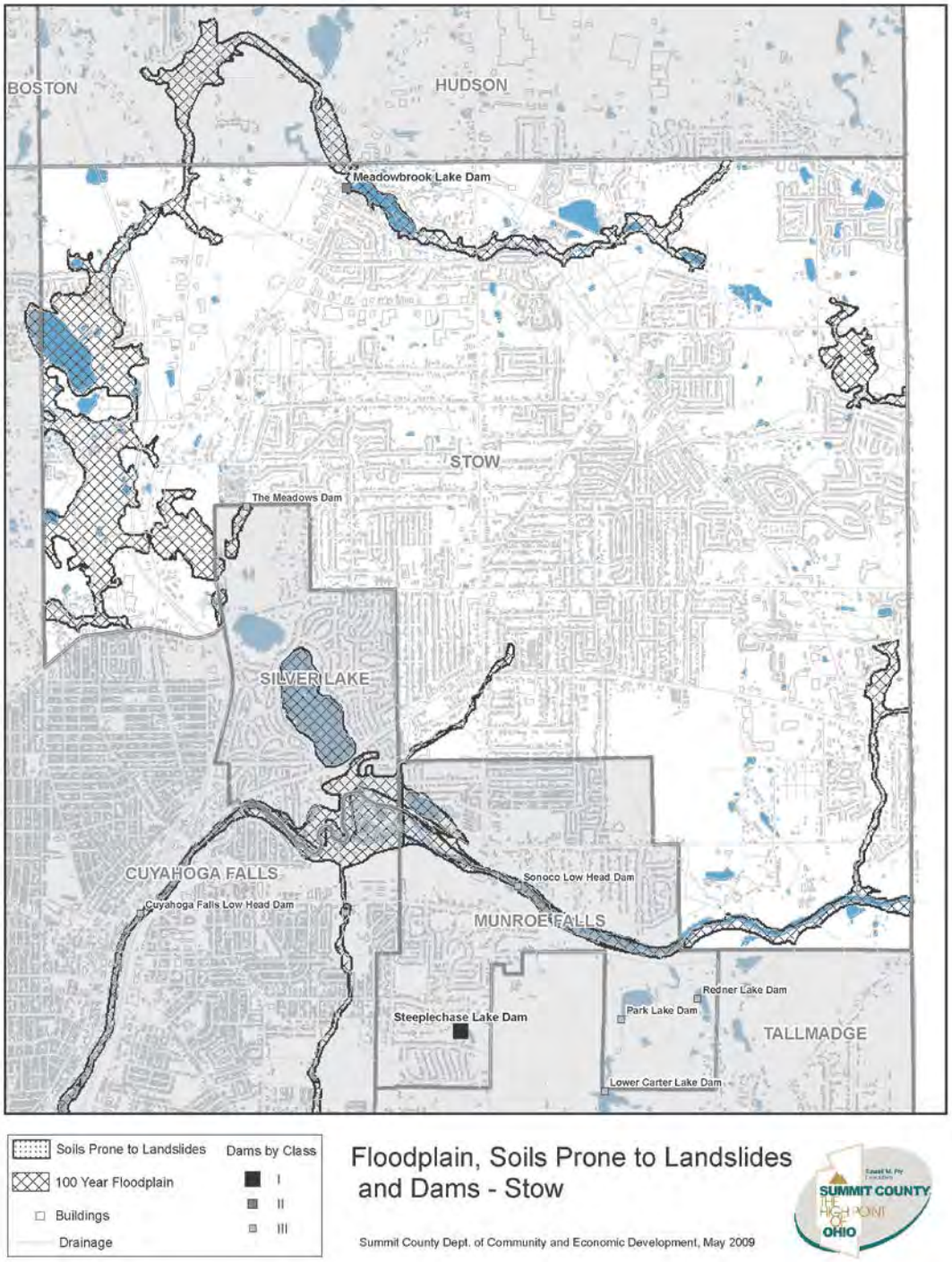
BOSTON
HUDSON
Meadowbrook Lake Dam
STOW
The Meadows Dam
SILVER LAKE
CUYAHOGA FALLS
Cuyahoga Falls Low Head Dam
Sonoco Low Head Dam
MUNROE FALLS
Redner Lake Dam
Park Lake Dam
Steeplechase Lake Dam
TALLMADGE
Lower Carter Lake Dam
Soils Prone to Landslides
100 Year Floodplain
Buildings
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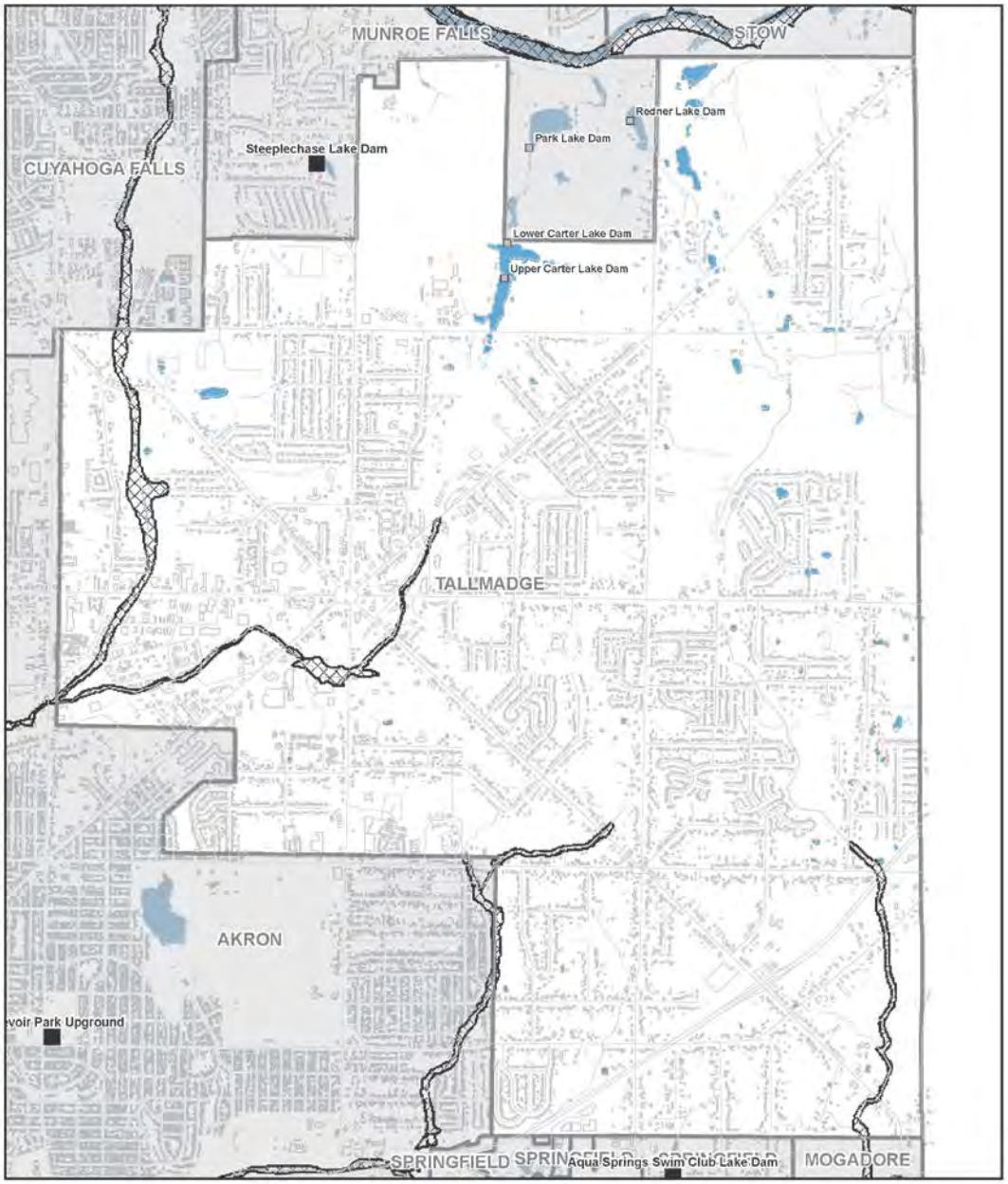
Dams by Class
I
II
III
Floodplain, Soils Prone to Landslides and Dams - Stow
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
OHIO


MUNROE FALLS
STOW
Redner Lake Dam
Park Lake Dam
Steeplechase Lake Dam
CUYAHOGA FALLS
Lower Carter Lake Dam
Upper Carter Lake Dam
TALLMADGE
AKRON
SPRINGFIELD
Aqua Springs Swim Club Lake Dam
MOGADORE
Soils Prone to Landslides
100 Year Floodplain
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I
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III
Floodplain, Soils Prone to Landslides and Dams - Tallmadge
Summit County Dept. of Community and Economic Development, May 2009
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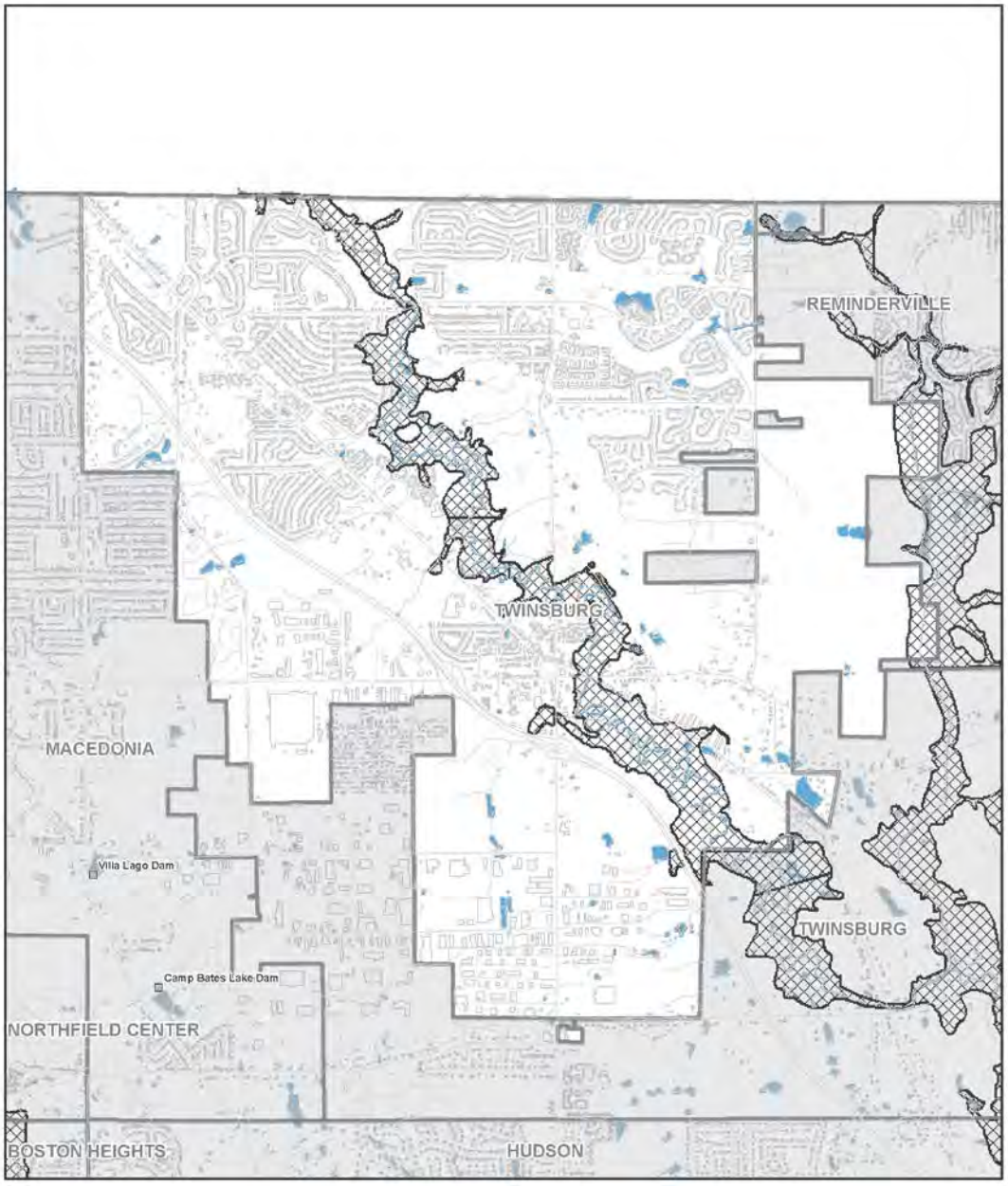
OHIO


REMINDERVILLE
TWINSBURG
MACEDONIA
Villa Lago Dam
TWINSBURG
Camp Bates Lake Dam
NORTHFIELD CENTER
BOSTON HEIGHTS
HUDSON
Soils Prone to Landslides
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Floodplain, Soils Prone to Landslides, and Dams - Twinsburg City
Summit County Dept. of Community and Economic Development, May 2009
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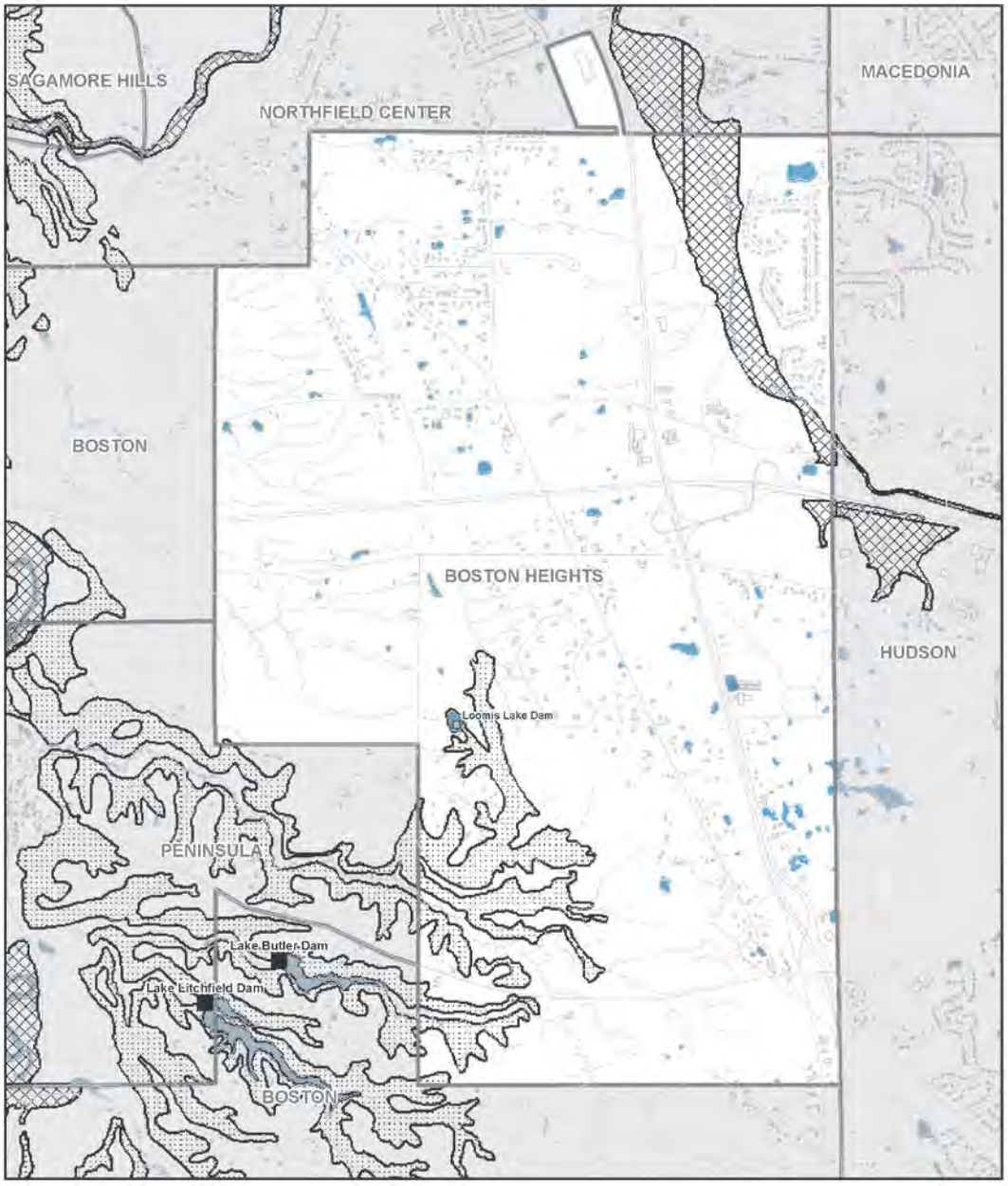
SAGAMORE HILLS
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MACEDONIA
BOSTON
BOSTON HEIGHTS
HUDSON
Loomis Lake Dam
PENINSULA
Lake Butler Dam
Lake Litchfield Dam
BOSTON
Soils Prone to Landslides
100 Year Floodplain
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I
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III
Floodplain, Soils Prone to Landslides, and Dams - Boston Heights
Summit County Dept. of Community and Economic Development, May 2009
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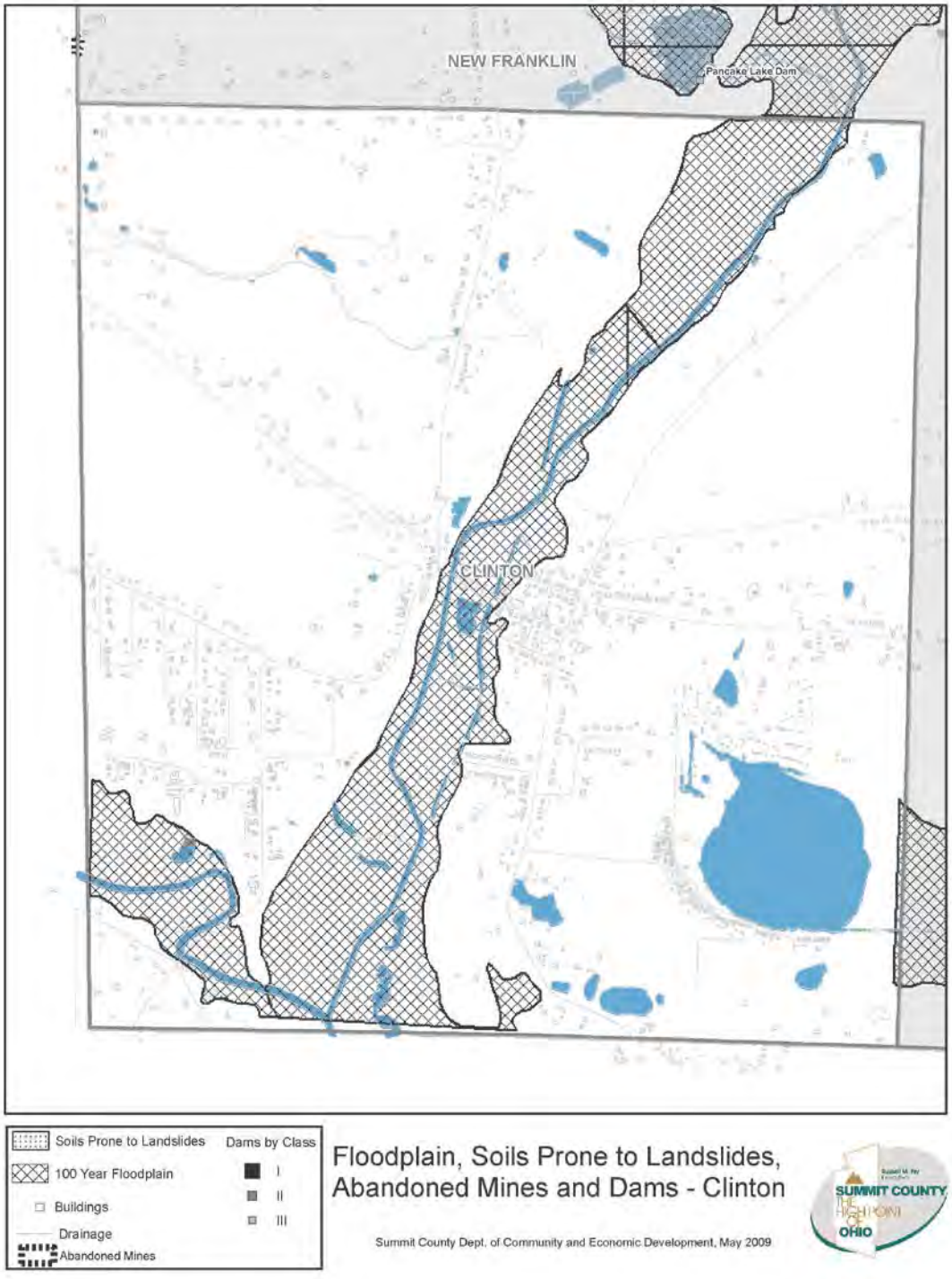
OHIO


NEW FRANKLIN
Pancake Lake Dam
CLINTON
Soils Prone to Landslides
100 Year Floodplain
Buildings
Drainage
Abandoned Mines
Dams by Class
I
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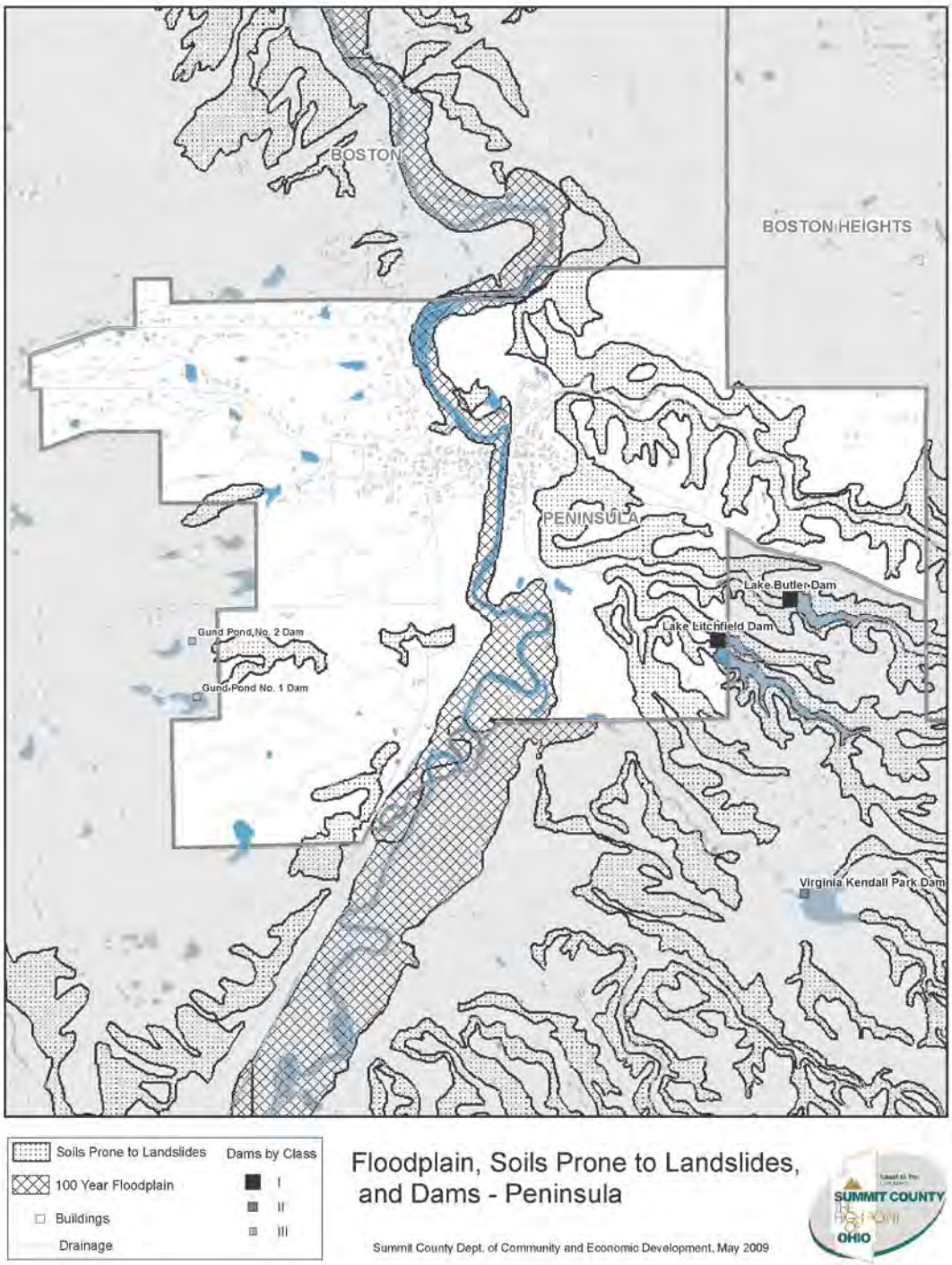
Floodplain, Soils Prone to Landslides, Abandoned Mines and Dams - Clinton
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
OHIO


BOSTON
BOSTON HEIGHTS
PENINSULA
Lake Butler Dam
Lake Litchfield Dam
Gund Pond No. 2 Dam
Gund Pond No. 1 Dam
Virginia Kendall Park Dam
Soils Prone to Landslides
100 Year Floodplain
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I
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Floodplain, Soils Prone to Landslides, and Dams - Peninsula
Summit County Dept. of Community and Economic Development, May 2009
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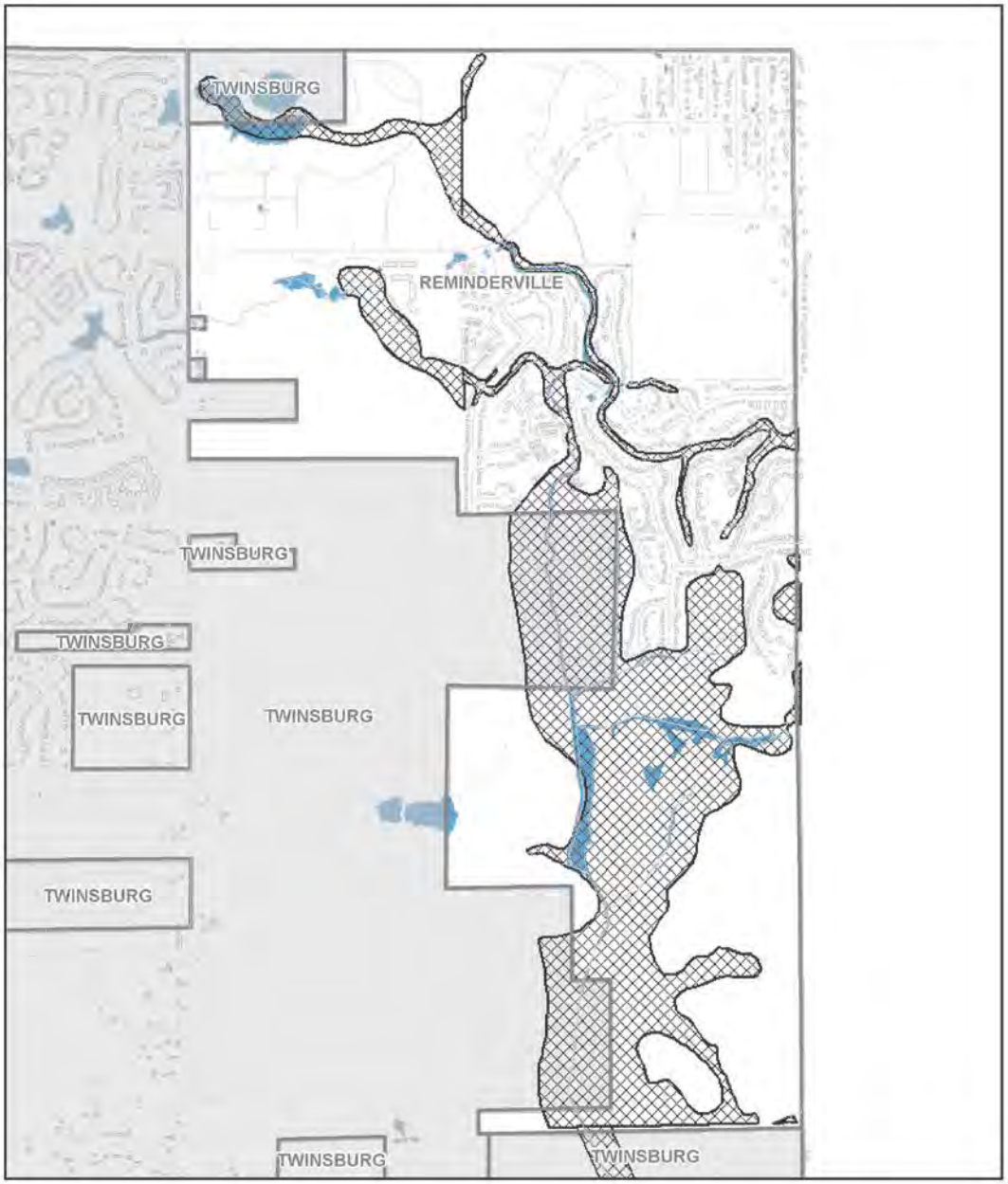
TWINSBURG
REMINDERVILLE
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TWINSBURG
TWINSBURG
Soils Prone to Landslides
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I
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Floodplain, Soils Prone to Landslides, and Dams - Reminderville
Summit County Dept. of Community and Economic Development, May 2009
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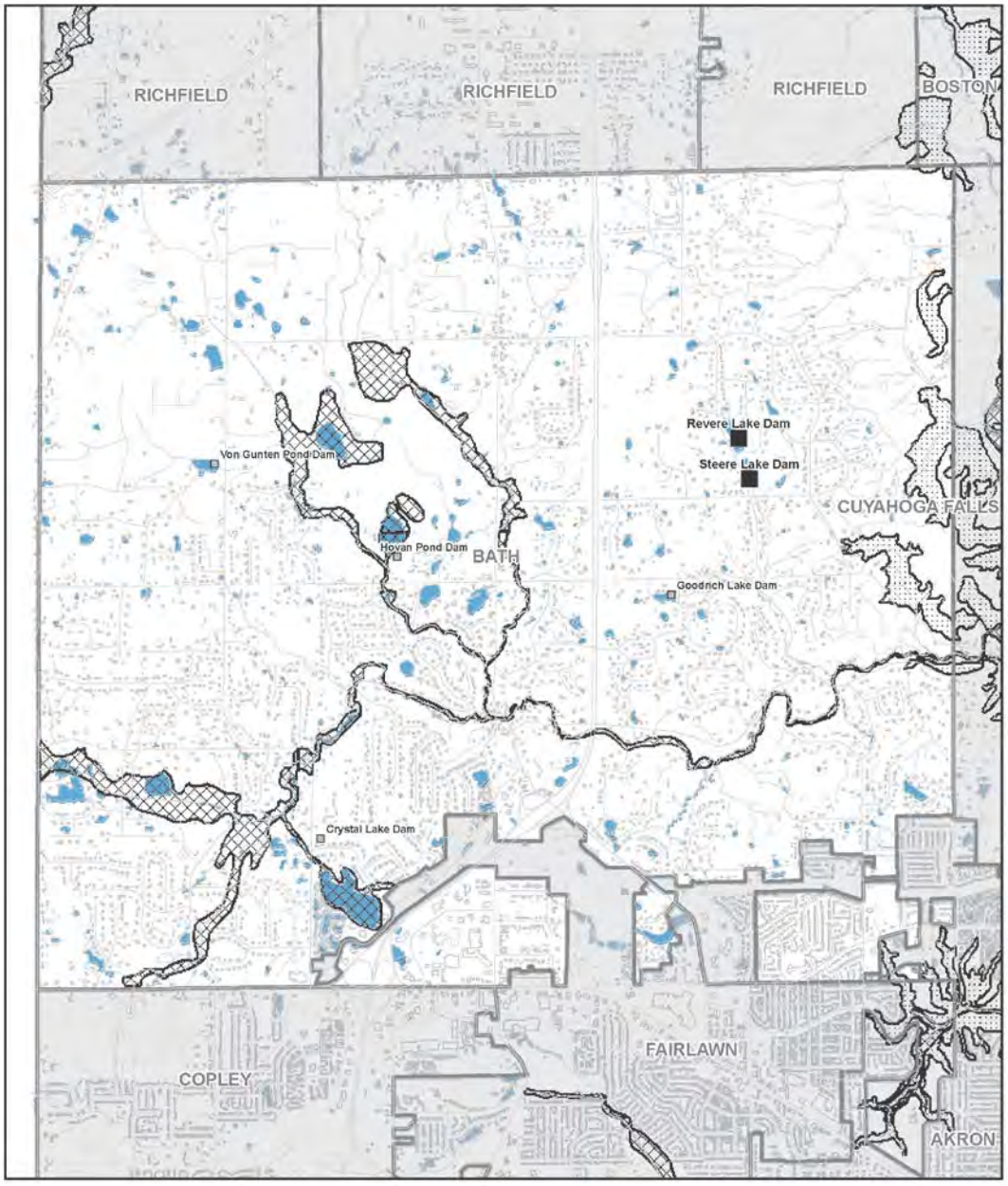
RICHFIELD
RICHFIELD
RICHFIELD
BOSTON
Revere Lake Dam
Steere Lake Dam
Von Gunten Pond Dam
Hovan Pond Dam
BATH
CUYAHOGA FALLS
Goodrich Lake Dam
Crystal Lake Dam
FAIRLAWN
COPLEY
AKRON
Soils Prone to Landslides
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Floodplain, Soils Prone to Landslides, and Dams - Bath Township
Summit County Dept. of Community and Economic Development, May 2009
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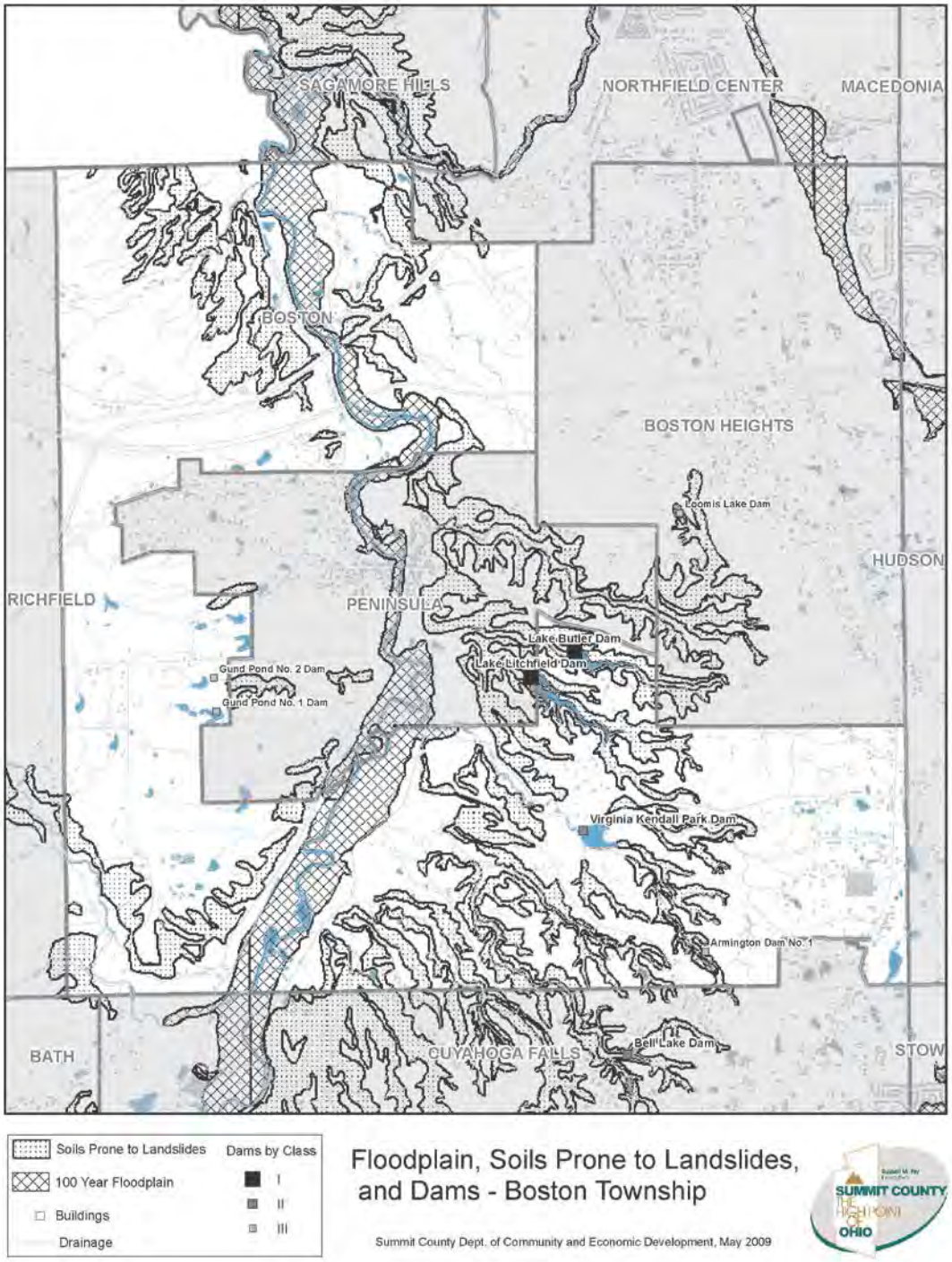
SAGAMORE HILLS
NORTHFIELD CENTER
MACEDONIA
BOSTON
BOSTON HEIGHTS
Loomis Lake Dam
HUDSON
RICHFIELD
PENINSULA
Lake Butler Dam
Lake Litchfield Dam
Gund Pond No. 2 Dam
Gund Pond No. 1 Dam
Virginia Kendall Park Dam
Armington Dam No. 1
Bell Lake Dam
BATH
CUYAHOGA FALLS
STOW
Soils Prone to Landslides
100 Year Floodplain
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I
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III
Floodplain, Soils Prone to Landslides, and Dams - Boston Township
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
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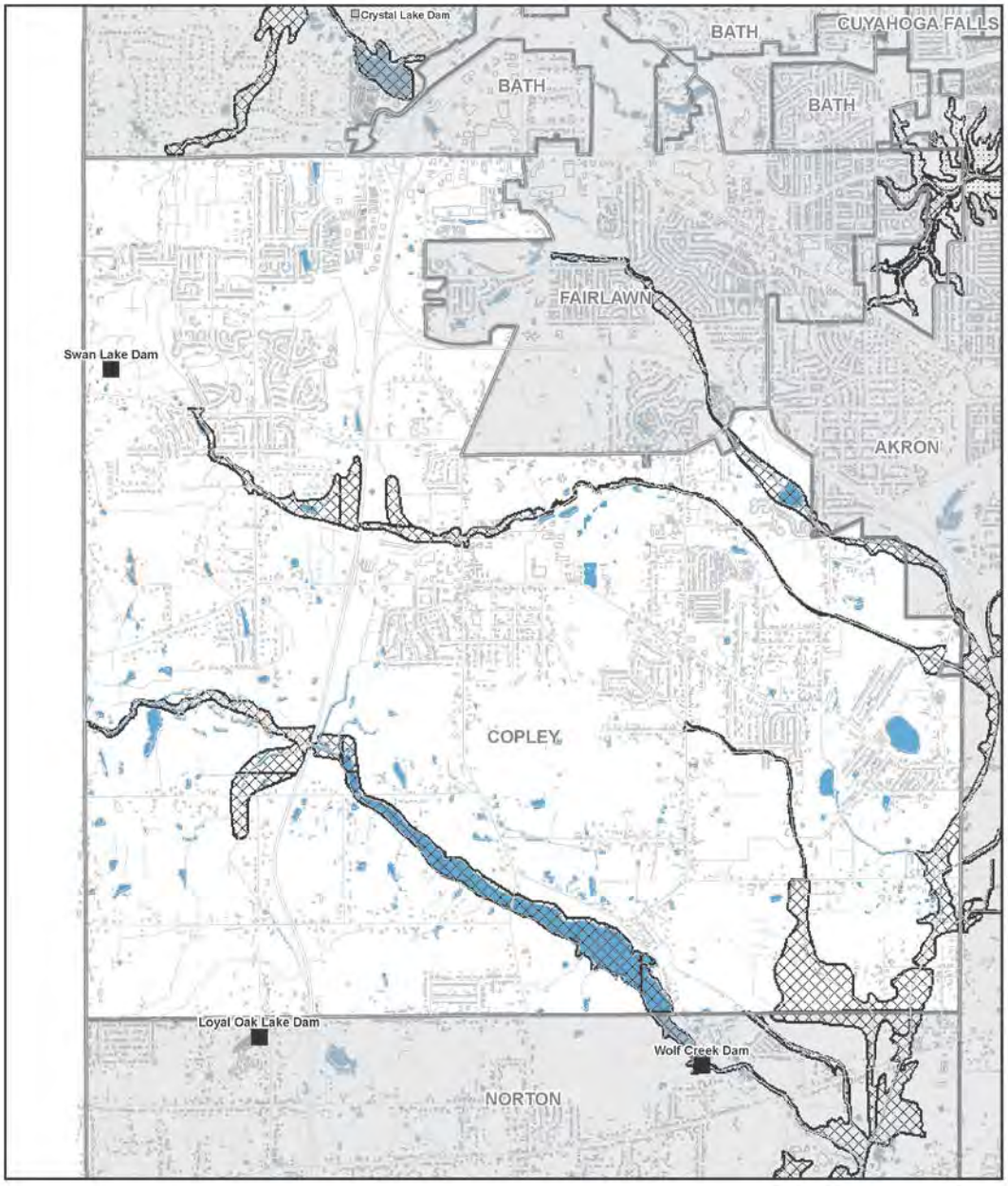
Crystal Lake Dam
BATH
CUYAHOGA FALLS
BATH
BATH
FAIRLAWN
Swan Lake Dam
AKRON
COPLEY
Loyal Oak Lake Dam
Wolf Creek Dam
NORTON
Soils Prone to Landslides
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I
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Floodplain, Soils Prone to Landslides, and Dams - Copley Township
Summit County Dept. of Community and Economic Development, May 2009
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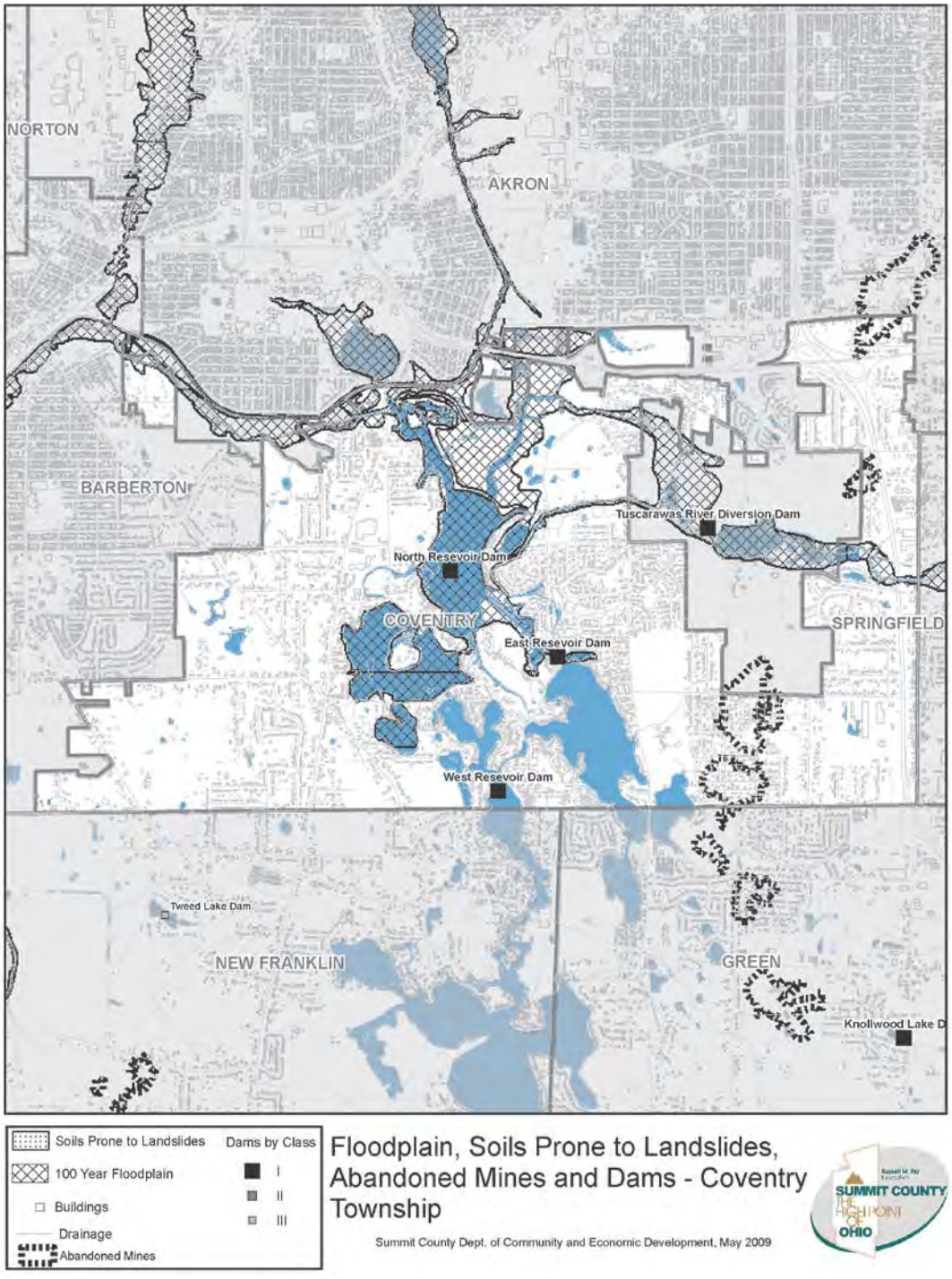
NORTON
AKRON
BARBERTON
Tuscarawas River Diversion Dam
North Resevoir Dam
COVENTRY
East Resevoir Dam
SPRINGFIELD
West Resevoir Dam
Tweed Lake Dam
NEW FRANKLIN
GREEN
Knollwood Lake D
Soils Prone to Landslides
100 Year Floodplain
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Floodplain, Soils Prone to Landslides, Abandoned Mines and Dams - Coventry Township
Summit County Dept. of Community and Economic Development, May 2009
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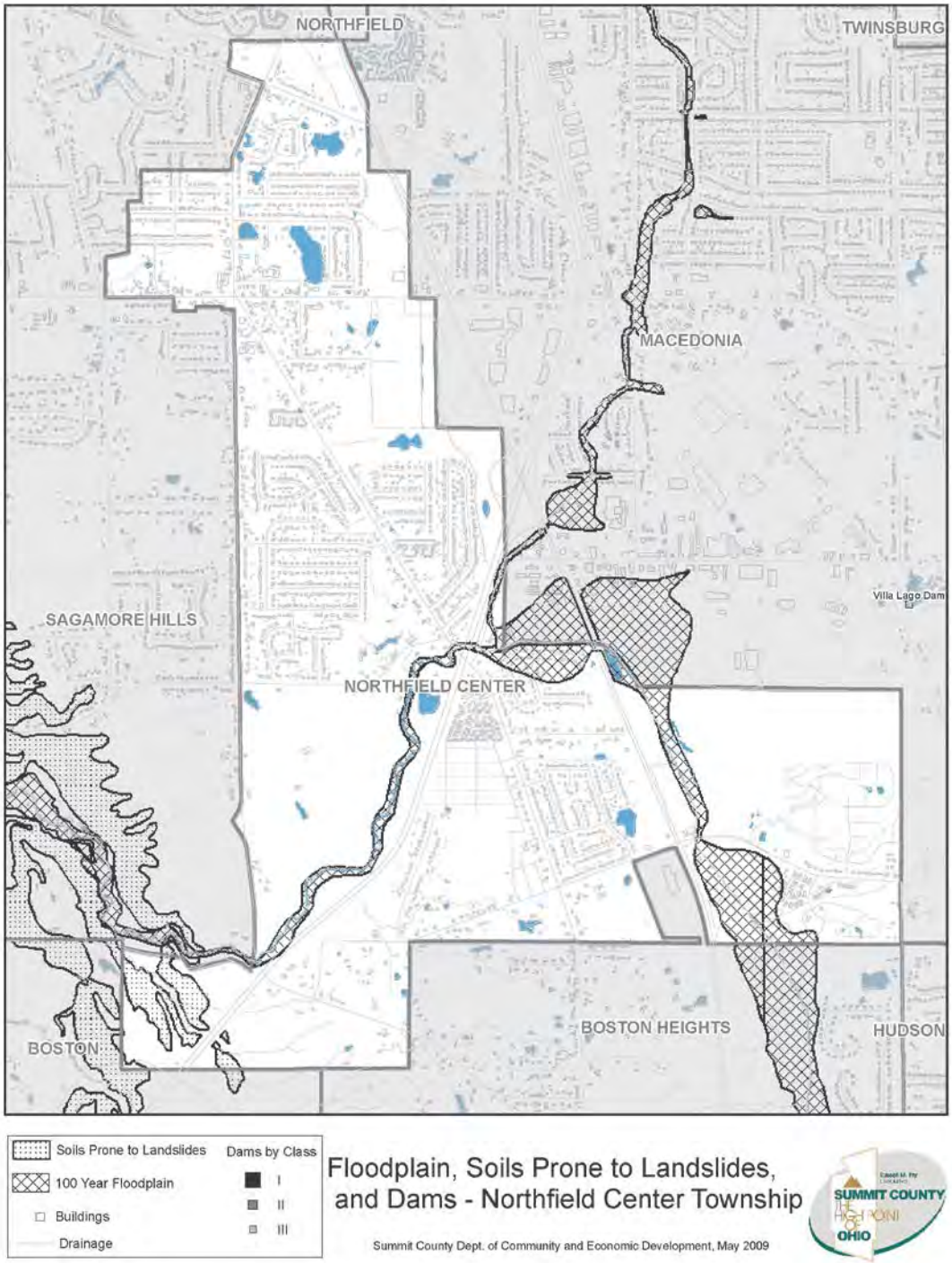
NORTHFIELD
TWINSBURG
MACEDONIA
Villa Lago Dam
SAGAMORE HILLS
NORTHFIELD CENTER
BOSTON HEIGHTS
HUDSON
BOSTON
Soils Prone to Landslides
100 Year Floodplain
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I
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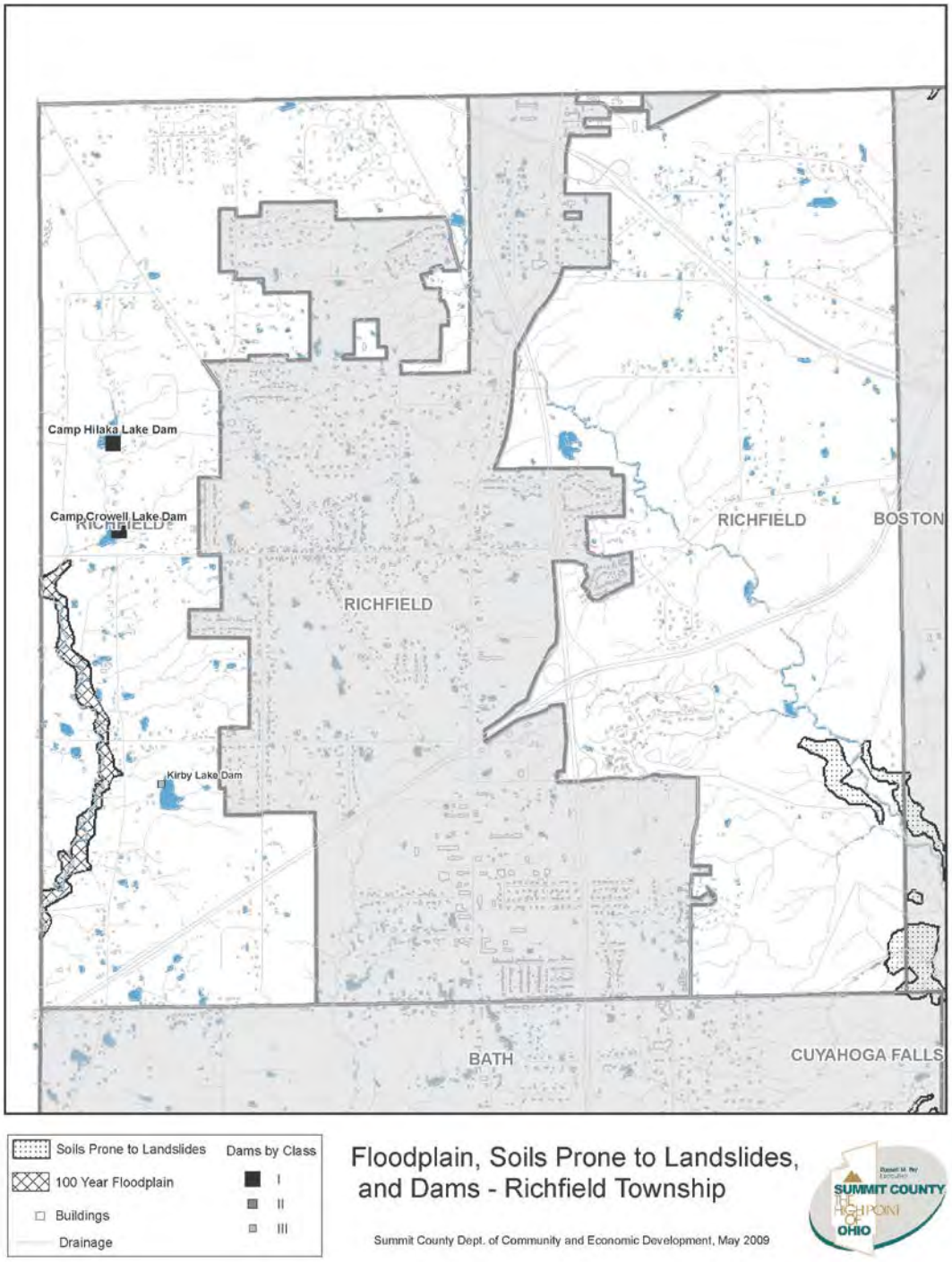
Floodplain, Soils Prone to Landslides, and Dams - Northfield Center Township
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
OHIO


Camp Hilaka Lake Dam
Camp Crowell Lake Dam
Kirby Lake Dam
RICHFIELD
RICHFIELD
BOSTON
BATH
CUYAHOGA FALLS
Soils Prone to Landslides
100 Year Floodplain
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Drainage
Dams by Class
I
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III
Floodplain, Soils Prone to Landslides, and Dams - Richfield Township
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
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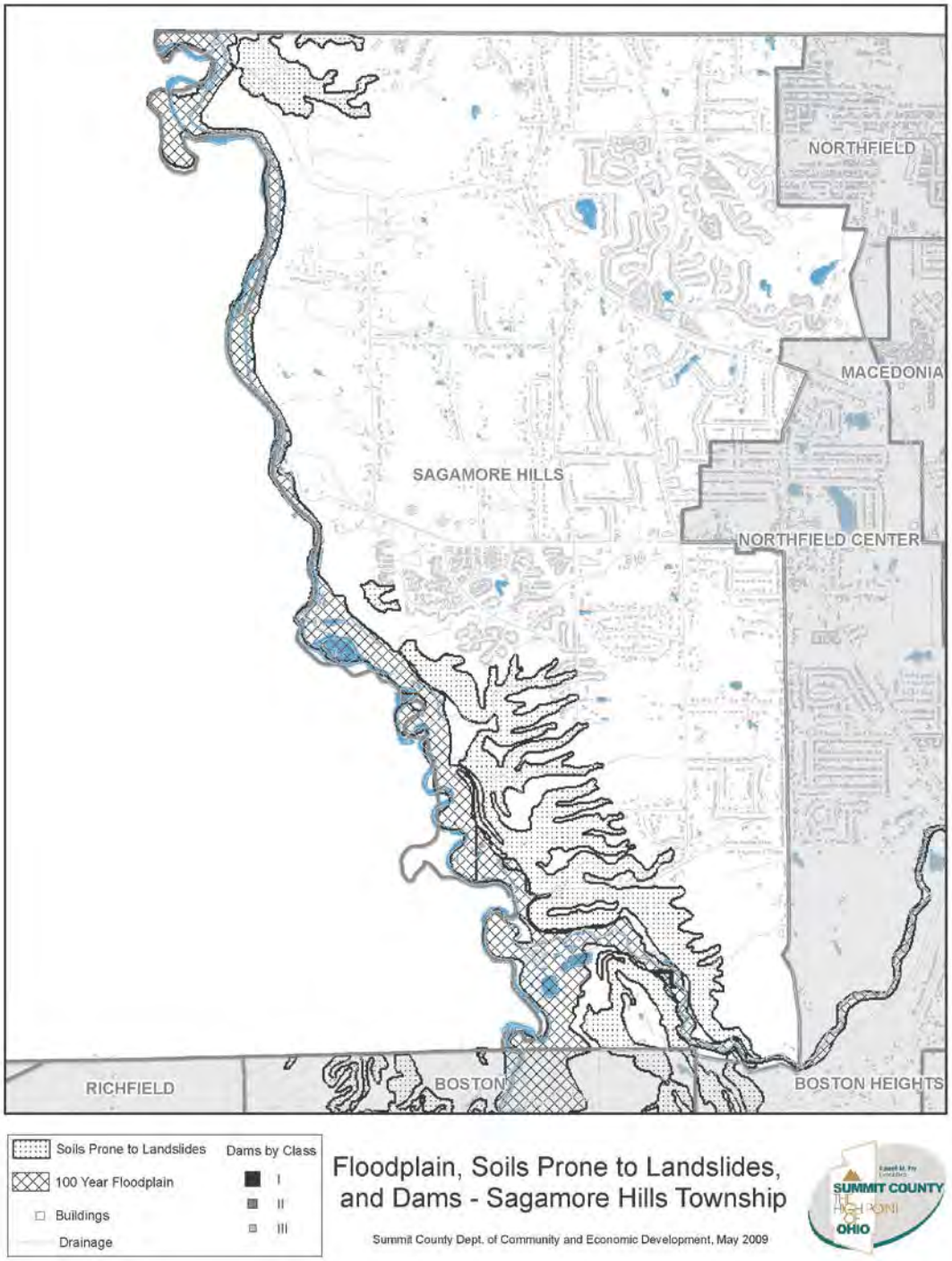
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MACEDONIA
SAGAMORE HILLS
NORTHFIELD CENTER
RICHFIELD
BOSTON
BOSTON HEIGHTS
Soils Prone to Landslides
100 Year Floodplain
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Floodplain, Soils Prone to Landslides, and Dams - Sagamore Hills Township
Summit County Dept. of Community and Economic Development, May 2009
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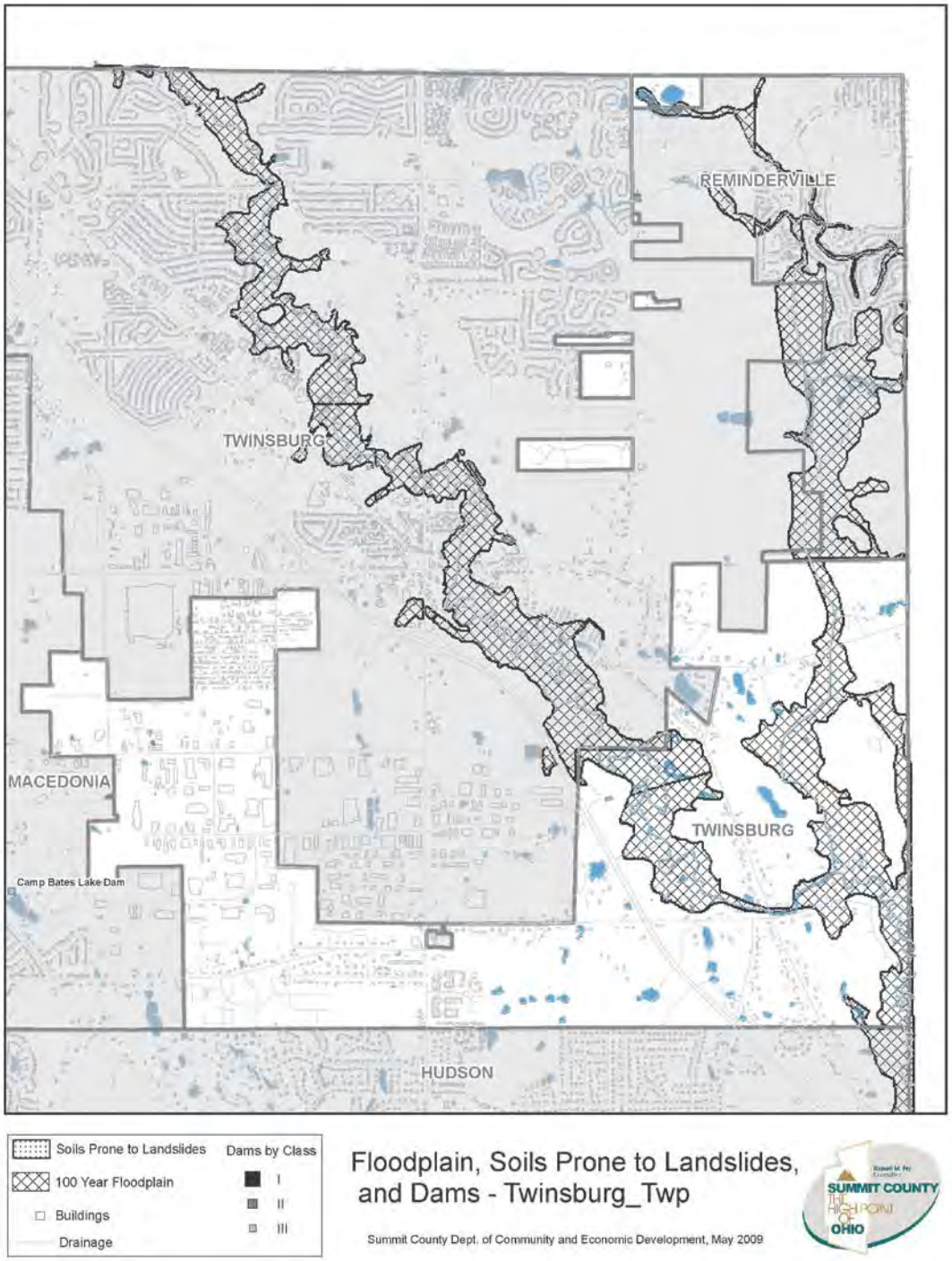
REMINDERVILLE
TWINSBURG
MACEDONIA
TWINSBURG
Camp Bates Lake Dam
HUDSON
Soils Prone to Landslides
100 Year Floodplain
Buildings
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Floodplain, Soils Prone to Landslides, and Dams - Twinsburg_Twp
Summit County Dept. of Community and Economic Development, May 2009
SUMMIT COUNTY
OHIO

Soils Prone to Landslide

NAME	TYPE	Residential	Commercial	Government
AKRON	CITY	$43,688,790	$7,000,920	$1,897,930
BARBERTON	CITY	$0	$0	$0
CUYAHOGA FALLS	CITY	$15,513,970	$1,520,940	$358,000
FAIRLAWN	CITY	$1,269,030	$0	$0
GREEN	CITY	$0	$0	$0
HUDSON	CITY	$0	$0	$0
MACEDONIA	CITY	$0	$0	$0
MUNROE FALLS	CITY	$0	$0	$0
NORTON	CITY	$0	$0	$0
STOW	CITY	$0	$0	$0
TALLMADGE	CITY	$0	$0	$0
TWINSBURG	CITY	$0	$0	$0
BOSTON HEIGHTS	VILLAGE	$0	$0	$0
CLINTON	VILLAGE	$0	$0	$0
FRANKLIN	VILLAGE	$0	$0	$0
LAKEMORE	VILLAGE	$0	$0	$0
MOGADORE	VILLAGE	$0	$0	$0
NORTHFIELD	VILLAGE	$0	$0	$0
PENINSULA	VILLAGE	$0	$0	$0
REMINDERVILLE	VILLAGE	$0	$0	$0
RICHFIELD	VILLAGE	$0	$0	$0
SILVER LAKE	VILLAGE	$0	$0	$0
BATH	TOWNSHIP	$828,760	$0	$333,630
BOSTON	TOWNSHIP	$308,930	$0	$946,010
COPLEY	TOWNSHIP	$0	$0	$0
COVENTRY	TOWNSHIP	$0	$0	$0
NORTHFIELD CENTER	TOWNSHIP	$0	$0	$155,880
RICHFIELD	TOWNSHIP	$0	$0	$0
SAGAMORE HILLS	TOWNSHIP	$1,792,320	$261,210	$0
SPRINGFIELD	TOWNSHIP	$0	$0	$0
TWINSBURG	TOWNSHIP	$0	$0	$0

$75,876,320

Abandoned Mines

NAME	TYPE	Residential	Commercial	Government
AKRON	CITY	$2,035,950	$5,070,690	$1,184,780
BARBERTON	CITY			
CUYAHOGA FALLS	CITY	$169,850	$106,820	$0
FAIRLAWN	CITY			
GREEN	CITY	$4,453,510	$343,250	$0
HUDSON	CITY			
MACEDONIA	CITY			
MUNROE FALLS	CITY			
NORTON	CITY	$3,130,810	$846,430	$859,730
STOW	CITY			
TALLMADGE	CITY			
TWINSBURG	CITY			
BOSTON HEIGHTS	VILLAGE			
CLINTON	VILLAGE			
FRANKLIN	VILLAGE	$13,771,840	$2,093,960	$335,110
LAKEMORE	VILLAGE			
MOGADORE	VILLAGE			
NORTHFIELD	VILLAGE			
PENINSULA	VILLAGE			
REMINDERVILLE	VILLAGE			
RICHFIELD	VILLAGE			
SILVER LAKE	VILLAGE			
BATH	TOWNSHIP			
BOSTON	TOWNSHIP			
COPLEY	TOWNSHIP			
COVENTRY	TOWNSHIP	$10,838,780	$344,900	$398,550
NORTHFIELD CENTER	TOWNSHIP			
RICHFIELD	TOWNSHIP			
SAGAMORE HILLS	TOWNSHIP			
SPRINGFIELD	TOWNSHIP			
TWINSBURG	TOWNSHIP			

$45,984,960

Summit County - Class I, II, & III Dams										
CLASS	**TOWN-SHIP**	**DAM NAME**	**DAM OWNER**	**OWNER ADDRESS**	**CITY**	**ST.**	**ZIP**	**TYPE IMPDMT**	**FILE NO.**	**PHONE**
I	SAGAMORE HILLS	CHARBONNEAU LAKE DAM	James Charbonneau	7315 South Boyden Road	Sagamore Hills	OH	44067-2501	DAM AND SPILLWAY	1214-016	330/468-0436
I	GREEN	COMET LAKE DAM	Comet Lake Club, Inc.	6010 Noreast Drive	Clinton	OH	44216-9635	DAM AND SPILLWAY	0714-003	330/882-5023
I	COVENTRY	EAST RESERVOIR DAM	ODNR, Division of Parks & Recreation	2045 Morse Road, Bldg. C	Columbus	OH	43229-6693	DAM AND SPILLWAY	1014-013	614/265-6714
I	CITY OF AKRON	GORGE PLANT DAM	Ohio Edison Co./FirstEnergy Corp.	Attn: Environmental Policy, 13th Flr. 76 South Main St.	Akron	OH	44308	DAM AND SPILLWAY	1013-003	330/761-7853
I	BOSTON	LAKE BUTLER DAM	Great Trail Council, BSA	Attn: Mike Jones, Scout Exec. 1601 S. Main St, P.O. Box 68	Akron	OH	44309	DAM AND SPILLWAY	1114-001	330/773-0415
I	NORTON	LAKE DOROTHY DAM	PPG Industries, Inc.	4829 Fairland Road	Barberton	OH	44203	DAM AND SPILLWAY	1015-001	330/825-2380

I	BOSTON	LAKE LITCHFIELD DAM	Great Trail Council, BSA	Attn: Mike Jones, Scout Exec. 1601 S. Main St, P.O. Box 68	Akron	OH	44309	DAM AND SPILLWAY	1114-047	330/773-0415
I	NORTON	LOYAL OAK LAKE DAM	Loyal Oak Lake Park, Inc.	2678 South Hametown Road	Norton	OH	44203	DAM AND SPILLWAY	1015-002	330/825-4343
I	GREEN	NIMISILA RESERVOIR DAM	ODNR, Division of Parks & Recreation	2045 Morse Road, Bldg. C	Columbus	OH	43229-6693	DAM AND SPILLWAY	0714-004	614/265-6714
I	COVENTRY	NORTH RESERVOIR DAM	ODNR, Division of Parks & Recreation	2045 Morse Road, Bldg. C	Columbus	OH	43229-6693	DAM AND SPILLWAY	1014-012	614/265-6714
I	CITY OF AKRON	RESERVOIR PARK UPGROUND	City of Akron	Public Utility Bureau Attn: Gregg Loesch	Akron	OH	44308	COVERED UPGROUND RESERVOIR	1013-010	330/375-2690
CLASS	**TOWN-SHIP**	**DAM NAME**	**DAM OWNER**	**OWNER ADDRESS**	**CITY**	**ST.**	**ZIP**	**TYPE IMPDMT**	**FILE NO.**	**PHONE**
I	VILLAGE OF MUNROE FALLS	STEEPLECHASE LAKE DAM	Steeplechase Lake Association	355 Valentines Brook	Munroe Falls	OH	44262	DAM AND SPILLWAY	1113-041	330/686-2300
I	COPLEY	SWAN LAKE DAM	Swan Lake Homeowners Association	4590 Regal Drive	Copley	OH	44321	DAM AND SPILLWAY	1115-037	330/666-6767

I	COVENTRY	TUSCARAWAS RIVER DIVERSION DAM	ODNR, Division of Parks & Recreation	2045 Morse Road, Bldg. C	Columbus	OH	43229-6693	DAM AND SPILLWAY	1014-009	330/644-2220
I	COVENTRY	WEST RESERVOIR DAM	ODNR, Division of Parks & Recreation	2045 Morse Road, Bldg. C	Columbus	OH	43229-6693	DAM AND SPILLWAY	0714-015	330/644-2220
I	CITY OF NORTON	WOLF CREEK DAM	City of Barberton	3365 Summit Road	Norton	OH	44203	DAM AND SPILLWAY	1014-001	330/848-6744
I	LAKE	ZIMBER DITCH DETENTION BASIN B	Stark County Board of Commissioners	Stark County Office Building 110 Central Plaza South, Ste. 240	Canton	OH	44702	DAM AND SPILLWAY	0713-033	330/451-7403
II	RICHFIELD	CAMP HILAKA LAKE DAM	Lake Erie Girl Scouts Council, Inc.	One Girl Scout Way	Macedonia	OH	44056	DAM AND SPILLWAY	1115-002	330/864-9933
II	RICHFIELD	CAMP JULIA CROWELL LAKE DAM	Lake Erie Girl Scouts Council, Inc.	One Girl Scout Way	Macedonia	OH	44056	DAM AND SPILLWAY	1115-003	330/864-9933
II	HUDSON	CITY OF HUDSON LOWER LAKE DAM	City of Hudson	51 S Main Street Suite 3	Hudson	OH	44236	DAM AND SPILLWAY	1113-043	330/342-1770
II	HUDSON	CITY OF HUDSON UPPER LAKE DAM	City of Hudson	51 S Main Street Suite 3	Hudson	OH	44236	DAM AND SPILLWAY	1113-042	330/342-1770
II	CITY OF BARBERT	COLUMBIA	PPG Industries,	4829 Fairland	Barbert	O	442	DAM AND	1014-	330/825-

	ON	LAKE DAM	Inc.	Road	on	H	03	SPILLWAY	003	2380
II	GREEN	CROUSE POND DAM	City of Green	1755 Town Park Boulevard P.O. Box 278	Green	OH	44232-0278	DAM AND SPILLWAY	0714-028	330-8965510
CLASS	**TOWN-SHIP**	**DAM NAME**	**DAM OWNER**	**OWNER ADDRESS**	**CITY**	**ST.**	**ZIP**	**TYPE IMPDMT**	**FILE NO.**	**PHONE**
II	BATH	CRYSTAL LAKE DAM	Crystal Lake Recreation Association	P. O. Box 701	Bath	OH	44210-0701	DAM AND SPILLWAY	1115-033	330/665-9881
II	SPRINGFIELD	FLOOD CONTROL DAM	Robert and Magaly Csorba	2525 Meyersville Road	Uniontown	OH	44685	DAM AND SPILLWAY	0713-022	330/285-4450
II	SUFFIELD	HILLS POND DAM	Portage County	449 South Meridian Street	Ravenna	OH	44266	DAM AND SPILLWAY	1013-002	330/297-3370
II	HUDSON	LAKE FOREST DAM	Lake Forest Country Club	100 Lake Forest Drive	Hudson	OH	44236	DAM AND SPILLWAY	1213-003	330/650-0371
II	GREEN	LAKE NOAH DAM	YMCA of Akron	Camp Y Noah 209 S. Main St, Ste. 501	Akron	OH	44308-1037	DAM AND SPILLWAY	0714-002	330/376-1335
II	CITY OF STOW	MEADOWBROOK LAKE DAM	City of Stow	3760 Darrow Road	Stow	OH	44224	DAM AND SPILLWAY	1113-001	330/689-5111

II	NORTON	SILVER CREEK LAKE DAM	Metro Parks Serving Summit County	975 Treaty Line Road	Akron	OH	44313	DAM AND SPILLWAY	0715-030	330/867-5511
II	CITY OF STOW	THE MEADOWS DAM	Progressive Painting & Power Washing	c/o Central City Motor Cars 1230 S. Arlington St.	Akron	OH	44306-3514	DAM AND SPILLWAY	1113-036	330/773-2011
II	BOSTON	VIRGINIA KENDALL PARK DAM	USDI, National Park Service	Cuyahoga Valley National Park 15610 Vaughton Rd.	Brecksville	OH	44141	DAM AND SPILLWAY	1114-003	440/546-5972
III	BOSTON	ARMINGTON DAM NO. 1	USDI, National Park Service	Cuyahoga Valley National Park 15610 Vaughton Rd.	Brecksville	OH	44141	DAM AND SPILLWAY	1114-049	440/546-5972
III	NORTHAMPTON	BELL LAKE DAM	Michael E. Bell & Roger S. Rounds, Jr.	c/o Michael Bell P.O. Box 1177	Cuyahoga Falls	OH	44223	DAM AND SPILLWAY	1114-018	330/923-3747
III	FRANKLIN	BILINOVICH RECREATION AREA LAKE DAM	Peter Bilinovich, Jr. and P L & T Partnership	c/o Peter Bilinovich, Jr., et. al. 6575 Taylor Rd.	Clinton	OH	44216	DAM AND SPILLWAY	0715-023	330/706-0237
III	CITY OF STOW	CUYAHO-GA FALLS LOW HEAD	City of Cuyahoga Falls	2310 2nd Street	Cuyahoga Falls	OH	44221	CHANNEL DAM	1113-037	330/971-8000

		DAM								
CLASS	**TOWN-SHIP**	**DAM NAME**	**DAM OWNER**	**OWNER ADDRESS**	**CITY**	**ST.**	**ZIP**	**TYPE IMPDMT**	**FILE NO:**	**PHONE**
III	BATH	GOODRICH LAKE DAM	George G. Goodrich	3320 West Bath Road	Akron	OH	44333-2106	DAM AND SPILLWAY	1114-023	330/666-9610
III	BOSTON	GUND POND NO. 1 DAM	Agnes Gund	765 Park Avenue, #14B	New York	NY	10021	DAM AND SPILLWAY	1114-045	216/406-3965
III	BOSTON	GUND POND NO. 2 DAM	Agnes Gund	765 Park Avenue, #14B	New York	NY	10021	DAM & SPILLWAY	1114-044	212/406-3965
III	HUDSON	HUDSON SPRINGS LAKE DAM	Hudson Township Board of Park Comm.	P.O. Box 544	Hudson	OH	44236	DAM AND SPILLWAY	1213-004	330/653-5201
III	RICHFIELD	KIRBY LAKE DAM	E.C. McCormick, Jr., Trust	2951 North Medina Line Road	Richfield	OH	44286	DAM AND SPILLWAY	1115-011	330/659-3611
III	CITY OF MACEDONIA	LAKE FOREST ESTATES DAM	PFR Land Company	c/o Transcon Builders 25250 Rockside Rd.	Bedford	OH	44146	DAM AND SPILLWAY	1213-010	330/606-8672
III	BOSTON	LOOMIS LAKE DAM	Western Reserve Girl Scout Council	One Girl Scout Way	Macedonia	OH	44056	DAM AND SPILLWAY	1114-002	330/650-1030
III	CITY OF TALLMADGE	LOWER CARTER LAKE DAM	Carter-Jones Lumber	601 Tallmadge Road	Kent	OH	44240-739	DAM AND SPILLW	1013-004	330/673-6100

			Company				7	AY		
III	BATH	MARCHETTA POND DAM	Dan Marchetta	4151 West Bath Road	Akron	OH	44333	DAM AND SPILLWAY	1115-022	330/958-3002
III	TALLMADGE	MUNROE FALLS PARK LAKE DAM	Metro Parks Serving Summit County	975 Treaty Line Road	Akron	OH	44313	DAM AND SPILLWAY	1113-005	330/865-8040
III	NEW FRANKLIN	PANCAKE LAKE DAM	Robil Corporation	6767 Taylor Road	Clinton	OH	44216	DAM AND SPILLWAY	0714-001	330/825-2447
III	MUNROE FALLS	REDNER LAKE DAM	Frank & Kaye Gauder	1151 N Munroe Road	Tallmadge	OH	44278	DAM AND SPILLWAY	1113-004	330/633-7065
III	BATH	THOMPSON LAKE DAM	William A & Bethany Downing	4028 Stonebridge Blvd	Akron	OH	44321	DAM AND SPILLWAY	1114-022	
III	SPRINGFIELD	TRITTS MILL POND DAM	Township of Springfield	2465 Canfield Road	Akron	OH	44312	DAM AND SPILLWAY	0713-019	330/351-4038
III	CITY OF TALLMADGE	UPPER CARTER LAKE DAM	Carter-Jones Lumber Company	601 Tallmadge Road	Kent	OH	44240-7397	DAM AND SPILLWAY	1013-005	330/673-6100
CLASS	**TOWN-SHIP**	**DAM NAME**	**DAM OWNER**	**OWNER ADDRESS**	**CITY**	**ST.**	**ZIP**	**TYPE IMPDMT**	**FILE NO.**	**PHONE**
III	CITY OF MACEDONIA	VILLA LAGO DAM	Villa Lago Homeowners Assoc.	c/o Aries Management Corporation 9821	North Center	OH	44067	DAM AND SPILLWAY	1213-011	330/468-2318

				Olde Eight Rd, Ste. C.						
III	BATH	VON GUNTEN POND DAM	Eric Von Gunten and Valerie Ewing	1520 North Hametown Road	Akron	OH	44333-1058	DAM AND SPILLWAY	1115-021	330/666-1228

Ohio's Dam Safety Program

Meeting for Summit County Officials & Dam Owners
8:30 AM – 11:30 AM, May 21st, 2013
Cuyahoga Falls Natatorium
2345 Fourth Street,
Cuyahoga Falls, OH 44221

Agenda

8:30 I. Introductions - Meeting Purpose

8:35 II. Dam Safety 101

A. Ohio Dam Safety Law
1. Overview of the laws, rules, authority, responsibilities
2. Dam classification – Hazard

B. How Dams Work
1. Dam pieces and parts – What does what?

C. Dam Failures
1. How and why dams fail?
2. Impacts of failures

9:15 III. The Dam Owners Role

Identify/discuss the dam owner's responsibilities:
1. Liability
2. Operation, Maintenance & Inspection (OMI)
3. Inspection Report Review
4. Downstream Development & Hazard

***10:00 IV.* Dam Emergency Situation Roles**
1. Dam owner
2. Local Officials
3. ODNR-DSWR Dam Safety Section
4. Others?

10:20 Break

10:30 V. Emergency Action Plans - 101
1. Definition of Emergency Action Plan (EAP)
2. EAP Format and Content
3. Emergency Preparedness
4. Development of the EAP – Keep it Current!
5. Compliant Dam Discount Program

***11:30* VI. Questions - Adjourn**

Tab 109 to the Summit County Hazard Reduction and Prevention Plan

Date

Addressee Name

Address

City, State, Zip Code

Dear _____

This letter serves as an invitation to attend an upcoming meeting in Cuyahoga Falls, OH focused on issues related to dam safety in Summit County and Ohio as well.

The Ohio Department of Natural Resources (ODNR), Division of Soil and Water Resources (DSWR) has the responsibility of implementing Ohio's Dam Safety program. The DSWR is currently increasing their educational programming and outreach efforts for Public Officials and Dam Owners on Dam Safety related topics. Development of Emergency Action Plans (EAP) for dams is a primary focus of their increased educational efforts. Public officials and Dam owners have critical roles in the successful development and implementation of EAPs for dams.

Recently, staff from the Summit Co. EMA and the Summit Soil & Water Conservation District (SWCD) met with staff from the ODNR-DSWR to plan a meeting for Summit County Public Officials and for Summit County Dam owners who own a "regulated" dam. **The meeting will be held from 8:30 AM.-11:30 AM. May 21st, 2013 at the Cuyahoga Falls Natatorium, 2345 Fourth Street, Cuyahoga Falls, OH 44221.**

Please see the enclosed agenda for the list of topics to be covered at the meeting. We hope you will attend the meeting. It is important for Public officials and Dam owners to understand the Ohio Dam Safety Program and the "roles and responsibilities" they have in implementing the program at the local level. We would ask that you please contact Thomas Smoot, Summit Co. EMA, at 330-643-2558 (tsmoot@summitoh.net) or Cindy Fink, Summit SWCD at 330-929-2871 (cfink@summitswcd.org) and affirm your attendance at the meeting.

Sincerely,

Valerie De Rose
Director

Summit Co. EMA

Sincerely,

Cindy Fink
Administrator

Summit SWCD

The next page includes a list of the planning participants involved in the revision process. Each political subdivision is represented at least once, and in many cases more than once. Summit County EMA was responsible for researching, obtaining, analyzing and compiling the information. Neighboring communities, local and regional agencies and other entities were all given the opportunity to participate and all of the describing information can be found in the chart within this section. Subcommittees and the Emergency Management Executive Committee no longer have an active role in the mitigation plan process.

Public participation opportunities were handled according to Summit County guidelines for public postings. This entails public postings located at the Ohio Building (County Government Building) on the first floor - Human Resource Division; fourth floor - main public entrance; and seventh floor – Summit County Council. All of these areas have public information boards where all public notices are posted. The document was also made available to anyone via the Summit County website where a link containing the plan, prior to the final draft version, has been made available. Newspaper notices are not required under County policy, and the newsletter Common Vision has not been published for quite some time. The most recent public review was conducted for a period of two weeks and ended on 02/28/13.

The planning process for the 2013 revision and the planning members involved 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 and provide insight on community needs and hazard mitigation projects. These email chains and phone conversations were accompanied by oral reports provided by private industry officials, as well as, local, state, and federal government officials. All invitations were sent via email. Response rates among planning participants were low, and necessitated phone calls to acquire data. Newly created documents, like the Probability & Vulnerability Matrix were submitted to the communities for concurrence. Requests/discussion for/of revisions, new data, mitigation projects and activities and additional information were addressed on multiple occasions: 01/23/13- 02/08/13; 02/22/13- 03/01/13; and 03/15/13 - 03/31/13. The review and discussion period for the Hazard Probability & Vulnerability Matrix was 02/19/13 - 02/22/13. The Land Use & Development discussion was 02/15/13 - 02/18/13. The information acquired from communities and various officials assisted in the planning and writing processes involved in revising this plan.

Planning Participants:

Agency	Name		Title
	Last	First	
Akron	Williamson	Mark	Director of Communications
Akron Canton Airport	Laps	Todd	Director of Operations
Akron Children's Hospital	Schueler	Laurie	Medina Relations Specialist
Akron General Medical Center	Gosky	Jim	Public Relations Director
Akron Metropolitan Housing Authority	O'Leary	Anthony	Executive Director
Akron Public Schools	Boxler	Robert	Program Manager
Akron Summa Health Systems	Bernstein	Mike	System Public Relations Manager
Akron University	Callahan	Paul	University of Akron Chief of Police
ATT	Porpora	Michael	ATT Representative
Barberton	Baldwin	Kim	Fire Chief
Summa Barberton Hospital	Gerber	Ricki	Safety Officer
Bath Township	Snow	William	Town Administrator
Boston Heights Village	Goncy	Bill	Mayor
Boston Township	Anderson	Amy	Chairman, Boston Township Trustees
Clinton	Mayberry	Phyllis	Mayor
Summit County Schools	Jones	David	Information Technology Consultant
Copley Township	Humphrys	Helen	President, Board of Trustees
County of Summit Executive's Office	Hinig Skapin	Jill	Director of Communications
County of Summit Health Department	Nixon	Gene	Health Commissioner
Coventry Township	Calderone	David	Township Trustee
Cuyahoga Falls Fire Department	Moledor	Paul	Chief of Fire Department
Fairlawn	Roth	William	Mayor
First Energy	Kirk	Gardner	Area Manager
Goodyear	Janko	Michael	Global Business Continuity Leader
Green	Groen	Kevin	Assistant to the Chief of Fire
Hudson	Roberts	Jody	Communications Manager
Lakemore	Kolomichuk	Mike	Mayor
Macedonia	Kuchta	Donald	Mayor
Metro Regional Transit Authority	Becker	Molly	Director of Communications and Marketing
Metro SWAT	Piatt	Ron	METRO SWAT Subcommittee
Mogadore	Adams	Don	Fire Chief
Munroe Falls	Larson	Frank	Mayor
New Franklin Fire Department	Surgeon	Perry	Fire Chief
Northfield	Milani	Victor	Mayor
Northfield Center Township	Ciocco	Samuel	Administrator
Norton	Ryland	Richard	Administration Officer
ODNR	Riley	Matt	GIMS Specialist
Red Cross	Jaros	Jessica	Emergency Services Supervisor
Reminderville Fire Department	Plunkett	Thomas	Fire Chief

Richfield	Lyons	Michael	Mayor
Richfield Township	Bowmer	Linda	Township Administrator
Sagamore Hills Township Trustee	Schweikert	Paul	Chair
Silver Lake Police Department	Conley	John	Chief of Police
Springfield Township Police Department	Smith	John	Chief of Police
Stow	Nahrstedt	Linda	Community Information Coordinator
Summit County Emergency Management Executive Committee	Ross	Rob	Committee Chairperson, AFD Chief
Summit Soil and Water Conservation District	Fink	Cindy	District Administrator
Tallmadge Police Department	Zesiger	Donald	Chief of Police
Twinsburg Fire Department	Bosso	Steve	Captain
Twinsburg Township	Procop	Katherine	Mayor
Valley Fire District	Riedel	Charlie	Fire Chief

Summit County Service Directors

Agency	Name		Title
	Last	First	
Akron	Moore	Elwood	Director of Public Service
Barberton	Palmer		Director of Public Service
Cuyahoga Falls	Wax Carr	Valerie	Director of Public Service
New Franklin	Olson	Jeffrey	Service Director
Green	Monteith	Randall	Service Director
Springfield Township	Kaylor	Richard	Road Superintendent
Coventry Township	Stouffer	Lael	Road Superintendent
Norton	Weinsheimer	Ted	Superintendent of Public Service
Clinton	Siegenthaler	Terry	Street Commissioner
Lakemore	Saley	Chief Barry	Fire Chief
Clinton	Frey	Chief Brent	Fire Chief
Copley	Mitchell	Mark	Service Director/Highway Superintendent
Tallmadge	Loughry	Dennis	Economic Developer
Fairlawn	Staten	Ernie	Deputy Director of Public Service
Munroe Falls	DiCola	Anne	Service Director
Silver Lake	Lipan	Mark	Service Director
Bath	Wilson	Robert	Service Director
Richfield	Baker	Melanie	Service Director
Stow	Miller	Mike	Service Director
Richfield Township	Schall	Jerry	Service Director
Boston Township	Tesmer	Tim	Road Superintendent
Peninsula	Robinson	Roger	Road Superintendent
Boston Heights	Robinson	Chief James	Fire Chief
Hudson	Anderson	Doug	Assistant Superintendent, Service Division

Twinsburg Township	Johnson	Todd	Service Coordinator
Twinsburg	Campbell	Christopher	Public Works Director
Reminderville	Wordell	Deborah	
Northfield Center	Pickering	Charles	Road Superintendent
Sagamore Hills	Cuprak	Bill	Road Superintendent
Macedonia	DeGaetano	Jim	Interim Service Director
Northfield Village	Walters	Jason	Service/Building & Zoning Department Superintendent
Summit County Engineer's Office	Kabbara	Gus	Director of Public Service
Cuyahoga County EMA	Carney	Brandy	Operations Manager
Medina County EMA	Fozio	Christina	Director
Portage County EMA	Barber	Jon	Director
Stark County EMA	Warstler	Tim	Director
Wayne County EMA	Villegas	Joseph	Director
Geauga County EMA	Laney	Brian	Deputy Director of Planning
University of Akron	Willett	Stacy	Professor, Emergency Management
"Concerned Citizen"	Zuch	Fred	
American Red Cross of Summit & Portage Counties	Jaros	Jessica	Director of Emergency Services
Akron Metropolitan Area Transportation Study (AMATS)	Botosan	Victor	Engineering Coordinator

Tab 111 to the Summit County Hazard Reduction and Prevention Plan

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).

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 _____

Summit County Hazard Vulnerability Assessment Criteria

1.) Historical Occurrence

This estimate is based on the historical evidence contained in the Historic Hazard Profile.

2	4	6	8
Few	**Marginal**	**Significant**	**Many**

Few: Between 0 and 10 occurrences in the last 50 years.
Marginal: Between 11 and 20 occurrences in the last 50 years. **Significant:** Between 21 and 30 occurrences in the last 50 years. **Many:** 31 or more occurrences in the last 50 years.

2.) Likelihood of Occurrence

Estimate the likelihood of each type of hazard occurring in Summit County. This estimate is based on the expertise of the Subcommittee and their knowledge of the County and is not tied to historic data.

Assessing the potential threat from a hazard to a specific location could pose planning challenges. Although helpful in an objective analysis, historic data may have limitations. The potential for a threat may exist, but the lack of occurrences yields little or no data, making an analysis difficult. Historic data may not account for changes in land use, which may increase or decrease the vulnerability of a geographic area.

2	4	6	8
Unlikely	**Possible**	**Likely**	**Highly Likely**

Unlikely: It is unlikely to have an incident within the next ten years.
Possible: It is possible to have an incident within the next ten years.
Likely: It is likely to have an incident within the next ten years.
Highly Likely: It is highly likely to have an incident in the next ten years.

3.) Size of Incident

Community Disaster- A large-scale emergency where a single community will operate under existing mutual aid or automatic response system.

County Disaster- When the threat to lives, property, and the environment depletes the resources of a community beyond ordinary practice. May also include mass casualty incidents or those involving two or more political sub-divisions. Summit County has declared a disaster.

State Declared Disaster- A disaster where resources from outside Summit
County are necessary. State declares a disaster in Summit County.

Federal Declared Disaster- A disaster where resources from the federal government are needed. Federal government declares a disaster in Summit County.

2	4	6	8
Community	**County**	**State**	**Federal**

4.) Indirect Damage

This effect has also been called a secondary event. For example, an earthquake could cause a dam to fail, which in turn could cause flooding to homes and businesses. In this example, the earthquake (the original hazard) caused another hazard to occur (Flooding from the dam failure).

2	4	6	8
No Possibility	**Some Possibility**	**Much Possibility**	**High Possibility**

No Possibility: It is determined that this hazard could not initiate another hazard throughout the course of the event.

Some Possibility: There is at least a chance that one or two hazards may be caused as the result of the original event.

Much Possibility: There is a likely chance that 3 or 4 hazards may be caused as the result of the original event.

High Possibility: There is a strong chance that more than 4 hazards can be potentially caused as a result of the original event.

5.) Warning Time

Warning Time has an effect on both the Population and Fiscal Impacts of a hazard. The lead time required to protect lives and property from a hazard varies greatly with each particular event. For example, drought may develop so slowly that there is time to dig a well, but flash floods can occur with no warning at all.

2	4	6	8
Long (over 60 minutes)	Medium (31-60 minutes)	Short (15-30 minutes)	Short-None (Under 15)

6.) Population Impact

Population Impact refers to the number of people affected via deaths and injuries that can be expected if a particular event occurs.

2	4	6	8
No Casualties	Low (1-11)	Medium (12-24)	High (25+)

7.) Fiscal Effects

Refers to the monetary losses suffered in an event. This type of vulnerability can vary greatly between communities based on economic, geographic, demographic, and legal considerations. For example: subdivisions that rigorously enforce floodplain regulations are likely to suffer far fewer fiscal effects than those permitting home and business construction in floodplains.

2	4	6	8
Minimum ($0-10,000)	Low ($10,000-50,000)	Medium ($50,001-100,000)	High (Over $100,000)

8.) Response Time

Response Time for a given hazardous event may vary greatly depending upon resources and capabilities. Response includes actions taken immediately before, during or just after an emergency occurs. Response activities are meant to save lives and minimize property damage. They also seek to reduce secondary damage and make recovery efforts faster and easier.

2	4	6	8
Low (Less than 24 hrs.)	Medium (1-5 days)	High (6-10 days)	Extreme (Over 10 days)

DUE ON OR BEFORE_____

COUNTY OF SUMMIT
EMERGENCY MANAGEMENT EXECUTIVE COMMITTEE HAZARD
REDUCTION AND PREVENTION PROJECT PROPOSAL FORM

GENERAL INFORMATION

Applicant:_____

Address:_____

Contract Person:_____

Phone and Fax Numbers:_____

Email

address:_____

Proposed Project Name:_____

1. List the community (ies), which is the focus of your project. If yours is a Countywide project indicate Summit County.

_____

2. Describe the past history of the current hazard. Include economic losses where available.

_____

_____

_____

3. Describe your project. Include what steps/phases/components it will have to achieve the desired results of reducing or preventing disasters.

_____

_____

_____

_____

4a) What results do you expect when your project is completed?_____

b) What documentation/evidence is available that these steps will generate the desired results?_____

5. From the list of disasters below, indicate the primary hazard (one only) and the secondary hazard (can be more than one), which your project hopes to mitigate.

Flood	Tornado	Drought
Infectious Diseases	Winter Storms	Fire
Hazardous Materials	Transportation	Civil/ Terrorism

Primary hazard_____

Secondary hazard(s)_____

6a) Your project is consistent with which of the Summit County Emergency Management 2003 Objectives?

_____

b) Verify (explain) that your proposed project is not a hazard preparedness or response project._____

_____

7. Using the 2000 Census, estimate the number of persons who will benefit from this project._____

_____

8. Describe the potential impact (e.g. injury and/or economic) and estimate the costs if the primary hazard you listed occurs.

_____

_____

_____

9. Financial Resources:

Local in-Kind Contributions	$_____	_____%
Local Public Revenue	$_____	_____%
Local Private Revenues	$_____	_____%
Other Revenues	$_____	_____%
Subtotal Local Resources	$_____	_____%
EM Funds Requested	$_____	_____%
Total Project Funding	$_____	_____%

FOR OFFICE USE ONLY EVALUATOR WORK SHEET

COUNTY OF SUMMIT
EMERGENCY MANAGEMENT EXECUTIVE COMMITTEE
HAZARD REDUCTION AND PREVENTION
HAZARD PREVENTION PROJECT WORK SHEET

This worksheet is a tool to assist the Summit County Emergency Management Executive Committee to rank Hazard Reduction and Prevention Project in accordance with the Summit County Hazard Reduction and Prevention Plan. 5 points being the best you can score per question. Discretionary points should be based on the additional information provided on the proposal form. Projects will be rank at the discretion of the Summit County Executive Committee.
Rank the project criteria questions by circling your response on the scale below.

Project Title_____

Question 1. Number of Communities _____ Number of Groups _____

Question 2. Number and cost of historical occurrence _____

Question 3. Timeline

Question 4. Project Results and supporting research

Discretionary Points: Based on the above 4 questions, discretionary points may be awarded by the Technical Advisory Committee. These points will be awarded by unanimous agreement of the *Technical Advisory Committee* and approved by the Summit County Emergency Management Executive Committee. Circle the score below.

5=Excellent 4=Good 3=Fair 2=Bad 1=Unacceptable

Question 5. Primary Hazard

5=Winter Storm, Hazardous Materials, Transportation
4=Civil Disturbance, Terrorism
3=Flood, Infectious Diseases,
2=Other

Question 6. How does this project fit into the current objectives set by the Emergency Management Executive Committee?

5=Excellent 4=Good 3=Fair 2=Bad 1=Unacceptable

Question 7. Summit Counties Population based on the 2000 census is 542,899. Ranking below is for Summit County Residents only.

5=Over 440,000 4=330,000 to 440,000 3=220,000 to 330,000
2=110,000 to 220,000 1=less than 110,000

Question 8 Projected Losses from Hazard _____
Question 9 Project Cost _____
Cost Benefit: Project cost vs. projected loss.

5=losses are more than 4 times the project cost
4= losses are more than 3 times the project cost
3= losses are more than 2 times the project cost
2= losses are more than the project cost
1=Project cost is more than project losses

Total Project Points _____

Summit County Hazard Vulnerability & Probability Matrix

The following graphs contain a description/identification of all the natural 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.

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 graph will categorize probability and vulnerability using a 1-5 scale for each of the 31 political sub-divisions. Determinations were made using the following references; Summit County GIS maps, Summit County Historic Hazard Profile, U.S Census, NOAA, National Climatic Data Center, and the Ohio Department of Public Safety website. This document was then sent to each political subdivision (02/19/13 - 02/22/13) for comment, discussion and revision with the final result below:

1- Little to no probability/vulnerability of hazard.
2- Some probability/vulnerability of hazard.
3- Average probability/vulnerability of hazard.
4- Increased probability/vulnerability of hazard.
5-Greatest probability/vulnerability

Jurisdiction	Flooding		Tornadoes		Winter Storm		Landslide		Dam/Levee Failure		Trans-portation		Civil Disturbance	
Akron	P3	V3	P3	V5	P5	V5	P2	V2	P1	V1	P4	V4	P2	V2
Barberton	P4	V4	P3	V5	P5	V5	P1	V1	P2	V2	P2	V2	P1	V1
Bath	P3	V3	P3	V5	P5	V5	P2	V2	P2	V2	P3	V3	P1	V1
Boston Township	P3	V3	P3	V5	P5	V5	P3	V3	P1	V1	P3	V4	P1	V1
Copley	P4	V4	P3	V5	P5	V5	P1	V1	P2	V1	P3	V3	P1	V1
Coventry	P4	V4	P3	V5	P5	V5	P1	V1	P2	V1	P2	V2	P1	V1
Cuyahoga Falls	P4	V4	P3	V5	P5	V5	P3	V3	P2	V2	P2	V3	P1	V1
Fairlawn	P2	V2	P3	V5	P5	V5	P1	V1	P1	V1	P3	V3	P1	V1

Green	P2	V2	P3	V5	P5	V5	P1	V1	P2	V2	P3	V3	P1	V1
Hudson	P3	V3	P3	V5	P5	V5	P1	V1	P2	V2	P2	V2	P1	V1
Macedonia	P2	V2	P3	V5	P5	V5	P1	V1	P2	V2	P3	V4	P1	V1
Munroe Falls	P2	V2	P3	V5	P5	V5	P1	V1	P2	V3	P1	V2	P1	V1
New Franklin	P2	V2	P3	V5	P5	V5	P1	V1	P2	V2	P1	V2	P1	V1
Norton	P3	V3	P3	V5	P5	V5	P1	V1	P2	V2	P3	V3	P1	V1
Stow	P3	V3	P3	V5	P5	V5	P1	V1	P2	V2	P3	V3	P1	V1
Tallmadge	P2	V2	P3	V5	P5	V5	P1	V1	P2	V1	P2	V2	P1	V1
Twinsburg	P3	V3	P3	V5	P5	V5	P1	V1	P1	V1	P2	V2	P1	V1
Northfield Center	P3	V3	P3	V5	P5	V5	P2	V2	P1	V1	P3	V3	P1	V1
Richfield	P1	V1	P3	V5	P5	V5	P2	V2	P1	V1	P3	V3	P1	V1
Sagamore Hills	P1	V1	P3	V5	P5	V5	P3	V3	P1	V1	P1	V2	P1	V1
Springfield	P2	V2	P3	V5	P5	V5	P1	V1	P2	V2	P3	V3	P1	V1
Twinsburg Township	P3	V3	P3	V5	P5	V5	P1	V1	P1	V1	P2	V2	P1	V1
Boston Heights	P2	V2	P3	V5	P5	V5	P3	V3	P2	V2	P3	V3	P1	V1
Clinton	P4	V4	P3	V5	P5	V5	P1	V1	P1	V1	P1	V2	P1	V1
Lakemore	P3	V3	P3	V5	P5	V5	P1	V1	P1	V1	P1	V2	P1	V1
Mogadore	P1	V1	P3	V5	P5	V5	P1	V1	P2	V2	P1	V2	P1	V1
Northfield	P1	V1	P3	V5	P5	V5	P2	V2	P1	V1	P2	V2	P1	V1

Village														
Peninsula	**P2**	**V2**	**P3**	**V5**	**P5**	**V5**	**P3**	**V3**	**P2**	**V2**	**P2**	**V2**	**P1**	**V1**
Reminder-Ville	**P3**	**V3**	**P3**	**V5**	**P5**	**V5**	**P1**	**V1**	**P2**	**V2**	**P1**	**V2**	**P1**	**V1**
Richfield	**P1**	**V1**	**P3**	**V5**	**P5**	**V5**	**P2**	**V3**	**P1**	**V1**	**P3**	**V3**	**P1**	**V1**
Silver Lake	**P3**	**V3**	**P3**	**V5**	**P5**	**V5**	**P1**	**V1**	**P2**	**V2**	**P2**	**V2**	**P1**	**V1**

1- Little to no probability/vulnerability of hazard.
2- Some probability/vulnerability of hazard.
3- Average probability/vulnerability of hazard.
4- Increased probability/vulnerability of hazard.
5-Greatest probability/vulnerability

Jurisdiction	**Earth Quake**		**Coastal Erosion**		***Drought***		**Severe Storms**		**Utility Disruption**		**Land Subsidence**		**Other**	
Akron	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P2**	**V2**		
Barberton	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Bath	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P2**	**V2**		
Boston Township	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P3**	**V3**		
Copley	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Coventry	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Cuyahoga Falls	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P3**	**V3**		
Fairlawn	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Green	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Hudson	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Macedonia	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		

Munroe Falls	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
New Franklin	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Norton	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Stow	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Tallmadge	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Twinsburg	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Northfield Center	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P2**	**V2**		
Richfield	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P2**	**V2**		
Sagamore Hills	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P3**	**V3**		
Springfield	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Twinsburg Township	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Boston Heights	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P3**	**V3**		
Clinton	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Lakemore	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Mogadore	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		
Northfield Village	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P2**	**V2**		
Peninsula	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P3**	**V3**		
Reminder-	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		

Ville														
Richfield	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P2**	**V3**		
Silver Lake	**P1**	**V5**	**P1**	**V1**	**P2**	**V3**	**P5**	**V5**	**P3**	**V3**	**P1**	**V1**		

All prior drought incident's listed in the mitigation plan are categorized by County and do not specify each jurisdiction affected. Thus, each jurisdiction was assigned the same probability and vulnerability