

HAZARDS IDENTIFICATION

A hazards identification for Morgan County has been completed and hazards that could affect all or parts of Morgan County have been identified and analyzed. The results of this identification and analysis were used as the basis for developing the emergency operations plan *and* revealed that:

- A. Annual Events- There are nine annual events in or near Morgan County which result in a significant increase in traffic and population. These are the Malta Flea Market held on the second weekend of May, the Outdoor Extravaganza held the second Saturday in May, the Reinersville Flea Market held on Memorial Day in May and the second weekend in October, the McConnelsville Cruise-In held the second weekend in June, the Fourth of July celebration in McConnelsville, the Civil War Enactment held on the second weekend of July, the Art Show held on the third weekend of July, the Morgan County Fair held the second week of September, and the McConnelsville car show held the third Sunday of September.
- B. Civil Disorders- could affect the county but would probably be limited to the more populated Villages of Malta/McConnelsville and could occur at any time. The greatest number of incidents usually emerge from strikes and/or for labor disputes. Probability for occurrence is low.
- C. Dams -There are nine Class I Dams in Morgan County. Dams having a storage volume greater than 5,000 acre-feet or a height of greater than 60 feet are classified as Class I dams. In addition, when failure of a dam would result in the probable loss of human life or present a serious hazard to health, damage to homes, high value industrial or commercial properties or major public utilities, the dams shall be placed in the Class I category. A map identifying those Class I dams is attached to this Hazard Identification. Probability of recurrence is low.
- D. Drought- would affect the entire county and could result in water shortages with accompanying agricultural damage and loss. Drought is a shortage of water so unusual that it creates destruction or ruin of life or property. Probability for recurrence is high.
- E. Earthquakes - Although most people do not look at Ohio as an earthquake-prone state, at least 120 earthquakes with epicenters in Ohio have been felt since 1771. Ohio is on the periphery of the New Madrid Fault Seismic Zone, an area in Missouri and adjacent states that was the site of the largest earthquakes to occur in historical times in the continental United States. Southeastern Ohio has been the site of at least 10 felt earthquakes with epicenters in the state since 1776. In 1952 an earthquake near Crooksville caused minor to moderate damage. Probability for recurrence is medium.
- F. Energy Emergencies The following utilities provide power to the homes and businesses in Morgan County: AEP, Guernsey-Muskingum Electric, Sprint, Columbia Gas of Ohio, and the National Gas & Oil Corporation, Gasco, Ameritech, GTE. A temporary shutdown of these facilities would seriously affect the lives and property of county residents. Probability for occurrence is medium.
- G. Hazardous Materials incidents could occur anyplace in the county, but the villages where industries that use hazardous materials and areas where transportation routes cross are the most vulnerable. Morgan County has experienced 65 spills involving hazardous material during the past 5 years of which 12 occurred during 1989.
- H. Nuclear Attack Threat is ever present and the reduction of such threat is dependent upon actions of another country that are unpredictable. As long as there are weapons and the capability of delivery of those weapons, the threat will remain. Parts of Morgan County have been designated as a risk area because of the electrical generating plant located in Center Township and Northwest Washington County.

A map of potential risk/target area is attached to this Hazard Identification. Developed by the Federal Emergency Management Agency (FEMA), NAPE is an estimate of the potential physical effects of a nuclear attack on the population of the United States. In the development of this target base, close attention was paid to frequent Soviet references to damage limitation strategies, particularly those involving non-

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military resources of the enemy. Nuclear Attack Planning Base (NAPS) projects fallout levels for Morgan County to be low. Low fallout risk counties are defined as those who have the potential to receive a one-week unprotected radiation dose of less than 3,000 roentgens. However, Center, Windsor, and Meigsville Townships are located in the Medium Direct Effects Risk Area of the Muskingum River Power Plant target aim point(s). (Those points are defined as areas around target aim points, which have the potential to experience blast overpressures from a nuclear weapon detonation(s) of equal to or greater than 2.0 PSI but less than 5.0 PSI. Approximately 3,500 persons (30 percent of the population) reside in the Medium Direct Effect Threat Area and would require evacuation to host areas located in Athens County. Probability of recurrence is low.

- I. Pipelines carrying oil or gas could rupture or explode. Experts agree that the greatest cause of accidents involves a farmer or a contractor digging nearby and accidentally striking the line.

Underground pipelines are dispersed as follows: Tennessee Gas Pipeline Company (Interstate) 3-26”/1-36” lines (Homer, Union, Malta and Bloom); Texas Eastern Gas Pipeline (Interstate) 2-30”/1-36” line (Windsor, Marion, and Center); Columbia Gas of Ohio, Inc. 1-10” line with compressor station vicinity Joy in Marion and Homer; Ohio Oil Gathering (crude) 1-8” line in Homer, Marion and Windsor; Natural Gas and Oil Company 1-6”/1-4” line in Deerfield, Union and York; Columbia Gas of Ohio, Inc., 1-6” line in Deerfield, Union, Penn, Marion, Windsor, York, Morgan, and a compressor station in Malta Township. 7 liquid pipelines accidents have occurred in Marion Township during the last 25 years so the probability of recurrence in Morgan County is medium.

- J. Terrorist Incidents Organized criminal groups do operate within Ohio according to the Buckeye Sheriff’s Association and the President’s Commission on Crime. Without a doubt such criminal organizations intimidate and threaten the freedom of many Ohio residents. The Morgan County Sheriff’s Office maintains a listing of vulnerable areas. Probability for occurrence is high.

- K. Tornado/Severe Storms could occur anyplace in the county. Damage and loss of life could be severe and overwhelm the ability of local responders to address the emergency. Morgan County has not reported any tornado activity or related injuries/deaths since 1916. However, each surrounding county has experienced catastrophic weather with Muskingum reporting 13 tornadoes and 1 death. Probability of occurrence is medium to high.

- L. Winter Storms could affect the entire county at the same time. Morgan County is highly vulnerable to the wide-ranging effects of snowstorms, blizzards, ice storms and severe cold snaps. This type of emergency poses a most difficult response effort because of road conditions, which impede or prohibit vehicle movement. Morgan County received a Presidential Declaration during 1978 and 2003 because of severe blizzard conditions.

- M. Floods continue to be a frequent and damaging natural disaster in Morgan County as a result of the Muskingum River basin. Floods occur when soil and water cannot absorb rain or melting snow, and when water runs off the land in such quantities that it cannot be carried into normal ponds and man-made reservoirs. Morgan County has received 7 Presidential Declarations for damage caused by heavy rains and flooding during the past 20 years. Probability of recurrence is high.

- N. Subsidence/Landslides - Morgan County is an area of very high relief and subject to landslides/rockfalls. The south—central area of the county paralleling the Muskingum River is more susceptible to landslides because of highway excavations. In Windsor Township, SR 376 and Township Road 2 are extremely vulnerable together with exposed surface mining areas of Bloom, Bristol, and Manchester Townships. Sub—surface mining in Bristol and Manchester Townships creates an increasing potential for subsidence. Probability of recurrence is high.

- O. Transportation Incidents are of a serious nature and could result in long—range effects especially when Hazardous Materials are involved. Commercial truck traffic carrying HazMat continues to increase each year. All state and county highways in Morgan County are traversal by HazMat transporters but the two primary arteries that cross the county, SR60 and 78, carrying the majority of those shipments. Three

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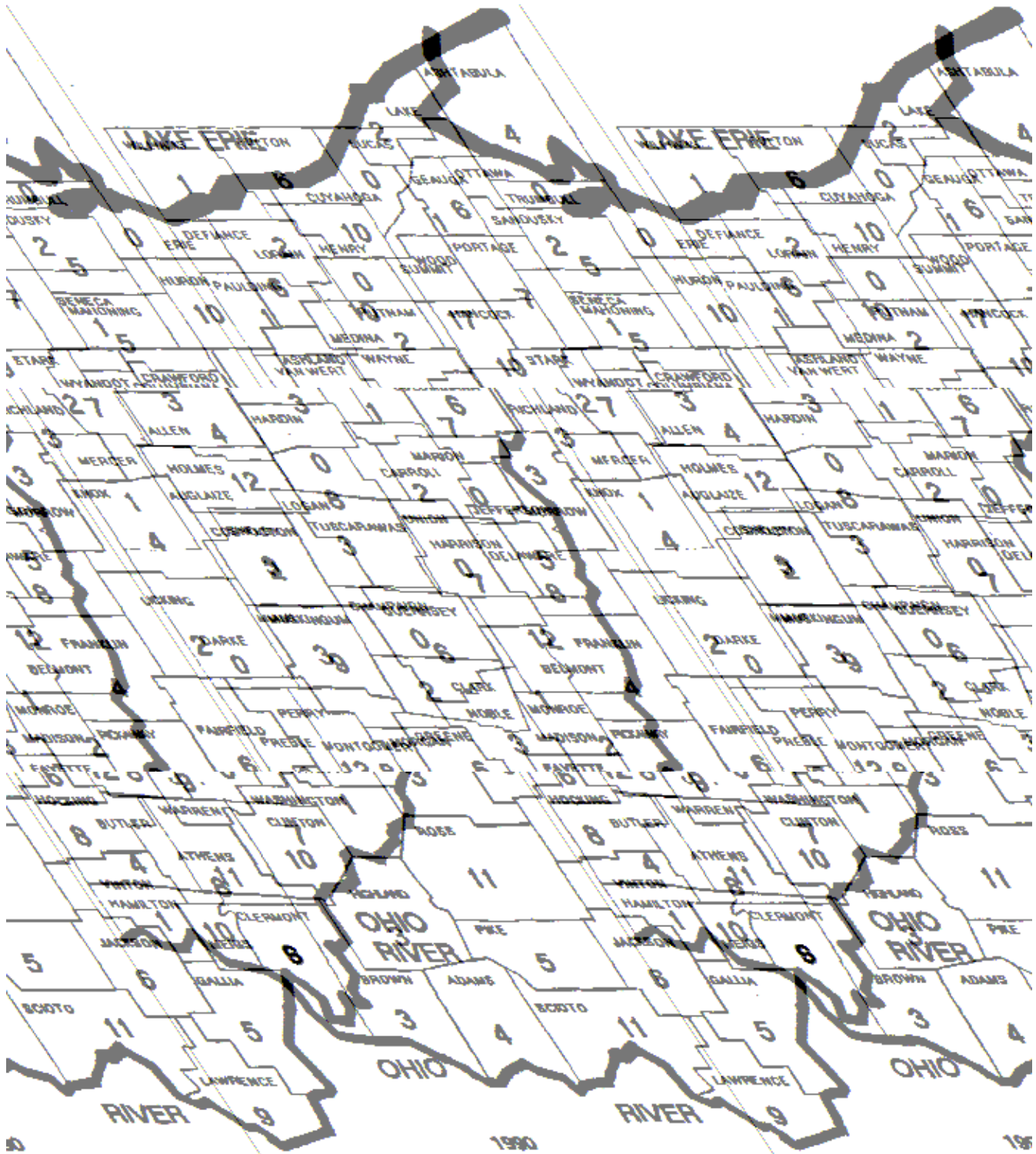
vehicles carrying hazardous loads were involved in traffic crashes during 1989 with 1 reported injury. Probability for recurrence is high.

- P. Water Shortages -Ground water resources of less than 5 gallons per minute make the county vulnerable to water shortages that could occur as a result of drought, contamination, and inadequate systems of delivery. Probability for recurrence is high.

TABS

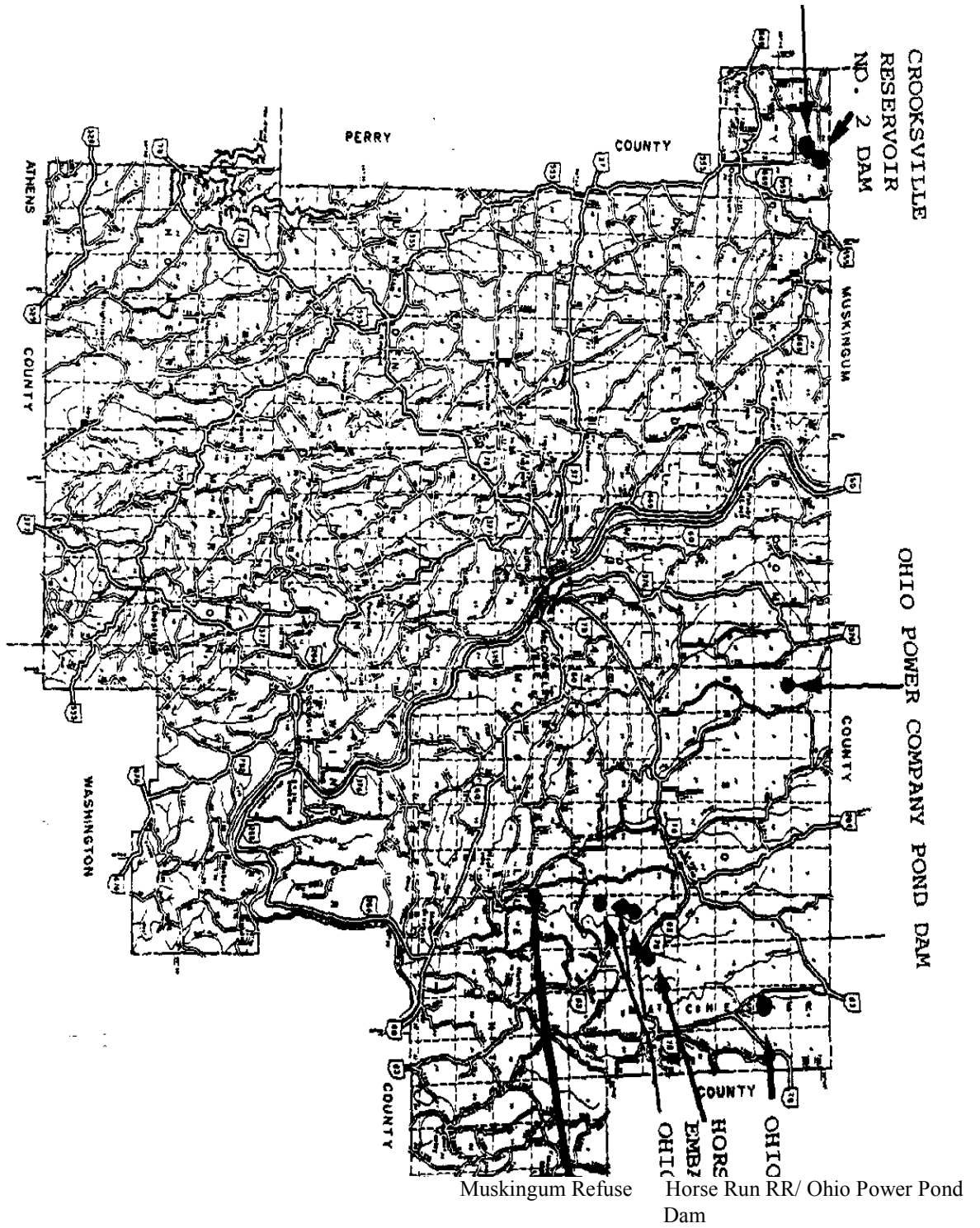
- 1 Map of Class I Dams
- 2 Earthquake Zone Map
- 3 Ohio Tornado Map
- 4 Ohio Flood Prone Areas
- 5 Morgan County Flood Plains
- 6 Hazardous Industries/Storage Sites/Routes
- 7 Nuclear Attack Risk Areas
- 8 Mines in Ohio

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Morgan County Class I Dams
Crooksville Reservoir #1 Dam

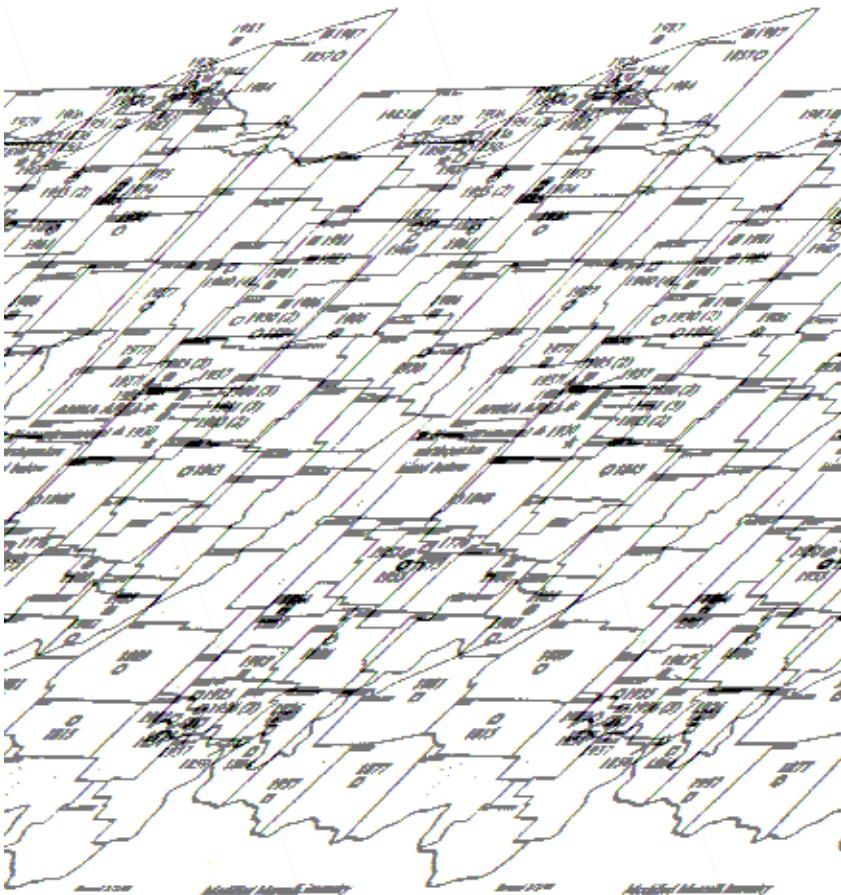
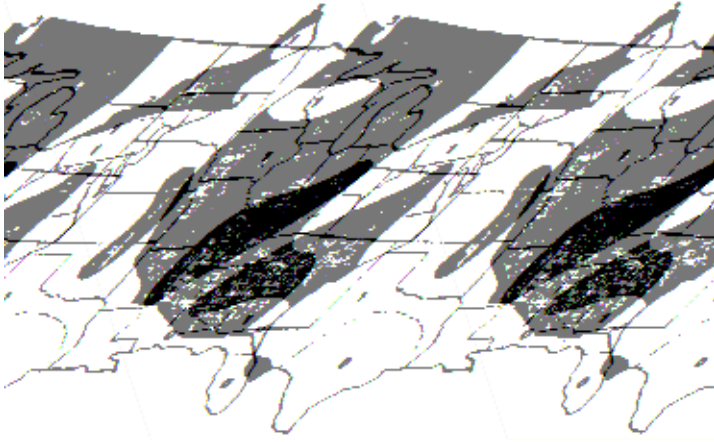
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Tab 2 to Hazard Identification

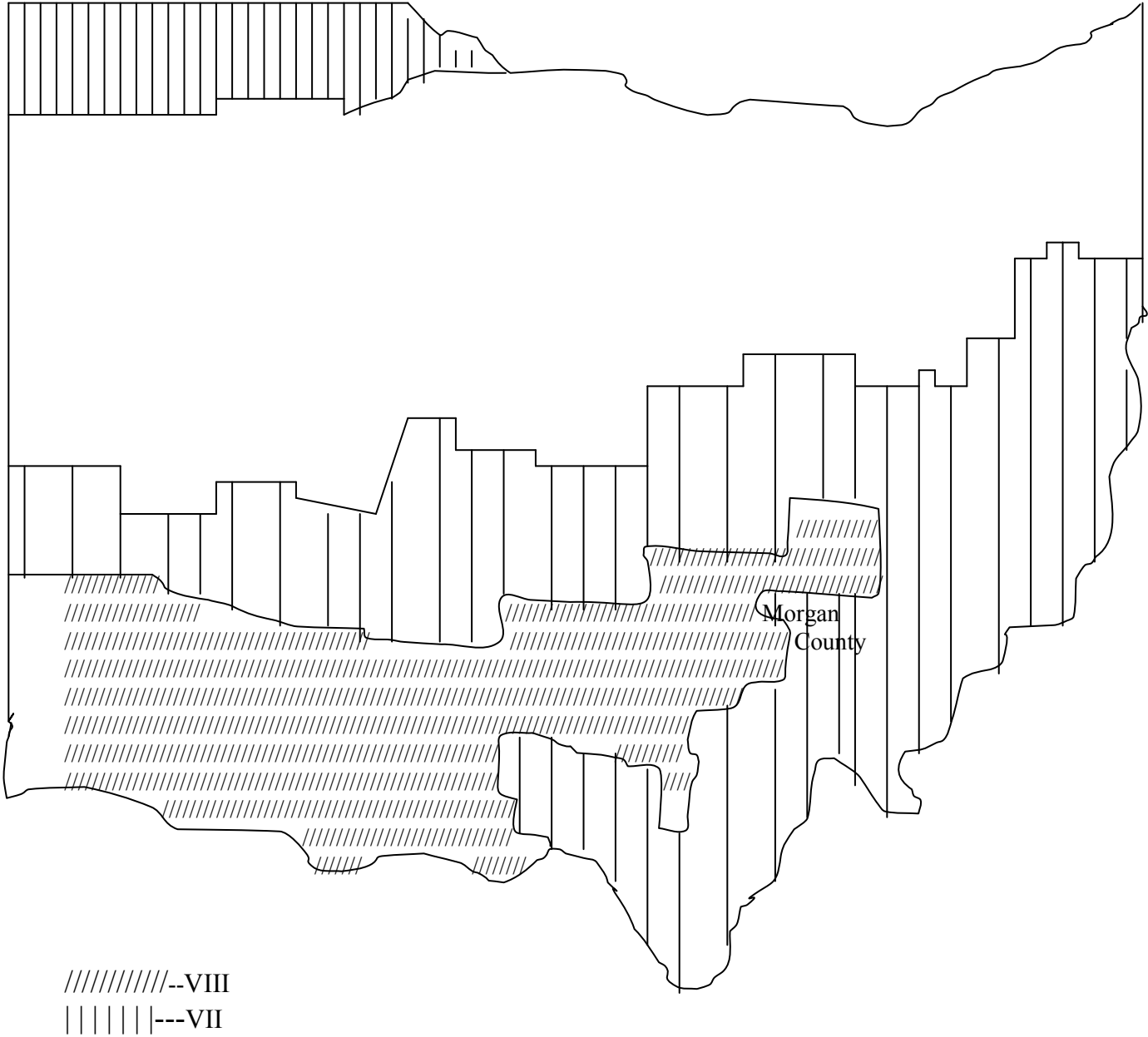
Earthquake Zone



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Earthquake Zone Map

(Estimated damage in Ohio from Earthquake along the New Madrid Seismic Zone)



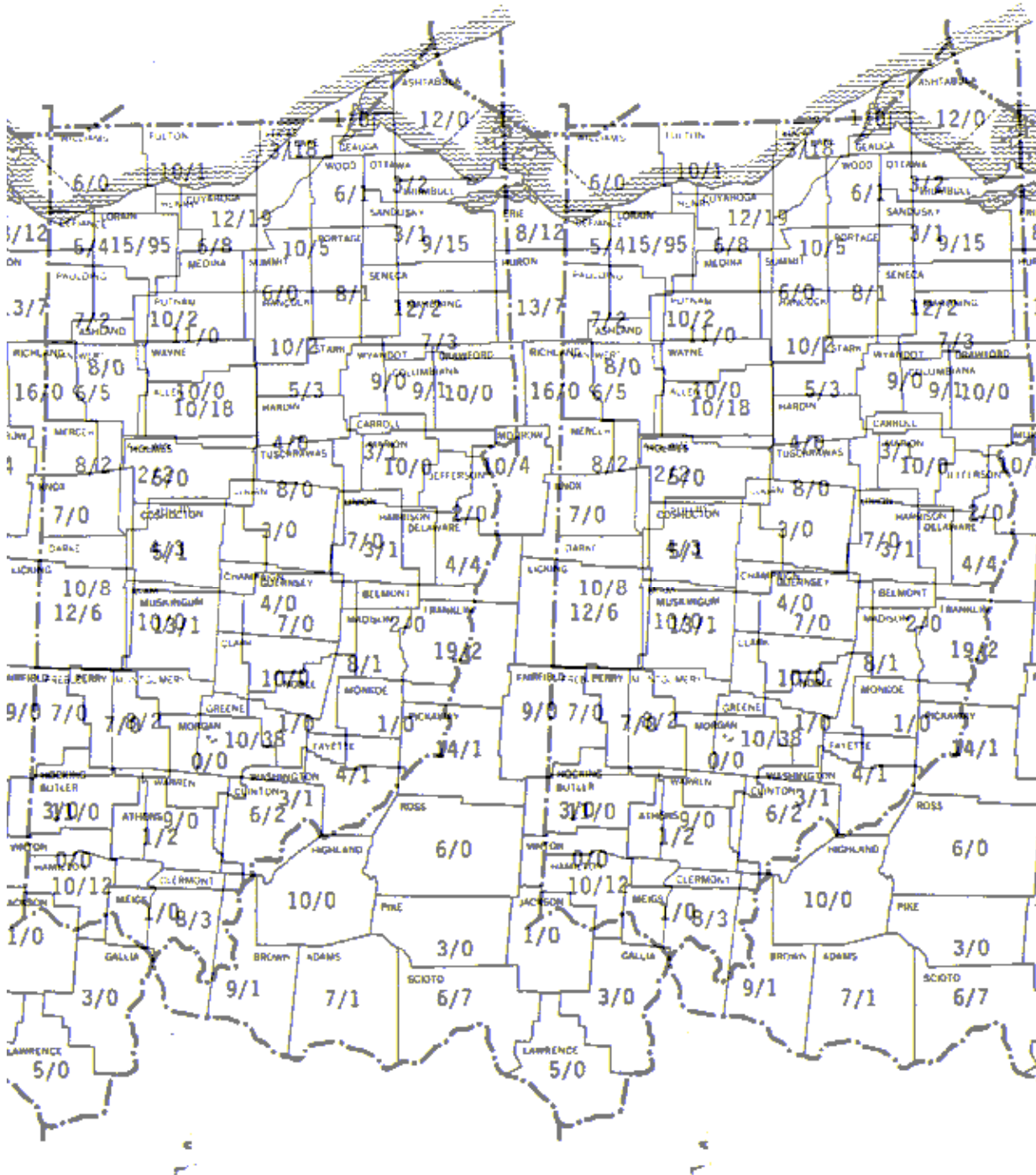
Morgan County is located within Zone 1 of the seismic-risk map of the U.S. Residents of this zone can expect minor damage based on historical trends. Recorded quakes are measured on the Modified Mercalli scale. Measurement from I (barely noticed) to XII (total damage). At Mercalli IV-VI most people will feel the quake as dishes rattle, plaster cracks, and chimneys are damaged.

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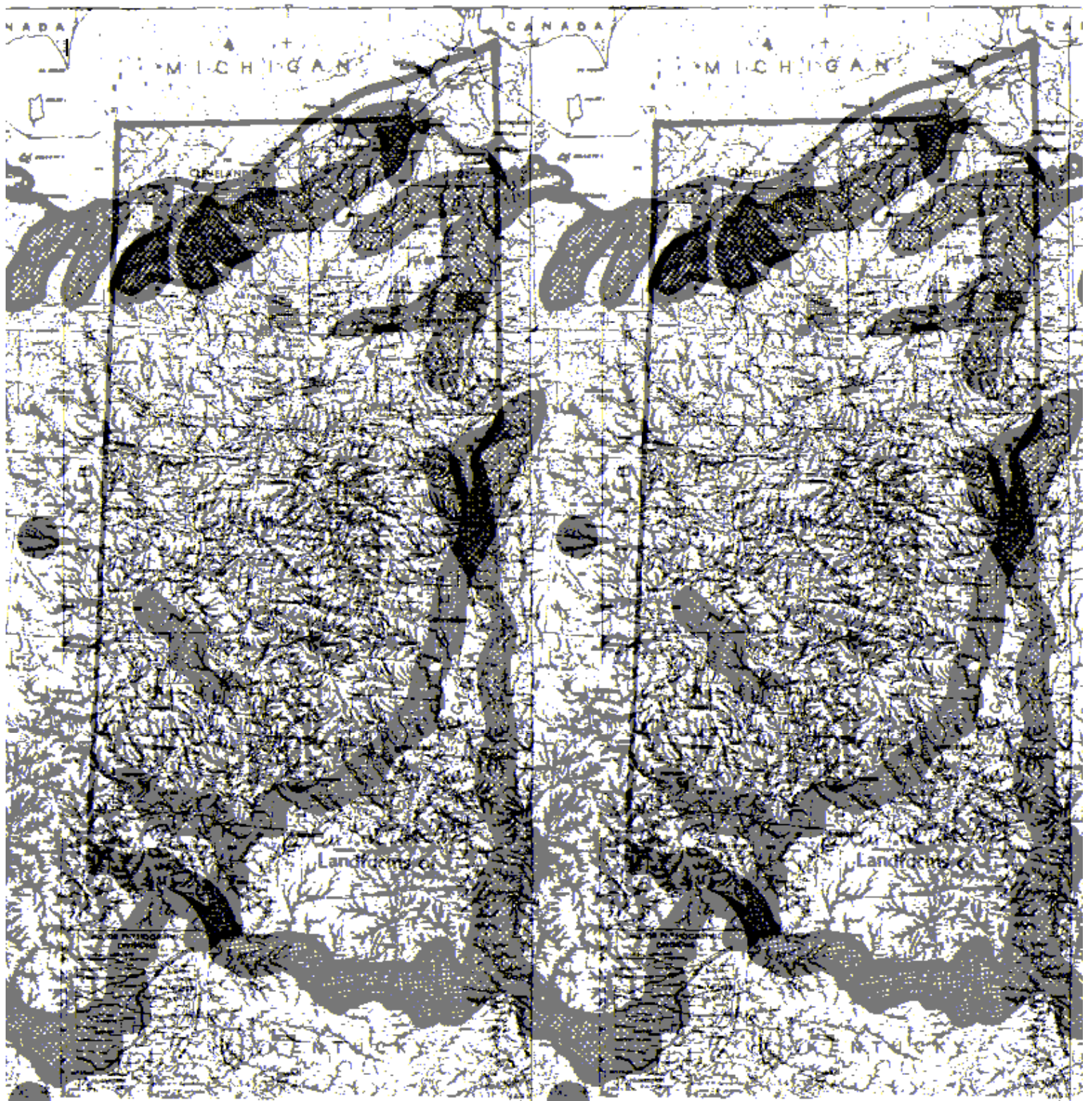
Ohio Tornadoes

Occurrences 1950-89

Deaths 1916-89



Hazard Identification



Ohio Flood Prone Areas

Hazard Identification

ZONE X

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a.

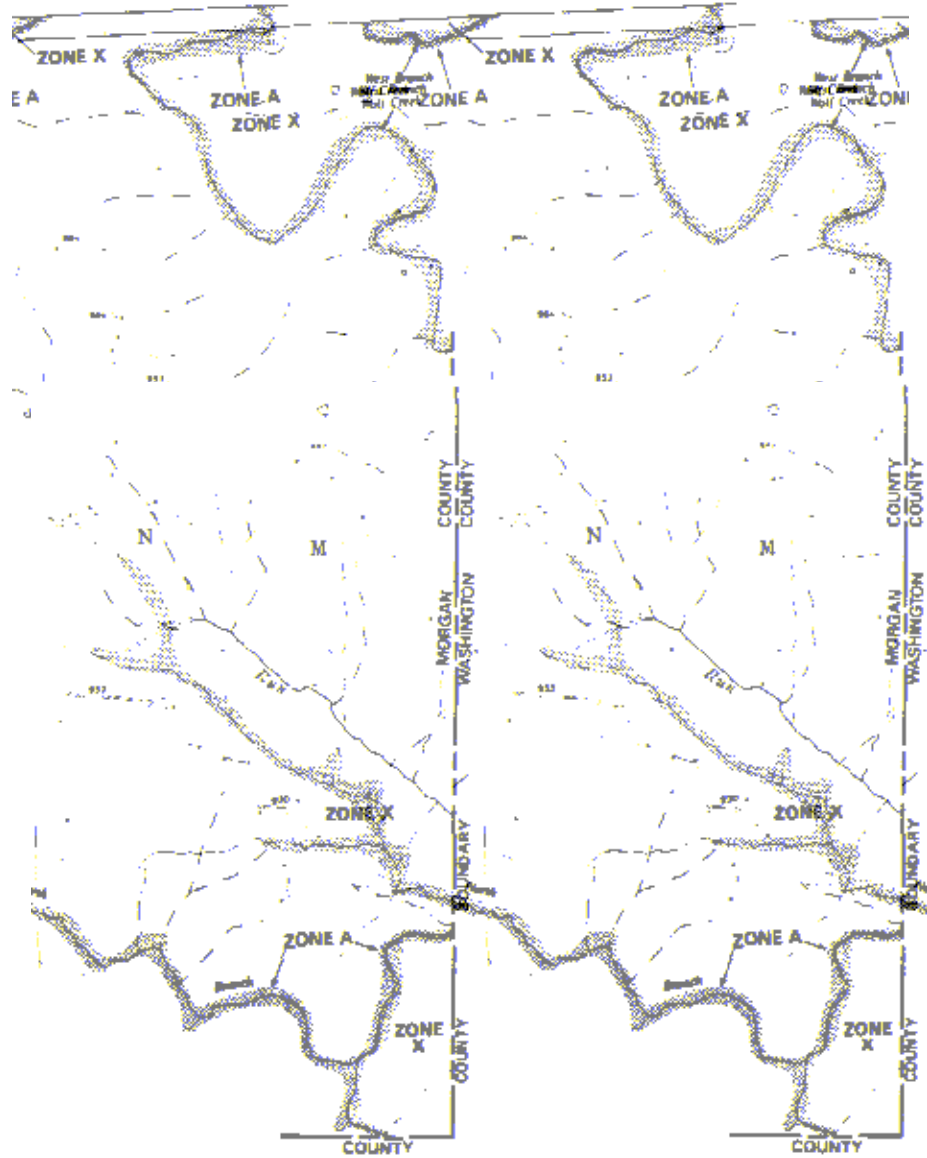
A

N

V

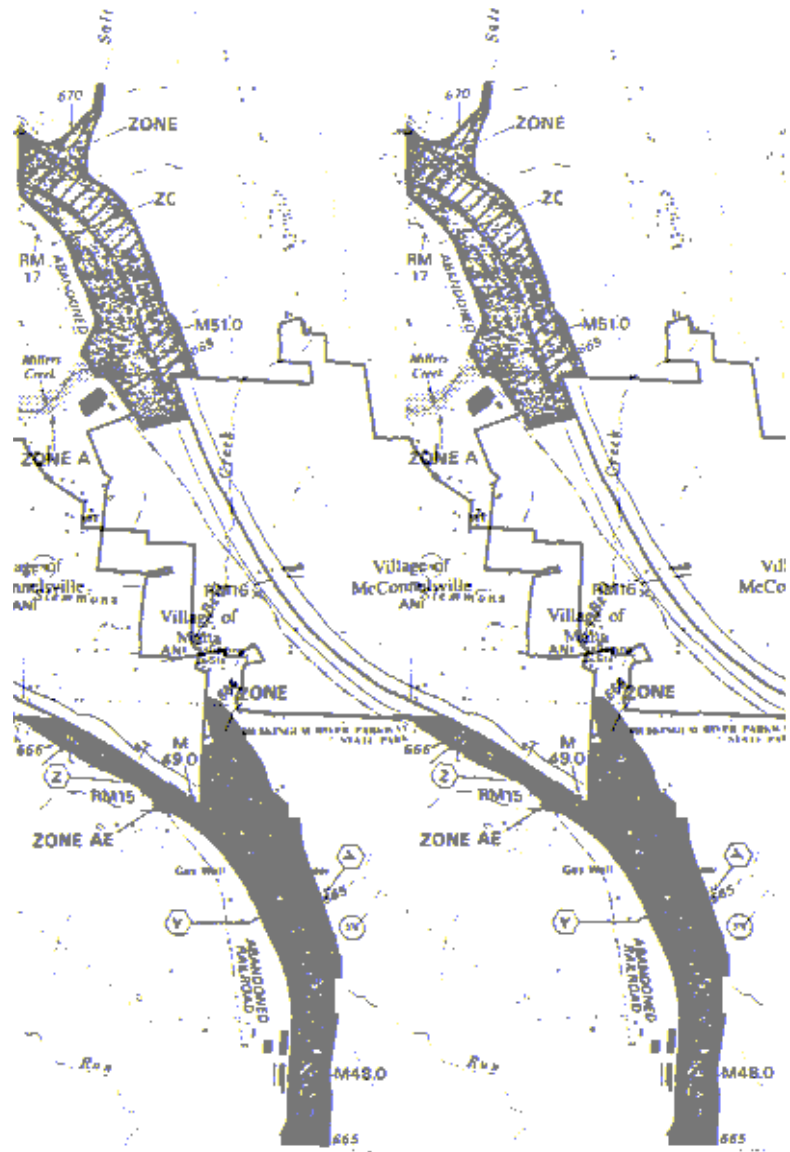
Morgan County Flood Plains
(Village of Chesterhill)

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**Morgan County Flood Plains
(Villages of Malta & McConnellsville)**

Hazard Identification

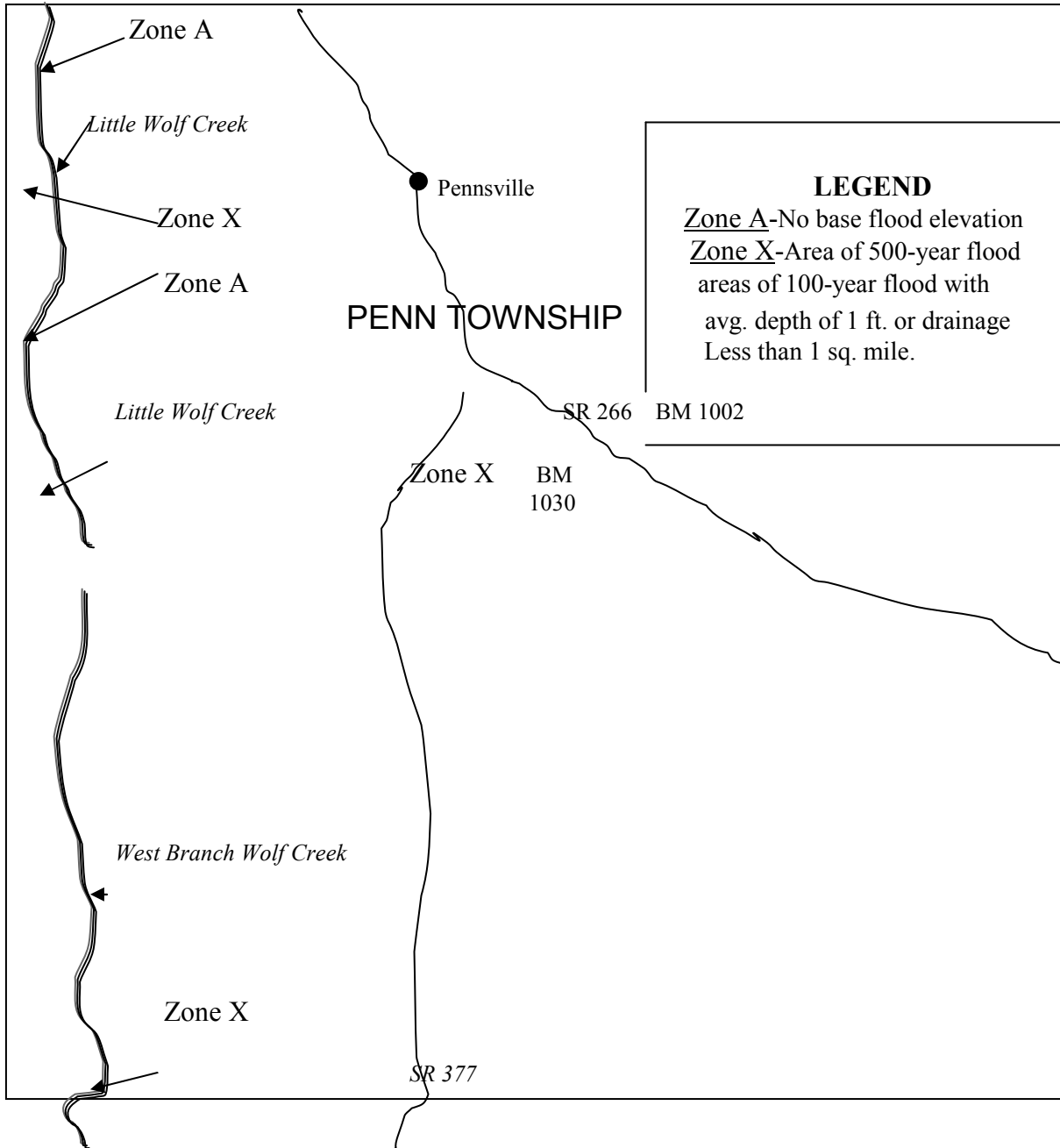


Villages of Malta & McConnelsville



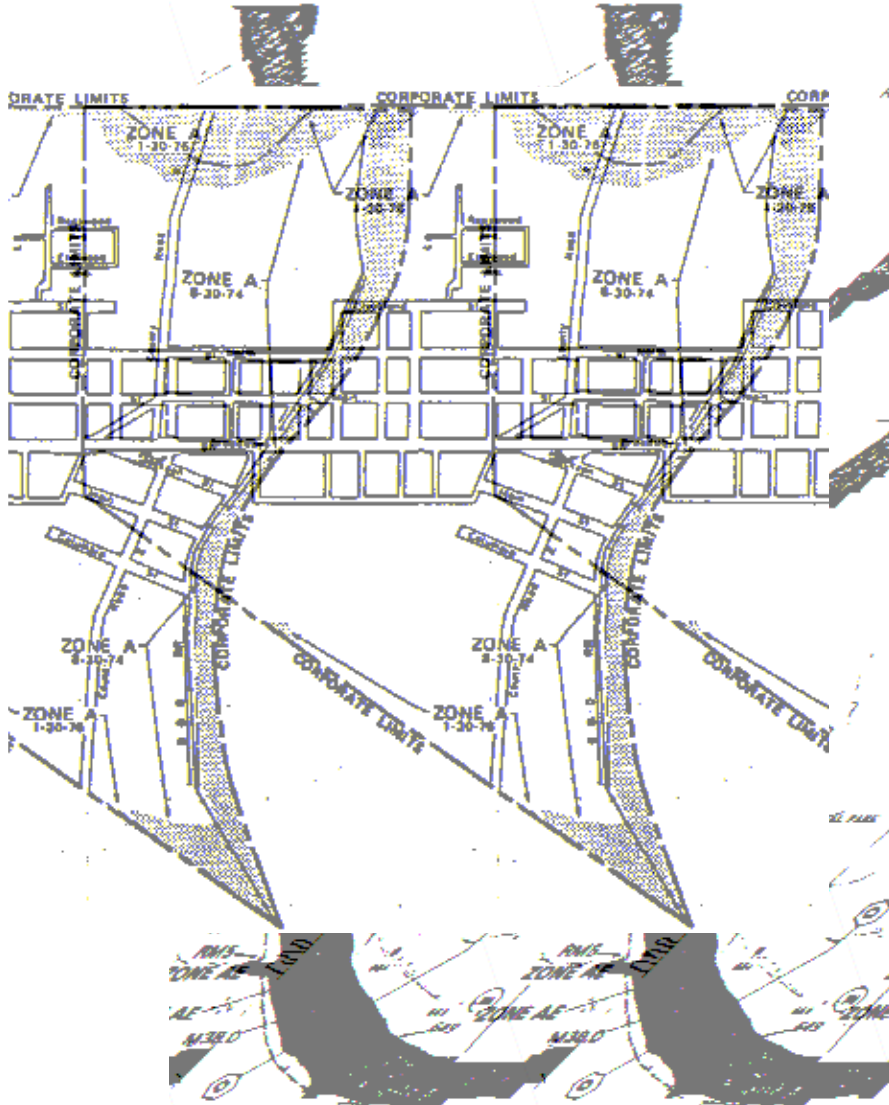
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Morgan County Flood Plains
(Village of Pennsville)



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Morgan County Flood Plains
(Village of Stockport)



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Village of Stockport

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- ◇ HazMat Storage
- Primary HazMat Evacuation Routes
- ▭ Hazard Industries / Storage