

# **HAZARD MITIGATION PRACTICES**

## 7 HAZARD MITIGATION PRACTICES

As required by the DMA2K, this Mitigation Plan summarizes policies, plans, regulations, programs and projects that Adams County has implemented or is planning to implement in the future that affect growth and how the County can achieve and maintain sustainability and disaster resiliency. These administrative controls and activities are separated into six categories as determined by FEMA which are referred to as hazard mitigation activities. The following sections describe these general categories, as well as plans and activities that the communities are implementing now or plan to implement in the future.

### 7.1 Property Protection

Protection measures are usually undertaken by property owners on a building-by-building or parcel basis. They help reduce a building's susceptibility to flood damage.

#### 7.1.1 Acquisition

Acquisition of a property and removing any structures eliminates the potential for harm to residents and businesses. After any structures are removed, the land is usually converted to public use, such as a park, or allowed to revert to natural conditions.

#### 7.1.2 Relocation

Relocation is moving a building to higher ground, either within the same property boundary or to a separate property. The building should always be moved to an area not susceptible to flooding.



#### 7.1.3 Retrofitting

Retrofitting a flood-prone structure entails installing flood protective measures on a specific structure or group of structures. Some of the more common examples of retrofitting and floodproofing are elevating a flood-prone building above the flood level, creating barriers around a flood-prone structure, dry floodproofing a structure to make it water-tight and wet floodproofing to intentionally allow flood waters to enter and yet reduce water pressure on the structure.

Retrofitting structures for other hazards is also possible. Structures affected by high winds can possibly be mitigated by securing a roof structure with adequate fasteners or tie downs to mitigate damage that may occur. Other retrofits are to strengthen garage doors, windows and other large openings. For tornadoes, constructing underground shelters or safe rooms can save lives. Burying power lines is a retrofit measure that addresses the winds from tornadoes, thunderstorms and ice that accompany winter storms.

Based on available information provided by various agencies, Adams County has not implemented any property protection measures within the County.

## **7.2 Preventive Measures**

### **7.2.1 Planning and Zoning**

#### **7.2.1.1 Comprehensive Planning**

Comprehensive plans and land use plans specify how a community should be developed (and where development should not occur). Through these plans, uses of land can be tailored to match the land's hazards. Comprehensive planning reflects what a community wants to see happen to their land in the future. A comprehensive plan can look 5, 10, or even 20 years into the future to help a community plan and shape how they envision their community. However, planning is only one part of the puzzle and usually has limited authority. Tied with zoning, comprehensive planning can be more effective.

#### *Adams County Comprehensive Land Use Plan*

As of 2008, the Adams County Commissioners are currently looking into the development of a Land Use Plan.

#### **7.2.1.2 Zoning Ordinance and Building Codes**

A zoning ordinance regulates development by dividing the community into zones or districts and establishing the type of development allowed within each district. The floodplain can be designated as one or more separate zoning districts in which development is prohibited or allowed only if it is not susceptible to flood damage. Some districts that are appropriate for floodplains are those designated for public use, conservation or agriculture. Zoning works best in conjunction with a comprehensive plan or “road map” for future development and building codes.

Building codes provide some of the best methods of addressing all the hazards in this plan. They are the prime measure to protect new property from damage by high winds, tornadoes, earthquakes, hail, and winter storms. When properly designed and constructed according to code, the average building can withstand the impact of most of these forces.

According to data gathered in mid 2008, Adams County unincorporated does not utilize zoning. However, Wayne Township has enacted Township Rural Zoning.

The State Building Code is enforced in Adams County for commercial properties whereas residential buildings have no enforced building codes.

### **7.2.1.3 Open Space Preservation**

Open space preservation is a technique that can be used to not only preserve floodplains but to preserve lands that may be crucial to controlling runoff that adds to flood problems. Existing undeveloped areas can be preserved as open space through zoning ordinances. Lands that ought to be set aside as open space but are already being put to other uses can be converted to public ownership (acquisition) or to public use (easement). Once the land is owned by the county, municipality, or state, buildings and other development that are subject to flood damage can be removed or prohibited. Open space lands and easements do not always have to be purchased outright. Developers can be required to dedicate land to the public for a park and/or to provide easements for flood flow, drainage, or maintenance.

According to the ODNR's Division of Natural Areas and Preserves, there are five nature preserves located in Adams County:

The Adams Lake Prairie Nature Preserve, 26 acres, is located within Adams Lake State Park, one mile north of West Union on S.R. 41.

The Robert A. Whipple Nature Preserve, 270 acres, is located in the southern part of the county on the east side of S.R. 247, approximately one mile north of U.S. Route 52.

The Chaparral Prairie Nature Preserve, 67 acres, is located about three miles northwest of West Union off of Hawk Hill Rd.

The Davis Memorial Nature Preserve, 168 acres, is located a few miles southeast of Peebles on Davis Memorial Rd.

The Johnson Ridge Nature Preserve, 208 acres, is located 3.5 miles north of West Union on Unity Rd, east of S.R. 247.

### **7.2.1.4 Subdivision Regulations**

Subdivision Regulations govern how land will be divided into individual lots. These regulations set construction and location standards for the infrastructure built by the developer, including roads, sidewalks, utility lines, storm sewers, storm water retention or detention basins and drainage ways.

According to data gathered in mid 2008, Adams County unincorporated as well as all of the incorporated jurisdictions have not incorporated subdivision regulations into their planning process.

### **7.2.1.5 Manufactured Homes**

Previously, the location and installation of manufactured and mobile homes were regulated at the local level of government, with the construction and fabrication standards being set by the United States Department of Housing and Urban Development (HUD). All mobile type homes constructed after 1976 must comply with HUD's National Manufactured Home Construction and Safety Standards. These standards apply uniformly across the country and it is illegal for a local unit of government to require additional construction requirements.

The installation of manufactured homes in Adams County is regulated by the existing State of Ohio regulations.

### **7.2.1.6 Floodplain Regulations**

Communities that adopt and enforce a floodplain management ordinance, to regulate new and existing development within the floodplains can significantly reduce the effects of flood damage. Communities typically adopt minimum standards that are recommended by FEMA. The objective of these regulations is to ensure that development will not aggravate existing flooding conditions and that new buildings will be protected from flood damage. Zoning and open space preservation work to keep damage-prone development out of hazardous or sensitive areas while floodplain development regulations impose construction standards on what is allowed to be built in the floodplain.

Adams County is a participant in the National Flood Insurance Program (NFIP), so they are required to adopt and administer floodplain management regulations that meet the minimum federal criteria. The Floodplain regulations were adopted by Adams County on October 29, 2001.

### **7.2.1.7 Drainage Regulations**

In order to protect a county's natural resources a community can implement regulations such as County Water Management and Sediment Control (WMSC) Regulations. The purposes of these regulations are to protect the county's water resources by ensuring that the proper storm water and erosion and sediment control measures are in place. Erosion and sediment control measures are called Best Management Practices (BMPs), and when installed and maintained correctly, they help prevent soil from leaving the site. Storm water control measures ensure that the volume of storm water runoff remains the same as before development occurs.

Some examples of what can go into a County WMSC Ordinance are as follows:

- Submit a WMSC Plan for proposed commercial, industrial, or residential development sites on parcels greater than five acres.
- Submit an abbreviated plan for sites on parcels less than five acres and part of a larger plan of development.
- Submit a plan for residential dwellings only if a village, township, or city zoning requires them to do so. They must check with the appropriate community for this information.
- Comply with the regulations whether or not a plan is required. All county residents are responsible for being familiar and complying with the regulations.

A designated agency should inspect sites to ensure that the regulations are being followed correctly. The designated agency should also work diligently to review plans and perform site inspections to ensure that these erosion and sediment control measures are in place.

There are no drainage regulations established in Adams County. NPDES regulations are currently not applicable due to the small population size.

## **7.3 Natural Resource Protection**

### **7.3.1 Riparian Buffer**

Riparian area refers to the vegetated area next to a watercourse often thought of as the floodplain and its connected uplands. Riparian buffers can protect water resources from nonpoint source pollution and provide bank stabilization, flood storage and aquatic wildlife

habitat. They can be a natural resource management tool used to limit disturbance within a certain distance of a water course to maintain streamside vegetation. Some communities in the State of Ohio have proceeded to adopt riparian buffer overlays and zoning ordinances to reap the benefits of such protection.

Currently, zoning ordinances pertaining to riparian buffer protection have not been enacted in Adams County.

### **7.3.2 Urban Forestry**

Eighty percent of Ohioans live and/or work within urban areas. The quality of life for them and their families is dependent upon the urban environment. Healthy trees enhance this environment by promoting clean air and water, increasing property values, reducing erosion and storm water runoff, providing wildlife habitat, moderating temperature, lessening energy demands, and offering year-round enjoyment.

Ohio's Urban Forestry Program was created in 1979 within the ODNR to promote trees and other vegetation as tools to enhance the quality of life within cities and villages. The purpose of the Urban Forestry Program is to provide community officials and allied agencies with the organizational and technical ability to effectively manage the trees along streets, within parks, and on public grounds. Through a statewide network of regional urban foresters, the program helps communities manage their urban forest resources to meet their local needs. Trees are particularly subject to damage by tornadoes, wind, ice and snow storms. Downed trees and branches break utility lines and damage buildings, parked vehicles, and anything else beneath them. An urban forestry program can reduce the damage potential of trees. A properly written and enforced urban forestry plan can reduce liability, alleviate the extent of fallen trees and limbs caused by wind and ice build-up, and provide guidance on repairs and pruning after a storm. Such a plan helps a community qualify to be a Tree City USA.

Ohio has been the Tree City USA national leader for the past 26 years. There are 249 Tree Cities USA in Ohio. Counties are not eligible for the program but can implement the credited activities.

In Adams County, no villages are members of the Tree City USA program.

### **7.3.3 Flood Compensation Banking**

A flood compensation bank is a detention basin that is used for floodplain encroachment compensation or for flood storage in which the basin's volume may be purchased to mitigate the effects of new development. A development may purchase storage volume from a bank to compensate for floodplain encroachment or to satisfy storm water detention requirements provided the basin is within the appropriate zone of influence.

Currently, flood compensation banking requirements have not been enacted in Adams County.

### **7.3.4 Watershed Planning Efforts**

Cities and counties carry out many of the decisions that result from watershed planning efforts. Participation and cooperation with state agencies is also an important component to quality watershed planning. Currently, a watershed management plan for Adams County has not been enacted.

cover is 50%. In Adams County, announcements concerning the amount of funding available are made annually.

*Wildlife Habitat Incentives Program (WHIP)* Wildlife Habitat Incentives Program (WHIP) is a voluntary cost-share program for people who want to improve terrestrial and aquatic habitat for fish and wildlife on private lands. The program provides technical and financial assistance for implementing conservation plans to improve wildlife habitat. Emphasis is placed on warm-season grassland habitat and wetland habitat creation. The program uses 5 to 15 year cost-share agreements and cost share rates are 75% for establishment of practices. Landowners may chose to bid-down their cost share rate to improve chances of funding. Typical landowners that participate in this program own 20 to 30 acres of land. In Adams County, there is a continuous enrollment period for WHIP and applications are ranked and funded once per year, on a statewide funding availability basis.

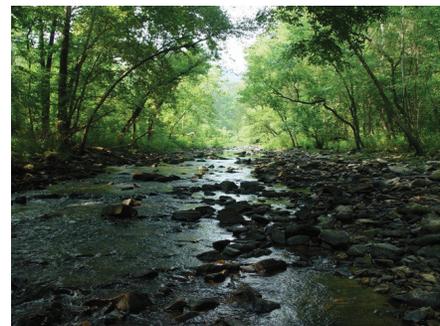
#### **7.3.4.2 Watershed Protection Projects**

Watershed projects promote understanding of the full range of physical, chemical and biological stressors in a watershed that may be affecting aquatic life and human health. When all significant sources and stressors are understood, agencies are better able to focus on those controls that are more likely to produce measurable improvements in ecosystem health. Administratively, watershed projects can be highly efficient. They encourage organizations to focus staff and financial resources on prioritized geographic locations and facilitate coordination of resources among interested parties. Also, they provide local agencies with an opportunity to take leadership roles in ecosystem protection. Individual watershed projects can supply critical information to a state's major river basin plans, for example, as new models are developed and new watershed-level management approaches are tested. Finally, watershed projects encourage local agencies and citizen groups to get involved, either by participating in state or federal projects or by starting their own watershed projects.

There are plans to upgrade some village sewage systems in Adams County to TMDL rules.

#### **7.3.4.3 Watershed Groups**

Scioto Brush Creek is recognized as one of Ohio's cleanest streams, providing habitat for a great diversity of plants and animals. Estimates figure as many as 30 rare plant and animal species live in or near the stream, an indicator of a healthy watershed. The 'Friends of Scioto Brush Creek' is an active watershed group that focuses on maintaining and improving the water quality of Scioto Brush Creek.  
( <http://www.friendsofsciotobrushcreek.org> )



### **7.4 Emergency Services**

Emergency services protect people before, during, and after a disaster. A good emergency management program addresses all hazards, natural and man-made. It involves the active participation and involvement of all county departments and municipalities. Emergency services include:

- Emergency Notification
- Warning

#### 7.3.4.1 Habitat Restoration

In urbanized watersheds, some stream and/or rivers suffer the effects of increased erosion and water quality problems because of the amount of development that is occurring in a given area. Bioengineering techniques can help prevent further degradation and also provide water quality and habitat benefits.

Biotechnical practices use vegetative or other natural materials to achieve stream management objectives, usually erosion control. One of the chief advantages of biotechnical practices is that they help restore natural stream features, like in-stream habitat and stream bank vegetation. The materials used for biotechnical practices are generally less expensive than for more traditional approaches, but installation is more labor intensive and they may require more frequent maintenance.

The Adams County SWCD currently promotes several habitat restoration programs and projects as described in the following paragraphs.

*Scioto River Watershed Conservation Reserve Enhancement Program (CREP)* The Scioto River Watershed Conservation Reserve Enhancement Program (CREP) is a farmer/landowner implemented agricultural environmental stewardship program. The goal is to create 70,000 acres of filter strips, riparian buffers, wildlife habitat, wetlands and tree plantings to reduce sediment and nutrient runoff into the river and its tributaries. As a result, it will improve biodiversity in the entire watershed. Landowners enrolling cropland or marginal pastureland will receive 15 annual rental payments from United States Department of Agriculture (USDA) and cost-share for installation and maintenance of eligible practices. Enrollment is on a continuous basis, as funding permits. Eligible land must be in the Scioto River Watershed and meet basic eligibility criteria for USDA's Conservation Reserve Program. The Adams County SWCD is actively involved in the conservation efforts of the Scioto CREP.

*Continuous Conservation Reserve Program (CCRP)* The Continuous Conservation Reserve Program (CCRP) is for landowners with cropland planted to commodity crops. The CCRP helps farmers establish grassed waterways, vegetative filter strips, water control structures, shallow water wetlands and riparian forest buffers. The cost share pays for approximately 90% of the establishment costs. In order to become eligible, the land must have been cropped four of the past six years. In Adams County, there is a continuous enrollment period for CCRP and applications are ranked and funded once per year, on a statewide funding availability basis.

*Conservation Reserve Program (CRP)* The Conservation Reserve Program (CRP) provides technical and financial assistance to eligible farmers and ranchers to address soil, water and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State and tribal environmental laws, and encourages environmental enhancement. CRP is administered by the Farm Service Agency, with the National Resource Conservation Service (NRCS) providing technical land eligibility determinations, conservation planning and practice implementation. The CRP reduces soil erosion, protects the ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat and enhances forest and wetland resources. The program encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices. The cost share for establishing vegetative

- Response
- Evacuation and Sheltering
- Post-Disaster Recovery and Mitigation

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### 7.4.1 Emergency Notification

The first step in responding to a hurricane, flood, tornado, or other natural hazard is knowing when weather conditions are such that an event could occur. With a proper and timely threat recognition system, adequate warnings can be disseminated.



Other agencies and departments will be notified as the situation dictates.

- American Red Cross
- Hospitals
- Utilities
- OEMA
- Health Department
- Elected Officials
- County Engineer

### 7.4.2 Warning

After there is a potential hazard recognized following steps must be taken to notify the public of its possible onset. Early and specific warnings allow more people the ability to set protection procedures in motion.

The NWS issues notices to the public using two levels of notification:

*Watch:* conditions are right for flooding, thunderstorms, tornadoes or winter storms.

*Warning:* a flood, tornado, etc. has started or has been observed.

A more specific warning may be disseminated by the community in a variety of ways. The following are the more common methods:

- Commercial or public radio or TV stations
- The Weather Channel
- Cable TV emergency news inserts
- Telephone trees/mass telephone notification

- National Oceanic and Atmospheric Administration (NOAA) Weather Radio
- Tone activated receivers in key facilities
- Outdoor warning sirens
- Sirens on public safety vehicles
- Door-to-door contact
- Mobile public address systems
- E-mail notifications

The Director of the Ohio Department of Public Safety is responsible for operating the state-level portion of NWS. The Ohio primary warning point is located at the Ohio State Highway Patrol Headquarters and at the State EOC on Dublin-Granville Road in Columbus. There are 23 warning points in various parts of the state.

Upon receipt of a NWS warning, the OSP, District # 8 Headquarters, Georgetown, Ohio will notify the Adams County Sheriff. All warnings will also be sent over the Law Enforcement Automated Data System (LEADS) to all law enforcement agencies in the warning area.

The Adams County Sheriff's office and Communications Center will receive warnings regarding severe weather, technological hazards, dam failures, widespread fires and other emergencies affecting the county. The Adams County Communications Center will notify:

- Emergency Management Director
- Local law enforcement agencies
- Local fire departments
- County Commissioners

The general public will be warned by:

- Sirens
- Emergency Alert System
- Horns, Mobile PA Systems
- Local Radio and Television Stations
- NOAA Weather Radio (National Weather Service)
- Telephone
- Newspapers

There are currently 22 sirens located throughout Adams County. The sirens are used primarily for tornado warnings, but can be used for other events, such as a hazardous material spill. When the National Weather Service issues a Tornado Warning for Adams County, the Adams County Communications Center will activate them.

The Emergency Alert System is the use of existing radio and TV stations to provide federal, state, and local governments with means of disseminating warnings and communicating information to the general public. EAS is a digital system capable of automated operation.

Emergency Alert System stations in the Southwest Region serving Adams County include WLW, WCPO, WKRC and WXIX in Cincinnati, Ohio. WAOL and Ripley, Ohio-WAXZ are located in Georgetown, Ohio.

NOAA Weather Radio is a nationwide network of radio stations broadcasting continuous weather information direct from a nearby National Weather Service office. It broadcasts National Weather Service warnings, watches, forecasts and other hazard information 24 hours a day.

The local station that provides continuous public information about emergencies is KIG86, which broadcasts from Columbus, Ohio.

### **7.4.3 Response**

The protection of life and property is the most important task of emergency responders. Concurrent with threat recognition and issuing warnings, a community should respond with actions that can prevent or reduce damage and injuries. Typical actions and responding parties include the following:

- Activate the emergency operations center (emergency preparedness)
- Close streets or bridges (sheriff or public works)
- Shut off power to threatened areas (utility company)
- Pass out sand and sandbags (public works)
- Hold children at school/releasing children from school (school superintendent)
- Open evacuation shelters (American Red Cross)
- Monitor water levels (engineering)
- Establish security and other protection measures (police/sheriff)

#### **7.4.3.1 Emergency Operations Plan**

An EOP ensures that all bases are covered and that the response activities are appropriate for the expected threat. These plans are developed in coordination with the agencies or offices that are given various responsibilities.

*The Adams County All-Hazard EOP* was developed pursuant to Section 5502.271 of the Ohio Revised Code and by the resolution made by the Adams County Commissioners in December 1990 which assigned emergency responsibilities. The most recent update is from 2007. The plan was jointly developed by the Adams County EMA Director, in cooperation with representatives from various departments and jurisdictions that have been tasked with emergency responsibilities. The first step in the planning process identified each hazard that is a possible threat to the County and its incorporated jurisdictions that have been tasked with emergency responsibilities. The second step assessed the resources of each governmental entity. The third step was to develop response procedures based on those resources.

The Adams County Emergency Operations Plan is the underlying document for the protection of health, safety, and property of the public in Adams County. It is the principle guide for the agencies of Adams County and other government entities in mitigating emergencies and disasters. It is intended to facilitate multiple-agency and multi-jurisdictional coordination, particularly between local, state, and federal agencies in emergency management

### **7.4.4 Evacuation and Sheltering**

#### **7.4.4.1 Evacuation**

Components of a successful evacuation:

1. Decision to evacuate
2. Notification to Evacuate
3. Determining the Evacuation Area
4. Transportation

5. Security
6. Re-Entry

According to *Adams County All-Hazard EOP*, Adams County EMA, law enforcement agencies, and Fire Departments determine the need and order evacuations during emergencies. When time allows, all evacuation orders will be coordinated with the chief executive officer of the affected jurisdiction before they are released to the public. In addition, maps of evacuation routes are illustrated in the introduction of the EOP and files entitled *Special Needs Populations* that list facilities such as nursing homes, schools and prisons are kept with each jurisdiction in the County.

#### **7.4.4.2 Shelter**

Shelter is required for those who cannot get out of harm's way. Typically, the ARC will staff a shelter and ensure that there is adequate food, bedding and washing facilities. Shelter management is a specialized skill. Managers must deal with problems like scared children, families that want to bring their pets and the potential for an overcrowded facility. The ultimate responsibility for sheltering evacuated citizens rests with each local jurisdiction. The ARC is responsible for organizing shelter services in cooperation with other non-profit or governmental agencies in the county including the County Mental Health Department, the Salvation Army.

#### **7.4.5 Post-Disaster Recovery and Mitigation**

After a disaster, communities should undertake activities to protect public health and safety and facilitate recovery. Appropriate measures include:

- Patrol evacuated areas to prevent looting
- Provide safe drinking water
- Monitor for diseases
- Vaccinate residents for tetanus
- Clear streets
- Clean up debris and garbage

Throughout the recovery phase, everyone wants to return to their daily routines. The problem is when recovery efforts are being instituted, people may be performing a quick fix that returns them to their daily routines faster. However, it is imperative that during this recovery phase every effort should be made to think about how to prevent repeated damage from happening if another disaster were to strike. Some efforts include:

- Advise residents through public information activities to advise residents about mitigation measures they can incorporate into their reconstruction work
- Evaluate damaged public facilities to identify mitigation measures that can be included during repairs
- Acquire substantially or repeatedly damaged properties from willing sellers,
- Plan for long term mitigation activities, and
- Apply for post-disaster mitigation funds.

In Adams County, the responsibility for damage assessment ultimately lies with local government entities. Local government officials will conduct an initial damage assessment using all available sources (fire, police, etc.) following a disaster. A more detailed damage assessment will then be developed and coordinated by the Damage Assessment Coordinator, who is either the EMA Director or an ARC representative.

## 7.5 Flood Control

Flood control projects have traditionally been used by communities to control or manage floodwaters. They are also known as “structural” projects that keep flood waters away from an area as opposed to “non-structural” projects, like retrofitting, that do not rely on structures to control flows.

### 7.5.1 Flood Control Measures

The most common type of measures that keep flood waters away from an area are reservoirs and dams, diversion channels, levees and floodwalls, and flood compensation banking.

#### 7.5.1.1 Reservoirs and Dams

Reservoirs and dams impound water to reduce the amount of water that reaches an area at one time. A reservoir holds high flows behind a dam or in a storage basin. Water is released at a controlled rate. Reservoirs and dams are generally perpendicular to a stream or river.

#### 7.5.1.2 Lowhead dams

A lowhead dam is a dam of low height, usually less than 15 feet, made of timber, stone, concrete, and other structural material, or some combination there of, that extends from bank to bank across a stream channel. Lowhead dams are constructed across the river channel to create a pool of water in the stream. They are built for a variety of purposes including, but not limited to diversion, grade control, water supply, gravel barriers, recreation, aesthetics and protection for utility crossings. Concrete, large rocks, wood, steel sheet piling and various combinations of the above are all common building materials in lowhead dams.

Table 7-1 lists the one lowhead dam recorded in Adams County.

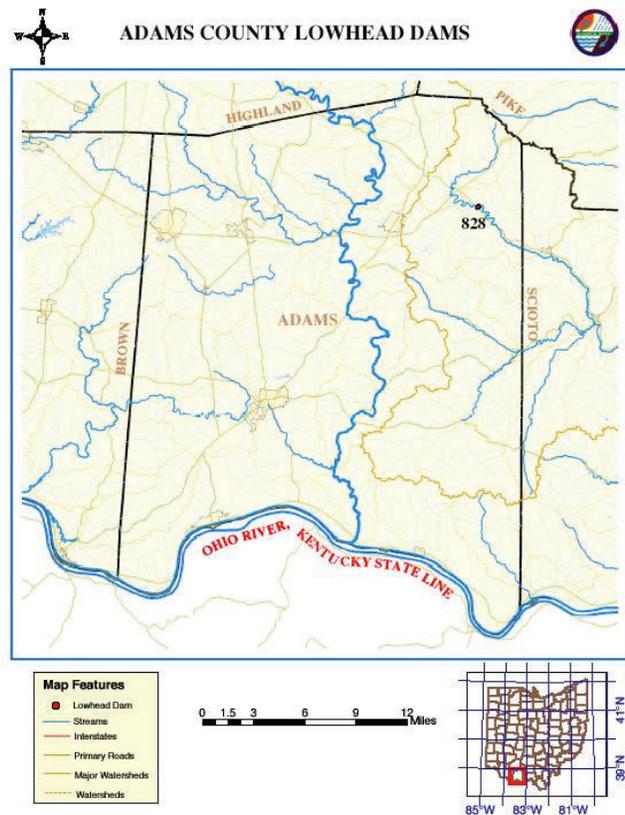


Table 7-1

**Adams County Lowhead Dam**

Summary Data: Adams County Lowhead Dams									
ID	County	Waterway	Description	Long.	Lat.	Township	ODOT District	HYUN	Watershed
828	ADAMS	SCIOTO BRUSH CREEK	NORTH & MAIN BRANCH DAM-- north of Adams Co. Rd. 1 bridge north of Pine Gap, portage river left with care	-83.32	38.96	FRANKLIN	9	05060002	Lower Scioto

**7.5.1.3 Levees and Floodwalls**

Levees and floodwalls restrain the flow of the stream or river. During a flood, the stream or river flow is not reduced; only confined. Levees and floodwalls are generally parallel to the flow of the stream.

According to the Adams County SWCD, there are small agricultural levees that have been built in the County and would not create a countywide problem if they were to fail.

**7.5.2 Drainage Maintenance**

Man-made ditches and storm sewers help drain areas where the surface drainage system is inadequate, or where underground drainageways may be safer or more practical. Particularly appropriate for depressions and low spots that will not drain naturally, drainage and storm sewer improvements are designed to carry the runoff from smaller, more frequent storms. There are three types of drainage improvements that are usually pursued to reduce storm water flooding: putting drainageways in underground pipes, channelization, and removing obstructions caused by stream crossings, such as culverts and bridges with small openings. Because drainage ditches and storm sewers convey water faster to other locations, improvements are only recommended for small local problems where the receiving stream or river has sufficient capacity to handle the additional volume and flow of water. To reduce the cumulative downstream flood impacts of numerous small drainage projects, additional detention or run-off reduction practices should be provided in conjunction with the drainage system improvements.

There are no petition ditches maintained by Adams County, hence no petition ditch process.

**7.6 Public Information**

A successful hazard mitigation plan program involves both the public and private sectors. Public information activities advise property owners, renters and businesses about hazards and ways to protect people and property from these hazards. These activities can motivate people to take the steps necessary to protect themselves and others. Information can initiate voluntary mitigation activities at little or no cost to the government. Property owners mitigated their flooding problems long before there was government funding programs.

### **7.6.1 Outreach Projects**

Outreach projects are the first step in the process of orienting property owners to the hazards they face and the concept of property protection. They are designed to encourage people to seek out more information in order to take steps to protect themselves and their properties. Research has proven that outreach projects work, however, awareness of the hazard is not enough; people need to be told what they can do about the hazard, so projects should include information on safety, health and property protection measures. Research has also shown that a properly run local information program is more effective than national advertising or publicity campaigns. Therefore, outreach projects should be locally designed and tailored to meet local conditions. A list of Outreach activities in Adams County are listed below.

- Adams County Fair
- Kinfold Landing Days, Manchester, Ohio
- West Union Summer Fair, West Union, Ohio
- Winchester Caramel Festival, Winchester, Ohio
- Peebles Old Timers Day Festival, Peebles, Ohio
- Seaman Fall Festival, Seaman, Ohio
- Lewis Mountain Herb Festival, Manchester, Ohio
- Adams County CERT
- Adams County Homeless Shelter
- Adams County Medical Reserve Corps
- Adams County Health Department Hope Van
- Adams County Sheriff's Office Annual Coat Drive, (this serves a lot of people in Adams County)

### **7.6.2 Real Estate Disclosure**

Many times after a natural disaster, people say they would have taken steps to protect themselves if only they had known they had purchased a property that is exposed to a natural hazard. By reaching out to residents in a community to become informed as to what hazards are a potential in the community, the community has armed them with information that they did not have previously. This knowledge allows them to make an informed decision on purchasing insurance to cover their potential losses.

#### **7.6.2.1 Federal law**

Federally regulated lending institutions must advise applicants for a mortgage or other loan that is to be secured by an insurable building whether the property is in a floodplain as shown on the FIRM. If so, flood insurance is required for buildings located within the floodplain if the mortgage or loan is federally insured. However, because this requirement has to be met only 10 days before closing, often the applicant is already committed to purchasing the property when he or she first learns of the flood hazard.

#### **7.6.2.2 State law**

The state of Ohio's Department of Commerce has a Residential Property Disclosure Form pursuant to section 5302.30 of the Revised Code and rule 1301:1-4-10 of the Administrative Code. It is to be completed by the owners who want to sell their property. Under a good faith stipulation, they are to note any areas of the house that may be dangerous which include being

in a floodplain/Lake Erie Coastal Erosion Area, whether there are drainage/erosion problems, and if there are zoning/code violations.

Adams County's and surrounding areas' multiple listing service does not include a listing of whether a property is in a flood zone or wetland. Disclosure practices are left up to the individual broker or agent.

### **7.6.3 Libraries and Websites**

Adams County maintains a website of general County information such as departments and auditor's information (<http://www.adamscountyoh.com/>).

The Adams County OSU extension website (<http://adams.osu.edu>) contains useful information regarding County agriculture and natural resources.