



### IDENTIFICATION AND ANALYSIS OF MITIGATION MEASURES –CARROLL COUNTY

*Including the villages and townships of the county*

*As per requirement 44 CFR Part 201.6(c)(3)(ii): [The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.*

Carroll County's HMC has identified several hazard mitigation projects that will benefit the county and its municipalities. Large mitigation projects that have been identified for particularly hazard-prone areas are as follows. \*NOTE: This is not a comprehensive listing of all mitigation actions. Only large projects requiring significant time, funding, or collaborative efforts are listed here.

- **Carroll County:** During all new dam construction, encourage the completion of a critical flood engineering analysis by a professional engineer licensed in the State of Ohio.
- **Carroll County:** Coordination with the USACOE to update studies of flood impact areas from topping or failure of Class I dams in and near Carroll County.
- **Carroll County:** Coordinate with the ODNR, Dam Safety Engineering Program to conduct periodic safety inspections of existing dams in Carroll County, and garner community support for the removal or repair of dams in disrepair.
- **Carroll County:** Conduct stream cleaning projects to clear log jams, trees, sediment bars, and other debris from streams.
- **Carroll County:** Coordinate with FEMA and the county's GIS Mapping System to review and update floodplain maps on a regular basis.
- **Carroll County:** Conduct acquisition and relocation projects in flood-prone areas.
- **Carroll County:** Develop specific flood mitigation plan(s) to accompany this mitigation plan for flood-prone areas.
- **Carroll County:** Consider installing, re-routing, or increasing the capacity of existing storm drainage systems that may involve detention and retention ponds.
- **Carroll County:** Consider either decreasing the amount of impermeable surfaces or increasing the amount of permeable surfaces.



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- **Carroll County:** Employ techniques of erosion control within watershed areas such as proper bank stabilization. For example, planting vegetation on slopes, creating terraces on hillsides, using riprap boulders and geo-textile fabrics, etc.
- **Carroll County:** Undertake a commodity flow study to determine what hazardous materials are used, stored, and shipped through the county.
- **Carroll County:** Coordinate with the Ohio Department of Natural Resources, Division of Mineral Resources Management, Office of Abandoned Mine Lands and Reclamation to undertake reclamation projects if subsidence occurs at a specific location.
- **Carroll County:** Consider burying power lines to secure uninterrupted power during and following a severe wind or tornado event.
- **Carroll County:** Assess the number, location, strength, and ability of shelters to house residents and withstand high wind speeds. Consider constructing concrete safe rooms near mobile home parks, shopping malls, and other vulnerable public areas.
- **Carroll County:** Purchase and strategically place tornado warning sirens throughout Carroll County.
- **Carroll County:** Develop an integrated communications system that will allow all response units to communicate with each other.
- **Carroll County:** Develop and/or enhance terrorist annexes in the county Emergency Operations Plan (EOP).

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- **Village of Dellroy:** Map formerly-mined areas or geologically unstable terrain so that development can be prevented or limited in these areas.
  - **Village of Leesville:** Coordinate with the ODNR, Dam Safety Engineering Program to conduct periodic safety inspections of the Leesville Lake Dam.
  - **Village of Magnolia:** Clean/drag the Big Sandy Creek, clearing log jams, trees, and shrubs, and sediment bars.
  - **Village of Malvern:** Consider constructing floodwalls along Big Sandy Creek and the flood-prone portions of State Route 43.



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- **Village of Minerva:** Consider purchasing and strategically placing stream gauges along portions of the Still Fork and Big Sandy Creeks.
- **Village of Sherrodsville:** Coordinate with the local cellular provider to install more cellular towers near the Village of Sherrodsville.

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- **August Township:** Clean/drag portions of Still Fork Creek to clear log jams, trees and shrubs, and sediment bars, and reduce flooding along portions of State Route 9.
  - **Fox Township:** Employ techniques of erosion control such as proper bank stabilization, e.g. planting vegetation of slopes, creating terraces on hillsides, and the use of riprap boulders and geo-textile fabric, etc.
  - **Harrison Township:** Purchase and strategically place tornado warning sirens throughout portions of Harrison Township.
  - **Orange Township:** Conduct acquisition and relocation projects in the flood-prone areas of Orange Township.
  - **Rose Township:** Coordinate with the ODNR to develop a map illustrating subsidence prone areas to prevent or limit development in those areas.
  - **Washington Township:** Coordinate with the local cellular provider to install more cellular towers in Washington Township.