



Carroll County Hazard Mitigation Plan

IMPLEMENTATION OF MITIGATION MEASURES – CARROLL COUNTY

Including the villages, and townships of the county

As per requirement 44 CFR Part 201.6 (c)(3)(iii): [The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

PRIORITIZATION OF MITIGATION STRATEGIES

The Carroll County HMC identified several hazard mitigation projects to be included in the county's Hazard Mitigation Plan. These projects, along with their priority, are listed in the following table. Each strategy is given a numerical priority rating. Strategies listed with a rating of "1" are the highest priority for that jurisdiction.

CARROLL COUNTY

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Dam Failure	Strategy 1.1.1: Coordinate with the Ohio Department of Natural Resources, Division of Water, in accordance with ORC Section 1512.062, to periodically reclassify any dam within Carroll County as a result of a change in circumstances not in existence at the time of its initial classification to ensure adequate safety according to the potential for downstream damage.	5
Dam Failure	Strategy 1.1.2: During all new dam construction, encourage the completion of a critical flood engineering analysis by a professional engineer licensed in the State of Ohio.	2
Dam Failure	Strategy 1.1.3: Coordinate with the US Army Corps of Engineers to update outdated flood studies encompassing areas affected by the failure or topping of the Class I dams within and near Carroll County, including, for example, the Atwood Lake Dam, Lake Mohawk Dam, and Stony Lake Dam.	5
Dam Failure	Strategy 1.1.4: 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.	5
Dam Failure	Strategy 1.1.5: Establish more coordination with nearby dam operators to control the flow of water out of dams, to reduce flooding in areas below dams.	4
Drought	Strategy 2.1.1: Develop an informational brochure to distribute to local farmers and residents.	2



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Drought	Strategy 2.1.2: Educate local residents on the benefits of conserving water at all times, not just during a drought.	2
Drought	Strategy 2.2.1: Coordinate mutual aid agreements with water hauling companies to have emergency supplies of water hauled into Carroll County.	13
Drought	Strategy 2.2.2: Establish procedures to prioritize or control water use during emergency drought conditions.	12
Earthquakes	Strategy 3.1.1: Develop an informational brochure explaining the potential for earthquakes, as well as the potential damages from those earthquakes. The brochure should include information pertaining to measures to take to safe-proof homes and other structures from the potential effects of earthquakes.	2
Earthquakes	Strategy 3.1.2: Educate local officials as to conditions in Carroll County that would compound the effects of an actual earthquake, such as soil type, etc.	2
Epidemic	Strategy 4.1.1: Produce public awareness campaigns on local media outlets.	2
Epidemic	Strategy 4.2.1: Coordinate with the health department to identify the source of an epidemic and determine appropriate actions for the general public to take to reduce or slow the spread of an epidemic, especially following severe flooding.	4
Epidemic	Strategy 4.2.2: Encourage residents to receive immunizations against communicable diseases.	2
Flooding	Strategy 5.1.1: Clean/drag creeks and streams clearing log jams, trees and shrubs, and sediment bars, and deepen feeder creeks.	15
Flooding	Strategy 5.2.1: Work with regional planning to post signs denoting hazard areas with respect to flooding, beginning with areas extremely prone to flooding and then extending the project to areas less prone to flooding.	7
Flooding	Strategy 5.2.2: Coordinate with FEMA and the county's GIS Mapping System to review and update floodplain maps on a regular basis.	8
Flooding	Strategy 5.2.3: Provide floodplain administrator with the authority to go onto private property.	11
Flooding	Strategy 5.2.4: Develop specific flood mitigation plan(s) to accompany this mitigation plan for flood-prone areas.	14
Flooding	Strategy 5.3.1: Implement floodplain zoning regulations and building codes.	12
Flooding	Strategy 5.3.2: Consider addressing building materials and the broadening of mobile home tie downs in the development of new floodplain regulations.	12
Flooding	Strategy 5.3.3: Participate in the Community Rating System (CRS) and join the National Flood Insurance Program (NFIP) where applicable to reduce flood insurance rates.	2
Flooding	Strategy 5.3.4: If funding is available, conduct acquisition and relocation projects in flood-prone areas.	10



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Flooding	Strategy 5.4.1: Consider installing, re-routing, or increasing the capacity of existing ditching and culvert systems across roads prone to flooding.	15
Flooding	Strategy 5.4.2: Consider either decreasing the amount of impermeable surfaces or increasing the amount of permeable surfaces upstream of flood-prone areas, as excessive amounts of paved areas or other such surfaces (impermeable) can increase the amount and rate of water runoff that could be absorbed by natural vegetation (permeable).	15
Flooding	Strategy 5.4.3: Employ techniques of erosion control within watershed areas such as proper bank stabilization. For example, consider planting vegetation on slopes, creating terraces on hillsides, using riprap boulders and geo-textile fabrics, etc.	14
Hail Storm	Strategy 6.1.1: Coordinate efforts with the local media to post advance warnings of hailstorms.	4
Hail Storm	Strategy 6.1.2: Encourage the use of NOAA weather radios that continuously broadcast National Weather Service forecasts and provide direct warnings to the public for natural, technological, and man-made hazards.	9
Hail Storm	Strategy 6.2.1: Evaluate the feasibility of using structural bracing, window shutters, laminated glass in windowpanes, and hail-resistant roof shingles to minimize damage to public and private structures.	15
Infestation	Strategy 7.1.1: Develop an informational brochure to distribute to local farmers and residents.	2
Land Subsidence	Strategy 8.1.1: 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.	5
Land Subsidence	Strategy 8.1.2: Consider developing a land use plan or modifying an existing plan to guide development away from and reduce the density of population in subsidence-prone areas.	12
Land Subsidence	Strategy 8.1.3: Conduct hydrological monitoring to monitor groundwater levels in subsidence-prone areas.	15
Severe Thunderstorm	Strategy 9.1.1: Coordinate with the National Weather Service (NWS) to warn residents of impending severe thunderstorm conditions.	9
Severe Thunderstorm	Strategy 9.1.2: Encourage the use of NOAA weather radios that continuously broadcast NWS forecasts and provide direct warnings to the public for natural, technological, and man-made hazards.	9
Severe Thunderstorm	Strategy 9.1.3: Encourage the use of the Emergency Alert System (EAS) on commercial radio, television, and cable systems to send out emergency information targeted to specific areas.	9



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Severe Thunderstorm	Strategy 9.1.4: Ensure that surge protection, such as surge protectors and grounding, has been installed on all critical electronic equipment owned by county government.	3
Severe Wind and Tornado	Strategy 10.1.1: Coordinate with the National Weather Service (NWS) to warn residents of impending severe winds and possible tornado conditions.	9
Severe Wind and Tornado	Strategy 10.1.2: Purchase and strategically place tornado warning sirens throughout Carroll County.	9
Severe Wind and Tornado	Strategy 10.2.1: Consider developing zoning and/or strengthening building codes that will regulate the materials used in new construction with respect to design wind speeds.	12
Severe Wind and Tornado	Strategy 10.2.2: Consider burying power lines to secure uninterrupted power during and following a severe wind or tornado event.	15
Severe Wind and Tornado	Strategy 10.2.3: Reduce the risk of mobile home damage by suggesting the use of tie-downs with ground anchors appropriate for the soil type.	2
Severe Wind and Tornado	Strategy 10.3.1: Develop an informational brochure to distribute to local residents.	2
Severe Wind and Tornado	Strategy 10.4.1: 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.	6
Severe Winter Storms and Sleet	Strategy 11.1.1: Instate countywide zoning, building codes, and other general planning requirements that will regulate the materials used in construction with respect to snow and ice weight.	12
Severe Winter Storms and Sleet	Strategy 11.1.2: Coordinate with local private contractors to develop mutual aid agreements for emergency snow removal.	13
Severe Winter Storms and Sleet	Strategy 11.2.1: Strategically place or identify existing sites that could be used as emergency shelters throughout Carroll County.	6
Heat Wave	Strategy 12.1.1: Develop an informational brochure to distribute to local residents.	2
Heat Wave	Strategy 12.1.2: Educate local residents on the benefits of conserving water during a heat wave.	2
Wildfire	Strategy 13.1.1: Distribute information concerning the leading causes of wildfires and steps the general public can take to avoid starting wildfires.	2
Wildfire	Strategy 13.1.2: Encourage residents to inspect and clean their chimneys at least once a year.	2
Wildfire	Strategy 13.1.3: Encourage residents to properly maintain property in or near wild land areas (including short grass, thinned trees, removal of low hanging branches, raking of leaves, and keeping woodpiles and other combustibles away from structures).	2



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Wildfire	Strategy 13.2.1: Establish ordinances requiring burn permits and restricting campfires and outdoor burning during unsafe hours in particular seasons, if not already established.	12
Misc.	Strategy 14.1.1: Establish a communications system that will allow all jurisdictional fire and police departments to communicate with each other during large-scale emergency situations.	3
Misc.	Strategy 14.2.1: Install generators to provide a backup power supply for traffic lights at major intersections.	3
Misc.	Strategy 14.3.1: Continue efforts to map/address the roads in Carroll County to assist emergency services.	8
Misc.	Strategy 14.3.2: Coordinate county GIS systems and 911 systems to facilitate identification/location of incoming calls and areas to be called when using the reverse 911 system.	1

VILLAGE OF CARROLLTON

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Misc.	Strategy 1A.1.1: Develop and/or strengthen ordinances addressing construction materials and/or building in areas prone to various hazardous events, e.g. limiting construction in flood prone areas.	1

VILLAGE OF DELLROY

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Mind Subsidence	Strategy 1B.1.1: Map former mining areas or geologically unstable terrain so that development can be prevented or limited in these areas.	1

VILLAGE OF LEESVILLE

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Dam Failure	Strategy 1C.1.1: Coordinate with the ODNR, Dam Safety Engineering Program to conduct periodic safety inspections of the Leesville Lake Dam.	1

VILLAGE OF MAGNOLIA

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Flooding	Strategy 1D.1.1: Clean/drag the Big Sandy Creek, clearing log jams, trees and shrubs, and sediment bars.	1



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VILLAGE OF MALVERN

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Flooding	Strategy 1E.1.1: Consider constructing floodwalls along Big Sandy Creek and the flood-prone portions of State Route 43.	2
	Strategy 1E.1.2: Assess the feasibility of conducting bank stabilization projects near the Firehouse Grill and Pub.	1

VILLAGE OF MINERVA

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Flooding	Strategy 1F.1.1: Consider purchasing and strategically placing stream gauges along portions of the Still Fork and Big Sandy Creeks.	1

VILLAGE OF SHERRODSVILLE

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Misc.	Strategy 1G.1.1: Consider elevating telephone boxes on poles in flood-prone areas.	2
Misc.	Strategy 1G.1.2: Coordinate with the local cellular provider to install more cellular towers in the Village of Sherrodsville.	1
Misc.	Strategy 2G.1.1: Equip first response units in Sherrodsville with four-wheel drive response vehicles to access individuals in rural areas during severe winter weather.	3

AUGUSTA TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Flooding	Strategy 1a.1.1: Coordinate with the USACOE to 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.	1

BROWN TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Mine Subsidence	Strategy 1b.1.1: Develop and distribute an informational brochure to the residents of western Brown Township that addresses the hazards associated with mine subsidence and actions residents can take to safeguard against those hazards.	1



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CENTER TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Severe Winter Storm and Sleet	Strategy 1c.1.1: Consider constructing snow fences or planting rows of trees to serve as living snow fences to limit the blowing and drifting of snow over critical roadways in the township.	1

EAST TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Severe Thunderstorm	Strategy 1d.1.1: Establish a township forestry program to trim trees and clear debris from utility poles and maintain all public rights-of-way.	1

FOX TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Flooding	Strategy 1e.1.1: Employ techniques of erosion control such as proper bank stabilization, planting vegetation of slopes, creating terraces on hillsides, and the use of riprap boulders and geotextile fabric, etc.	1

HARRISON TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Severe Wind and Tornado	Strategy 1f.1.1: Purchase and strategically place tornado warning sirens throughout portions of Harrison Township.	1

LEE TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Flooding	Strategy 1g.1.1: Encourage residents to control and secure debris, yard items, or stored objects (including oil, gasoline, and propane tanks that may be swept away, damaged, or pose a hazard when flooding occurs.	1

LOUDON TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Severe Thunderstorm	Strategy 1h.1.1: Increase the coverage and use of NOAA weather radios and the Emergency Alert System throughout Loudon Township.	1



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MONROE TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Dam Failure	Strategy 1i.1.1: Coordinate with Atwood Lake Dam officials to provide notification and warning to the residents of Monroe Township of any failure.	1

ORANGE TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Flooding	Strategy 1j.1.1: Conduct acquisition and relocation projects in the flood-prone areas of Orange Township.	1

PERRY TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Severe Wind and Tornado	Strategy 1k.1.1: Encourage residents to secure loose yard materials and patio items indoors or where winds cannot blow them about.	1

ROSE TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Mine Subsidence	Strategy 1l.1.1: Coordinate with the ODNR to develop a map illustrating subsidence-prone areas to prevent or limit development in those areas.	1

UNION TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Misc.	Strategy 1m.1.1: Determine if all portions of State Route 332 is adequate to evacuate Union Township in an emergency situation.	1

WASHINGTON TOWNSHIP

<i>Hazard</i>	<i>Mitigation Strategy</i>	<i>Priority</i>
Misc.	Strategy 1n.1.1: Coordinate with the local cellular providers to install more cellular towers in Washington Township.	1