

**2016 Monroe County Hazard Mitigation Plan - Municipal Project Opportunities**

Municipality	Community Rank	Project Name	Mitigation Measures		Hazard Mitigated	Total Cost
			Description of Problem to be Solved	Project Description		
Barrett Township		Creek Bank Restoration	To preserve and retain stream banks to prevent flooding and or road failures.	Rebuild, reinforce existing stream and creek bank to prevent further erosion and or road failure.	Flooding	\$250,000
Barrett Township		Road Failure Repair	Temporary repair of road failures such as pot holes, cracks or washouts in a timely manner when PA Department of Transportation fails to act on reported hazards.	Having funding available, or mandating PENNDOT to act ASAP, in order to make temporary repairs to roads where it is a hazard to motorists.	Transportation	"could vary"
Barrett Township		Hazard Tree Removal	Removal of tree or man made objects that could fall onto public property causing death, injury or property damage especially during adverse weather events.	Being able to identify hazard objects, contacting private land owner(s) and obtaining permission to remove objects, removal and clean up.	Multiple hazards	\$15,000
Barrett Township		Utility Relief	Compensation for time (man-power), equipment and fuel that is used when municipality, fire companies or law enforcement has to deal with downed utility lines.	Obtaining funding and or enacting legislation against utility companies in order to compensate municipalities and fire companies for services provided to insure public safety when there are downed wires and or enacting legislation to compensate fire company personnel via a discount to their home utility bills when acting as a volunteer.	Utility interruption	"various"
Barrett Township		Brodhead Debris Removal	Removal of dead trees and previous storm debris that clogs or diverts the flow of water allowing it to wash away road banks and or flooding of Rt 447 and potentially flood creek front properties and homes.	Appropriation of funds and or being able to obtain permits to get into the creek and remove debris with heavy equipment.	Flooding	\$50,000

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Chestnuthill Township		EOC Generator	The Chestnuthill township Municipal Building Meeting Room serves as the regional Emergency Operations Center for the entire west end including Chestnuthill, Jackson, Eldred, Ross and Polk townships (CJERP Region). In the event of an emergency the EOPC serves as critical infrastructure. This command center requires a generator in the event of power failure. An automatic generator fueled by propane would best serve this facility which needs to be up and running as soon as possible in the event of an emergency and/or power failure.	Acquiring an automatic propane fueled generator, and having an electrician to install and set up protocols for on-going operation checks and maintenance.	Utility interruption	\$30,000
Chestnuthill Township		Wildland Interface Vehicle	Development has and continues to be in the wooded areas of the townships of CJERP Region. This increases the risk of fires in these areas. In order to help reduce losses in these areas, vehicle designed for this type of fire risks should be purchased.	To acquire Wildland Urban Interface vehicles to assist the Chestnuthill and Jackson Township fire departments to reduce losses in these areas.	Wildfire	\$300,000
Chestnuthill Township		Stream Debris Removal	Debris from trees, branches, logs, etc. in the streams located within the Chestnuthill, Jackson, Eldred, Ross and Polk Township (CJERP Region) exacerbate flood conditions if the debris is not removed periodically. This debris removal will help minimize damage and flooding conditions that may occur at and around bridges and culverts.	To have the CJERP Region municipalities road crews' remove the debris from the stream and stream bed areas, that could potentially exacerbate flooding within the region.	Flooding	\$10,000

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Chestnuthill Township		Designated Detour Route Signage	There are two State Routes within Chestnuthill Township that are highly traveled and have relatively high accident rates. These roads are SR 209 and SR 115. Establishing designated detour routes would assist in managing the traffic during accident events and Emergency Management situation.	Detour routes would be established and marked with color coded signage. This signage would be consistent with MUTCD Standards, and permanently placed along the designated detour routes.	Transportation	\$350
Coolbaugh Township		Cayuga	Current drainage tube is rotting away, only half of the tube is present.	Replace draining tube and pave the roadway.	Flooding	\$25,000
Coolbaugh Township		Hemlock Bridge	Bridge is crumbling on north bound side	Bridge and tube replacement.	Transportation	\$100,000
Delaware Water Gap Borough		Wellhouse 4	Tear down and rebuild wellhouse for well 4, and chlorine contact tank.	Replacement of existing wellhouse and underground chlorine contact tanks. Addition of a pitless adapter in existing well and concrete slab over existing well location.	Hazardous Materials	\$505,319
Delaware Water Gap Borough		Well Generators	Wellhouses have sensitive electric equipment to monitor water quality. There are frequent power outages resulting in equipment breakage.	To purchase and install generators with automatic transfer switches at wells 4, 6 and 7.	Utility interruption	\$136,551
East Stroudsburg Borough		Day Street Storm Culvert	Flood control levee along Little Sombo Creek does not have the required free board, and the culvert pipe passing Little Sombo Creek under Day Street restricts the passage of flood waters.	Replace the existing CMP storm pipe with a larger pipe or culvert, to enable passing of larger flows and reduce potential for overtopping of this levee.	Flooding	\$750,000
Eldred Township		Gower Road Bridge	Bridge is failing due to its age - to avoid collapse and make residences inaccessible via normal emergency routes.	Replace current bridge with a new one.	Transportation	No costs provided

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Hamilton Township	1	Purchase of Keller Drive Property	Property floods repeatedly	Purchase the property, remove existing structures to eliminate repetitive loss.	Flooding	\$350,000
Hamilton Township	2	Kroucher Road Pipe Replacement	Pipe has partially collapsed, edges deteriorated with diminished drainage.	Dig area around pipe and replace it.	Flooding	\$23,000
Hamilton Township	3	Pine Lane Pipe Replacement	The metal pipe is partially collapsed, causing flooding of property and road. Potential for pipe to collapse completely.	Remove old pipe and install new pipe, resurface road.	Flooding	\$30,000
Hamilton Township	4	Haney Road Pipe Replacement	The dual pipe structure has eroded and is not safe for traffic.	Remove existing pipe structure and replace with suitable piping, resurface road.	Flooding	\$40,000
Hamilton Township	5	Spruce Woods Bank Stabilization	Gradual deterioration of bank from stream to the road. Potential for roadway collapsing toward stream.	Either stabilize existing bank or acquire land opposite side of road to accommodate road widening in that direction.	Flooding	\$300,000
Hamilton Township	6	Old Mill Road Stabilization	Embankment on streamside of road has deteriorated or eroded from previous flooding events.	Either stabilize embankments or potentially acquire property to widen road way from embankment.	Flooding	\$175,000
Jackson Township	1	Barton Glenn	Flooding condition during heavy rains	Replace the two 36 inch pipes with a bridge	Flooding	\$309,277
Jackson Township	2	Running Valley Road	Roadway flooding	Replace 42 Inch road pipe with a 4x8 box culvert for 50 year flood	Flooding	\$115,506
Jackson Township	3	Camelback Road	Reduced access during heavy use times for emergency vehicles	Possible additional road access or add an additional lane	Transportation	Unknown
Middle Smithfield Township		Barren Road GSR	Flash flooding due to piping being overwhelmed.	Construct new bridge using GSR. Bridge size 20'x26'	Flooding	\$84,812
Mount Pocono Borough	1	Church Avenue	Inadequate and failing road culverts	Replace culverts prior to repaving.	Flooding	\$15,000
Mount Pocono Borough	2	Center Avenue	Inadequate and failing road culverts	Replace culverts with larger size prior to repaving.	Flooding	\$20,000
Mount Pocono Borough	3	Fairview Lake	Failed dam on private property	Acquire and reconstruct failed dam structure for Fairview Lake Stormwater retention.	Dam failure	\$400,000

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Paradise Township	1	Browns Hill Culvert Replacement	Reduce risk of flooding and washout of existing culverts.	Replace two existing 54" RCP culverts with a single, open bottom Conspan type arch culvert.	Flooding	\$355,000
Paradise Township	2	Hulbert Hill Culvert Replacement	Reduce risk of flooding and replacement of damaged beams.	Replace the existing adjacent, non-composite, prestressed box beam superstructure with a composite, prestressed, spread box beam superstructure.	Flooding	\$354,000
Paradise Township	3	Koerners Road Bridge Replacement	Reduce risk of flooding and replacement of damaged beams.	Replace the existing adjacent, non-composite, prestressed box beam superstructure with a composite, prestressed, spread box beam superstructure.	Flooding	\$240,000
Pocono Township	1	WW-2 Protect Buildings and Infrastructure	Township operations are vulnerable to power outages and severe weather.	Analyze and upgrade Municipal Building to prevent disruption of operations due to significant weather and/or power outage.	All hazards	\$100,000
Polk Township		Carney Road Pipe Replacement	The installation of a new pipe or pipes/culvert will properly channel the stream and avoid erosion and remove the risk of the road from collapsing. This will also prevent the possibility of localized flooding and improve the safety of the traveling public.	The existing culvert pipe has deteriorated and a new pipe or set of pipes will be required. The road will need to be closed when the excavation occurs and upgraded pipes are installed.	Flooding	\$275,000

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Polk Township		Dotters Corner Road, Jonas Road, SR 534 Intersection and Flooding on RT 534	The three roads are unaligned in vertical heights and there is no sight distance. The drainage pipes to the North across RT 534 are inadequate and the roadway floods in a bad curve and then travels across a homeowner's property and onto Dotters Corner Road west of the intersection.	Realign the roads to a height that allows for better sight distance. Bigger drainage pipes under RT 534 and a detention basin are needed to handle the large volumes of water flowing off of Jonas Mountain.	Flooding	\$1,000,000
Polk Township		Hell Hollow Culvert Project	End road flooding and washing out of Hell Hollow Road. Restore stream bed to its natural condition. Minimize flooding of roadway and adjacent property. Restore the natural ecological conditions at the site.	Remove old culvert and replace with larger bridge culvert type structure and stabilize all stream beds.	Flooding	\$389,990
Polk Township		Lower Gree Hill Road	The road is a farmland flood plain and often has water ponding across the road. It is an extremely flat area and the road needs to be elevated and drained properly.	Elevate approximately a quarter mile of roadway.	Flooding	\$128,000
Polk Township		Mertz Road, Smith Road, and Memorial Drive Realignment	The three roads connect in a hazardous irregular substandard traffic pattern that dissects a very active camp with approximately 500 daily vehicle trips. The "Y" shaped intersection has serious deficient sight distances. Campers walk along and cross the very narrow dangerous roadways. Winter ice sheeting is also a problem due to the three roads unaligned connections.	Removal of two sharp curves and increasing the grade on Memorial Drive will improve the sight distance for motorists and pedestrians. Widening of the roads, adding signage, a public crossing safety zone and safe designated walking paths would alleviate this dangerous location and save lives.	Transportation	\$263,385

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Polk Township		Silver Spring Blvd., SR 209, and Polk Township Road	The three roads connect in hazardous irregular substandard intersection that needs realignment. It is a very busy intersection that does not allow for the many tractor trailers and school buses that try to turn into and out of a 40 degree angle, where there is no sight distance and the turn can only be made by going into the opposite lane of traffic in all 4 directions. The area lacks signage and traffic control devices. SR 209 in this area also has drainage problems during heavy rains. This traffic hazard area will continue to become more dangerous as a new Waste Transfer Station is now using the intersection and Nestle Water Extraction Company is also planning to use the same roadway intersection for their tankers.	Obtain available land, which would allow for realignment of 90 degree angle intersections and a traffic signal to be timed with the 534/209 traffic signal. Widen the roadways. SR 209 also requires additional drainage pipes and detention basins in this area.	Transportation	\$28,500,000
Polk Township		Vertical Improvement to SR 209 at HTY Road	Very poor sight distances in both directions, due to elevated roadway of RT 209 near H.T.Y. intersection. Unsafe passing is taking place in this section of the highway that a high volume of school buses use for the elementary and intermediate schools in Pleasant Valley School District.	Correct the sight distances for traffic in both directions by reconstructing the roadway to an acceptable visual sight distance standard for the designated speed limit. This would entail removing the high spot in the roadway and properly remarking the roadway and possible turning lane onto H.T.Y. Road.	Transportation	\$450,000

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Polk Township		Upper Green Hill Road	The steepness of the tree-lined roadway causes driveway and roadway washout issues and dangerous icing during the winter. It is extremely dangerous during snowstorms, Township trucks have even slid into the ditch.	The very dangerous curves need to be widened, with special attention to drainage problems that wash out the edges of the road and resident's driveways. Additional guide rail is also needed. The MCCD Dirt and Gravel Agency has also reviewed the situation and has determined it is available for funding due to conservation efforts.	Transportation	\$258,000
Price Township		Stream Obstruction A	Remove debris from stream.	Remove debris from stream.	Flooding	No costs provided
Price Township		Stream Obstruction B	Remove debris from stream.	Remove debris from stream.	Flooding	

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Price Township		Hazardous Abandoned Cabins	Hazardous abandoned cabins.	Remove abandoned cabins.	All hazards	
Ross Township	1	Generator Project New Building	Utility Outages for critical facility	Install a new generator at the new township building/emergency operations center	Utility interruption	\$8,000
Smithfield Township		King Pond Road Flood Area	Road lies between an established pond and wetlands which cause considerable flooding and icing from snow melt causing a hazardous condition, sometimes impassable, that effects fire company and EMS responders.	Work on berm of both sides of road. Elevation of roadway above the pond and wetland, elevations thus restricting the flow of water onto this section of Kings Pond Road.	Flooding	No costs provided

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Smithfield Township		Green Mtn. Drive Bridge	The bridge is in poor condition and is a critical structure providing access to homes, for fire, EMS, and other services. Prevents bridge closure - avoid formation of dam like structure that would cause flooding of a number of homes in the community.	The bridge provides access to a residential area comprised of many homes. Replacement of bridge.	Flooding/Transportation	\$70,065
Smithfield Township		Post Office Road Bridge	Bridge is a critical structure that provides access to and from homes and businesses into area for fire, EMS and other services. Prevent bridge closure and avoid the formation of a dam like structure that would cause flooding in this zone.	Replacement of bridge.	Flooding/Transportation	\$114,510
Stroud Township		Route 447 Drainage	Flooding along Route 447 causes ponding which can impede or stop traffic or cause hazardous driving conditions. Private properties are flooded.	Engineering completed for drainage improvement to improve storm flows to Sambo Creek. Re-establishing drainage to Brodhead Creek as original condition existed is being reviewed.	Flooding/Transportation	\$100,000 Sambo Creek Project, \$3,000,000 Brodhead Creek Project

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Stroudsburg Borough		Improve Storm Water Drainage System Capacity	Improve storm water drainage system capacity throughout Stroudsburg Borough.	Increase capacity of ponding areas by removing silt and overburden; upgrade entire system with larger inlets to increase system capacity (approx. quantity is 40).	Flooding	\$1,200,000
Tobyhanna		Tobyhanna Township Parking Lot Security Lighting	Illuminate parking area and fuel island to address safety concerns	Purchase additional lighting and replace existing with LED lights.	Safety- Terrorism	\$9,000
Tobyhanna		Tobyhanna Township Security Cameras	Address security of facility.	Installation of interior and exterior security cameras.	Safety- Terrorism	\$10,000
Tobyhanna		Blanche Price Park Security Lighting	Illuminate park facility to address safety concerns.	Additional lighting fixtures to be installed and replace existing with LED lights.	Safety- Terrorism	\$5,000
Tobyhanna		Miller Bridge - Sediment Removal	Remove excess sediment and install stabilization.	Remove excess sediment and install stabilization.	Flooding	\$30,000
Tobyhanna		Tobyhanna Township - Realignment of Long Pond and 380 Ramp	Traffic - hazard situation.	Realignment of Long Pond Road and 380 ramp.	Transportation	\$3,000,000
Tunkhannock Township		Municipal building security upgrades	Install bullet proof glass, windows and wall to protect township employees and officials.	Install bullet proof glass and windows and reinforce wall under glass	Terrorism	\$125,000
Tunkhannock Township		ATV	Township has Pocono Raceway with three major events per year, drawing hundreds to a thousand plus visitors. The track is an extremely large, open field that is often muddy.	To have an ATV for the township to use in the township mountainous, woody, marshy area. To help navigation during race weekends.	All hazards	\$22,000

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