Chapter 9 - Mitigation Strategies and Priorities

The next step in the hazard mitigation planning process is to identify mitigation actions suitable to the community, evaluate the effect the action will have on the specified mitigation objective and prioritize actions to decide what sequence or order these actions should be pursued.

Mitigation actions can be grouped into six broad categories:

- **1. Prevention.** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.
- **2. Property Protection.** Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- **3. Public Education and Awareness.** Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- **4. Natural Resource Protection.** Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **5. Emergency Services.** Actions that protect people and property during and immediately after a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.
- **6. Structural Projects.** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.

Identification of Mitigation Actions

A public workshop was held in Alcona County on May 25, 2004 to invite the community to discuss hazards and identify possible mitigation actions. Communities, agencies, LEPC and general public were invited to attend the workshop that was held in the community of Harrisville. **Table 9.1** lists the mitigation actions identified at the community workshop.

Evaluation and Prioritization of Mitigation Actions

A Hazard Mitigation Committee meeting was held on September 23, 2004 to evaluate and prioritize the list of mitigation actions. The committee also identified agencies and organizations responsible for completing the action and possible funding sources. Evaluation criteria included: social impacts, technically feasible, administrative capabilities, political impacts, legal issues, environmental, benefits and cost effective. Appendix C shows the projects and associated evaluated criteria.

The committee used a recommended process to rank the list of projects compiled at earlier sessions. The planning team chose to use the approach termed "multi-voting." Actions were ranked by hazard type. Each team member was given half the total number of potential actions to use as individual votes. In other words, if there were 20 mitigation actions for wildfires, each member could vote for 10 of the actions. The number of votes was tabulated for each action, and based on the score, actions were given a high, medium or low priority. Next, the committee identified responsible agencies and organizations, general funding sources and an anticipated timeframe for completing the actions.

Alcona County Implementation Strategy Table					
Mitigation Actions A. Multi-Hazard Actions 1	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Organize outreach program to vulnerable populations during and after hazard events, including wildfires, extreme winter and summer weather events, periods of extreme temperatures, public health emergencies, and other hazards that can impact the community.	High	A. D. H. I. J. N. O. V.	Local- General Fund Federal- F9, F70, F97, F98, F100, F104 American Red Cross	2007	
Build the capabilities of the county GIS program to function as a tool to address multiple hazards. This effort would require the creation/updating of datasets such as parcels/ownership, location of all structures, driveways with ingress/egress conditions, roads, forest types, ownership types, floodplains, utilities (power lines, gas lines and water lines), wetlands, water features, bridges and culverts, (SARA III sites)	High	A. B. C. E. F. H. J. V.	Local- General Fund State- MDIT Federal- F76, F77, F79, F104, F106 Homeland Security	Ongoing	
Communities will acquire and maintain an adequate level of emergency power generators to supply emergency water needs, wastewater processing, emergency communications, emergency health care, and shelters.	High	A. B. C.	Local- General Fund Federal- F12, F13, F14, F16, F19, F83, F85	2015	
Enhance and expand a public education program for all natural hazards that threaten the community.	Med	A. J. O.	Local- General Fund Federal- F54, F39, F54, F104	Ongoing	
Conduct workshops at community gatherings to encourage residents to develop a Family Disaster Plan which includes the preparation of a Disaster Supplies Kit.	Med	A. I. J. K. N.	Local- General Fund State- Health Department Federal- F104 American Red Cross, Civic Groups	2006	
Continue to develop Emergency Response Team program to help prepare for all hazard events in the county.	Med	A. D. H. I. J. E.	Local- LEPC State- Health Department Federal- F38, F104	Ongoing	

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Alcona County Implementation Strategy Table						
Mitigation Actions A. Multi-Hazard Actions 2	Priority	Responsible Agency or Organization	Funding Sources	Timeframe		
Produce and distribute family emergency preparedness information relating to all natural hazards affecting the County.	Med	A. D. H. I. J. N.	Local- General Fund State- Health Department Federal- F54, F102, F104	Ongoing		
Increase usage of NOAA Weather Radio by subsidizing purchase and distribution of radios to county residents, organizations and businesses. Use NOAA radios as a community emergency alert system to information on hazard events.	Med	A.	Federal- F104	Ongoing		
Ensure that the County and individual communities have adequate equipment, staff, and training to respond to transportation-related accidents specific to their needs.	Med	B. C. D. E. V.	Local- General Fund Federal- F62, F63, F64, F65, F68, F104	2010		
Enhance and expand an all hazards education and awareness program in schools, which includes classroom presentations and incorporating wildfire and weather hazard preparedness into school curriculums.	Med	A. D. J. O. R.	Local- General Fund Federal- F39, F54, F102, F104	2006		
Develop plans to identify and inform persons of "Safe Areas" during festivals/events. (include signs and directions to shelters)	Med	A. B. C. D. E. M. N. V.	Federal- F54, F104	2015		
Ensure key gasoline stations have the capacity to pump gasoline during power outages.	Med	A. C. E. M. V.	Federal- F15, F87, F102, F108	2015		

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Alcona County Implementation Strategy Table					
Mitigation Actions A. Multi-Hazard Actions 3	Priority	Responsible Agency or Organization	Funding	Timeframe	
Work with power companies to inventory condition of power line right- of-ways, and identify priority sections to clear branches and trees from power lines. The end goal is to create and maintain a disaster- resistant landscape in public rights-of-way.	Med	A. E. P. U.	Local- Private Federal- F14	2007	
Enforce a balanced system of ordinances that protect the community as-a-whole while respecting the rights of individuals.	Low	С	N/A	2012	
Where feasible and cost effective (more densely populated areas) bury and protect power and utility lines.	Low	A. C. P.	N/A	2015	
Communities will work with the Federal Emergency Management Agency (FEMA) to identify flood plains.	Low	A. B. C. E. T.	N/A	2015	
Identify optimal staffing levels for County and community needs – seek funding to meet optimal levels	Low	B. C.	N/A	2012	
Acquire portable/changeable message signs to direct crowds and provide information.	Low	A. E.	N/A	2007	
Individual communities should prepare future land use plans and capital improvement programs to plan for their future needs.	Low	C. E.	N/A	Ongoing	

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Alcona County Implementation Strategy Table					
Mitigation Actions B. Wildfire Actions 1	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Coordinate countywide wildfire education program: distribution of materials via direct mailings, school presentations, demonstration projects, displays at community events, displays and education materials at community libraries.	High	A. B. C. D. I. J. G. R.	Local- General Fund State-MDNR Federal-F54, F104, F105	Ongoing	
Develop and implement strategy to introduce "Firewise" program in atrisk communities.	High	A. B. C. D. I. J. G.	State- S21, Federal- F54, F104, F105, F107	Ongoing	
Review and strict enforcement of open burning regulations.	High	B. C. D. J. V.	Local- Local Fire Department State- MDNR Federal- F102, F105, F107	Ongoing	
Conduct multi-agency, inter-county emergency management response exercises for fire suppression.	High	A. D. I. V.	Federal- F87, F104, F105, F108	2008	
Promote and implement fuel management by thinning of flammable vegetation, creation of fuel breaks, use of fire-retardant materials/vegetation and selective thinning	High	J. U.	State- MDNR Federal- F54, F102, F104, F105, F107, USFS	2007	
Promote creation of defensible space around structures in fire-prone wildland areas.	Med	A. C. D. I. J. K.	Federal- F54, F102, F104, F105, F107	2007	
Community Chipper Days – Organize a program to provide a chipper for properly disposing of woody debris, in conjunction with composting programs and spring clean-up days.	Med	A. B. C. D. K. M. N. P.	Local- General Fund Federal- F54, F87, F102, F104, F105	2010	
Distribute wildfire education materials to homeowners and businesses through tax bill receipts.	Med	A. C. D. J. K. P.	Local- Local Fire Department State- MDNR Federal- F54, F104, F105, USFS	2007	

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Alcona County Implementation Strategy Table					
Mitigation Actions B. Wildfire Actions 2	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Develop a program to instruct residents on proper procedures for wildfire evacuation.	Med	A. B. C. D. J. N. I.	Local- General Fund, Local Fire Department State- MDNR Federal- F54, F104, F105, USFS		
Identify adequate water supplies for emergency fire fighting, areas lacking adequate water supplies and develop strategy to construct dry hydrants.	Med	D. E. J.	Local- General Fund Federal- F54, F104, F105, F108	Ongoing	
Promote media broadcasts of fire weather and fire warnings	Low	A. O. J.	N/A	2010	
Promote and implement solutions for keeping roads and driveways accessible to vehicles and fire equipment.	Low	A. C. D. E. U.	N/A	2007	
Work with insurance companies to provide wildfire safety information to area residents, and consider reduction of insurance premiums if homes meet "Firewise" criteria.	Low	K.	N/A	2015	
Organize neighborhood wildfire safety coalitions to plan how residents can work together to prevent wildfire	Low	A. C. D. G.	N/A	2011	
Develop program to form Wildfire Safety Coalition to develop neighborhood watch program to instruct others about escape routes, sprinkler systems, power lines, etc	Low	A. B. C. D. U.	N/A	2015	
Identify communities or neighborhoods to develop "Firewise" demonstration projects.	Low	A. B. C. D. I. J. G.	N/A	Ongoing	
Implement community wildland fire education program utilizing the Student Conservation Association – Fire Education Corps, to provide land managers and communities with tools and information designed to reduce the negative impact of wildland fires on individuals living in the wildland urban interface.	Low	A. B. C. D. I. J. G.	N/A	2010	

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Alcona County Implementation Strategy Table					
Mitigation Actions C. Shoreline Flooding and Erosion	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Initiate a program to identify and map flood-prone areas and structures affected by flooding	High	A. B. E. K. Q. T.	State- S7 Federal- F22, F23, F31, F39, F96, F102, F104, F106	Ongoing	
Communities should incorporate floodplain/coastal zone management into their local planning activities by planning acceptable uses for areas prone to flooding (comprehensive planning, zoning, open space requirements, subdivision regulations, land use and capital improvements planning)	High	C.	State- S7, S9 Federal- F22, F23, F30, F104	2012	
Change real estate disclosure laws to require sellers to identify a structures location in a shoreline flooding or erosion area.	Med	L. Q.	State- State Legislature	2015	
Construct elevated or alternative roads that are unaffected by flooding, or make roads more flood-resistant	Med	E. S. T.	Local- Special Assessment Federal- F40, F61, F102, F104, F108	2015	
Communities with flooding hazards should join the National Flood Insurance Program	Med	C.	Federal- F90, F91, F96, F106	Ongoing	
Elevate flood-prone structures above the 100-year flood level where deemed technically feasible and cost effective	Low	Q. T. U.	N/A	2015	
Dry floodproofing of structures within known flood areas.	Low	Q. T. U.	N/A	2015	
Initiate structural projects to increase drainage or absorption.	Low	C. B. E.	N/A	2015	

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Alcona County Implementation Strategy Table					
Mitigation Actions D. Riverine and Urban Flooding 1	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Communities should incorporate floodplain management into their local planning activities by planning acceptable land uses and land use densities for areas prone to flooding	High	C.	Local- General Fund Federal- F102, F104	2015	
Construct elevated or alternative roads that are unaffected by flooding, or make roads more flood-resistant	High	E. S. T.	Local- Special Assessment Federal- F40, F61, F104, F108	2015	
Increase public awareness of the need for permits (MDEQ Part 31) for building in floodplain areas.	Med	A. B. C. Q. T.	State- MDEQ Federal- F23, F39, F104	2012	
Protect and restore wetlands and natural water retention areas to improve natural Stormwater retention systems	Med	B. C. J.	Local- General Fund Federal- F22, F43, F71, F102, F104	2015	
Communities with flooding hazards should join the National Flood Insurance Program	Med	C.	Federal- F90, F91, F96, F106	Ongoing	
Initiate structural projects to increase drainage or absorption capacities.	Med	B. C. E.	Local- Special Assessment Federal- F22, F41, F42, F104	2015	
Change real estate disclosure laws to require sellers to identify a structures location in a floodplain	Med	Q. L.	State- State Legislature	2015	
Elevate flood-prone structures above the 100-year flood level where deemed technically feasible and cost effective	Low	Q. T. U.	N/A	2015	
Dry floodproofing of structures within known flood areas.	Low	Q. T. U.	N/A	2012	

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Alcona County Implementation Strategy Table					
Mitigation Actions		Re	Responsible		
D. Riverine and Urban Flooding 2	Priority	Agency or Organization	Funding Sources	Timeframe	
Enforce basic building code requirements related to flood mitigation.	High	B. Q.	Local- General Fund Federal- F96, F102, F104	2015	
Drainage easements (allowing the planned and regulated public use of privately owned land for temporary water retention and drainage).	Med	B. C. E.	Local- General Fund Federal- F22, F23, F104	2015	
Improve and expand regional and watershed cooperation activities	Med	A. B. C. F.	State- MDEQ Federal- F22, F104	2015	
Detection and prevention/discouragement of illegal discharges into storm-water sewer systems, from home footing drains, downspouts and sump pumps	Low	B. C. U.	N/A	2015	

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Alcona County Implementation Strategy Table					
Mitigation Actions E. Summer Weather Hazards Actions	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Maintain a listing of homes and facilities with vulnerable residents such as elderly, infirmed and disabled individuals. Establish outreach procedures for assisting residents after severe summer storm events	High	A. C. H. N. Q. S.	Local- General Fund State- Health Department Federal- F92, F104	Ongoing	
Develop or update emergency response plans for schools, campgrounds, fairgrounds, parks, community events and marinas	High	A. N. R. V.	Local- EMD Federal- F57, F104	Ongoing	
Continue training and increased use of weather spotters.	High	A. C. O. V.	US Weather Service	Ongoing	
Identify campgrounds, fairgrounds, parks, and outdoor recreational facilities that lack and need "Safe Areas." Where necessary construct safe areas and storm shelters.	High	A. B. C. J. M. R.	Local- EMD Federal- F57, F58, F87, F102, F104, F108	2010	
Increase usage of NOAA Weather Radio by subsidizing purchase and distribution of radios to county residents, organizations and businesses	Med	A. O.	Federal- F104	Ongoing	
Require new mobile home parks to have tornado/wind shelters	Low	Q.	N/A	2015	
Include safety strategies for severe weather events in driver education classes and materials	Low	M. Q. R.	N/A	2015	
Amend building codes to require anchoring of manufactured homes and exterior structures such as carports and porches	Low	Q.	N/A	2015	
Continue pre-planning efforts for debris management staging and storage areas	Low	A. B. C. E.	N/A	2015	
Amend building codes to require installation of weather radios in new structures, similar to smoke detectors	Low	Q.	N/A	2015	

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Alcona County Implementation Strategy Table					
Mitigation Actions F. Winter Weather Hazards	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Establish heating centers/shelters for vulnerable populations	High	A. B. C. I. N. V.	Local- General Fund State- Health Department Federal- F14, F92, F104, F108	Ongoing	
Complete and inventory problem sections of roads. Place snow fences or "living snow fences" (rows of trees or vegetation) to limit blowing and drifting of snow over critical roadway segments	High	E. V.	Local- County Road Commission State- S1	2015	
Compile a listing of homes and facilities with vulnerable residents such as elderly, infirmed and disabled individuals; and establish outreach procedures for assisting residents after severe winter storm events	Med	A. C. H. N. Q. V.	Local- EMD State- Health Department Federal- F92, F98, F104	2008	
Prearrange for shelters for stranded motorists/travelers.	Low	A. N. Q. V.	N/A	2015	

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Alcona County Implementation Strategy Table					
Mitigation Actions		Responsible			
G. Infrastructure Failures	Priority	Agency or Organization	Funding Sources	Timeframe	
Establish redundancies in utility and communications systems, especially "lifeline" systems	High	A. B. C. D. P. V.	Local- Private Federal- F35	Ongoing	
Purchase and/or maintain generators for backup power at critical facilities	High	A, B, C, R. S. T. V.	Local- General Fund Federal- F14, F19, F87, F102, F108	2010	
Establish and improve programs/networks for contacting elderly or homebound persons during periods of infrastructure failure, to assess whether they have unmet needs	Med	A. B. I. N. V.	Local- Council on Aging Federal- F104	2010	
Protect electrical and communications systems from lightning strikes by completing an inventory of protection systems and where necessary upgrade systems.	Med	A. B. C. F.	Local- General Fund State- Federal- F14, F19	2010	
Identify sites, obtain support and seek funding to improve critical road/stream crossings	Low	E. F. Q. C.	N/A	2010	

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Alcona County Implementation Strategy Table					
Mitigation Actions H. Public Health Emergencies	Priority	Responsible Agency or Organization	Funding Sources	Timeframe	
Maintain a community public health system with sufficient disease monitoring and surveillance capabilities to adequately protect the population from large-scale outbreaks	High	H. Q. S. T.	State- Health Department Federal- F82, F104	Ongoing	
Increase public awareness of the causes, symptoms, and protective actions for disease outbreaks and other potential public health emergencies	High	H. N. R. S.	State- Health Department Federal- F82, F104	2007	
Seek support and funding to clean up sites of environmental contamination	Med	B. M. Q. T.	State- Health Department Federal- F73, F75, F76, F79	2012	
Encourage residents to receive immunizations against communicable diseases	Med	H. I. N. Q. S.	State- Health Department Federal- F82	Ongoing	
Expand community support of free or reduced-expense clinics and school health services	Med	B. C. H. N. Q. S.	State- Health Department	2010	
Inform public and support pollution control, enforcement and cleanup; proper disposal of chemicals and scrap materials	Med	A. B. H. M. Q. R. T.	State- Health Department Federal- F104	2010	
Demolish and clear vacant condemned structures in populated areas to prevent rodent infestations	Low	C. B. H.	N/A	2015	
Coordinate with health department and local communities to assure proper location, installation, cleaning, monitoring, and maintenance of septic tanks	Low	C. H.	N/A	2015	
Increase public awareness of radon dangers and the prevention efforts that can be taken to reduce concentrations of radon in homes and buildings	Low	H. Q.	N/A	2012	

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Alcona County Implementation Strategy Table	T	T		T
Mitigation Actions I. Hazardous Material Transportation Incidents	Priority	Responsible Agency or Organization	Funding Sources	Timeframe
Provide for trained, equipped, and prepared search and rescue teams	High	A. B. C. D. V.	Local- General Fund Federal- F66, F68, F104	Ongoing
Maintain and enhance trained, equipped and prepared local hazardous materials emergency response teams	High	A. B. C. D. V.	Local- General Fund Federal- F66, F68, F104	Ongoing
Increase coverage and use of NOAA Weather Radio (which can provide notification to the community during any period of emergency, including large scale hazardous material incidents)	Med	A.	Federal- F104	Ongoing
Develop evacuation plans and community awareness of them	Med	A. V.	Local- EMD Federal- F62, F63, F64, F65, F68, F104	2010
Improve capability of agencies to carry-out road closures and to provide traffic control in accident areas	Med	E. V.	Local- County Road Commission Federal- F62, F63, F66, F68, F104	2008

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Capability Assessment

Presently, staff and financial resources are limited in the communities. For example, communities do not have planners, foresters, floodplain managers, public works engineers, transportation engineers, and civil engineers on staff. An exception is the Alcona County Road Commission which has an engineer on staff. The community has an active and strong Emergency Management Office. Alcona County has no zoning enforced at the county level. Land use planning and zoning is administered at the city, village and township level. None of these entities have planners on staff and utilize planning commission members, regional planning agencies and consultants for planning purposes. The Northeast Michigan Council of Governments (NEMCOG) provides planning assistance to local communities on a project by project basis. U.S. Forest Service and the Michigan Department of Natural Resources have foresters on staff to conduct forest and fuels management on public lands. Forest management assistance on private land is limited to forestry consultants and the county conservation district. Agencies and local units of government have fire suppression crews. All entities provide some level of prevention and education activities. In conclusion, additional staff and financial resources would be needed to implement this comprehensive hazard mitigation plan.

Potential Local Partnerships for Hazard Mitigation Activities

County Emergency Management Coordinator

County Board of Commissioners

Township Boards

City and Village Councils

County Road Commission

County Sheriff Department

Township Fire Department

Building Department

Planning Commissions

Zoning Administrators

Conservation District

Housing Commission

Northeast Michigan Council of Governments

Michigan State Police

US Forest Service

Michigan Department of Natural Resources

Huron Pines RC&D

Natural Resource Conservation Service

NEMSCA

Health Department

Federal Emergency Management Administration

STATE HAZARD MITIGATION FUNDING SOURCES

	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperatures	Scrap Tire Fires	Structural Fires	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosid	Hazmat Fixed Site Incidents	Hazmat Transportation Incidents	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accid	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornadoes	Transportation Accidents (Passenger)	Ice and Sleet Storms	Snowstorms	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
	MICHIGAN DEPARTMENT OF AGRICULTURE																														
S1	Energy Conservation Program									Χ															Χ			<u> </u>		-	Χ
S2	only)								Χ	Χ	Χ																	<u> </u>	_	<u> </u>	X
S3	Michigan Groundwater Stewardship Program												Χ							X										Χ	Χ
	MICHIGAN DEPT OF ENVIRONMENTAL QUALITY																														
S4	Abandoned Well Mgmt. Program Clean Water Fund																			Χ										Χ	
S5	Alternate Water Supply Replacement Program									Χ	Χ		Χ		Χ					Χ										Χ	
S6	Brownfield Redevelopment Grants (Clean Michigan Initiative)												Χ							Χ										Χ	
S7	Coastal Zone Management Program											Χ																	•	Χ	Χ
S8	Drinking Water Revolving Fund (Loan)														Χ					X	Χ									Χ	
S9	Michigan Great Lakes Protection Fund											Χ																		Χ	
S10	Municipal Landfill Cost-Share Grant Program																			Χ										Χ	
S11	Non-community Water Supply Program Grant																			X										Χ	
S12	Scrap Tire Collection Site Cleanup Grants					Χ																								Χ	
0.40	State Revolving Fund (Loan) - incl. Strategic Water Quality																														
S13	Initiative)									Х	Х				Χ				-	X								_		X	_
S14	Wellhead Protection Program									_							\square			X						\dashv		\dashv	4	X	\dashv
S15	Wetland Program Development (also see 10.461 in CFDA)									Χ	Χ	Χ																	ل_	Χ	
	MICHIGAN DEPARTMENT OF NATURAL RESOURCES																												H		
S16	Land & Water Conservation Fund (see 15.916 CFDA)									X							-									_		\dashv	4	X	\dashv
S17	Michigan Habitat Improvement Fund Project Grants									X																				Χ	

STATE HAZARD MITIGATION FUNDING SOURCES

	Funding Source MICHIGAN DEPARTMENT OF NATURAL RESOURCES cont.	Civil Disturbance	Drought	Earthquake	Extreme Temperatures	Scrap Tire Fires	Structural Fires	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazmat Fixed Site Incidents	Hazmat Transportation Incidents	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accidents	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornadoes	Transportation Accidents (Passenger)	Ice and Sleet Storms	Snowstorms	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
S18	Michigan Natural Resources Trust Fund							Χ		Χ																				Χ	
S19	Michigan Volunteer Fire Assistance					Х	Χ	Χ																						Х	
S20	Recreational Trails Program Grants									Χ		Χ																		Х	
S21	Urban & Community Forestry Program																								Χ	Χ		Χ		Χ	
	MICHIGAN DEPARTMENT OF STATE POLICE																														
S22	Emergency Management Performance Grants (also see 97.042 in CFDA)	X	Х	X	Х	Х	Х	X	Х	Х	X	X	Χ	Χ	Х	Χ	Х	Х	X Z	X Z	X	X	X	X	X	Χ	Χ	X	X	x 2	Х
S23	CFDA)									Χ	Χ	Χ																		X 2	Х
S24	Hazard Mitigation Grant Program (also see 97.039 in CFDA)	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ		Χ	Χ	X .	X 2	X :	X	Χ	Χ	Χ	Χ	Χ	Χ	X	Х	
S25	CFDA)									Χ	Χ	Χ			Χ										Χ	Χ				Х	
S26	Interagency Hazardous Materials Pub. Sector Training & Planning Grants (Hazardous Materials Emergency Preparedness Grant) (also see 20.703 in CFDA)												X	X																х	
S27	Pre-Disaster Mitigation (also see 97.047 in CFDA)			Χ	Χ			Χ	Χ	Χ	Χ	Χ										Χ	Χ	Χ	Χ	Χ		Χ	X	Χ	
620	Pre-Disaster Mitigation (PDM) Competitive Grants (also see 97.017 in CFDA)	~	v	Х	~	v	_	X	Х	~	Χ	~	_	_	_	_	$\sqrt{}$	$\sqrt{}$	X :	, T	$\sqrt{1}$	$\sqrt{1}$	_	_	_	_	$\sqrt{}$	$\sqrt{}$	v	$\sqrt{1}$	
S28	Pre-Disaster Mitigation Disaster Resistant Universities (also	Х	Х	٨	X	Х	Χ	۸	٨	X	٨	Χ	X	Χ	Х	X	Х	Х	^	X 2	X .	X	Х	Χ	X	Х	Х	Х	X	^	\dashv
S29	see 97.063 in CFDA)			X	X			Х	Х	Х	Χ	Χ										X	Х	Χ	Χ	Х		X	X	Χ	
S30	Public Assistance Grant Program (also see 97.036 in CFDA)	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	X :	X 2	X :	X	Χ	Χ	Χ	Χ	Χ	Χ	X	X Z	Χ
S31	State and Local All Hazards Emergency Operations Planning (also see 97.051 in CFDA)	X	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Х	Χ	Х	Х	X .	X Z	X :	Х	Χ	Χ	Χ	Χ	Χ	Χ	X	х	

STATE HAZARD MITIGATION FUNDING SOURCES

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	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperatures	Scrap Tire Fires	Structural Fires	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazmat Fixed Site Incidents	Hazmat Transportation Incidents	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accidents	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornadoes	Transportation Accidents (Passenger)	Ice and Sleet Storms	Snowstorms	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
_	MICHIGAN DEPARTMENT OF TRANSPORTATION																														
S32	Michigan Rail Loan Assistance Program													Χ	Χ													\square		Х	
S33	Transportation Economic Development Fund									Χ	Χ	Χ																		Χ	
	MICHIGAN ECONOMIC DEVELOPMENT CORPORATION																														
S34	Community Development Block Grant Program (also see 14.218,14.219, 14.228 in CFDA)									X	X	X			Х															Х	
S35	Urban Land Assembly									Χ		Χ																		Χ	
	MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY																														
S36	CDBG Housing Resource Fund (Inc HOME) (also see 14.239 in CFDA)						Х			X	X	X											Χ		X	х				Х	
S37	Home/Property Improvement Loans						Х			Х	Χ	Χ											X	_	X	Х			\neg	Х	
	MICHIGAN DEPARTMENT OF TREASURY																														
S38	Michigan Municipal Bond Authority-Local Government Loan Program				X		Х			X	X	X			Х					,	X		Χ	Х	X	Х		Х	X	Х	
S39	Michigan Municipal Bond Authority-State Aid Note Program				Χ		Х				Χ	Χ			Х						X	_	Χ	-	_	Χ		-	Χ	Х	
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	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperatures	Scrap Tire Fires	Structural Fires	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazardous Materials Fixed Site Incidents	Hazardous Materials Transportation Incidents	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accident	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornadoes	Transportation Accidents (Passenger)	Ice and Sleet Storms	Snowstorms	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
F1	10.054 Emergency Conservation Program		X	ш	Ш	0)	0)	۸	ш	X				_	_	_	_	O	ш.	ш	0)	0)	一	_	X	X			0)	X	
F2	10.064 Forestry Incentives Program		_							<u>^`</u>															X	X				X	
F3	10.069 Conservation Reserve Program									Х	Χ														X	X				X	Х
F4	10.072 Wetlands Reserve Program											Χ																		X	X
F5	10.202 Cooperative Forestry Research							Х																	Χ	Х				X	
F6	10.410 Very Low to Moderate Income Housing Loans				Χ		Χ	Χ		Χ		Х										Χ	Х	Х	Χ	Χ				Χ	
F7	10.411 Rural Housing Site Loans and Self Help Housing and Development Loans									Х		Х																		Х	
F8	10.417 Very Low Income Housing Repair Loans/Grants				Χ		Χ	Χ		Χ		Χ										Χ	Χ	Χ	Χ	Χ				Χ	
Ε0	10.445 Direct Housing Natural Disaster (Very Low/Low Income						~	~		V		V											~	~	V	~				~	
F9	Loans)		-	 			Χ	۸		X	V	X						\vdash					Χ	Χ	X	X			igwdap	X	$\vdash \vdash \vdash$
F10	10.652 Forestry Research		-	 						Χ	X	Χ						\vdash							X	X			igwdap	X	$\vdash \vdash \vdash$
F11	10.664 Cooperative Forestry		-	 						_	-	~	V		V			\vdash		<u></u>	_				Х	Χ			igwdap	X	$\vdash \vdash \vdash$
F12	10.760 Water & Waste Disposal Sys. for Rural Comm.		~	 						X	-	X	X		X			\vdash			X								igwdap	<u> </u>	$\vdash \vdash \vdash$
F13	10.763 Emergency Community Water Assistance Grants		X	~	~	~	~	~	~	X	~	X	X	~	X	_	V	~			X	~	~	~	~	_	$\overline{}$	~	$\overline{}$	<u> </u>	$\vdash\vdash\vdash$
F14 F15	10.766 Community Facilities Loans & Grants	X	X V	X	X X	X		X X	X X	X X	X	X	X X	X X	X X	Λ ~	X X	X X			X X	X	X	X	X		X X	X	X	X X	$\vdash \vdash$
F15	10.768 Business and Industry Loans	۸	۸	^	۸	^	۸	۸	۸	X	۸	X	٨	۸		۸	۸	^	^	^	^	X	۸	۸	^	۸	^	٨	^	$\stackrel{\wedge}{\smile}$	$\vdash \vdash \vdash$
F16	10.769 Rural Business Enterprise Grants		-	-						X		X	Х		X X			\vdash		Х		٨							$oldsymbol{oldsymbol{arphi}}$	$\stackrel{\leftarrow}{\smile}$	$\vdash \vdash \vdash$
F17 F18	10.770 Water/Waste Disposal Loans/Grants		-	-		-				<u>^</u>	-	<u>х</u>	^		^			\vdash		^					-		_		igwdap	X	$\vdash \vdash \vdash$
F18	10.773 Rural Business Opportunity Grants		-	-						_		^			Х			\vdash						Х	Х	Х		X	$\overline{}$	$\hat{}$	$\vdash \vdash \vdash$
F19 F20	10.850 Rural Electrification Loans		V	Х	Х	-		Х		Х	Х	Х			^			\vdash						^	_	^_	_	^	<u>^</u>	^_	Х
F20 F21	10.901 Resource Conservation and Development		$\frac{\wedge}{\vee}$	^ V	<u>^</u>	-		<u>^</u>		<u>^</u>	$\frac{\wedge}{\vee}$	^ V						\vdash							-		_		igwdap	lacksquare	X
ГΖΙ	10.902 Soil and Water Conservation		Λ	Λ	Λ			Λ		Λ	Λ	Λ											<u> </u>	<u> </u>					ш		^

	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Fire	Structural Fire	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazardous Materials Fixed Site	Hazardous Materials Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accident	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornado	Transportation Accidents (Passenger)	Ice and Sleet Storm	Snowstorm	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
F22	10.904 Watershed Protection and Flood Prevention								Χ	Χ	Χ	Χ								Χ										Χ	Χ
F23	10.906 Watershed Surveys and Planning		Χ							Χ		Χ																			Χ
F24	10.910 Rural Abandoned Mine Program																					Χ								Χ	
F25	10.913 Farmland Protection Program									Χ		Χ																		Χ	
F26	10.914 Wildlife Habitat Incentive Program									Χ		Χ																		Χ	
F27	11.300 Grants for Public Works and Economic Development Facilities								Χ	Χ	Χ	Χ			Χ															Х	
F28	11.303 Economic Development Technical Assistance									Χ		Χ																		Χ	Χ
F29	11.307 Economic Adjustment Assistance								Χ	Χ	Χ	Χ													Χ	Χ				Χ	
F30	11.419 Coastal Zone Mgmt. Administration Awards											Χ																			Χ
F31	11.462 Hydrologic Research		Χ						Χ	Χ	Χ	Χ																		Χ	
F32	11.463 Habitat Conservation											Χ																		Χ	
F33	11.477 Fisheries Disaster Relief		Χ					Χ	Χ	Χ	Χ	Χ	Χ	Χ							Χ									Χ	
F34	11.478 Coastal Ocean Program (Center for Sponsored Coastal Ocean Research)											Χ																		Х	
F35	11.550 Public Telecommunication Facilities-Planning & Construction																									Χ				Х	
F36	12.101 Beach Erosion Control Projects											Χ																		Х	
F37	12.102 Emergency Rehabilitation of Flood Control Works or Federally Authorized Coastal Protection Works								Х	Х		Х																		X	
E20	12.103 Emergency Operations Flood Response & Post-Flood								~	~	~	Х																		$\overline{}$	
F38 F39	Response 12.104 Flood Plain Management Services								X	X X	X X	<u>^</u>																		^ 	X
F40	12.105 Protection of Essential Highways, Highway Bridge								· ·	X	^	X																		_	~
F40 F41	Approaches, and Public Works			-					^	^		X																		$\stackrel{\frown}{\vee}$	-
F41 F42	12.106 Flood Control Projects 12.108 Snagging and Clearing for Flood Control								X	X		X								_				_						^ X	-
1 74	12.100 Shayying and Oleaning IOI Flood Control	1	ı	I					^	^		^																		^	

	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Fire	Structural Fire	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazardous Materials Fixed Site	Hazardous Materials Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accident	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornado	Transportation Accidents (Passenger)	Ice and Sleet Storm	Snowstorm	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
F43	12.109 Protection, Clearing and Straightening Channels									Χ		Χ																		Χ	
F44	12.111 Emergency Advance Measures for Flood Protection								Х	Х	Х	Χ																		Х	
F45	14.129 Mortgage Insurance, Nursing Homes, ICF, B&C Homes and Assisted Living Facilities						Χ																							Х	
F46	14.218 Community Development Block Grants/Entitlement Grants	Х	Χ	Х	Х	Χ	Χ	Χ	Χ	Х	Χ	Χ	Х	Χ	Χ					Χ	Χ	Χ	Х	Χ	Х	Χ	Χ	Х	Х	X	
F47	14.219 Community Development Block Grants -Small Cities Program	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ					Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Х	Х	
F48	14.228 Community Development Block Grants-State's Program	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х					Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Х	1
F49	14.239 HOME Investment Partnerships Program									Χ	Χ	Χ											Х	Χ	Х	Χ				Х	
F50	14.246 Community Development Block Grant/Economic Development Initiative									Х	Х	Х			Х										Х	Х				Х	
F51	14.250 Rural Housing and Economic Development	Х	Χ	Χ	Χ	Х	Χ	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ					Χ	Χ	Χ	Х	Χ	Х	Χ	Χ	Χ	Χ	Х	
F52	14.511 Community Outreach Partnership Center Program	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ					Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	
F53	15.031 Indian Community Fire Protection 15.228 Wildland Urban Interface Community and Rural Fire					Χ	Χ	Χ																						Χ	
F54	Assistance							Χ																						Χ	<u>i</u>
F55	15.623 North American Wetlands Conservation Fund									Χ	Χ	Χ																		Χ	
F56	15.904 Historic Preservation Fund Grants-In-Aid 15.916 Outdoor Recreation-Acquisition, Development and						Χ			Χ	Χ	Χ										Χ	Χ	Χ	Χ	Χ		Χ	Χ		Χ
F57	Planning (Land and Water Conservation Fund Grants)									Χ		Χ																	Ш	Χ	Щ
F58	15.918 Disposal of Federal Surplus Property (Property Transfer)								L	Х		Х																		LI	
F59	15.921 Rivers, Trails, and Conservation Assistance									Χ		Χ																			Χ
F60	20.106 Airport Improvement Program																										Χ			Χ	Χ
F61	20.205 Highway Planning and Construction														Χ															Χ	Χ
F62	20.217 Motor Carrier Safety													Χ													Χ		Ш	Ш	Χ
F63	20.218 National Motor Carrier Safety													Χ													Χ		Ш		Χ

	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Fire	Structural Fire	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazardous Materials Fixed Site	Hazardous Materials Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accident	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornado	Transportation Accidents (Passenger)	Ice and Sleet Storm	Snowstorm	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
F64	20.301 Railroad Safety													Χ													Χ				Χ
F65	20.303 Grants-In-Aid for Railroad Safety-State Participation													Χ													Χ				Χ
F66	20.600 State and Community Highway Safety													Χ													Χ				Χ
F67	20.700 Pipeline Safety 20.703 Interagency Hazardous Materials Public Sector																	Χ	Χ										Ш	X	
F68	Training & Planning Grants (Hazardous Materials Emergency Preparedness Grant)												Χ	Х																Х	
F69	47.041 Engineering Grants	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ				Χ	Χ	Χ	Χ	Χ	X Z	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	
F70	59.008 Physical Disaster Loans	Χ		Χ			Χ	Χ		Χ	Χ	Χ			Χ						Χ	Χ	Χ	Χ	Χ	Χ		Χ	Χ	Х	
F71	66.461 Wetlands Protection - Development Grants									Χ	Χ	Χ																		Χ	
F72	66.463 National Pollutant Discharge Elimination System Related State Program Grants																	Х	Х	Х										Χ	
F73	66.469 Great Lakes Program											Χ																		Χ	
F74	66.606 Surveys, Studies, Investigations & Special Purpose Grants												х	Х			Х	Х	х	х										Х	
F75	66.802 Superfund State Site-Specific Cooperative Agreement												Χ							Χ										Х	
F76	66.806 Superfund Technical Assistance Grants for Citizen Groups at Priority Sites												Χ																	Х	X
F77	66.810 CEPP Technical Assistance Grants Program												Χ	Χ						Χ										Χ	Χ
F78	81.042 Weatherization Assistance for Low-Income Persons				Χ															耳										Χ	
F79	81.104 Technology Development for Environmental Management													Χ			Χ													Χ	
F80	93.003 Public Health and Social Services Emergency Fund - (Post Declaration Only)																			х										Χ	
F81	93.161 Health Program for Toxic Substances and Disease Registry												Χ							Х										Х	
F82	93.283 Centers for Disease Control & Prevention - Investigations and Technical Assistance																			Х										Х	
F83	97.004 State Domestic Preparedness Equipment. Support Program																			2	X									Х	

	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Fire	Structural Fire	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazardous Materials Fixed Site	Hazardous Materials Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accident	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornado	Transportation Accidents (Passenger)	ice and Sleet Storm	Snowstorm	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
F84	97.007 State and Local Domestic Preparedness Technical Assistance															Х					Χ									X	Х
F85	97.008 Urban Areas Security Initiative															X					X						Χ			X	
F86	97.014 Bridge Alteration														Х						,						, ·			X	
F87	97.017 Pre-Disaster Mitigation (PDM) Competitive Grants		Х	Х	Х			X	Х	Х	Χ	Х			_							Х	X	Х	Х	Х		Х	X	X	
F88	97.018 National Fire Academy Training Assistance					Х	Х	Х	_				Χ	Х	Х			Χ	Х					,						,,	Х
F89	97.020 Hazardous Materials Training Program for Implementation of the Superfund Amendment and Reauthorization Act (SARA) of 1986					Λ		Λ						X	^_			^	^												X
F90	97.022 Flood Insurance									Χ	Χ	Χ																			Χ
F91	97.023 Community Assistance Program - State Support Services Element (NFIP)									Χ	Χ	Χ																			Х
F92	97.024 Emergency Food and Shelter National Board Program	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	
F93	97.025 National Urban Search and Rescue (US&R) Response System																				Χ									X	
F94	97.026 Emergency Management Institute-Training Assistance	x	Χ	Х	Х	Χ	Х	Χ	Х	Х	Х	Х	Χ	Χ	Χ	Х	Х	Х	Х			Χ	Χ	Х	Х	Х	Х	Χ	Х	^	Х
	97.028 Emergency Management Institute-Resident Education																												Λ 		
F95	Program	Χ	Χ	Х	Χ	Χ	Χ	Χ	Χ	X	X		Χ	Χ	Χ	Χ	Χ	Χ	Χ	X	X	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	· ·	Χ
F96	97.029 Flood Mitigation Assistance	V	V	V			V	V	V	X	X	X	V	V		V	V	V	·	,		V	V	V		V	V	V	V	X	$\boldsymbol{\sqcup}$
F97	97.030 Community Disaster Loans	X	X	X	X	X	X	X	X V	X	Χ	-	X		X	Χ	X	X	_		X	X	X	X X	X		_	X	X	X	$\boldsymbol{\vdash}$
F98 F99	97.031 Cora Brown Fund	۸	X	Λ ∨	Λ ∨	Х	Х	X	^	X	<u>۸</u>	X	X	X	X		X X	^	X		X X	^	X	۸	Λ ∨	X X	Х	X	٨	^ ~	\vdash
F99 F100	97.035 Individual and Family Grant Program 97.036 Public Assistance Grant Program	Y	^ V	Λ Υ	^ V	Х	Y	Λ Υ	Λ Υ	^ Y	^ Y	Λ Υ	X	Y	Y	Y	^ Y	^ Y	^ Y	Y	$\frac{\wedge}{\vee}$	^ Y	Y	Y	^ V	^ Y	Y	Y	Y	^ _	$\vdash\vdash$
F100	97.036 Public Assistance Grant Program 97.037 Disaster Housing Program	Υ	Υ	Λ X	X	X	Λ X	Λ X	Λ	Λ Υ	Λ	Λ	Λ X	Λ Χ	Υ	Λ	Λ Χ	Λ X	Λ Υ	Λ	^ X	Λ Y	Λ X	Λ Χ	Υ	^ X	Λ	^ X	Λ X	^ X	\vdash
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	Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Fire	Structural Fire	Wildfire	Dam Failure	Riverine Flooding	Urban Flooding	Great Lakes Shoreline Flooding and Erosion	Hazardous Materials Fixed Site	Hazardous Materials Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Accidents	Oil and Natural Gas Well Accidents	Petroleum and Natural Gas Pipeline Accident	Public Health Emergencies	Sabotage/Terrorism	Subsidence	Hail	Lightning	Severe Wind	Tornado	Transportation Accidents (Passenger)	Ice and Sleet Storm	Snowstorm	FINANCIAL ASSISTANCE	TECHNICAL ASSISTANCE
	97.039 Hazard Mitigation Grant Program	X	X	Х	Х	X	X	> X	X	X	X	X	X	X	<u>=</u>	X	X	Х	X	X		X	X	X	X	X	Х	X	X	X	
	97.041 National Dam Safety Program	<u> </u>		^	^	^	^	^	X	^				^	^		^	^				, .		^	^	^	, \	, .			Χ
	97.042 Emergency Management Performance Grants	Х	Х	Х	Х	Х	Х	Х	•	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Χ	Х	Х	Х	Х	Χ	Х	Χ	Χ	一
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F105	97.044 Assistance to Firefighters Grants					Χ	Χ	Χ																					Ш	Χ	
F106	97.045 Cooperating Technical Partners									Χ	Х	Χ																		X	
F107	97.046 Fire Management Assistance Grant	_	<u> </u>					Χ				<u> </u>				<u> </u>					_								Ш	X	Щ
F108	97.047 Pre-Disaster Mitigation			Х	Х			Х	Х	Х	Х	Х										Х	Х	Х	Х	Х		Х	Х	Х	
	97.063 Pre-Disaster Mitigation - Disaster Resistant																														
F109	Universities	_	<u> </u>	Χ	Χ			Χ	Χ	Χ	Χ	Χ				<u> </u>					_	Χ	Χ	Χ	Χ	Χ		Χ	Χ	X	Щ
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