

		KALKASKA COUNTY HAZARD MITIGATION STRATEGIES	HAZARD TYPE								WHERE - Affected Locations or Groups	WHO - Responsible Parties	HOW - Resources	WHEN - Timeframe (Years)	PRIORITY TYPE (High, Med, or Low)	STRATEGY TYPE			
			Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Flooding and Erosion	Extreme Temperatures	Drought	Invasive Species	Public Health Emergency						1	2	3	4
Preparation and Awareness	1	Incorporate the County Hazard Mitigation Plan's strategies into elements of County and local master plans.	X	X	X	X	X	X	X	X	Countywide	Kalkaska County, all townships, and Village of Kalkaska	A, B	Ongoing		X	X	X	X
	2	Continue to pursue interdepartmental cooperation and coordination of police, fire, rescue and EMS services to achieve community-wide coverage availability.	X	X	X	X	X	X		X	Countywide	County Sheriff and EM; local fire/EMS	A, B, C	Ongoing		X			
	3	Identify and promote resources that provide extreme weather and emergency notifications including RAVE, IPAWS, social media outlets, and radio channels	X	X	X	X	X	X		X	Countywide	County EM	A, B	Ongoing					X
	4	Continue and expand public education/outreach efforts, such as drills, exercises, programs, brochures, NOAA weather radio distribution, and website/social media information, to aid in preparedness and resilience for hazard events.	X	X	X	X	X	X	X	X	Countywide	County EM, DHD #10, MDNR	A, B, C			X	X		X
	4a	Continue the preparedness practice of conducting the annual statewide tornado drill.		X								County EM	A, B, C	Annually		X			X
	4b	Conduct public education and awareness activities such as programs, brochures, and online information, regarding flood mitigation efforts, wildfire prevention efforts, and preparedness for extreme temperature events	X	X	X	X	X			X	Countywide	County EM, local fire Depts./First Responders, MDNR, ARC	A, B, C						X
	4c	Continue to promote participation in Storm Spotter Training via partnership with the NWS.		X							Countywide	County EM	A, B, C	Annually					X
	5	Support the Kalkaska Commission on Aging's reduced cost snow plowing, meal delivery service, friendly visitor, and service with love programs.	X	X	X	X	X			X	Countywide	Kalkaska County Commission on Aging	A, D	Ongoing		X			
	6	Monitor and document persistent flood areas including areas of repetitive loss				X					Countywide	Kalkaska County, local governments	A, B, C, T						
	7	Incorporate green infrastructure and floodplain management best practices into the planning and development process				X					Countywide	Kalkaska County Dept. of Building Codes	A, B						
	8	Assess local fire suppression access points and equipment and pursue improvements as needed.			X						Countywide	County EM, KCRC, Local fire departments; MDNR Wildfire Mgmt., Local governments	A, B, C			X			X
	9	Continue to provide information to local communities that may benefit from participation in the Firewise USA® program.			X			X			Countywide	County EM, Local Fire Depts./First Responders, MDNR, Local Governments	A, B, C, M			X			X
	10	Continue to create Incident Action Plans for outdoor recreation sites including campgrounds and county parks.	X	X	X	X	X			X	Countywide	County, MDNR, Private Campgrounds	A			X			X
	11	Review and update event Incident Action Plans annually	X	X	X	X	X	X		X	Countywide		A						
	12	Ensure that County residents, particularly vulnerable populations, have access to healthy, affordable food options.						X	X	X	Countywide	County Dispatch keeps a list of vulnerable persons to check up on	A, D, F,			X	X	X	X
	12a	Consider involvement in MSUE's School Gardens Program (https://www.canr.msu.edu/community_food_systems/school-gardens/) and continue provision of the Kalkaska County 4-H Junior Master Gardener Program partnership with schools for grades K-6							X	X	Countywide	School districts	A, DD, FF				X	X	X
	12b	Utilize the dedicated space the county has for community garden use.						X	X	X	Village of Kalkaska	Kalkaska County	A, B						
	12c	Continue acceptance of WIC Project Fresh, Senior Project Fresh, SNAP/EB-T, Communities in Schools vouchers at the Kalkaska Farmers Market								X	Countywide	Kalkaska Farmers Market	FF	Annually; May - December					

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Preparation and Awareness	12d	Continue to provide and improve food assistance programs and emergency food programs to help communities prepare for unanticipated pandemics, but also increase year-round food accessibility.	X	X	X	X	X			X	Countywide	NMCAA; KAIR food pantry; School Districts (school meal programs); churches	A, D, F, FF	Ongoing		X			
	12e	Food rescue programs, involving public/private partnerships between farms, restaurants, hotels and other venues of large food production, can partner with local food pantries and schools to make good food more widely available.	X	X	X	X	X			X	Countywide	NMCAA; KAIR food pantry; School Districts (school meal programs); churches	A, D, F			X			X
	13	Continue to manage invasive species with treatment programs and promoting public awareness of invasive species management							X		Countywide	Kalkaska County, KCD, CAKE-CISMA	A, Z, DD, FF, GG, II, JJ, KK, LL, MM, NN, OO						
	14	Continue programs and services offered by the DHD #10 and/or MDHHS				X				X	Countywide	DHD#10; MDHHS	A, E	Ongoing		X	X	X	X
	15	Continue to coordinate with the MDHHS for guidance via their State Pandemic Plan and information about new or emerging disease threats.								X	Countywide	DHD #10, MDHHS; County EM	A, E,	Ongoing		X			X
Shelters	16	Maintain an accurate inventory of emergency shelter sites (overnight vs. daily use types) within the service area; review annually and update as needed.	X	X	X	X	X			X	Countywide	County EM; American Red Cross	A, B, C	Annually		X			
	17	Provide local governments or public/private organizations information on funding sources for the installation of generators to enhance capabilities of emergency shelter locations.	X	X	X	X	X			X	Countywide	County EM; Local Fire Depts.; Senior Centers; Municipal Offices	A, W				X		X
	18	Review shelter locations and consider additional sites as needed including "safe rooms"	X	X		X	X				Countywide	County Building Dept., EM; local govts; private and public site managers	A, W			X	X		
	19	Provide emergency shelter location information at all outdoor recreation sites.	X	X	X	X	X			X	Countywide	Kalkaska County	A, W						X
	20	Maintain procedures to create quarantine areas in group living quarters, such as overnight shelters or assisted living facilities.								X	Countywide	ARC, DHD #10, Assisted living facilities	A, W	Ongoing		X			
Buildings & Infrastructure	21	Continue enforcement of the County Building Code, Soil Erosion and Sedimentation Code, and District Health Dept. Code for new construction through the permitting process.	X	X		X	X			X	Countywide	County Building Dept.; ACD; DHD#10	A, E			X			
	22	Consider revising zoning code requirements in high fire-risk areas to include wildland fire risk mitigation practices (i.e., provide a 25 foot cleared space/defensible space between houses and other structures.)			X						Countywide	County Building Department, local governments	B, M, N			X			X
	23	Continue enforcement of the zoning standards for areas of land within these Michigan Designated Natural River systems: Boardman and Upper Manistee River				X					All Townships EXCEPT Rapid River and Clearwater Townships.	MDNR Natural Rivers Program Permitting Staff; Local Township Boards	B, OO						
	24	Implement strategic action plan for Rugg Pond Dam				X					Rapid River Township	Kalkaska County, KCD, Rapid River Township	A, B, W			X			
	25	Investigate funding sources for maintenance repairs to the Youngs Dam in Boardman Twp.				X					Boardman Township	Boardman Township	A, B				X		
	26	Continue to pursue opportunities for brownfield and blight clean-up activities, including demolition and clearance of vacant, condemned structures, to remove actual and potential sources of land, water and air contamination.	X	X	X	X				X	Countywide	Village of Kalkaska	A, B	Ongoing		X	X	X	X
	27	Promote the availability of low-cost residential weatherization and home improvement programs.	X	X	X	X	X			X	Countywide	NMCAA	D, G				X		X
	28	Evaluate the need for a potential reduced-cost program to install air conditioning in the homes of low-income senior citizens.			X		X			X	Countywide	Kalkaska County Commission on Aging	D, G				X		
	29	Pursue FEMA hazard mitigation assistance grants as appropriate (i.e., culvert/bridge replacement, storm sewer retrofitting, storm water management, dry flood-proofing of structures; structure elevation; property acquisition, for structure demolition or relocation; nature-based solutions.)	X	X	X	X	X	X	X	X	Countywide	Kalkaska County, KCRC, local governments	V, W				X	X	
	30	Inventory and prioritize improvements for flood prone locations				X					Countywide	KCRC, Drain Commissioner	W			X	X		

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Buildings & Infrastructure	30a	Hoiles Drive NW, east of Baggs Road			X						Clearwater Township	KCRC, Drain Commissioner	W				X		
	30b	Rapid City Road NW near Zimmerman Road NW			X						Clearwater Township	KCRC, Drain Commissioner	W				X		
	30c	Hillcrest Boulevard, south side of Bear Lake			X						Bear Lake Township	KCRC, Drain Commissioner	W				X		
	30d	Arwood trail NW			X						Clearwater Township	KCRC, Drain Commissioner	W				X		
	30e	Twin Lake Road between Big and Little Twin Lakes			X						Blue Lake Township, Coldsprings Township	KCRC, Drain Commissioner	W				X		
	30f	Lake Drive NE at base of hill from Maple Grove Drive NE			X						Excelsior Township	KCRC, Drain Commissioner	W				X		
	31	Inventory and prioritize improvements for problematic culverts or bridges that need reconstruction or replacement to improve water and habitat quality, as well as reduce occurrence of localized flooding.			X						Countywide	KCRC, MDOT	A, B				X	X	X
	31a				X												X	X	
	31b				X												X	X	
	32	Continue to require Point of Sale evaluations, where no sale of a parcel containing an on-site water supply and/or on-site sewage disposal system may take place until conditions are met.			X					X	Countywide	County, DHD#10	A, B, E				X	X	
Utilities & Technology	33	Continue work amongst the utility companies (GLE, Consumers E.), the Kalkaska County Road Commission & MDOT to clear vegetation (particularly diseased or dead trees, i.e., from Emerald Ash Borer infestations) along various road and utility right-of-ways to minimize power outages and road blockages from storm damage.	X	X	X				X		Countywide	KCRC, MDOT, Great Lakes E., Consumers Energy	A, O, P	Ongoing			X		X
	34	Continue to maintain effective communications practices between electric utility companies and County Emergency Management regarding power restoration. (County EM to post and promote the electrical outage map on social media account.)	X	X	X	X	X				Countywide	Consumers Energy or Great Lakes Energy and the County Emergency Mgmt.	A, O, P	Ongoing					X
	35	Investigate opportunities to bury overhead utilities, such as during new construction or in areas regularly prone to power outages.	X	X	X		X				Countywide	Consumers Energy or Great Lakes Energy	A, O, P, Q,				X	X	
	36	Maintain Continuity of Operations (COOP) plans and alternative "remote work" schedules.								X	Countywide	County and Local Government Agencies; Public Schools	A, O, P, Q,	Ongoing			X		
	37	Continue to expand availability of high-speed internet service to allow for widely available remote work/learning.								X	Countywide	Local service providers; Connected Nation MI	A, O, P, Q,	Ongoing			X	X	X
Environment & Natural Resources	38	Continue to utilize and promote the technical assistance, outreach and education pertaining to invasive species management (monitoring, treatment & removal) provided by non-profit and government agencies.							X		Countywide	KCD, CAKE-CISMA, CRA, MI EGLE, MDNR, MDARD, MSUE	A, B, Z, DD, EE, FF, GG, HH, II, JJ, KK, LL, MM, NN	Ongoing			X		X
	38a	Continue to provide invasive species management services with reduced-cost services for landowners.							X		Countywide	KCD, USDA-NRCS, MAEAP	DD, FF, GG	Ongoing				X	X
	38b	Continue to conduct annual routine invasive species surveying and monitoring to identify new emergent invasive species (such as Cypress Spurge or Leafy Spurge) before they get established and spread in the county.							X		Countywide	KCD, CAKE-CISMA, CRA, Bear Lake Improvement Board	DD, FF, GG				X		X
	38c	Continue participation in EGLE's annual Great Lakes Aquatic Invasive Species "Landing Blitz" event at public boat launches, emphasizing the need to Clean, Drain, Dry boats whenever they come out of the water, and Dispose of any unwanted bait in the trash.							X		Countywide	KCD, CAKE-CISMA	Z	Ongoing				X	X
	38d	Promote MSUE's "Clean Boats, Clean Waters" comprehensive aquatic invasive species boater outreach program; apply for grant funding to communicate aquatic invasive species prevention information through outreach materials and in-person educational events to boaters.							X		Public boat launches are located in all communities except the Village of Kalkaska, Excelsior Township and Boardman Township.	County Recreation, KCD, local governments	DD	Annually			X		X
	38e	Continue to promote EGLE's "NotMISpecies" webinars and resources on invasives control and management							X		Countywide	KCD, CAKE-CISMA	BB	Ongoing				X	X

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Environment & Natural Resources	38f	Investigate alternative, effective and less expensive invasive species control measures, such as livestock grazing.						X			Countywide	KCD, CAKE-CISMA	AA, DD, EE, FF, GG, HH						X		
	39	Support management of natural areas and restoration and removal of species that are not supposed to be there						X			Clearwater Township, Countywide	KCD, CAKE-CISMA	AA, DD, EE, FF, GG, HH	Ongoing		X		X	X		
	40	Install temporary or permanent boat-washing facilities at other water access sites to reduce the spread of invasives.						X			Lake Skegemog, Torch Lake, Fife Lake	Kalkaska County, KCD, CAKE-CISMA	Z, AA, EE, FF, GG			X		X	X		
	41	Identify existing and potential new locations for boat and/or equipment cleaning facilities at popular trailheads (non-motorized, equestrian, and ORV/Motorcycle) and on logging trails to reduce the spread of invasives species.						X			Countywide	MDNR, KCD, CAKE-CISMA, GTRLC	Z, AA, EE, FF, GG			X		X	X		
	42	Consider adoption of local ordinances that regulate activities to prevent the introduction of or the contribution to the spread of invasive species, such as prohibiting the use of invasive species in landscaping and/or vegetative riparian buffers, and permit treatment of existing infestations.						X			Countywide	Local governments	B, FF, GG			X		X	X		
	43	Continue implementation of MDNR Forestry Management Plans that outline mitigation efforts for invasive species.	X	X	X	X	X	X	X			MDNR Lands	MDNR	A, B, FF, GG	Ongoing		X		X		
	44	Continue to conduct wildfire management such as prescribed burns and surface fuels management projects (this also encourages regeneration of native plant species).			X				X			Countywide	MDNR	A, B, C	Ongoing		X		X		
	45	Continue efforts to regularly clean up river and lake debris, as well as clean out plugged culverts (due to beaver activity, sediment deposits, invasive species, etc.)				X						Countywide	Local Volunteers, MDNR, non-profit groups, schools	A, B, FF, GG	Ongoing				X	X	
	46	Identify and prioritize sites for open space protection/preservation, green infrastructure and/or stormwater management, especially in areas prone to flooding or erosion.		X		X	X		X			Countywide	Kalkaska County, local governments, KCD	A, B, FF, GG					X		
	47	Encourage identified flood prone areas be used for open space		X		X						Countywide	Kalkaska County, local governments, KCD	A, B, FF, GG					X		
	48	Develop an interconnected system of trailways that link communities, parks, and existing trails				X	X		X	X		Countywide	Kalkaska County, local governments, KCD, GTRLC, MDNR	A, B, FF, GG			X	X	X	X	
	49	Investigate the potential to continue groundwater monitoring for contamination in the vicinity of the Kalkaska County PBB Cattle Burial site.							X	X		Garfield Twp.	MDNR, EGLE, Kalkaska County, Garfield Twp.	A, B, Z					X	X	

ID	Resource	Description	Hazard Type	Website
A	Kalkaska County staff	Kalkaska County staff as appropriate	All hazards	https://www.kalkaskacounty.net/
B	Local government staff	All local units of government	All hazards	
C	Local Emergency Services and Fire Departments		Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Wildfire; Flooding; Extreme Temperatures; Public Health Emergency	
D	Kalkaska County Commission on Aging	The Commission on Aging provides services and support for seniors in Kalkaska County	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	https://www.kalkaskacounty.net/government/commission_on_aging/index.php
E	District Health Department #10	DHD #10 serves 10 counties in Michigan; those in the NW MI region include Kalkaska, Manistee, Missaukee, and Wexford counties. Their mission is to promote and enhance the health of our communities and environment through protection, prevention, and intervention. DHD #10 provides programs and services such as: immunizations; communicable disease reporting; issuing public health notifications; school health services; permitting processes for proper location and installation of water wells and septic systems; education about cleaning, monitoring and maintaining septic systems; septic or well repair financial assistance, and the inspection and licensing of food service establishments.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	https://www.dhd10.org/
F	Northern Michigan Community Action Association (NMCAA)	NMCAA serves the counties of Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Missaukee, Roscommon and Wexford. They provide the Weatherization Assistance Program and Emergency Home Repair Program for low- to moderate- income households. They also provide food distribution via the following USDA programs: monthly food package to low-income senior citizens via the Commodity Supplemental Food Program (CSFP), and The Emergency Food Assistance Program (TEFAP) to low-income persons through a quarterly distribution.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	https://www.nmcaa.net
G	"MI HOPE" Grants (Michigan Housing Opportunities Promoting Energy Efficiency)	Program for up to \$25K to repair or replace roofs, doors, windows, insulation, heating/cooling systems, water heaters, security lighting, Energy Star appliances and electrical systems for eligible low-income residents.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	www.michigan.gov/mi-hope
H	Habitat for Humanity Grand Traverse Region	Home Repair Program for those whose income is under 60% of the Average Median Income (AMI) for their county; can demonstrate a challenging circumstance such as limited income, disability, illness, or age that prevents them from making the repairs; and have owned their home for at least 12 months.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	https://www.habitatqtr.org/home-repair/
I	Grand Traverse Regional Community Foundation - Kalkaska Area	The Endowment for Kalkaska Area is designed to be responsive and flexible in addressing a variety of community needs and interests - both emerging and established - within Kalkaska County.	All hazards	https://www.qtrcf.org/kalkaska
J	Groundwork Center for Resilient Communities	With roots firmly embedded in the pro-health, pro-environment, and pro-economy principles of a local food system, the Groundwork Food and Farming team creates markets for local farmers, and helps connect locally grown food to school children, food pantry clients and families across the state.	Public Health Emergency	https://www.groundworkcenter.org/food-farming/
K	Midwest Agriculture Climate Team	MAC-T members are Extension specialists and state climatologists from many of the states represented in the Midwest Climate Hub, and NOAA NWS climate and weather specialists. The goal of this team is to share expertise regionally, discuss impacts and opportunities as it relates to agriculture and outlooks, and maintain an open line of communication so when weather/climate events do occur, the Midwest agriculture community is set to respond. The team meets monthly during the growing season regularly, and as needed during the winter season.	Drought, Extreme Temperatures, Flooding, Severe Winter Weather, High Winds, Hail	https://www.climatehubs.usda.gov/hubs/midwest/topic/midwest-agriculture-climate-team-mac-t

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L	NWS Climate Prediction Center	The U.S. Drought Monitor is a map released every Thursday, showing parts of the U.S. that are in drought. The map uses five classifications: abnormally dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought: moderate (D1), severe (D2), extreme (D3) and exceptional (D4).	Drought	https://www.cpc.ncep.noaa.gov/products/Drought/
M	National Fire Protection Association Firewise USA Program	Firewise USA Program: Each applicant must create a board/committee, complete a community wildfire risk assessment with a 3-year action plan to reduce ignition risk to homes, and complete annual educational and risk reduction actions identified in the plan.	Wildfire, Drought	https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA
N	NFPA Community Wildfire Defense Grants	Communities can use these grants from the USFS in a variety of ways to reduce the wildfire risk to people and property. One key use is capacity building for wildfire mitigation. For example, communities can use the grants to support the implementation and enforcement of wildfire-related codes and standards; to train people to assess wildfire risk and implement effective mitigation measures; and to perform outreach to community members through programs like Firewise USA®. Communities that build these fundamentals—sound land use and building practices, a skilled workforce, and an educated public—will be better prepared for sustained and effective risk reduction and better equipped to take advantage of future federal grants that prioritize communities with codes in place.	Wildfire, Drought	https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire
O	Consumer's Energy Utility Services	Consumers Energy provides electrical and natural gas utility services. Energy through renewable energy sources is available. A power outage map is available to track outage locations.	All hazards.	https://www.consumersenergy.com/outagemap
P	Great Lakes Energy Utility Services	GLE provides electric and high-speed fiber internet and voice services. GLE provides an online power outage map to track outage locations. Also, Trustream's Status Map indicates where fiber internet is available or is being explored in the region.	All hazards.	https://www.gtlakes.com/power-outages/ https://www.trustreamfiber.com/status-map/
Q	Connected Nation Michigan	Connected Nation develops and provides the tools, resources, and methods that help states and communities create and implement solutions to their broadband and digital technology gaps. They assess and plan for the expansion of broadband access, adoption, and use. They empower people with technology skills and resources to improve their quality of life, and we develop public-private partnerships to bring technology access to targeted geographies and population.	All hazards.	https://connectednation.org/michigan/
R	EGLE's Michigan Oil, and Gas and Minerals Division Data Explorer	Interactive mapping tool to search for oil and gas well facilities and associated records throughout Michigan; list of oil and gas well types and status codes.	Flooding, Lightning, Tornado, Severe Winter Weather, High Winds	https://www.egle.state.mi.us/dataminer/ https://www.michigan.gov/egle/about/organization/oil-and-gas-and-minerals/oil-and-gas/oil-and-gas-well-type-and-status
S	National Pipeline Mapping System - Public Map Viewer	The National Pipeline Mapping System (NPMS) Public Map Viewer is a web-based mapping application designed to assist the general public with displaying and querying data related to: gas transmission and hazardous liquid pipelines, liquefied natural gas plants, and breakout tanks under Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) jurisdiction. This application does not contain distribution or gas gathering pipelines. Basic information about gas or hazardous liquid pipeline incidents is also available.	Extreme temperatures, flooding, and soil erosion.	https://www.npms.phmsa.dot.gov/
T	EGLE's Wetlands Map Viewer	The WMV application was created for the Department of Environment, Great Lakes, and Energy to provide the public with quick and easy access to wetland spatial data.	Flooding, Drought, Extreme Temperatures	https://www.mcqi.state.mi.us/wetlands/mcqiMap.html
U	FEMA Floodplain Management Resources for Local Government Officials	How to participate with the NFIP and tools and resources to provide higher standards for floodplain management.	Flooding	https://www.fema.gov/floodplain-management/manage-risk/local

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V	FEMA Flood Mitigation Assistance (FMA) Grant Program	<p>FMA is a non-disaster, competitive grant program that provides funding to states, local communities, federally recognized tribes. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program.</p> <ul style="list-style-type: none"> • \$800 million available in funding for FY22 • Application Period: September 30, 2022, to January 27, 2023 • Period of Performance: 3 Years • Cost-share: 25% non-federal • Severe Repetitive Loss (up to 100% federal) • Repetitive Loss (up to 90% federal) • Priorities are set each fiscal year 	Flooding	https://www.fema.gov/grants/mitigation/floods
W	FEMA Building Resilient Infrastructure and Communities (BRIC) Grant Program	<p>BRIC is a non-disaster grant program, which provides funds on an annual basis for hazard mitigation planning and the implementation of mitigation projects prior to a disaster. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency. Funding has doubled for BRIC to \$2.295 billion for FY21.</p> <ul style="list-style-type: none"> • Caps: States/Territories Allocation and Activities: \$2 million; Tribal set-aside: \$2 million; National Competition: \$2.133 billion • Application Period: September 30, 2022 to January 27, 2023 • Period of Performance: 3 year from start date on Recipient's federal award • Cost-share: 25% non-federal • Economically disadvantaged rural communities are eligible for 10% non-federal • Priorities are set each fiscal year 	All hazards	https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities
X	FEMA Hazard Mitigation Grant Program (HGMP)	<p>HMGP is a post-disaster grant program, where funding is only made available under a Presidential major disaster declaration, in the areas of the State requested by the Governor. Federally-recognized tribes may also submit a request for a Presidential major disaster declaration within their impacted areas.</p>	All hazards	https://www.fema.gov/grants/mitigation/hazard-mitigation
Y	HMGP Post-Fire Assistance (PFA) grant program	<p>This grant funds projects that make a community more resilient after a designated wildfire disaster. States and federally-recognized tribes affected by fires resulting in a Fire Management Assistance Grant (FMAG) declaration on or after October 5, 2018, are eligible to apply.</p>	Wildfire, Drought	https://www.fema.gov/grants/mitigation/post-fire
Z	State of MI: Resources and Best Practices to prevent and manage invasive species	Prevention tips and action steps to control or remove invasive species.	Invasive Species	https://www.michigan.gov/invasives/take-action
AA	Michigan Invasive Species Grant Program	<p>The Departments of Natural Resources, Environmental Quality and Agriculture and Rural Development work together to address strategic issues of prevention, detection, eradication, and control for both terrestrial and aquatic invasive species in Michigan. This program is designed to address strategic issues of prevention, detection, eradication and control for both terrestrial invasive species (TIS) and aquatic invasive species (AIS) in Michigan.</p>	Invasive Species	www.michigan.gov/invasives/grants/misgip
BB	EGLE's "NotMISpecies" webinar series	<p>This webinar series explores how agencies, universities and locally led organizations are working together to protect Michigan's natural resources through the Michigan Invasive Species Program. If you are concerned about the impacts of invasive species or interested in the techniques used to control them, join us as we examine species-specific actions, innovations in research and technology, and programs designed to help communities prevent and manage harmful invasive species.</p>	Invasive Species	https://www.michigan.gov/invasives/take-action

ID	Resource	Description	Hazard Type	Website
CC	Clean Boats, Clean Waters Program	Funding from the Michigan Department of Environment, Great Lakes, and Energy and the Great Lakes Restoration Initiative has enabled Clean Boats, Clean Waters to grow into a comprehensive aquatic invasive species boater outreach program. The program's mission\ to prevent new aquatic invasive species introductions and limit their dispersal from water recreation activities through outreach and engagement. The program promotes understanding of boat cleaning practices and regulations through the distribution of educational materials, an online resource library, boat washing demonstrations, grants and partnerships.	Invasive Species	www.canr.msu.edu/clean_boats_clean_waters/index
DD	Michigan State University Extension (MSUE)	Resources available for: training elected and appointed officials, agriculture and food support programs, and natural resources protections.	All hazards	https://www.canr.msu.edu/outreach/
EE	USDA Natural Resources Conservation Service (NRCS)	The NRCS helps America's farmers, ranchers, and landowners conserve our nation's resources through voluntary programs and science-based solutions.	Drought; Extreme Temperatures; Invasive Species; Public Health Emergency	https://www.nrcs.usda.gov/
FF	Kalkaska Conservation District	Founded in 1950, the Kalkaska Conservation District works to steward the natural beauty of Kalkaska County. Through our efforts and community partners we're building thriving agriculture, healthy forests and the best recreation areas. All of these are essential to our local economy and high quality of life.	Flooding & Erosion; Invasive Species; Wildfire; Drought; Extreme Temperatures; Public Health Emergency	https://kalkaskaconservation.org/
GG	Charlevoix, Antrim, Kalkaska, Emmet Cooperative Invasive Species Management Area	To protect the natural resources, economy, and human health in Northern Lower Michigan through collaborative outreach and management of invasive species.	Invasive Species; Flooding and Erosion	https://www.michiganinvasives.org/cakecisma/
HH	Conservation Resource Alliance	Current projects include: Wild Roots, a cost-share program offering native plants to property owners at a greatly reduced rate; and The River Care Program, which ensures that natural resource professionals maintain a consistent and prioritized action plan for each river in the organization's region. River Care professionals not only find and repair physical problems before they become worse, they also team with local agencies, residents, and interest group representatives for fact-based conversations. These cross-functional teams can speak openly and affect change in an agile, efficient and transparent way. CRA works in the 10-county northwest MI region, along with the southerly adjoining counties of Mason, Lake, Osceola, Oceana and Newaygo.	Flooding & Erosion; Invasive Species; Drought; Extreme Heat; Public Health Emergency	https://www.rivercare.org/
II	The Watershed Center Grand Traverse Bay	The Watershed Center is solely dedicated to enhancing and protecting the quality of Grand Traverse Bay and its connected waterways.	Flooding & Erosion; Invasive Species, Public Health Emergency, Drought, Extreme Heat	https://gtbay.org/
JJ	Upper Manistee River Association	The purpose of this Association is to preserve and protect for future generations the Upper Manistee River system and its drainage as a world class natural resource. MRA consists largely, but not exclusively, of riparian property owners who share river related interests on that part of the Manistee River system, reaching from its head waters in southern Antrim and Otsego Counties downstream, 147 river miles, through Crawford, Kalkaska and Missaukee counties to highway US-131 in Wexford County.	Flooding & Erosion; Extreme Heat; Invasive Species, Public Health Emergency, Drought	

ID	Resource	Description	Hazard Type	Website
KK	MSUE's Michigan Inland Lakes Partnership	The purpose of the Michigan Inland Lakes Partnership (Partnership) is to engage state and local agencies, Native American Nations, outreach institutions (universities and other educational institutions), non-governmental organizations (NGOs), businesses, industries and citizens in a collaborative effort to ensure the quality, sustainability and ecological diversity of lakes, while considering society's needs. The Partnership will promote communication and cooperation between partners, communities and citizens interested in the management of Michigan's inland lakes, educating leaders, and strengthening stewardship efforts.	Inland flooding, shoreline erosion; Invasive Species	https://www.canr.msu.edu/michiganlakes/convention/
LL	Bear Lake Association/ Lake Improvement Board	Bear Lake Association informs and promotes the education of riparian property owners and other lake users about water issues and quality.	Inland flooding, shoreline erosion; Invasive Species	https://www.bearlakeassoc.com/
MM	Manistee Lake Association/ Manistee Lake Improvement Board		Inland flooding, shoreline erosion; Invasive Species	https://www.manisteelake.org/
NN	Great Lakes Stream Crossing Inventory	Previously, individual inventories were conducted by partnership agencies, watershed organizations, and road agencies but were not readily accessible to stakeholders and did not contain comparable information. The newly developed protocol and datasheet are intended to promote consistent data collection, selection criteria for improvement projects, and selection of appropriate Best Management Practices for each project to benefit all stakeholders. Information gathered on the datasheet can and has been used to prioritize structure replacement and successfully seek funding.	Flooding & Erosion	https://great-lakes-stream-crossing-inventory-michigan.hub.arcgis.com/
OO	Michigan's Designated Natural Rivers Program	Michigan's Natural Rivers program is a river protection effort that protects the natural quality of select river systems throughout the state by regulating their use and development through zoning rules. The Natural Rivers Program was developed to preserve, protect and enhance our state's finest river systems for the use and enjoyment of current and future generations by allowing property owners their right to reasonable development while protecting Michigan's unique river resources. There are 16 designated Natural River systems in Michigan. The designation includes the mainstream, as well as most of the tributaries. Nearly all construction, land change/earth moving, and placement of structures is regulated within 400-feet of any designated stream segment. Please consult with Natural Rivers Program staff for specific regulatory determinations.	Flooding & Erosion	https://www.michigan.gov/dnr/managing-resources/fisheries/natural-rivers
PP	MDNR Natural Rivers Program Permitting Staff	Contact Info	Flooding & Erosion	https://www.michigan.gov/-/media/Project/Websites/dnr/Documents/Fisheries/NaturalRivers/Natural-Rivers-Permitting-Staff-Map.pdf?rev=8cc4037834c44506bf3ca35cac658ffb

STRATEGY TYPES

1	Local Planning & Regulations
2	Building & Infrastructure Projects
3	Natural Systems Protection
4	Education & Awareness Efforts

PRIORITY

HIGH
MEDIUM
LOW