

Hazard Mitigation Strategy for Federal Disaster #1413: 2002 Central and Western Upper Peninsula Flooding

The objective of mitigation is to reduce future disaster losses through acquisition and relocation of hazard-prone property, structural retrofitting, mitigation education of community officials and residents, wise land use and land development practices, prudent use of resources and funding, and encouragement of National Flood Insurance Program (NFIP) implementation and compliance, to name just a few measures that have been successful. To assist communities in Michigan with mitigation efforts, so that the environment is safer and has a reduced risk from disaster damage, the following objectives must be accomplished.

The initial mitigation opportunities and recommendations identified during the damage assessment process in many of the affected communities include the following:

- A. Acquisition and relocation or retrofitting and flood proofing (including elevation) of substantially damaged structures located in flood prone areas.
- B. Community outreach and education to promote flood proofing methods in residential and commercial structures, focusing on elevation and/or relocation of utilities and mechanical systems in basements or other vulnerable areas.
- C. Applying the best methods to properly anchor and/or elevate or floodproof fuel oil tanks in home basements.
- D. Floodproofing roads, bridges, culverts and other public facilities located in floodplains or other flood prone areas.
- E. Armoring erosion prone streambanks to prevent sedimentation and to otherwise ensure maximum hydraulic capacity is maintained.
- F. Assessing the need for initial or revised flood hazard mapping in selected communities.

Financial resources, including disaster assistance programs such as the HMGP and PAGP, and the funds from other state and federal programs, will be maximized:

- Under the Public Assistance Grant Program, inspectors will make every effort to include appropriate mitigation measures in restoring damaged public facilities (on every project)—including the removal of disaster-caused debris from culverts and streambeds to ensure maximum hydraulic capacity.
- Under the Federal Highway Administration (FHWA) Emergency Relief Program, inspectors will make every effort to include appropriate mitigation measures in restoring damaged Federal-Aid roads and bridges.
- Under the Small Business Administration, low interest loans can be acquired for repairs and mitigation upgrades to damaged structures.
- Under the Natural Resource Conservation Service (NRCS) Emergency Watershed Program, appropriate mitigation measures will be implemented to remove any and all threats (urgent and compelling) resulting from sudden watershed impairment. In addition, supplemental funding will be requested to implement appropriate mitigation measures at other damaged, impacted or threatened sites (not considered urgent and compelling) that do not fall under the purview of the FEMA Public Assistance Grant Program or other programs.
- The maximum seven-percent (7%) allotment of available HMGP funds will be earmarked by the State to facilitate the development of local hazard mitigation plans in the declared disaster area and in other communities in the region.
- Under the HMGP, funds will be earmarked to acquire/relocate substantially damaged structures located in flood prone areas. In addition, FEMA will be requested to make available PAGP funds to cover the demolition and debris removal costs associated with these acquisitions.
- Under the Pre-Disaster Mitigation Program (PDMP), funds will be made available as appropriate (at the discretion of the State) to support mitigation planning efforts in the declared area.
- Voluntary organizations (i.e., Red Cross, Salvation Army, etc.) will be requested to provide (as appropriate and in keeping with their organizational mission) financial and other resources to promote and facilitate the implementation of mitigation measures in individual damaged homes.

Long-term mitigation will be ensured through comprehensive and prudent public health and safety measures (i.e., floodproofing utilities, mechanical systems, and basement fuel oil tanks in residences and businesses), local building practices, and floodplain management.

The mitigation strategy for promoting and achieving hazard mitigation in this disaster will be focused on the following areas:

- Public health and safety measures.
- Community mitigation education and outreach.
- Coordination with the FEMA PAGP, the FHWA Emergency Relief Program, and the NRCS Emergency Watershed Program.

- Community administered floodproofing measures.
- Mitigation project development.
- National Flood Insurance Program promotion and flood hazard identification.
- Promoting disaster resistant communities through the Pre-Disaster Mitigation Program and through local mitigation plan development.

Public health and safety measures

- Assist community officials and residents in identifying appropriate floodproofing solutions for basement fuel oil tanks, utilities and other mechanical systems that will ensure public health and safety. The Michigan Hazard Mitigation Coordinating Council has a representative from the Michigan Department of Environmental Quality (MDEQ). Public health and safety issues pertaining to the flood damages in individual homes and businesses related to this disaster can be discussed at an upcoming MHMCC meeting and suggestions taken from the MDEQ representative. In addition, FEMA Disaster Assistance Employees (DAEs) can provide written guidance materials directly to individual homeowners through community outreach at a Disaster Recovery Center (DRC), through the media, or through other appropriate avenues.

Community mitigation education and outreach

- Coordinate with public and private agencies in the development of flood resistant building practices and a multi-hazard mitigation plan for each declared county.
- FEMA should consider partnering with the SBA to provide information on the National Flood Insurance Program (NFIP) and floodproofing techniques for residential and commercial structures. This could be done at the SBA's Loan Assistance Office at the DFO and/or through one-on-one meetings with applicants and community officials.
- Conduct workshops on the DMA 2000 planning requirements and mitigation plan development with regional and local planning agencies.

Coordination with the Public Assistance Grant Program and other active relief programs

- Provide guidance to PAGP applicants that promotes mitigation and specifies the types of measures that are potentially eligible for funding under the PAGP.
- Coordinate with FEMA PAGP inspectors to ensure that appropriate mitigation measures are allowed and specified for damaged roads, bridges, culverts and other public facilities – including the removal of disaster-caused debris from culverts and streambeds to ensure maximum hydraulic capacity. This is best achieved by having FEMA Mitigation DAEs (preferably) and/or state mitigation staff (as a backup) be part of the PAGP inspection teams sent out to survey damaged sites. In addition, FEMA Mitigation DAEs (preferably) and/or state mitigation and PAGP staff should review each damage report written by the PAGP inspectors to ensure that mitigation measures have been considered on every project. The FEMA Deputy Coordinating Officer (FCO) for Mitigation should also review the PAGP inspection report trends (i.e., the percent of all PAGP projects that have specified mitigation measures) to ensure that mitigation measures are being specified in all appropriate circumstances and for all appropriate types of projects.
- Coordinate with FHWA inspectors to ensure that appropriate mitigation measures are being considered for damaged Federal-Aid roads and bridges being repaired under the FHWA Emergency Relief Program. This is best achieved by having the Michigan Department of Transportation (MDOT) representative in (or reporting to) the DFO to monitor and evaluate the decisions being made by FHWA inspectors in the field. If mitigation measures are not being considered, the FEMA Deputy FCO for Mitigation should contact the FHWA and request that mitigation be considered where appropriate and cost-effective.
- Coordinate with NRCS inspectors to ensure that appropriate mitigation measures are being considered on all sites being restored under the NRCS Emergency Watershed Program and other activated programs. This is best achieved by having state mitigation staff monitor and evaluate the decisions being made by NRCS inspectors in the field and central office program staff in Lansing. If mitigation measures are not being considered, the FEMA Deputy FCO for Hazard Mitigation should contact the NRCS and request that mitigation be considered where appropriate and cost-effective.
- Coordinate with the U.S. Army Corp of Engineers (USACE) on the possible development of flood control projects within or benefiting the declared area.

Community-administered floodproofing measures

- Invite communities to establish and administer a locally based floodproofing program that would provide public education on proper floodproofing techniques, and provide grants to individual home and business owners wishing to retrofit their structures to reduce flood damage. The program could be implemented and administered by an existing local department, such as the building, planning or public works department, who would be responsible for disbursing grants, monitoring work, providing technical assistance, and providing program status to the State. Note: floodproofing methods could include the following:
 - Acquire and demolish/relocate flood-prone structures.
 - Elevate flood-prone structures above the base flood level (1% annual chance of occurrence).

- Securely mount basement fuel oil tanks to prevent tank ruptures during flooding.
- Installation of standpipes, sewer backflow (check) valves, or revised plumbing to include an ejector or sump pump for basements.
- Raise electrical system components including service panels, meters, switches, and outlets that may easily be damaged by floodwater.
- Raise or relocate HVAC equipment, water heater, and washer/dryer.

Mitigation project development

- Information from the Preliminary Damage Assessment (PDA) will be used to help identify the communities that should be contacted concerning the possibility of mitigation opportunities under the Hazard Mitigation Grant Program (HMGP) and other state and federal programs.
- Review the potentially damaged structure inventory from the PDA, concentrating primarily on structures that may have been substantially damaged.
- Review the NFIP State Coordinator’s information concerning the flood hazard identification and participation status of communities in the NFIP.
- Coordinate with the Michigan Economic Development Corporation, Michigan Department of Career Development, Michigan State Housing Development Authority, and other appropriate state agencies concerning communities with a substantial investment of state financial resources.
- Whenever possible, incorporate mitigation projects into larger, ongoing or planned community projects (as long as the larger project will be completed in a timely manner and mitigation benefits can be fully retained). (Ongoing)
- Upon identification of communities suitable for mitigation, local officials will be contacted to determine the level of local interest in partnering towards recovery that will reduce the community’s risk to future flooding. The Mitigation Team will be activated and conduct site visits with communities, as necessary, to gain commitment in developing projects and implementing appropriate mitigation measures. The Mitigation Team will function as a technical resource to the community to help identify problems that should be addressed by the mitigation measure and identify financial assistance opportunities through federal, state and private sector programs.

NFIP promotion and flood hazard identification

- FEMA will collect and assess flood map upgrade needs data using the NFIP’s Map Needs Update Support System database. Where no NFIP maps are available, the map needs data collection process shall include a community-wide assessment of flood damage potential according to NFIP standards. FEMA shall coordinate with the United States Geological Survey (USGS), the MDEQ, and the NFIP Regional Engineer to determine the need for collection of high water data. In addition, FEMA shall coordinate with PAGP inspection staff to determine where floodplain map data would enhance benefit-cost analysis for potential mitigation-induced project enhancements and prepare hydrologic and hydraulic analyses as required. Working in consultation with the NFIP State Coordinator, FEMA will identify areas where flood damage has occurred to residential or commercial building stock and prepare flood recovery maps as required to assist in rebuilding efforts that comply with minimum state and federal flood damage prevention standards.
- MDEQ staff will provide technical assistance to local floodplain administrators as needed. (Ongoing)
- MDEQ staff will, as needed, conduct NFIP briefings to inform local floodplain administrators of NFIP responsibilities. (Ongoing)
- FEMA will mail letters to affected communities regarding immediate substantial damage determinations. (Ongoing)
- FEMA will identify (with MDEQ input) priorities for possible enforcement actions. (Ongoing)
- MDEQ, EMD/MSP and FEMA will review repetitive loss data for potential acquisition, elevation or floodproofing sites.
- There is one NFIP sanctioned community (L’Anse Township) in the five-county disaster area. This community has applied to join the NFIP and should be eligible shortly.

Promoting disaster resistant communities through the Pre-Disaster Mitigation Program

- Coordinate the use of PDMP funds, as appropriate, to promote mitigation plan development to ensure less disaster damage in the future.