

## **Hazard Mitigation Strategy for Federal Disaster #1028:** **1994 Northern Michigan Deep Freeze**

Improve capabilities to predict severe cold weather periods which may hamper operation of water and sewer systems, and to take appropriate actions to prevent system freeze ups and damage.

Ensure all future construction, alterations and repairs to water and sewer systems adhere to state codes and standards and system master plans.

Integrate mitigation into long range capital improvements planning to identify and implement preventive measures for vulnerable system components.

Where appropriate, improve state codes and standards to better address the problems associated with frost damage caused by severe cold weather.

Decrease the vulnerability of those system components not directly affected by the disaster, or which were damaged but not covered under the Public Assistance Grant Program, but nonetheless could be susceptible to frost damage from a similar event in the future.

Jurisdictions had until July 15<sup>th</sup>, 1994, to submit Pre-Application Forms for proposed mitigation measures to EMHSD. A total of 62 projects proposals were received, with funding requests totaling nearly \$5.7 million dollars. FEMA set the total amount of available HMGP funding for this disaster at \$669,539. On July 20<sup>th</sup>, 1994, a State Selection Panel was convened to review, prioritize and approve project proposals for funding under the HMGP. A total of 21 projects were selected by the Panel for funding consideration. EMHSD then submitted a State Grant Application to FEMA, with the individual project applications attached. FEMA then reviewed the individual project applications and provided a grant to the State for disbursement to those applications whose projects are approved. *Lead Agency: MSP/EMHSD.*

Increase awareness of community officials about state codes and standards for water and sewer systems, and the permit processes for system alterations. *Lead Agency: MDPH and MDNR*

Develop water system master plans for those communities that don't presently have one. *Lead Agency: MDPH*

Provide technical assistance and encouragement to communities to apply for and use Community Development Block Grant funds for implementing mitigation measures. *Lead Agency: MSP/EMHSD and MDOCm.*

Ensure that all water/sewer system repairs and mitigation measures funded under the PAGP and HMGP use appropriate cold weather engineering practices, and are consistent with state codes and standards. *Lead Agency: MSP/EMHSD, MDPH and MDNR.*

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Incorporate appropriate cold weather engineering practices into state codes and standards for design, construction and alteration of public water and sewer systems throughout the state. *Lead Agency: MDPH and MDNR.*

Establish formal "let run" policies and procedures to keep water moving through a community's system to prevent freezing during periods of extended or extreme cold weather. *Lead Agency: MDPH and MDNR.*

Work with the National Weather Service, Army Corps of Engineers Cold Regions Research and Engineering Laboratory, and other appropriate agencies to better identify periods of extended sub-zero weather which could lead to widespread water and sewer system freeze ups. *Lead Agency: NWS, USACE, MDPH, MDNR, MSP/EMHSD.*