



# Disasters in the New Millennium

A Historical Look at Minnesota Disasters, 2000–2010



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## Disasters in the New Millennium



The mission of the Minnesota Department of Public Safety Division of Homeland Security and Emergency Management (HSEM) is to help Minnesota prevent, prepare for, respond to and recover from natural and human caused disaster.

This report is an overview of major disasters in our state from the year 2000 through 2010, along with changes experienced and goals accomplished by HSEM.

As the new millennium began, catastrophic events that took place far from Minnesota changed Americans' perception of reality and resulted in a seismic shift in our approach to emergency response not only in Minnesota, but nationwide. More than ever, lines of communications are opening between agencies, jurisdictions and states. We've become

a nation of people intent on preparation and response-readiness. This report includes many of the ways in which HSEM and other Minnesota agencies are participating in that goal.

Closer to home, Minnesota experienced 12 presidentially declared major disasters and four emergency declarations, including the collapse of the I-35W Bridge across the Mississippi River in downtown Minneapolis.

The financial impact of disasters on communities and individuals can be devastating, and because of government funding systems and a professional staff that understands them well, HSEM brings millions of dollars in response, recovery, mitigation and education funding into our state every year. Minnesotans received more than \$382 million in disaster assistance from 2000 through 2010; the largest single event, the 2007 storms and flooding in southeast Minnesota, resulted in a federal assistance package of approximately \$71 million.

As a response agency, we seek monetary aid for disaster victims, but funding is only part of our mission. We also make good things happen. It's impossible to include in these pages all the stories of dedication, community spirit and professional skill it takes to help our residents get through the worst that people and nature can throw at us. But with every year, every decade and every disaster, we get better. With the support of our citizens, our community partners and our elected officials, we'll continue to manage risk, mitigate loss and minimize destruction for the people of Minnesota.

Sincerely,

A handwritten signature in black ink that reads "Kris A Eide". The signature is fluid and cursive, with the first letters of the first and last names being capitalized.

Kris A. Eide, Director  
Minnesota Department of Public Safety  
Homeland Security and Emergency Management

# Disasters in the New Millennium:

## A Historical Look at Disaster Preparedness, Response, Recovery and Mitigation in Minnesota, 2000–2010

Fourteen major weather events made the decade of the 1990s a benchmark for natural disasters in Minnesota. In fact, according to Property Claims Services Group, Minnesota ranked seventh in the nation in catastrophic losses for the period of 1990 through 1999.

In the first part of the new millennium, Mother Nature produced fewer weather events; we experienced 12 presidentially declared, weather-related disasters and two emergency weather declarations in 11 years. But during that time, two distant, catastrophic events – acts of terrorism in New York City, Washington D.C. and Pennsylvania, and a hurricane in the Gulf of Mexico – permanently changed the landscape of emergency management nationwide.

The attacks of September 11, 2001, and the 9/11 Commission Report that resulted focused our attention on national security and terrorism prevention. Then Hurricane Katrina in 2005 and the Post-Katrina Emergency Management Reform Act that followed redefined the roles of state government and FEMA in disaster response and sheltering.

The emergency management and response community matured between 2000 and 2010, expanding its vision to include the previously unimaginable. Our planning related to human-initiated disasters now encompasses bioterrorism, pandemic disease and more. Additionally, we're faced with the reality that while disasters occur locally, they may have wider significance; it can be necessary to coordinate regional and national resources for local response and recovery.

As we've experienced the new millennium in Minnesota, new initiatives and ideas have emerged in the field of emergency management, expanding our responsibilities, our vision, our needs and our goals.

### ICEFISHX

Managed by the Minnesota Joint Analysis Center under the supervision of the Bureau of Criminal Apprehension, Minnesota's Intelligence Communications Enterprise for Information Sharing and Exchange (ICEFISHX) is a partnership among Minnesota, North Dakota and South Dakota law enforcement agencies. This Internet-based, intelligence-sharing initiative allows law enforcement, government agencies and private-sector members to collect and disseminate information related to terrorist operations and other criminal activities in the tri-state area. ICEFISHX is the mechanism by which reports of suspicious activity are analyzed to find patterns of terrorist or criminal operations. It functions as a two-way communication vehicle for federal, state and local law enforcement agencies in our three-state region.

The true success of a tool like ICEFISHX is marked by events that never take place. In recent years, this initiative has

- Helped the Carlton County Sheriff's Office prepare for and respond to a national outlaw motorcycle gang gathering in Cloquet by obtaining information from other states about the gang's previous activities
- Alerted federal, state and local agencies about a fugitive's plans to head to Mexico, resulting in the eventual location of the suspect in Nashville
- Determined the true identity of the subject of an arrest warrant who had been using a fake ID
- Helped confirm a suspect's identity by obtaining photographs from the Texas Fusion Center, providing the last piece of evidence needed to make an arrest

Find more information at [www.icefishx.org](http://www.icefishx.org).

## National Incident Management System (NIMS)

NIMS was adopted by Minnesota in 2005. This system provides a unified approach to incident management, with standardized command and management structures that can be followed by all responding agencies when disaster strikes. It's a systematic, proactive approach that emphasizes preparedness, mutual aid and resource management. NIMS is designed to guide government agencies, non-profits and private-sector groups, helping them work seamlessly to prevent, respond to, recover from and mitigate the effects of any type of disaster, including acts of terrorism.

By 2010, there were NIMS-trained personnel in all Minnesota counties, jurisdictions, tribes and state-level agencies, with more than 7,200 of the 7,500 response personnel requiring initial training having fulfilled that requirement. Of the 900 personnel required to have higher-level training, over 91 percent have acquired it. Training is offered primarily by HSEM; additional coursework, workshops, conference topics and information exchanges contribute to continuing education.

The positive impact of NIMS on Minnesota's response effectiveness has been clearly demonstrated during major weather events and the collapse of the I-35W bridge.

Find more information at [www.fema.gov/emergency/nims](http://www.fema.gov/emergency/nims).

## DisasterLAN

This incident management system is a NIMS-compliant, Web-based crisis management solution for use in emergency operations centers. Built around the unique workflow requirements of the emergency management community, DisasterLAN provides users with a complete set of tools for managing incidents of any size.

Based on the National Incident Management System, DisasterLAN excels at helping emergency managers comply with NIMS mandates by

- Providing a formal, standardized documentation process
- Improving interagency and inter-jurisdictional communication and coordination
- Tracking and managing mission and asset requests
- Collecting information; tracking and reporting on resources
- Developing and sharing a common operational vision
- Maintaining situational awareness

## Minnesota Responds Medical Reserve Corps

Managed by the Minnesota Department of Health, the Medical Reserve Corps (MRC) is part of a national initiative to mobilize and coordinate health volunteers in response to emergencies. Every state is required by a 2002 federal mandate to implement statewide health-volunteer registration systems; Minnesota Responds is the program that satisfies that federal requirement. Minnesota Responds is a state coordinated, locally operated network of more than 100 volunteer programs. During a disaster, local volunteers work in partnership, assisting disaster-area healthcare systems.

Prior to Hurricane Katrina, there were approximately 350 people registered with Minnesota Responds. During Katrina that number grew to more than 2,000; currently there are nearly 9,000 active registrants, each of whom can be contacted in minutes using the program's digital voice-activation system.

During response to hurricanes Katrina and Rita, Minnesota Responds partnered with the American Red Cross to send Minnesotans into flood areas. Another partner-

ship between the University of Minnesota MRC and Mayo Clinic provided primary care in Louisiana for weeks following the disaster. Following the 2007 bridge collapse, behavioral health volunteers staffed a family assistance center. During 2009 flooding on the Red River, more than 100 volunteers assisted hospitals, nursing homes and behavioral health operations, as well as general sheltering operations. Volunteers also supported behavioral health needs of southeast Minnesota flood victims in 2007 and 2010.

Find more information at [www.mnresponds.org](http://www.mnresponds.org).

## Camp Ripley Training and Exercise Center

Legislation enacted in 2008 authorized funding for the Homeland Security and Emergency Management Training and Exercise Center at Camp Ripley. Cities, counties and state agencies will save time and money by training close to home, increasing the likelihood



Breaking ground for Camp Ripley Training Center: BG Joe Kelly, Minn. Army National Guard; HSEM Director Kris Eide; AMEM President Terry Stoltzman; Post Commander LTC(P) Scott St. Sauver; DPS Assistant Commissioner Mark Shields

that they will receive the training they need and assuring that emergency personnel from many disciplines can train the way they respond – together. Partnering with the National Guard by integrating our facility plans with their efforts enables Minnesota to build one of the nation's premier training facilities in an economical way.

## Interstate Mutual Aid — Emergency Management Assistance Compact (EMAC)

Since its inception in 1995, EMAC's membership has grown from a handful of states to all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands and Guam. Congress ratified EMAC in 1996; Minnesota joined in 1998.

Since 2000, member states have activated EMAC in support of hurricanes, floods, wildfires, tornadoes, presidential inaugurations, national political conventions and the September 11, 2001 terrorist attacks. Minnesota passed interstate-enabling legislation to allow deployment of responders from fire, forestry, search and rescue, medical, public health, debris removal, law enforcement, human services, transportation, amateur radio, animal control, public assistance, community relations, donations management, infrastructure support and mass care disciplines.

EMAC has been activated 165 times, including the following events in which Minnesota provided or received assistance.

- Katrina/Rita: In what remains the largest mutual aid deployment in our nation's history, Minnesota sent 637 personnel, civilian and National Guard, to participate in the 2005 hurricane response.



Cedar Rapids, June 2008 — Local residents on Highway 92 ramp with swollen Cedar River in the background. Under EMAC agreements, Minnesota sent 123 responders to Iowa in the 2008 floods. Photo: Greg Henshall, FEMA

- 2008 Iowa Floods: Minnesota sent 123 responders to Iowa during 2008 spring floods to provide search and rescue, veterinary support, incident management support and law enforcement.
- 2009 Spring Floods: In the 2009 spring flooding in North Dakota and Minnesota, other states deployed equipment, sandbags and 1,029 personnel to North Dakota and six persons to Minnesota. In all, 727 National Guard personnel and 302 civilians were sent to assist via EMAC. Not as heavily impacted as North Dakota, Minnesota sent 222 personnel to North Dakota to assist in evacuation, medical care and pet sheltering.

Since 2008, Kris Eide, HSEM director, has provided national leadership for EMAC as the chair of the EMAC Committee for the National Emergency Management Association (NEMA). As the EMAC Committee Chair, Eide's duties include:

- Ensuring that EMAC is in a constant state of response readiness

- Making national policy and strategy recommendations to NEMA for the advancement of EMAC and mutual aid throughout the country
- Working with the Department of Homeland Security/Federal Emergency Management Agency on resource typing, credentialing and other initiatives to advance mutual aid
- Providing oversight of EMAC training and exercise programs from which Minnesota personnel have benefitted directly
- Working toward an international mutual aid system that mirrors EMAC across the Canadian border — an initiative that could directly benefit Minnesota
- Serving on the NEMA Board of Directors which gives Minnesota a voice on national emergency management and homeland security related issues

## Hazard Mitigation, New-Millennium Style

Mitigation today is quite different than it was in the 1990s due to the implementation of the Disaster Mitigation Act of 2000, or DMA 2K.

Some notable changes include the facts that mitigation-specific planning requirements are now codified, an annual funding stream dedicated to mitigation is available and mitigation funding amounts have been altered.

Hazard mitigation planning mandates require emphasis on planning and strategy; identification and analysis of hazards; public participation in the planning process; coordination with other agency plans; adoption of the mitigation plan by the affected community; and adoption of a plan maintenance schedule. In meeting the requirements of DMA 2K, Minnesota has improved our mitigation process and created a safer future for residents.



A road in Red Wing, Minnesota is closed due to flooding. Photo: Patsy Lynch, FEMA

## 2000

Four waves of severe weather and flooding between May 17 and July 26 in southeast, southwest, east central and northwest Minnesota resulted in one presidential declaration for four separate disaster areas. See FEMA DR-1333.

The initial wave of thunderstorms brought hail, high winds and up to 12 inches of rain in small areas of Freeborn and Mower Counties. Another system dropped from five to 12 inches of rain on already saturated ground in south central and southeastern Minnesota. June 19, overland flooding occurred in northwestern counties already distressed by excessive rainfall. Then, on July 7 and 8, thunderstorms and wind hammered the Metro Area, dropping up to 12 inches of rain in Dakota County, where one drowning was reported. A line of severe thunderstorms moved through southwestern Minnesota on July 25, during which at least one tornado struck Granite Falls and caused one death.

In October, the focus switched from floods to wildfires. Weather events in 1999 had left behind blow-down that turned into 600 square miles of dry fuel. The fires began on October 19 and burned for more

than a week. A Federal Emergency Fire Suppression Declaration was received from FEMA on October 20 to cover 70 percent of firefighting costs estimated by the DNR at \$2.5 million; it was the first federal fire suppression assistance in Minnesota since 1976. Together, the Carlos Edge, St. Croix and Johnson fires burned about 10,000 acres.

In 2000, the Division of Emergency Management (HSEM's predecessor) purchased two automatic sandbag-filling machines and loaned them to Chippewa and Red Lake Counties to manage and maintain. We also partnered with the Minnesota Department of Health (MDH) to complete planning and exercises for influenza pandemic and received a \$949,000 U.S. Office of Justice grant for a domestic preparedness needs assessment and strategic plan.

With funding provided by the state legislature, the Domestic Terrorism Management Advisory Committee was formed in 2000; it included representatives from 21 agencies.

Sites were selected for new NOAA Weather Radio Transmitter sites, increasing coverage to reach almost 100 percent of Minnesotans.

## 2001

Spring floods and summer storms affected 60 Minnesota counties in 2001, resulting in nearly 1,200 applications for public assistance to repair or replace infrastructure – the largest number in one year to that date. See FEMA DR-1370.

The DEM hazard analysis and mitigation plan begun in 2000 was completed, and results were used to help local governments prepare their own plans.

The State Emergency Operations Center (SEOC) was activated on September 11, 2001, in response to acts of terrorism in New York City, Washington, D.C. and rural Pennsylvania. Calls to the SEOC information hotline averaged 100 per hour – many from local government officials asking for help with their own emergency planning and training.

The SEOC was activated once again in October due to a large number of incoming calls about anthrax; DEM and the MDH provided information to several jurisdictions in response to bioterrorism threats.

DEM was awarded another U.S. Office of Justice grant for domestic preparedness needs assessment and planning. The Domestic Terrorism Advisory Committee was renamed Terrorism Preparedness Advisory Council (T-PAC).

## 2002

From June 19 through 28, 2002, heavy rains caused flooding in northwest Minnesota and areas of south central and southeast Minnesota, resulting in a presidential disaster declaration and more than \$50 million in state and federal aid. See DR-1419.

Federal funding in the amount of \$4 million was allocated specifically for mitigation of damage by straight-line winds, and 13 funded infrastructure projects resulted in hundreds of miles of power lines buried in 13 counties.

A new federal law in 2002 required each city, county and township to have in place a mitigation plan by November 2004. Eight counties began planning immediately that year.



Army Reserve Corps members sandbagging in Roseau, 2002.  
Photo: Marvin Nauman, FEMA

## 2003

In 2003, the Department of Public Safety Division of Emergency Management and the state Office of Homeland Security merged to become the Division of Homeland Security and Emergency Management, streamlining processes as they created an all-hazards vision of prevention and response.

There were no presidential disaster declarations in our state that year, although droughts in north-east, southeast and central Minnesota resulted in 83 counties being declared agricultural disaster areas and becoming eligible for low-interest emergency loans.

HSEM staff members were involved in flash-flood response in Albertville, Glenwood and Alexandria; a natural gas pipeline rupture affected the Silver Bay area; and tornadoes touched down in Mankato, St. Clair and Buffalo Lake. The Small Business Administration subsequently declared Renville and nine other counties eligible for low-interest loans.

All 87 Minnesota counties, along with St. Paul, Minneapolis and Duluth participated in federally-mandated threat and vulnerability assessments in 2003, while 53 counties began mitigation planning projects.

The SEOC was partially activated on March 19 at the onset of the war in Iraq. With no threats confirmed, the center was deactivated March 22.

HSEM purchased decontamination trailers capable of decontaminating 50–60 persons per hour and distributed them to 15 regional fire districts.

## 2004

In February, Governor Pawlenty signed a reorganization order that transferred the powers and responsibilities of the State Emergency Response Commission to HSEM.

In June, a tabletop exercise involving more than a dozen agencies focused on coordinating a state response to a biological emergency.

September 14 and 15, nearly all of south central and southeast Minnesota, along with northwest and north central Iowa, received more than four inches of rain. The heaviest 36-hour total was 13 inches, reported by an unofficial weather observer in Freeborn County. The combination of geographic area and rainfall amounts made this one of the most significant flash floods in Minnesota's climate history. The SEOC was partially activated on Sept. 14, and HSEM staff were deployed to assist local authorities. See FEMA DR-1569.



15 regional fire districts received decontamination trailers purchased by HSEM in 2003.

## 2005

In June, HSEM and seven local law enforcement agencies, along with the Minnesota National Guard, launched the Minnesota Joint Analysis Center (MNJAC) to collect, manage and distribute strategic and tactical information related to terrorism and other criminal activities in Minnesota.

With U.S. Department of Homeland Security grant funding, HSEM procured eleven chemical assessment trucks and trailers for distribution across Minnesota this year. In addition, five collapsed-structure rescue teams were stood up; those trucks and equipment were delivered in spring, 2005.

Avian and pandemic influenza planning began in November with HSEM as the coordinating agency for the state's response to a pandemic.

Beginning on Sunday evening, November 27, a large area of snow and freezing rain covered much of western Minnesota for up to 12 hours before turning to heavy snow on Monday morning. Ice accumulations of up to two inches were covered by four to eight inches of snow, with northwest winds gusting to over 40 mph through Tuesday morning.

Very heavy damage was inflicted over an area of several counties; the human toll of this disastrous storm was substantial. Volunteers worked with neighbors, local officials and strangers to reduce devastation. HSEM coordinated activities around sheltering, medical needs, food and transportation. The disaster was presidentially declared; see FEMA DR-1622.

HSEM revised and updated the Emergency Planning and Procedures Guide for Schools, originally published in 1999, to be used in conjunction with the Minnesota Department of Education's Model Crisis Management Policy.

NIMSCAST – the National Incident Management System Capability Assessment Support Tool – is a 2005 DHS initiative. This tool supports self-assessment for government and private organizations to evaluate their ability to prepare for, prevent, respond to and recover from any type of domestic incident.

The SEOC was activated in response to the possible airlifting of more than 3,000 hurricane survivors to Minnesota. The airlift did not materialize, but hurricane survivors self-evacuated to Minnesota, necessitating state assistance in the Twin Cities. More than 20 state and non-profit agencies gathered in a temporary headquarters to provide “one-stop-shopping” for 600+ households. The center was open for more than three weeks to assist victims with FEMA registration, housing and other basic needs.

See FEMA EM-3242.

## 2006

HSEM created a supplement to the state emergency operations plan outlining a response to an avian or pandemic influenza outbreak in Minnesota and identifying roles of each state agency.

In late March, HSEM moved from monitoring possibilities to preparing for flooding along the Red River. At the request of Clay and Norman Counties, Governor Pawlenty authorized mobilization of 135 National Guard soldiers in early April to provide assistance to local authorities. HSEM coordinated the state response from the SEOC and acquired a presidential disaster declaration; see FEMA DR-1648.

HSEM worked with MDH to receive from the Nuclear Regulatory Commission a stockpile of potassium iodide (KI) to be offered at no cost to residents within ten miles of the Monticello and Prairie Island nuclear energy plants.

Excessive heat – the highest July temperatures in 70 years – along with drought, tornadoes, thunderstorms, wind and hail in July and August, killed one Minnesotan and destroyed property around Warroad, Lake Emily, Rogers and the northern Twin Cities suburbs. HSEM regional program coordinators assisted with response and coordinated state agency activities.



In Stockton, Deb Rotering holds her daughter, Heather Zimmerman at an Aug. 23 town meeting as FEMA representatives talked about services available for flood victims once a federal declaration is in effect. Photo: Patsy Lynch, FEMA

## 2007

March brought flooding to Traverse County when ice jams caused the Minnesota River to overflow its banks. Damage did not meet thresholds for FEMA assistance, but a Small Business Administration declaration was made. The Minnesota state legislature also approved an aid package for residents.

HSEM and MDH joined forces again to launch the codeReady campaign to motivate Minnesotans to prepare for emergencies. The campaign kicked off with a statewide tour by preparedness staff to generate excitement around codeReady.

The Ham Lake wildfire began May 5 and burned for two weeks, scorching 120 square miles of forest in Minnesota and Ontario and destroying multiple buildings along the Gunflint Trail. The Small Business Administration made low-interest loans available to residents who lost property.

In collaboration with the Minnesota Department of Education (MDE) and funded by grants from the federal Bureau of Justice and the MDE, HSEM established the Minnesota School Safety Center in August. The center works with school districts to support crisis preparedness and share expertise in prevention, response and recovery. In its first year of operation, the center established a website, helped districts develop crisis-response and safety policies, and trained school staff and mental health service providers on cognitive behavioral interventions for trauma in schools.

In late August, the SEOC was activated in response to flooding in southeast Minnesota. Six deaths were reported in those floods and seven counties suffered severe damage, where an expedited federal disaster declaration made federal funds available to affected individuals. See FEMA DR-1717.



# I-35W Bridge Collapse

Vehicles and bridge deck that collapsed into the Mississippi River on August 1, 2007.

On August 1, 2007, Minnesota responded to one of the most high-profile events in the state's history when the I-35W bridge catastrophically collapsed during evening rush hour, plunging dozens of vehicles and their occupants into the Mississippi River and onto its banks.

Thirteen people were killed and more than 100 injured in that event. HSEM activated the SEOC, establishing a joint information center in St. Paul and one near the collapse scene. Governor Pawlenty requested and President Bush issued an emergency declaration making federal resources available. See FEMA EM-3278.

Local and state response included fire, law enforcement, collapsed structure rescue, water rescue, hazmat specialists and emergency medical services, with state resources coordinated through the SEOC along with public information, various state agencies and federal liaisons from FEMA, the White House, Congress, the U.S. DOT, the National Transportation Safety Board and the Department of Homeland Security.

In the SEOC, it was quickly discovered that this was an international media event, as public information officers from several state agencies sorted phone calls into local, state, national and international categories and pursued answers for major media from around the world.

Among the lessons reinforced in this disaster were that relationships are central to effective response, and that planning, repetitive exercising, interoperable communications and mutual aid agreements save time, money and lives.

In the fall of 2007 the House Transportation and Infrastructure Committee authorized emergency recovery funds in a bill that provided \$250 million for replacement of the I-35W bridge. The new bridge opened in September of 2008.

## 2008

In March, HSEM created a disaster recovery coordinator position to improve the flow of information between state agencies, benefitting impacted communities by providing current and accurate disaster-recovery assistance and resources. This position leads the Minnesota Recovers Task Force, which assists applicants by identifying and coordinating disaster recovery resources.

On May 25, a tornado in Hugo caused the death of a child, about 50 injuries and more than \$24 million damage to homes. June 6, a series of three tornadoes impacted Wadena and Hubbard Counties, and on July 11 an F-3 tornado touched down near Willmar.

On June 5 and 6 severe flooding took place in Cook County, impacting Grand Marais. June 7 and 8 a wave of intense thunderstorms hit Fillmore and Houston Counties, causing the Root River to flood Preston, Lanesboro and Houston. These storms resulted in a presidential disaster declaration. See FEMA DR-1772. One fatality was reported from the same storm, in Freeborn County where a road washout occurred.

The SEOC was activated and staffed around the clock August 30–September 5 during the Republican National Convention in St. Paul.



April 9, 2009 – This unusual mitigation method employs large stones to divert and break up water from the Red River as it flows over and under a road surface near Oslo, Minn. The SEOC was activated for four weeks during Red River floods in 2009. Photo: Mike Moore, FEMA

## 2009

Minnesota made great strides in 2009 with expansion of its mutual aid agreements, including implementation of an all-hazard, interstate agreement with Wisconsin; the governor's approval of a number of other interstate agreements; and continued work on an international all-hazards agreement with Ontario.

The benefits of the HSEM Public-Private Coordination and Action Team (P2CAT) partnership were demonstrated during spring floods as P2CAT teams helped SEOC staff procure valuable resources from private-sector partners to enhance flood response.

Minnesota was struck by 24 tornadoes in 2009. A June 17 storm tracked about 10 miles across Mower County, damaging trees, homes, buildings and power poles. July 14, super-cell thunderstorms produced two tornadoes in central Minnesota, destroying two large turkey barns and ruining trees and crops with winds in excess of 85 mph. A second tornado struck Kandiyohi County that day, damaging homes and vehicles, while the heavy rainfall and hail accompanying the storms caused flash flooding and erosion in Aitkin, Stearns and Todd Counties. On August 8 an F-1 tornado touched down in several areas of Hennepin county, and on August 19, eight funnel clouds touched down statewide, the most significant originating in south Minneapolis. Total damage was greater than \$1.6 million, with 65 buildings damaged or destroyed.

Several areas of the state, primarily the Red River Valley, began flooding in mid-March after heavier than normal snowfall and unseasonably warm spring weather. The SEOC was activated for about four weeks to coordinate state response activities. Twenty-eight counties and one tribal government were included in the disaster declaration; see FEMA DR-1830 and FEMA EM-3304.



# Record Tornado Outbreak

One of 48 tornadoes on June 17 destroyed homes in Wadena. Photo: Brian Hansel, Wadena Pioneer Journal

## 2010

Early March flooding in the Red River basin resulted in a presidentially declared disaster (see FEMA DR-1900) and an Emergency Declaration (EM-3310).

Minnesota experienced more tornadoes than any other state in 2010; 145 for the year, with a one-day record of 48 on June 17. (The previous one-day record was 28 on June 16, 1992.) The June outbreak was also the greatest number of tornadoes rated F4 or greater on one day since 1967. These storms caused four fatalities. Hardest-hit were seven south-east Minnesota counties, where a presidential declaration resulted. See FEMA DR-1921.

September 22-23, more than 10 inches of rain fell on saturated soil in less than 24 hours, affecting 35 counties in the southern third of Minnesota, ten of which had been flooded in the spring (FEMA DR-1900) and three of which had been hit by severe storms in June (DR 1921.) These rainstorms resulted in a presidential disaster declaration; see FEMA DR-1941.

On December 10, the fifth largest snowstorm on record in the Twin Cities metro area dropped 17.1

inches of snow. No disaster declaration was necessary, but this event was significant both as a weather record and due to its impact on roads and buildings – most notably the Metrodome sports facility in Minneapolis, where the roof tore and collapsed under the weight of snow.



Damage in Rochester after June 17, 2010 tornadoes. Photo: National Weather Service, LaCrosse



# Good Neighbors, Good News

Mennonite volunteers from International Falls help fill sandbags in Moorhead during a Red River flood. Photo: Andrea Booher, FEMA

## Good News in the New Millennium

- 514 people completed the Minnesota Emergency Management Certification Program between 12/31/2000 and 12/31/2010.
  - In 1999, only 20 percent of Minnesota counties and 44 percent of cities enforced the uniform building codes that help protect residents from property destruction by the forces of nature. In the last decade, we've seen a modest increase to 22 percent of counties and 49 percent of cities.
  - In 1999, only 48 percent of Minnesota cities participated in the National Flood Insurance Program. By 2010, 89 percent of cities were enrolled. In 2010, there were 93 cities with FEMA maps showing high flood-risk areas that are not NFIP participants.
  - In 1999, only 18 percent of Minnesota counties and 12 percent of her cities had comprehensive planning in place. As of 2008, 71 percent of counties had comprehensive plans – and due to the
- Disaster Mitigation Act of 2000 (also known as DMA2K) that increased requirements for disaster mitigation planning in order to receive federal assistance, 77 of Minnesota's 87 counties have approved hazard mitigation plans (or are awaiting FEMA approval). The first plans were approved in 2005.
- Since 1989, federal, state and local funding has removed 1,100 Minnesota structures from flood hazard areas, reinforced or buried hundreds of miles of overhead electric transmission lines and protected nearly 400 structures from being damaged by wildfire. This long-term focus on damage reduction continues.
  - Using FEMA Hazard Mitigation Grants and Minnesota DNR Flood Damage Reduction (FDR) funding for buyouts, Minnesota has acquired 183 repetitive loss properties as of December 2010. HSEM produces a Hazard Mitigation Grant Program Property Acquisition handbook to help community officials mitigate flood losses by removing repetitive loss structures from flood plains.

- In response to the September 11, 2001 terrorist attacks, the state legislature adopted the Anti-Terrorism Act of 2002 with the goal of continuing Minnesota's efforts in terrorism preparedness. The act requires consistently updated terrorism preparedness plans and provided a \$13 million appropriation to the commissioner of public safety for anti-terrorism equipment and training.
- The Minnesota Disaster Management Handbook is a tool developed by HSEM for local jurisdictions to help emergency managers mitigate hazards, prepare for emergencies, and enhance response and recovery. The handbook includes damage and impact assessment forms for state, county and local officials. Look for handbooks and forms online at [www.minnesotarecovers.org](http://www.minnesotarecovers.org).
- The Minnesota Disaster Recovery Assistance Framework is a document developed by HSEM for government officials and community leaders involved in managing, organizing or leading disaster recovery. It provides information on state, federal, local and voluntary agency assistance and provides a comprehensive overview of roles and responsibilities. Find it at [www.hsem.state.mn.us](http://www.hsem.state.mn.us).

## New Help with Unmet Needs

Currently, three resources assist in individual or housing recovery:

- The Minnesota Recovers Task Force serves local jurisdictions by identifying state and federal recovery resources. Typically, this may be to address appropriations created from a disaster relief bill.
- Disaster Recovery Centers are locations where the public seeks assistance as they plan their recovery.
- Local Unmet Need Committees are established by disaster-affected communities to address needs that are not being met by local, state or federal resources. Activities are typically supported by members of Minnesota Voluntary Organizations Active in Disaster (MNVOAD).

Now, MNVOAD, with assistance from the HSEM recovery staff, will be adding one more component to the recovery effort – the MNVOAD Statewide, Long Term Recovery Committee. This group of volunteers will deploy regionally to provide disaster assistance resources.

## Looking Ahead

In the next decade, HSEM will concentrate on:

- Catastrophic event preparedness
- Increasing the state's response capacity
- Multi-jurisdictional, multi-state mutual aid
- Establishing international mutual aid agreements
- Advancing the use of technology to better manage disasters and communicate with the public, elected officials and other decision makers
- Strengthening public/private partnerships by developing joint goals and objectives to safeguard communities
- Promoting citizen preparedness to ensure resilience
- Assessments made collaboratively to capture and share the maximum damage assessment information at one time

## Minnesota Disaster Costs 2000-2010 Current as of 12/30/2010

This entire document exists online at [www.hsem.state.mn.us](http://www.hsem.state.mn.us) with live links to FEMA summaries of each disaster.

Assistance types are Public Assistance (PA), Individual Assistance (IA) and Hazard Mitigation Grant Program (HMGP). Go to [www.fema.gov/government/grant/](http://www.fema.gov/government/grant/) for more info.

\*\* Total includes the federal expenditures and unobligated balance (75 percent) and recipient (state/local) share of funding paid under the Stafford Act. Other federal funds, special state appropriations, and local funds are not included.

FEMA #	Event Date	Description	PA Total	IA Total	HMGP Total	**Grand Total
DR-1941	9/22/2010	Severe Storms and Flooding Across Southern Minnesota (Public Damage Assessment Estimates)	\$44,985,556	n/a	\$6,747,833	\$51,733,389
DR-1921	6/17/2010	Record Number of Tornadoes, Severe Storms, and Related Flooding	\$13,177,536	n/a	\$51,707	\$13,229,243
DR-1900	3/1/2010	Red River and Minnesota River Basin Flooding	\$16,543,048	n/a	\$24,628	\$16,567,676
EM-3310	3/1/2010	Red River and Minnesota River Basin Flooding	—	n/a	n/a	—
DR-1830	3/16/2009	Lake County Ice Storm, and Severe Spring Storms and Flooding in the Red River Basin	\$39,164,835	\$2,440,267	\$3,291,117	\$44,896,219
EM-3304	3/16/2009	Lake County Ice Storm, and Severe Spring Storms and Flooding in the Red River Basin	\$726,393	n/a	n/a	\$726,393
DR-1772	6/7/2008	Severe Storms and Flooding in Southeastern Minnesota	\$8,442,566	n/a	\$731,206	\$9,173,772
DR-1717	8/18/2007	Severe Storms and Flooding in Southeastern Minnesota	\$44,790,011	\$19,808,889	\$6,409,741	\$71,008,640
EM-3278	8/1/2007	I-35W Bridge Collapse	\$4,753,797	n/a	n/a	\$4,753,797
DR-1648	3/30/2006	Red River Basin Flooding	\$9,253,781	n/a	\$503,405	\$9,757,186
DR-1622	11/27/2005	Severe Winter Ice Storms in the Red River Basin	\$10,895,518	n/a	\$865,483	\$11,761,000
EM-3242	8/29/2005	Hurricane Katrina Evacuation Statewide	\$2,470,004	n/a	n/a	\$2,470,004
DR-1569	9/14/2004	Severe Storms and Flooding in South Central Minnesota	\$5,395,038	\$4,210,930	\$831,787	\$10,437,756
DR-1419	6/9/2002	Severe Storms, Flooding and Tornadoes	\$34,984,807	\$7,867,336	\$7,792,259	\$50,644,401
DR-1370	3/23/2001	Statewide Flooding (62 counties)	\$48,159,399	\$3,789,072	\$6,920,516	\$58,868,987
DR-1333	5/17/2000	Severe Storms, Flooding and Tornadoes in Southeastern Minnesota (Granite Falls Tornado)	\$15,500,286	\$5,167,603	\$6,162,428	\$26,830,318
					<b>Total</b>	<b>\$382,858,781</b>





Red River, March 29, 2009. Photo: Andrea Boorman, FEMA

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