

Chapter 11. Hazard Mitigation



Tornado near Iowa farm

Source: <https://ready.iowa.gov/>



Severe thunderstorm

Source: <https://ready.iowa.gov/>



Ice storm impacts power lines

Source:



Floods

Source: <https://ready.iowa.gov/>

OVERVIEW

Hazard mitigation is a coordinated, multi-jurisdictional process involving federal, state, and local agencies, volunteer groups, and businesses. It is a vital part of a comprehensive plan.

“To many, responding to disasters and emergencies does not come naturally. The response from the various agencies and organizations has developed with thorough and informed planning, training, exercises, and unfortunately, experience of responding to past disasters. This experience has been invaluable in highlighting the need for considered, integrated, and coordinated emergency planning.

Planning for emergencies ensures that the emergency services, local authorities and other organizations better communicate and coordinate their efforts, improving the management at the scene, in the emergency operations center, and the post-disaster recovery process.”

Source: Jackson County Emergency Management at <https://jacksoncounty.iowa.gov/emergency-management/>

EMERGENCY MANAGEMENT AGENCIES

The **Federal Emergency Management Agency (FEMA)** is part of the U. S. Department of Homeland Security. FEMA helps state and local agencies reduce their disaster risk, coordinates federal response efforts to stabilize communities after a disaster, and provides support for individuals and communities to rebuild and become more resilient. To learn more, visit <https://www.fema.gov/about>

The **Iowa Department of Homeland Security and Emergency Management (HSEMD)** coordinates homeland security and emergency management activities statewide. The HSEMD administers disaster grants provided by the federal government. To learn more, visit <https://homelandsecurity.iowa.gov/about/>

The coordinates local efforts in partnership with the HSEMD to prepare for, respond to, and recover from disasters. The JCEMA’s Emergency Management Commission and the Emergency Management Coordinator work with cities, school districts, and other partners to lay out the county’s hazard mitigation strategies in the

Jackson County Multi-Jurisdictional Hazard Mitigation Plan.

The Emergency Management Commission includes a member of the Board of Supervisors, the Sheriff, and the Mayor from each city within the county. The Commission appoints the Emergency Management Coordinator.

The JCEMA and the HSEMD are the primary emergency management agencies for Jackson County. Their services include addressing these types of hazards, disasters, and emergencies:

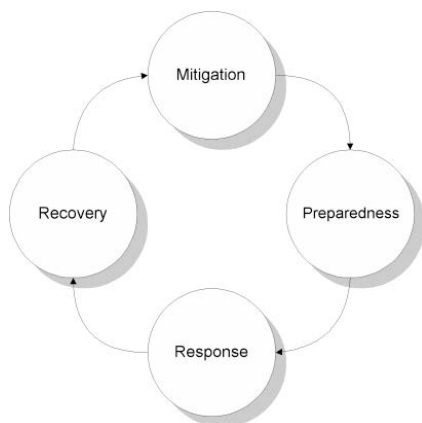
- **Natural** – such as a blizzard, tornado, flood, severe storm, or dam failure.
- **Public Health** – disease outbreak in people, animals, crops, or plants.
- **Technological (man-made)** – such as hazardous materials, infrastructure failure, transportation incident, or terrorism.

To learn more, visit <https://jacksoncounty.iowa.gov/emergency-management/>

Emergency Management Cycle

Emergency managers think of disasters as a recurring cycle with these four phases:

- **Mitigation:** Includes actions taken to prevent or reduce the cause, impact, and consequences of disasters.
- **Preparedness:** Includes planning, training, and educational activities for events that cannot be mitigated.
- **Response:** Occurs in the immediate aftermath of a disaster; business and other operations do not function normally.
- **Recovery:** Restoration efforts occur concurrently with regular operations and activities.



Source: FEMA Training “Emergency Management in the United States” at <https://training.fema.gov>

Preparedness Cycle

According to the Iowa Department of Homeland Security and Emergency Management (HSEMD): “The Preparedness Cycle is an important organizational tool that is comprised of five phases: preparedness, prevention, response, recovery and mitigation.



There is a continuous cycle of planning, organizing, training, equipping, exercising and evaluating emergency preparedness activities that allows organizations to increase their overall capacity and resiliency to experience and recover from any type of disaster.

Planning

Planning for emergencies ensures that emergency services, local authorities and other organizations better communicate and coordinate efforts, improving disaster response and post-disaster recovery. Federal, state, and local planning provides safety and security for the public under threat of a full spectrum of potential disasters.

Training

HSEMD training has helped prepare thousands of state and local first responders to prevent, protect, respond to and recover from a variety of emergency situations at all levels of government throughout the state.

Exercise

The goal of the Iowa HSEMD exercise program is to test the plans and practice the training in a simulated real-life environment to better prepare for actual emergencies.”

Source: Iowa HSEMD at <https://homelandsecurity.iowa.gov/alert-iowa/>

Alert Iowa Messaging System

Alert Iowa is the State of Iowa’s official emergency notification system. Through Alert Iowa, state and local officials can utilize a single, statewide notification system that provides local control of how and when to disseminate emergency and public safety messages to residents. Jackson County participates in Alert Iowa.

Sign up to receive free community and weather alerts via text message, email, and/or voice message.

1. Create a profile through Jackson County’s website opt-in page: <https://www.smart911.com/smart911/ref/reg.action?pa=JacksonCountyAlerts>
2. Download the Smart911 app and create a customized profile
3. Text JacksonIA to 672-83



Source: Iowa HSEMD at <https://homelandsecurity.iowa.gov/alert-iowa/>

Iowa 911 Emergency Program

All 99 Iowa counties have the capability of accepting wireless enhanced 911 Phase II service, which provides the call taker at the public safety answering point with latitude and longitude coordinates so they can more readily locate the

person who has placed the 911 call. All carriers have taken the necessary steps to allow callers to text 911 on a mobile phone. Text to 911 has been enabled in 911 centers across the United States.

It's always preferred that you call 911, but in Iowa if you can't call, then text!

WHEN TO CALL 911?

911 is for emergencies only. Reasons you may need to call 911 may include;

- To report a crime or a suspicious person
- To assist someone who is injured and needs help
- If you smell smoke or see a fire
- If you or someone else is having a medical emergency
- If you suspect a crime is taking place

You should call 911 anytime you believe there is an actual emergency. If you are unsure, call 911 and the dispatcher will make the final determination.

KNOW WHEN TO NOT CALL 911

Don't call 911 for city or local program information, to play a joke, or because you are late for a meeting and need help finding an address. While those situations may count as emergencies for you, they aren't for public safety. Inappropriate use of the 911 system wastes resources and ties up the lines at the 911 center.

WHAT WILL YOU BE ASKED WHEN YOU CALL 911?

When you call 911 the dispatcher will ask you questions that help them determine the correct personnel and equipment that needs to be sent. Questions you may be asked are;

WHAT? You are the dispatchers eyes and ears. You can provide detailed information that helps them dispatch the right services. Try not to panic, the dispatcher is trained to ask you questions to determine what is needed.


WHERE? Knowing where the problem is or where you are is a crucial detail that you can provide when you call 911. Be aware of your surroundings and be as detailed as possible.

WHO? If there is a person or persons involved in the incident dispatchers will need good descriptions of what they look like, what they are wearing, or what they might be carrying.

While you answer these questions dispatchers are providing this information to first responders. Do not hang up until the dispatcher tells you.

TEACH YOUR KIDS ABOUT 911

It is important that children learn that there are specific times when calling 911 is the right thing to do. Let them know that they should only call when someone or something is hurt or in danger or if they need a police officer, a firefighter, or a doctor.



CAN AN INACTIVE PHONE CALL 911?

You may have an old phone laying around at home, maybe your kids use it as a "play phone". Those old phones can still call 911. As long as the phone is charged and turned on a call can be placed to 911. Though an inactive phone does not provide a location or call back number.

If your kids use a real phone as a play phone make sure they know not to dial 911 as a joke or during playtime. If an accidental call is made, stay on the line and let the dispatcher know what has happened.

Source: Iowa HSEMD at <https://homelandsecurity.iowa.gov/programs/911-program/>

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

In Jackson County, the Jackson County Emergency Management Agency (JCEMA) and partner jurisdictions, including the cities, lay out the area’s hazard mitigation strategies in the 2024 Jackson County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP).

The 2024 Hazard Mitigation Plan assesses the risks to communities from natural hazards and identifies actions that can be taken in advance to reduce future losses. The law requires all local governments and districts to have an approved plan to be eligible for federal disaster assistance and hazard mitigation funding programs.

Hazard Identification and Ranking

The 2024 plan identifies and ranks risks from the natural hazards and the human-caused/technological, or non-natural, hazards. Hazards are prioritized using a scoring system with these four elements of risk:

- **Probability:** the likelihood of a hazard occurring again in the future.

- **Magnitude:** the severity in terms of injuries, fatalities, and damage to property and infrastructure.
- **Warning Time:** the potential amount of warning time available before the hazard occurs.
- **Duration:** how long the hazard will affect the area.

The score is called a Calculated Priority Risk Index (CPRI). Based on each hazard’s overall weighted score, they are ranked as High (3.0-4.0), Moderate (2.0-2.9), and Low (1.0-1.9) for their risk level.

According to the 2024 Hazard Mitigation Plan, these terms relate to the level of planning analysis to be given to the hazard in the risk assessment process and are not meant to suggest that a hazard would have only limited impact. To focus on the most critical natural hazards, those assigned a level of high or moderate were given more extensive attention in the remainder of the risk assessment (e.g., quantitative analysis or loss estimation), while those with a low level were addressed in more general or qualitative ways.

The overview hazard ranking scores were determined for Jackson County as a whole. The 2024 results of this overview are provided in Table 11.1.

Table 11.1 Overview of Jackson County Hazards: Ranking Score Results (2024)		
Natural Hazards	Score	Risk Level
Tornado/Windstorm	3.1	High
Thunderstorm/Lightning/Hail	2.9	Moderate
River Flooding	2.55	Moderate
Drought	2.5	Moderate
Extreme Heat	2.4	Moderate
Severe Winter Storm	2.4	Moderate
Grass/Wildland Fire	2.3	Moderate
Dam/Levee Failure	2.2	Moderate
Flash Flood	2.15	Moderate
Non-Natural Hazards	Score	Risk Level
Hazardous Materials	2.3	Moderate
Transportation Incident	2.3	Moderate
Infrastructure Failure	2.25	Moderate
Animal/Plant/Crop Disease	2.05	Moderate
Human Disease	2.05	Moderate
Terrorism	1.75	Low
Radiological Incident	1.5	Low
Source: 2024 Jackson County MJHMP		

Multi-Jurisdictional Risk Assessment

Jackson County is fairly uniform in terms of climate and topography as well as building construction characteristics. Accordingly, most weather-related hazards occur similarly across the county.

For the 2024 Hazard Mitigation Plan, the hazards were ranked for the following jurisdictions: unincorporated Jackson County, the 13 cities, and four community school districts: Andrew, Bellevue, Easton Valley, and Maquoketa. Risk assessment for the additional public and private schools that serve Jackson County is found in the Hazard Mitigation Plans for their respective counties. Chapter 4. Community Facilities and Services of this comprehensive plan has information about the schools serving Jackson County.

Multi-Jurisdictional Mitigation Strategy

For the 2024 Hazard Mitigation Plan, the Mitigation Strategy was developed through a collaborative group process and consists of updated general goal statements to guide the jurisdictions in efforts to lessen disaster impacts as well as specific mitigation actions that can be

put in place to directly reduce vulnerability to hazards and losses. The following definitions are based upon those found in the March 2023 *Local Mitigation Planning Handbook*:

- **Goals** are general guidelines that explain what the community wants to achieve with the plan. They are usually broad policy-type statements that are long-term, and they represent visions for reducing or avoiding losses from the identified hazards.
- **Mitigation Actions** are specific actions that help achieve goals.
- **Action Plan** describes how the mitigation actions will be carried out.

Jackson County’s hazard mitigation strategy set forth in the 2024 Hazard Mitigation Plan is incorporated by reference in this comprehensive plan. For more information about the 2024 Hazard Mitigation Plan, contact the Jackson County Emergency Management Agency (JCEMA) at <https://jacksoncounty.iowa.gov/emergency-management/>

A **Comprehensive Emergency Operations Plan** describes how the local government will conduct emergency operations:

- Identifies departments and agencies designated to perform response and recovery activities and specifies tasks they must accomplish.
- Outlines integration of assistance that is available to local jurisdictions during disaster situations that generate emergency response and recovery needs beyond what the local jurisdiction can satisfy.
- Specifies the direction, control, and communications procedures and systems that will be relied upon to alert, notify, recall, and dispatch emergency response personnel; warn the public; protect residents and property; and request aid/support from other jurisdictions and/or the Federal Government (including the role of the Governor’s Authorized Representative).
- Provides coordinating instructions and provisions for implementing mutual aid agreements, as applicable.
- Describes the logistical support for planned operations.

Source: “Developing and Maintaining Emergency Operations Plans,” FEMA, November 2010 at https://www.fema.gov/sites/default/files/2020-05/CPG_101_V2_30NOV2010_FINAL_508.pdf

LOCAL, STATE, & FEDERAL PROGRAMS

Jackson County Emergency Management Agency (JCEMA)

The JCEMA coordinates emergency management and hazard mitigation activities in Jackson County in partnership with federal, state, county, and city governments, schools, private companies, businesses, volunteer organizations, and individuals.

Through its emergency management grant fund, the JCEMA can apply for and manage state and federal pass-through grants for hazard mitigation, emergency management, and disaster response projects on behalf of the county and individual cities.



Iowa Department of Homeland Security and Emergency Management (HSEMD)

HSEMD programs and campaigns offer a variety of information, training, and assistance with federal government, non-profit, faith-based, volunteer, and private-sector partners.

The **School Safety Improvement Fund** provides up to \$50,000 per school building to implement recommended safety measure capital improvements identified through the vulnerability assessment.

Federal Grant Programs – Managed By HSEMD Available to Local Governments

The **Emergency Management Performance Grant (EMPG)** assists with development, maintenance, and improvement of state and local emergency management capabilities.

The **State Homeland Security Program (SHSP)** supports state, local, and tribal efforts to build, sustain, and deliver the capabilities necessary to prevent, prepare for, protect against, and respond to acts of terrorism.

The **Nonprofit Security Grant Program – State (NSGP-S)** integrates preparedness activities of nonprofit organizations with broader state and local preparedness efforts. It supports physical security enhancements and other security-related activities to nonprofit organizations at high risk of a terrorist attack.

The **State and Local Cybersecurity Grant Program (SLCGP)** provides funding to eligible entities to address cybersecurity risks and threats to information systems owned or operated by, or on behalf of, state, local, or tribal governments.

<https://homelandsecurity.iowa.gov/grants-overview/>

Iowa Individual Assistance Programs

The **Iowa Individual Disaster Assistance Grant Program (IIAGP)** offers grants to families whose household’s annual income is at *200% or less of the federal poverty level*. Each eligible household may receive up to \$5,000 for items that qualify under one of the four categories: temporary housing, food assistance, personal property, and home repair. Supporting documentation is required.

<https://homelandsecurity.iowa.gov/assistance/>

The **Iowa Disaster Case Advocacy Program** is designed to address serious needs to overcome a disaster-related hardship, injury or adverse condition.

There are no income eligibility requirements for this program. Disaster case managers work with clients to create a disaster recovery plan and provide guidance, advice and referral to obtain a service or resource. For Jackson County, service is provided by the Hawkeye Community Action Program, Inc. in Hiawatha.

Disaster Unemployment Assistance

After a Presidential Disaster Declaration for Individual Assistance, certain Iowans may be eligible for the federal **Disaster Unemployment Assistance (DUA) Program**. This program extends unemployment insurance benefits to self-employed civilians, farm workers, individuals who have worked for only a few weeks, and others who have lost earned income or whose income has been interrupted as a result of a major disaster. The benefits cover those usually not entitled to unemployment insurance. Claims are handled by Iowa Workforce Development.

Iowa Crisis Counseling

The Iowa Department of Health and Human Services offers **Project Recovery Iowa**, which provides free counseling and support for those impacted by disasters with resources for ongoing support.

The **Iowa Disaster Behavioral Response Team (DBHRT)** are trained volunteers who can mobilize resources to provide post-disaster mental health services statewide to individual victims, family members, volunteers, responders, survivors, or the community affected by critical incidents or disasters.

<https://homelandsecurity.iowa.gov/disasters/individual-assistance/>

Federal Emergency Management Agency (FEMA) Disaster Grants

FEMA's **Public Assistance** program awards grants to assist state and local governments and certain nonprofit organizations with response to and recovery from disasters. The program provides funding for debris removal, implementation of emergency protective measures, and permanent restoration of infrastructure. The program also encourages protection from future

damage with aid for hazard mitigation measures during the recovery process. HSEMD works with FEMA to manage the program and administer the funding.

FEMA Hazard Mitigation Grants

FEMA's two **Hazard Mitigation Assistance (HMA)** programs provide both pre- and post-disaster grant funding.

The **Building Resilient Infrastructure and Communities (BRIC)** program is for research-supported, proactive investment in community resilience with innovative approaches to partnerships, such as shared funding mechanisms, and/or project design.

The **Flood Mitigation Assistance (FMA)** program was created to assist states and communities in implementing measures that reduce or eliminate the long-term risk of flood damage to buildings insured under the National Flood Insurance Program. There are three types of FMA grants available to states and communities: planning, project, and management cost grants.

<https://homelandsecurity.iowa.gov/grants-overview/>

U.S. Department of Agriculture (USDA) Assistance For Agricultural Producers

The USDA offers a variety of **Disaster Assistance Programs** to help farmers, ranchers, communities, and businesses that have been hard hit by natural disaster events through the **Farm Service Agency (FSA)**. Eligible agricultural producers who have sustained losses from recent weather events can apply for assistance through the local Farm Service Agency office at the USDA Service Center in Maquoketa.

Following is a list of available FSA programs; visit farmers.gov for additional USDA programs that can help agricultural producers recover.

Livestock Assistance: Livestock Forage Disaster Program, Livestock Indemnity Program, Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish (ELAP), and Emergency Livestock Relief Program (ELRP).

Farm Loans: Emergency Loan Program and Disaster Set-Aside Program.

Farmland Damage: Emergency Conservation Program (ECP) and

Emergency Forest Restoration Program (EFRP).

Crop Losses: Noninsured Disaster Assistance Program (NAP) and Tree Assistance Program (TAP).

SBA Assistance for Private Non-Profits

The U.S. Small Business Administration (SBA) may provide **low-interest federal loans to private nonprofit organizations** (PNPs) that provide essential services of a governmental nature after a disaster to repair or replace damaged or destroyed real estate, machinery and equipment, inventory, and other business assets. <https://homelandsecurity.iowa.gov/disasters/individual-assistance/>

USDOT Hazardous Materials Grant

The U.S. Department of Transportation (USDOT) **Hazardous Materials Emergency Preparedness (HMEP)** grant program provides financial and technical assistance to eligible Local Emergency Planning Committees (LECPs) for hazmat planning and training. A guidebook for conducting hazardous materials commodity flow studies can be downloaded at no cost at

<https://www.trb.org/Publications/Blurbs/165775.aspx>.

Jackson County is part of the Region 6 LEPC. The Davenport Fire Department is the hazmat response team for Jackson County.

<https://homelandsecurity.iowa.gov/programs/lepc/>



Haz Mat Team Source: <https://ready.iowa.gov/>

Ready Iowa

Ready Iowa is an online resource of the Iowa HSEMD that helps people to be prepared for and be aware of potential disasters and emergencies. Learn more at <https://ready.iowa.gov/>



ISSUES AND OPPORTUNITIES

The following information is from the 2024 Jackson County Multi-Jurisdictional Hazard Mitigation Plan.

Monitoring, Evaluating, and Updating the Plan

Issue: With adoption of the Hazard Mitigation Plan, the Hazard Mitigation Planning Committee (HMPC) is tasked with plan monitoring, evaluation and maintenance, led by the Jackson County Emergency Management Coordinator.

The HMPC is an advisory body and can only make recommendations to county, city, town, or district elected officials. Its primary duty is to see the plan successfully carried out and to report to the community governing boards and the public on the status of plan implementation and mitigation opportunities.

Opportunities:

Plan Maintenance Schedule: The HMPC agreed to meet annually to monitor progress, discuss recent hazard events, changes in development that impact

vulnerability, and update the mitigation strategy.

The Jackson County Emergency Management Coordinator is responsible for initiating the plan reviews which will be integrated into the regularly scheduled Emergency Management Commission meetings.

In coordination with the other participating jurisdictions, a five-year written update of the plan will be submitted to the Iowa HSEMD and FEMA.

Plan Maintenance Process: Evaluation of progress can be achieved by monitoring changes in vulnerabilities identified in the plan. Changes in vulnerability can be identified by noting:

- Decreased vulnerability as a result of implementing recommended actions,
- Increased vulnerability as a result of failed or ineffective mitigation actions, and/or
- Increased vulnerability as a result of new development (and/or annexation).

Incorporation into Existing Planning Mechanisms

Issue: Many of the small jurisdictions in Jackson County do not have standing formal planning mechanisms such as a Comprehensive Plan or Capital Improvements Plan through which formal integration of mitigation actions can be documented.

As a result, activities that occur in these small communities are developed through annual budget planning, regular City Council Meetings, and other community forums rather than a formal planning process.

Opportunities: Where possible, plan participants use existing plans and/or programs to implement hazard mitigation actions. After the annual review of the Hazard Mitigation Plan, the Emergency Management Coordinator provides the updated Mitigation Strategy with current status of each mitigation action to the county’s Emergency Management Commission and county Department Heads as well as all Mayors, City Clerks, and School District Superintendents requesting that the updated mitigation strategy be

incorporated, where appropriate, in other planning mechanisms.

Continued Public Involvement

Issue: The update process provides an opportunity to publicize success stories from the plan's implementation and seek additional public comment.

Opportunities: The public is involved in the plan maintenance process by publication of a press release after each annual review indicating the committee has met with a summary of mitigation action status updates and highlights of specific completed mitigation actions, as applicable.

When the HMPC reconvenes for an update, it coordinates with all stakeholders participating in the planning process, including those who joined the HMPC after the initial effort, to update and revise the plan.

Public notice is posted through available website postings and social media outlets.

Plan Update

Issue: The five-year update for Jackson County's 2024 Hazard Mitigation Plan is scheduled for completion in 2029.

Opportunities: Jackson County's integration process for annual updates of the 2024 Hazard Mitigation Plan is:

- Incorporate into annual emergency management training, planning, and purchasing plans.
- Continue coordination of mitigation strategy with the county's Emergency Management Grant Fund as well as seek additional funding sources.
- Continue integration of the Risk Assessment in future updates of the county's Comprehensive Emergency Operations Plan.
- Incorporate into future updates of the county's Comprehensive Plan.

GOALS AND OBJECTIVES

Mitigation

11.1 Protect the health, safety and quality of life for Jackson County citizens while reducing or eliminating property losses, economic costs, and damage to the natural environment caused by a disaster.

- Maintain or consider National Flood Insurance Program (NFIP) membership as required.
- Continue to maintain and enforce snow removal policies.
- Purchase or elevate structures, add lift stations, increase/reinforce culvert size, and add curb and gutter to streets in areas in flood zones with severe and repetitive flood damage to prevent reoccurrence.

Prevention

11.2 Ensure government operations, response and recovery in Jackson County are not significantly disrupted by disasters.

- Provide backup power generators and wiring for critical facilities.

- Consider building a tornado safe room for all new construction and rehabilitation projects.
- Train personnel as weather spotters.

Preparedness

11.3 Expand public awareness and encourage intergovernmental cooperation, coordination and communication in Jackson County to build a more resilient community against all hazards.

- Continue to maintain existing outdoor warning siren systems and ensure appropriate coverage for population or ensure National Oceanic and Atmospheric Administration (NOAA) weather radios are available in uncovered areas.
- Purchase barricades and signage as deemed necessary to better communicate information.
- Continue to improve public awareness of hazardous weather through newsletters, public notices, strolling signs, etc.

- Create a data base of individuals with special needs to assist in a hazard event.
- Review and implement snow policies and implement during smaller storms as appropriate so residents are familiar with rules and regulations.