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I. INTRODUCTION

A. Plan Purpose

Cherokee, Ida, Monona, Plymouth, and Woodbury Counties in Iowa, along with their respective participating cities and school districts, have prepared this Regional Hazard Mitigation Plan to guide planning for increased resilience by way of sustained action to eliminate or reduce loss resulting from the occurrence of natural or other disasters. This Plan is intended for use in conjunction with all planning and guidance documents, procedures, and processes within a given jurisdiction (including but not limited to Comprehensive Plans, Economic Development Plans, Emergency Response Plans, and Capital Improvement Programs).

Background

In 2022, the Iowa Department of Homeland Security and Emergency Management (DHSEM) issued a Notice of Funding Available (NOFA) through the Building Resilient Infrastructure and Communities (BRIC) grant program specifically referencing Hazard Mitigation Plans set to expire in 2025. This notice was provided to County Emergency Management Agencies (EMA) in Iowa and communicated through the Iowa Association of Councils of Government (ICOG). Represented under a common Council of Governments (COG), Cherokee, Ida, Monona, Plymouth, and Woodbury County EMAs agreed to update their 2020 Regional plan and maintain five-county participation. Siouxland Interstate Metropolitan Planning Council (SIMPCO) facilitated the discussion and agreed to prepare the estimated budget, scope of work, and application. Plymouth County agreed to be the applicant of record and as such, contracted with SIMPCO to complete the Regional Hazard Mitigation Plan encompassing Cherokee, Ida, Monona, Plymouth, and Woodbury Counties in northwest Iowa. As compliant with federal allocation guidelines, the State of Iowa has a current Hazard Mitigation Plan, initiating a 10% provision from the state for eligible BRIC projects. Each county, as duly agreed upon, is responsible for its respective proportion of the remaining fifteen percent (15%) share of the total project cost.

Planning Area

This Regional Hazard Mitigation Plan includes an overview of each jurisdiction within Cherokee, Ida, Monona, Plymouth, and Woodbury Counties in Iowa including:

- profile
- participation
- community capabilities
- hazard analysis and risk assessment, and
- identified mitigation actions and strategies

The term “jurisdiction” within the context of this Plan refers to an incorporated city, unincorporated area under its respective county authority, county entity, and/or school district serving a population within the region and having at least one facility hosted within the region. The same five counties share a boundary under the SIMPCO regional planning area and its Iowa metropolitan planning area, the Iowa Department of Transportation (IaDOT) – designated as Transit Region IV and Transportation Planning Region IV, and the Local Emergency Planning Committee (LEPC) also designated as Iowa Region IV.

While all cities, counties, and school districts with facilities in the Region are included for discussion, FEMA recognizes “Participating Jurisdictions” as those with specific actions, strategies, and/or projects included in the Region Listing of Projects located in Title III *Region, Section F Mitigation Actions, Strategies, & Projects, Article 3 Identified Actions, Strategies, & Projects*. Participating jurisdictions will adopt the FEMA-approved plan and submit record of proceedings to SIMPCO as it pertains to plan maintenance.

For jurisdictions represented in this plan that have not included defined strategies or actions in the development of this Plan, an amendment and subsequent adoption at the local level enables that jurisdiction’s eligibility and activates “Participant” status upon notification to the State and FEMA. Jurisdictions included but not meeting the FEMA expectation of including a specific action, strategy, or project are denoted with an asterisk (*) on the complete listing of included jurisdictions beginning below.

To minimize redundancy, describing hazards and risks impacting the region are discussed in terms of the Region as a whole. Similarly, the geological makeup that is consistent across county borders is also characterized in regional terms. Therefore, identified mitigation actions and strategies in response to identified hazards are included in the Region summary, wherein some apply to the Region as a whole and are grouped together. Jurisdiction measures that respond to unique circumstances are also listed within jurisdiction profiles. To better reflect jurisdiction participation unique characteristics, public input, and planning procedures are independently addressed within the context of the given jurisdiction where applicable.

Following is a complete listing of jurisdictions included in this plan. Please note these indicators as applicable.

- * denotes plan development participation with **no FEMA-qualifying participatory projects** identified
- ** denotes participation in **another FEMA-Approved Plan**. Included as reference point for county or host community-based projects as may be considered
- x denotes **non-participant status** due to no response provided from jurisdiction

Cherokee County, its unincorporated area and the cities of:

Aurelia	* Cleghorn	Marcus	* Quimby
Cherokee	* Larrabee	* Meriden	* Washta

Ida County, its unincorporated area and the cities of:

Arthur	Battle Creek	Galva	Holstein	Ida Grove
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Monona County, its unincorporated area and the cities of:

Blencoe	Mapleton	Onawa	Soldier	Ute
Castana	Moorhead	Rodney	* Turin	Whiting

Plymouth County, its unincorporated area and the cities of:

Akron	Hinton	Merrill	Struble
x Brunsville	Kingsley	Oyens	Westfield
x Craig	Le Mars	Remsen	

Woodbury County, its unincorporated area and the cities of:

Anthon	Cushing	Lawton	Pierson	Sioux City
Bronson	Danbury	Moville	Salix	Sloan
Correctionville	Hornick	Oto	Sergeant Bluff	Smithland

Public School Districts serving the Region

Akron-Westfield CSD	* Odebolt Arthur Battle Creek Ida Grove CSD (OABCIG)
** Alta-Aurelia CSD	
Cherokee CSD	Remsen-Union CSD (RU)
Galva-Holstein CSD	River Valley CSD
Hinton CSD	Sergeant Bluff-Luton Community Schools (SBL)
Kingsley-Pierson School District	Sioux City CSD (SCCSD)
* Lawton-Bronson School District (LB)	* West Monona CSD
Le Mars Community School District	Westwood Schools
* Maple Valley-Anthon-Oto CSD (MVAO)	* Whiting CSD
Marcus-Meriden-Cleghorn CSD	* Woodbury Central CSD

Jurisdictions indicating a notation of non-participant (*) or without qualifying projects/action (*) are included in the plan as they may be beneficiaries of county or nearby-jurisdiction planned/proposed action. These entities have not identified specific mitigative strategies, actions, or projects and therefore are NOT classified as “Participants” under FEMA guidelines requiring such. Jurisdictions as indicated are required to amend, and adopt by resolution, the Plan at the local level to be eligible to apply for PDM funds as may become available for mitigation projects.

It is important to note that the Alta-Aurelia School District is a participant in the Buena Vista County, Iowa Hazard Mitigation Plan. The district is included by reference here as it may be a collaborative partner in projects affecting its Aurelia student population and/or facilities. **As a regionally devised plan, each participating county is adjacent to at least one other participating county. Participants from jurisdictions bordering other cities and/or counties not included in this plan have considered events, activities, and experiences from adjacent entities with whom there exists a 28E and other mutual aid agreements between response teams, departments,**

and agencies. Such partners have provided examples of best practices and opportunities in their respective jurisdictions which are exemplified in some projects included herein.

B. Funding

As provided in the *Background* section, this plan is made possible through the Federal Emergency Management Agency (FEMA) BRIC program as allocated by the Iowa Department of Homeland Security and Emergency Management (DHSEM) accounting for seventy-five percent (75%) of development and production costs. The funding opportunity was announced August 15, 2022. The State, having on file an approved State Hazard Mitigation Plan, covers 10% of the total project cost, reducing the local match. Participating counties completed a sub-award agreement with Plymouth County formalizing commitment to participate and cover in equal shares the 15% local match as required for funding eligibility. The application was submitted December 21, 2022. Plymouth County received a request for more information requiring ongoing communication between Plymouth County, Iowa Homeland Security Mitigation Bureau, and SIMPCO through November 2023. Notification to proceed was granted December 8, 2023 pending a pre-project meeting with the Iowa DHSEM program manager.

Upon completing coordination with the state mitigation bureau, finalizing county commitments, and approval of contracting with SIMPCO, work on this plan effectively began February, 2024. The Region Planning Committee included participating county EMAs and key partners in emergency response planning for each of those agencies.

C. Region Planning Team

Upon notification of available funding through BRIC 2022, SIMPCO, in its position as MPO and SRTPA for represented counties in the 2020 Regional Hazard Mitigation Plan, reached out to Emergency Management Agency coordinators in Cherokee, Ida, Monona, Plymouth, and Woodbury Counties to determine interest in collaborative pursuit of funding to update the Plan. With mutual agreement to pursue funding to complete a comprehensive update, Plymouth County EMA agreed to serve as project sponsor, hosting the application and subsequent award agreement with Iowa Homeland Security and Emergency Management. At

such time, the EMAs requested a contract with SIMPCO to administer the project and to complete the project.

Beginning with EMAs from each County, SIMPCO organized the lead Regional Planning Team to include Rebecca Socknat – Plymouth County EMA, Justin Pritts – Cherokee County EMA, Ed Sohm – Ida County EMA, Patrick Prorok – Monona County EMA, and Mike Montino – Woodbury County EMA. Additional counsel was provided through existing committees and respective members including Region IV LEPC, the SIMPCO Water Resource Committee, the SIMPCO MPO, and SIMPCO SRTPA in addition to SIMPCO Staff – Michelle Bostinelos, Ryan Brauer, Nathan Kistner, Bess Seaman, Tonia Abell, and Dawn Kimmel.

The Planning Team was instrumental in relaying significance of participation to jurisdictions through direct contact to encourage response to the planning packets as received as well as promotion of surveys to residents and local business. Quarterly meetings included review of progress to date and next steps. Planning Team meetings were conducted adjacent to established meetings to maximize efficiency, taking advantage of common place and time as applicable. The Planning Team continuously engages in relevant discussion when congregated to collaborate on potential projects and strategies that may guide mitigative action(s).

STAKEHOLDER REPRESENTATION

The following table provides an overview of meetings attended or facilitated with specific intent to include stakeholders throughout the planning area in the mitigation strategies conversation. For those represented in established committees with regular meetings, invitation was initiated through communications of future agenda items, among them the Regional Hazard Mitigation Plan. At each scheduled meeting, attendees were invited to discuss and participate in the development of the Regional Hazard Mitigation Plan. The format as presented shows correlation of meeting intent, impact on plan development, and stakeholder representation. As many attendees hold multiple roles within their communities, the stakeholder list is not exhaustive of those represented through meeting participation. Included for review are Regional Planning Team meetings, standing coalition and planning meetings for target stakeholders, some industry representatives, and/or service providers for vulnerable populations, among others.

Meetings as attended regularly throughout the process are not repeated unless specific interaction was notable.

<i>Date</i>	<i>Meeting purpose</i>	<i>Location</i>	<i># Attending</i>	<i>Committee purpose</i>	<i>Correlation to Plan Development</i>	<i>Stakeholders</i>
11/1/2023	Region Planning Team meeting	The Security Institute, Lower Level – WITCC	6	Plan development meeting. Discussed mode of communications with jurisdiction, public input opportunities, timeline (order of operation)	Communications document organization; rough timeline	Participating County EM Agencies
12/15/2023	Pre-Contract meeting with state officer	Online via Google Meet	3	Pre-contract meeting	initiate pre-implementation requirements to begin billable work on HMP.	Iowa DHSEM, Plymouth County (fiscal agent, responsible entity), SIMPCO (contracted project manager)
3/25/2024	Siouxland Coalition to End Homelessness	Sioux City Public Library, Gleason Room	28	Established coalition meeting held every other month. SIMPCO requested space on agenda to introduce HMP and request input from board and committee members.	preparation for interactive presentation, survey distribution, survey completion at later date.	Collective representation is expansive including but not limited to Attendees and Board members. Affiliations include representation from local banks, The Food Bank,, Connections Area Agency on Aging, Center for Siouxland, Sioux City Neighborhood Services, Iowa Workforce Development, Community Action Agency - Siouxland, NENCAP, Crittenton Center, Catholic Charities, Lutheran Services, Rosecrance, Haven House, Heartland Counseling Center, Siouxland SHIP, Siouxland Community Health Center, Siouxland Mental Health, CAASA, WomenAware, Goodwill, Salvation

						Army, Safe Place Siouxland, United Way, The Warming Shelter.
4/24/2024	Region Planning Team meeting	The Security Institute, Lower Level – WITCC	6	Action planning - outreach and follow up processes. Summary of state contact meeting enabling billable activities.	Consensus on communications process and integrating county & jurisdiction correlations. Progress report on plan prep. Confirmation of contacts by jurisdiction	Participating County EM Agencies
7/10/2024	Flood Resource Fair (Riverside)	Riverside Lutheran Church, 1817 Riverside Blvd	50+	Established community event. Attended to receive input from directly affected persons/households and vendors presenting info on available resources	Risk assessment enhancement for Sioux City profile. Representation of weaknesses and desired improvements.	Residents and Resource providers: American Red Cross, Community Action Agency, Sioux City Building Inspections, The Salvation Army, Sunnybrook Hope Center, Siouxland Mental Health, SCPD, FEMA field services, and more
7/11/2024	Flood Resource Fair (Riverside)	Riverside Lutheran Church, 1817 Riverside Lutheran Church, 1817 Riverside Blvd	50+	2nd day of established community event. Attended to receive input from directly affected persons/households and vendors presenting info on available resources	Risk assessment enhancement for Sioux City profile. Representation of weaknesses and desired improvements.	Residents and Resource providers: American Red Cross, Community Action Agency, Sioux City Building Inspections, The Salvation Army, Sunnybrook Hope Center, Siouxland Mental Health, SCPD, FEMA field services, and more

9/23/2024	Siouxland Coalition to End Homelessness	Sioux City Public Library, Gleason Room	20	Established coalition meeting held every other month. SIMPCO requested space on agenda to present info on HMP and its relevance to the homeless population. Requested input representative of populations served by committee members. Assessed available resources.	Risk assessments reflected impact on the homeless among vulnerable populations. Discussion shared during jurisdiction meetings where applicable, primarily Sioux City and surrounding metro area) in potential project development.	Attendees and Board members. Affiliations include representation from local banks, The Food Bank,, Connections Area Agency on Aging, Center for Siouxland, Sioux City Neighborhood Services, Iowa Workforce Development, Community Action Agency - Siouxland, NENCAP, Crittenton Center, Catholic Charities, Lutheran Services, Rosecrance, Haven House, Heartland Counseling Center, Siouxland SHIP, Siouxland Community Health Center, Siouxland Mental Health, CAASA, WomenAware, Goodwill, Salvation Army, Safe Place Siouxland, United Way, The Warming Shelter, college students, KTIV, CBS/Fox News (local affiliate), Dismas Charities.
10/16/2024	Region Planning Team meeting	The Security Institute, Lower Level – WITCC	5	Review of progress and modification of timeline reflecting community interactions to date and related budget impacts (timing, not amount) for local budget discussions. Re-focused efforts for direct communications with jurisdictions.	Updating of contacts. Additional push from Regional Team to add HMP development into scheduled quarterly meetings within respective jurisdictional meetings.	Participating County EM Agencies

12/13/2024	Plymouth County Health Planning Committee Mtg	Floyd Valley Healthcare	20	Established meeting held monthly during school year, moved to intermittent mid-plan. Opportunity to connect with health planning resources within county including health and human services providers from varying fields including but not limited to medical care, peer/caregiver support, transportation, early childhood programs/supports, senior services, community action agency resources, emergency response.	Gained survey participation and expanded distribution of survey to increase public input opportunity. Enable direct response from representative services addressing vulnerable populations. Meeting outcomes addressed in <i>Participation</i> portion of relevant jurisdictions as well as <i>Risk Assessment and Actions Needed</i> .	Floyd Valley Community Health, Mid Sioux Opportunity, Le Mars Community Schools, Unity Point Health PACE, Seniors Helping Seniors, Le Mars YMCA, Rosecrance Jackson, Gehlen Catholic School, Healthy Families - Plymouth/Cherokee Counties, Big Brothers Big Sisters of Siouxland, Childcare Nurse Consultant - MSO.
1/15/2025	Region Planning Team meeting	SIMPCO, 6401 Gordon Dr, Sioux City	6	Scheduled meeting. SIMPCO provided a progress report and reviewed remaining tasks.	general plan development	Participating County EM Agencies
4/23/2025	Region Planning Team meeting	SIMPCO, 6401 Gordon Dr, Sioux City	8	Scheduled meeting. SIMPCO provided a progress report, conducted gap assessment to determine where additional information is needed. Sought input from stakeholders in attendance. Reviewed remaining tasks.	general plan development; consideration of represented entities and potential effect. Included in risk assessment and strategies for respective jurisdictions and region.	Participating County EM Agencies; Kevin Handke(Unity Point), David Hoepfner - NEW Coop, Kent Carper - Woodbury Co Supervisor

6/18/2025	SIMPCO Water Resource Committee meeting	SIMPCO, 6401 Gordon Dr, Sioux City	14	Multi-state, scheduled quarterly meeting including elected officials, field experts, and interested parties/stakeholders along the Missouri River. Involvement expands to communities along tributaries whose flood impacts may or may not be directly related to Missouri Flow and volume. Experts and related resources are strictly tied to the Missouri River. Information, such as snow cap melt and dam/reservoir retention provide points of necessary attention/concern for tributaries as often fed by the same natural events (Precipitation, pace of snow melt, etc.)	Discussion included recommendations for mitigation-based projects that would decrease or eliminate potential for damage or loss of property or life in river flooding situations. Focus on Big Sioux, Little Sioux rivers and related flood districts. Info included in risk assessments for impact area profiles and region.	Woodbury Co EMA, North Sioux City, SD; Sergeant Bluff IA (resident; P&Z Rep); South Sioux City, City Administrator; North Sioux City, City Administrator; NEW Coop; Dakota Dunes CID; Cherokee Co Board of Supervisors; Senator Ernst office liaison; Sen Grassley office liaison; Sen Feenstra office liaison. Union Co, SD Commissioner.
10/10/2024	Ida County Community Alliance	Online via Teams	10	Established meeting held every other month. Opportunity to connect with health planning resources within county including health and human services providers from varying fields including but not limited to medical care, peer/caregiver support, transportation, early childhood programs/supports, senior services, community action agency resources, emergency response.	Survey Distribution - Flyers, paper format pdf, social media template, Natural Disasters and Other Hazards posting. Gained survey participation and expanded distribution of survey to increase public input opportunity. Enable direct response from representative services addressing vulnerable populations. Meeting outcomes addressed in <i>Participation</i> portion of relevant jurisdictions as well as <i>Risk Assessment</i> and <i>Actions Needed</i> .	Ida Co. Public Health, Siouxland District Health, Connections Area Agency on Aging, Rosecrance, Plains Area Mental Health, New Opportunities, Health and Human Services

It is important to note that SIMPCO's role on the Planning Team and in plan development provided insights unique to its regional position as a Council of Governments. Immersive community involvement is ongoing through an extensive network of facilitated and affiliated community committees. Facilitated meetings include but are not limited to Transportation and Infrastructure project planning (rural and metro), Economic and Community Development planning, community committees including Local Emergency Planning, Bike/Pedestrian Roundtable, and Water Resources. Participatory roles include the All-Abilities Health and Wellness Coalition, Tri-State Incident Management, Downtown Partners Environmental Group, Healthy Siouxland Initiative, Siouxland Coalition to End Homelessness, Active Transportation Committee, and several County Health Planning Committees. SIMPCO leads housing improvement and sustainability programs such as the Western Iowa Community Improvement Regional Housing Trust Fund. Such programs are representative of effects of natural and other disasters on aging housing stock, especially when recurring or extreme.

This collaboration of County Emergency Management Agencies and SIMPCO establishes a thorough representation of stakeholders required by FEMA as directed in their Local Mitigation Planning Handbook. Presentations at many of these meetings introduced the Hazard Mitigation Plan and the current update. Board members, attendees, and represented populations were further invited to provide input during the meetings as well as through survey completion and/or distribution.

By way of survey completion, schools districts as participating in the student version of the survey indicate that various clubs including but not limited to 4H and FFA were represented by respondents. EMA coordinators for participating counties included considerations from numerous stakeholders including but not limited to Western Iowa Tech Community College, Tyson Refrigeration, Wells Enterprises, VT Industries, NEW Coop, Seaboard Triumph Foods, and CF Industries. Communities hosting these and other businesses also addressed local significance of operations.

D. Plan Development & Data Collection

The 2025 Regional Hazard Mitigation Plan for Cherokee, Ida, Monona, Plymouth and Woodbury Counties is presented in a format consistent with guidelines as provided through FEMA, Iowa DHSEM and the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by the Disaster Mitigation Act of 2000 and Title 44 Code of Federal Regulations §201.6.

The Plan has been developed using a broad range of data resources, community interviews, and survey collection. The primary source for demographic data included the analysis of participant profiles on CensusReporter.org¹. Some information is also drawn from American Community Survey (ACS) estimates² and decennial census data³ through the Census Bureau. It is important to note that using a common base source for demographic data allows for consistent comparison and basic correlations between jurisdictions. Local accounts of events and other details are given full consideration in profile compilation.

Records of weather events are sourced through NOAA Storm Event database⁴ as well as local, state, and federal records of disaster declarations and damages. Online and personal accounts when provided were considered for discussion. NOAA is a reporting system that receives data from residents and jurisdiction officials. Many reports can be made for a single event. For the purpose of this plan, some general condition reports made on the same day are grouped together as appropriate, for example, four counties reported drought on August 1, 2020. This is recognized as a single event as it relays to general conditions without a unique impact on just one portion of the reporting area. The same consideration is given to general cold weather events and windstorm activity. Hail and Tornado reports, however, may be isolated in nature and are counted separately for each jurisdiction and each occurrence. Reports for the same community at varying times in a single day are also recognized as separate events.

GIS databases and locally collected and compiled data were used to create representational maps, including but not limited to land use and floodplains, to provide visual support of plan

¹ Source: <https://censusreporter.org/>

² Source: <https://www.census.gov/programs-surveys/acs.html>

³ Source: <https://data.census.gov/>

⁴ Source: National Oceanic and Atmospheric Administration, US Dept of Commerce
<https://www.noaa.gov/>

content. Additional maps have been included or referenced where applicable with source information duly noted.

Jurisdictions were each directly contacted through email by SIMPCO and respective County EMA coordinators. Follow up communications included phone calls and attempts at on-site visits when no response was received. SIMPCO facilitated meetings with all participating jurisdictions as noted in respective profiles. Stakeholders in each jurisdiction include residents, elected officials, city/county staff, school district administrations, and business owners. While CensusReporter.org provides a consistent baseline for comparisons, it is important to note that local accounting of populations, incomes trends, and housing details tend to better reflect circumstances not recognized in estimation-sourced data. Stakeholders were invited to participate by way of survey – available on paper and online. Each jurisdiction promoted the surveys through postings at city halls and on city websites as applicable. Smaller communities included invitation to participate through public postings at their selected locations for public notice. Direct involvement by large industry partners in the region was underwhelming while some smaller business owners were often represented by council members and where applicable, through discussion in committee meetings included potential effects of natural and other disasters. An example of participation through representation of service providers is reflected in record of the Siouxland Coalition to End Homelessness meeting. Dedicated to ensuring services for the homeless population within the region, the SCEH Coalition provided feedback and completed surveys highlighting gaps in protections of residents in general and the homeless in particular, before, during, and after disaster events.

County-level participation was promoted through County Clerk offices with postings promoting participation in the surveys, both online and on paper. As a matter of public education, the Mitigation Plan was highlighted at vendor booths at the Woodbury, Plymouth, and Cherokee County fairs. The displays at fairs included opportunity to take the survey and to ask emergency response team members and project partners how the Plan is used and why their input is relevant. Input received throughout the planning process is included for discussion within respective jurisdictional profiles.

Plan outline is consistent with FEMA and state requirements to ensure participant eligibility to apply for pre-disaster program funds, flood mitigation assistance, and other capacity and capability-building program funding opportunities.

E. Profile Organization

A profile is included for each level of information — region, county, city, and school district, providing the detail at the broadest level as applicable. Characteristics regarding all aspects of mitigation and related projects that are common to all or most jurisdictions within a County are detailed in the County profile. The same applies to features consistent in all counties as included in the presentation of regional information throughout the Plan.

Jurisdiction profiles are consistent with state and FEMA guidelines providing a context for community mitigation capabilities and needs. These basic community characteristics help define population risk levels and city per capita capacities, housing sustainability, variables in temporary population increases, and several other factors contributing to emergency preparedness. Each jurisdiction profile includes an overview of the following.

- City Governance & Community Supports
- Demographics, Housing, & Economics
- Leading Employers
- Critical Facilities
- Community Supports, Vulnerable Populations, Gathering Locations, & Local Areas of Interest
- Valuation of City Assets
- Land use map with floodplain overlay (in Appendices)

In addition to the profile, the following are itemized for each jurisdiction, documenting input, supports in place, addressing changes/implementations since the 2020 Regional Hazard Mitigation Plan, and allowing notation of specific actions, strategies, and needs.

- Participation

- Community Capabilities
 - Review of Actions Taken (Since 2019)
- Risk Assessment
 - Contributing Factors
 - Priority Hazards
- Mitigation Needs, Actions, & Strategies

JURISDICTION PROFILE

For the purpose of this Plan, critical facilities are those as identified by the community as significant to the operation of the City such as:

- City facilities and infrastructure
- Facilities hosting or having the potential to host vulnerable populations – event and recreation facilities as well as nursing homes, childcare centers, and medical facilities where applicable,
- Businesses and organizations that are essential to the overall wellbeing of the community at large.

Aside from recreation venues, maintaining function of the critical facilities and infrastructure as presented in the event of a natural or other disaster is indicative of a given community's ability to recover. Unless specified as a refuge location, churches and private or in-home child/elder care providers are generally not included for discussion.

“Vulnerable populations” is a characterization of any given group that may have increased risk of threat in the event of a natural hazard occurrence due to exposure, age-based restrictions and/or limitations, disability, or access to a designated safe zone. While nursing homes, hospitals, and schools are obvious locations that may have large groups of vulnerable persons, parks and local gathering places may also host an abnormally large representation of the population that is temporarily at an increased risk to hazards due to exposure. Several categories of critical facilities and locations are considered when determining the need and/or impact of a given mitigation action. While some locations as listed for a given jurisdiction fall outside City limits, they are still relevant to emergency response and emergency action as may

result from a natural, human-caused, or biological hazard. Community Support and/or Gathering Locations may occur anywhere within the City's borders. The above provision is not an exhaustive list. It is intended to reflect an expansive representation of where residents and visitors may congregate.

PARTICIPATION

Participation includes planned meetings, phone and email submissions of jurisdiction-specific information, collected informal public input, and formal public input as submitted by respondents through written comment cards, emailed responses to comment cards, or completion of an online survey. If a given jurisdiction is represented by a submitted response, that submission is included for discussion. Note of venues used for informal public input is included where applicable.

Each jurisdictional meeting included at least one representative from City staff and/or Council, with some including multiple department heads as applicable. Such roles and individuals are listed in the Participation section of community, county, and school district profiles. Additional input and planning discussion was conducted through collaboration with existing coalition and planning group meetings. Each engagement opportunity included the following unless otherwise noted within respective profiles.

1. Presentation where applicable: Overview of hazard mitigation, examples of effects specific to attendees, and purpose of a FEMA-approved Hazard Mitigation Plan
2. Hazards as identified in the State 2023 Plan and the 2020 Regional Plan.
3. Concerns of such natural disasters and other hazards on jurisdiction at large, specific business/agencies within the jurisdiction, and vulnerable populations
4. Review of practices/strategies in place
5. Discussion of planned projects
6. Discussion of needed strategies, actions, and projects
7. Using the Regional HMP to guide other planned projects as well as emergency or urgent response/reactionary measures in the event of a natural disaster other hazard
8. Plan adoption and maintenance.

Stakeholders and their represented businesses/entities/organizations/populations are noted on corresponding sign-in sheet or listed in context of discussion as applicable.

CAPABILITIES

Capabilities are discussed in terms of jurisdictional resources. Supports available to the Region at large are provided in the summary of Regional Resources. Countywide supports are listed as available under the County summary provided. Jurisdiction capabilities are indicators and measures taken that enable a community to properly prepare for, endure, and recover from a natural disaster. Including but not limited to communications networks, equipment, designated refuge locations, guided planning documents, proactive ordinances, and a community network of public and private services and supports, each jurisdiction’s capabilities are outlined within its profile. Implemented actions and strategies further contribute to a jurisdiction’s capability to remain resilient during and after a disastrous event. As such, completed actions and strategies are included under Capabilities. Implemented projects, actions, and strategies enhance a community’s capabilities. For each jurisdiction, comment is provided updating the status of the actions and strategies as assigned in the 2020 Plan.

F. RISK ASSESSMENT

An analysis of jurisdictional strengths, weaknesses, opportunities and threats comprises the risk assessment. In context of historical events within and around the region and due consideration of community capabilities, participants determine necessary strategies, feasible actions, and desired projects.

A table is provided for each natural disaster and other hazard providing regional context of significance. The following is intended as a key.

Geographic Extent	Severity	Future Probability	Regional Significance
Proportion of area within region affected or potentially affected by such hazard.	General extent of historical and future potential effects.	Likelihood of occurrence recurrence based on historical events and contributing conditions.	Potential level of cumulative impact throughout region. Potential area of effect by

			county, and by jurisdiction within county
<ul style="list-style-type: none"> • Extensive • Significant • Limited 	<ul style="list-style-type: none"> • Severe • Moderate • Negligible 	<ul style="list-style-type: none"> • Highly likely • Likely • Occasional • Unlikely 	<ul style="list-style-type: none"> • High • Medium • Low

MITIGATION GOALS, ACTIONS, AND STRATEGIES

Specified projects based on Region Mitigation Goals in Title III, Section F as they correspond to Region Mitigation Action and Strategies, will be included in each jurisdiction profile. Local actions and strategies reflect that community’s interest in regard to their own priority disaster concerns.

Some considerations are not economically feasible on their own, however, the City will include assessment of potential mitigation actions when preparing and developing new betterment projects. Additional projects, as decided by the Council and outside the description of projects and potential projects as outlined above, may be eligible for resiliency and/or pre-disaster mitigation funds through a formal process to amend this document at the jurisdiction level.

G. Public Input

Public input was collected through in-person conversation, scheduled planning meetings, and survey collection. In-person interactions took place at the following events and community meetings:

- Riverside Flood Resources Fair, Sioux City IA July 10 & 11, 2024
- Siouxland Coalition to End Homelessness meeting, Sioux City IA September 23, 2024
- Plymouth County Health Planning meeting, Le Mars IA December 13, 2024

Informal invitation to complete the online survey was extended at several community meetings not listed when attendees provided organizational updates as well. Additional input was collected through in-person discussion, paper survey distribution, and postings/flyers prompting participation via online survey at the following county fairs in the region.

- Cherokee County Fair, Cherokee, IA July 17-21 2024
- Plymouth County Fair, Le Mars, IA July 24-28 2024
- Woodbury County Fair, Merville, IA July 31-August 4 2024

A total of 251 primary surveys were collected – some were completed online, most completed on paper and data-entered into the survey collector to better tabulate findings. For each jurisdiction with survey responses, a summary of results is included for discussion under participation and results are referenced under the risk assessment and priority hazards sections within their prospective profile.

Meetings conducted with participating school districts included an invitation to share an adapted version of the survey with their junior and senior students allowing consideration of youth perspective. A total of 65 student surveys were collected from 4 schools. Findings from student surveys are added for discussion within profiles where applicable. These responses are separately noted than those of the primary survey.

Upon FEMA approval and subsequent jurisdiction adoption of this Plan, participating jurisdictions will submit record of plan adoption to SIMPO to maintain in the project file. Annual reviews of respective profiles, capabilities, actions, strategies, and projects are expected per jurisdiction, with submission of a completed progress report to be forwarded to SIMPCO.

To ensure public engagement and stakeholder support for the HMP, notices for public meetings involving implementation of actions, including plan updates, will be published and posted within the jurisdiction with reasonable advance notice. Notices for public meetings concerning discussion or action on hazard mitigation plan updates will be published and posted per jurisdiction ordinance which may include but is not limited to local newspapers, radio/television, websites, and public spaces/buildings within the community.

H. Amendments and Plan Maintenance

For projects to be eligible for Pre-Disaster Mitigation or like-program funds, the project must be included in this plan's identified actions and strategies. To modify mitigation actions or

strategies, an amendment may be passed at jurisdiction level with documentation of such amendment kept on record with the Plan. Each jurisdiction will have on file an electronic copy of the Plan and a progress report form. As a city implements mitigation strategies to improve its overall resilience, a progress report is to be completed and filed in the City's Record of Mitigation Plan Amendments and Implemented Mitigation Actions and reported to the County EMA at least annually. Record of amendments approved to the jurisdiction's needs assessment and/or planned projects will be maintained in the same manner. Such records will be made available for review upon request. An electronic file is recommended for ongoing plan maintenance.

This plan shall be renewed or updated formally every five (5) years. However, each jurisdiction is charged with reviewing the plan annually and is responsible for maintaining record of mitigation actions/strategies/projects completed and/or needed, regardless of funding requests. All jurisdictions are expected to communicate with their respective County Emergency Management Office and its Director/Coordinator when implementing mitigation projects. For cities, the City Clerk is expected to collaborate with the Council and City Staff to assign responsibility as appropriate for each project. For counties, the responsible department leading any action/strategy/project shall communicate intentions with the Emergency Management Agency. Progress of mitigation projects shall be reported to the County EMA Coordinator on an annual basis at minimum. School districts are encouraged to maintain record of actions/strategies/projects for review by the Emergency Management Agency. If funding supports are sought, districts may work with the County EMA to amend the Plan and/or initiate a funding application, with the collaboration of the facility's host city/county as applicable.

In the review process, the following shall be duly considered.

- Immediate relevance of plan goals and objectives,
- conditions affecting changes or need thereof,
- barriers to mitigation activities,
- funding opportunities,
- potential integration with other improvements, implementations, maintenance, and/or projects

- effects of recent natural disasters and other hazards and likelihood of recurrence
- previously incurred damages/losses
- case examples of mitigative actions under like circumstances.

I. Plan Adoption

All participating jurisdictions are required to adopt the plan at the jurisdiction level. A Resolution of Adoption template is provided in Appendix D, along with the Amendment template, and Progress Report form. Included jurisdictions that have not identified specific mitigation actions, strategies, or goals are required to submit an amendment to include an identified action, strategy, or project, and subsequently adopt the Plan by resolution to be recognized as a participant by FEMA. Non-participant jurisdictions **as determined by FEMA** are denoted with an asterisk (*) in the Planning Area Listing on page 3 of this Plan.

II. HAZARDS

One or more of these four qualifying considerations have determined the natural hazards, and those that are human-caused or biological, included in this plan:

1. Inclusion in the 2023 State of Iowa Hazard Mitigation Plan (IHMP)
2. Actual occurrence in recent history within the region and/or jurisdiction
3. Occurrence, presence, or increased frequency of event/condition in nearby and border communities/counties/states
4. Concern of increased impact due to continuous extreme weather conditions on aging or incident-compromised infrastructure.

Mitigation actions and strategies included in the 2020 Regional Hazard Mitigation Plan addressed hazards as identified in that plan as shown in the table below. While each natural disaster and other hazard included is possible, a few have very low likelihood of occurrence, including but not limited to earthquakes, naturally occurring sink holes, and radiological incidents. Potential for incidents varies based on contributing conditions and specific geographic location. Expansive soils and landslides are rarely an issue but can become significant concerns in fluctuations between drought and heavy rain periods. Radiological incidents stemming from facility failures are extremely limited at present, however, there is active discussion within at least one participating county. Planning and future development if pursued will affect preparedness, probability, and level of effect. Regardless of imminent potential, it is in the best interest of all jurisdictions to be aware of possible outcomes as well as contributing factors so there exists some means of minimizing loss/damages.

<i>Natural Disasters Identified 2020 Regional Hazard Mitigation Plan</i>	
1 Dam Failure/Levee Failure	8 Landslide
2 Drought	9 Severe Winter Storm
3 Earthquake	10 Sinkholes
4 Expansive Soils	11 Thunderstorms & Lightning /Hail
5 Extreme Heat	12 Tornado/Windstorm
6 Flood – Flash & Riverine	13 Other Hazards
7 Grass or Wildland Fire	

<i>Other Hazards</i>			
1	Animal/Plant/Crop Disease	5	Radiological Incident
2	Hazardous Materials Incident	6	Terrorism
3	Infrastructure Failure	7	Transportation Incident
4	Pandemic Human Disease		

A. Identify

Using the definition as provided in the State Plan according to the *U.S. Department of Homeland Security Risk Lexicon* (2010), natural hazards are hereby defined as "a source of harm or difficulty created by a meteorological, environmental, or geological phenomenon or combination of phenomena". As such, hazards originating biologically (i.e. disease) or through human-caused events, are not in this plan deemed "natural". To remain consistent in presentation of data in relation to the State Plan, this Plan addresses hazards using the same categorization. While identified natural hazards have not changed, the order of priority has shifted. Hazards as included in the 2023 State of Iowa Hazard Mitigation Plan are as follows:

1. Drought
2. Tornadoes and other High Wind Events (including derechos)
3. Flooding-River
4. Flooding-Flash
5. Severe Winter Storms
6. Hail and Lightning storms
7. Excessive Heat
8. Dam and Levee failure (relates to natural hazard of flooding)
9. Landslides
10. Earthquake
11. Wildfire, including Grass Fire
12. Sinkholes
13. Expansive Soils

For reference in regard to their potential or likelihood of occurrence within the state of Iowa, and to provide context for these concerns to be included in mitigation actions and strategies in this plan, the following biological and human-caused hazards are included for consideration as "Other Hazards". Other hazards, also unchanged except for priority ranking, as identified in the current state plan include:

1. Animal/Crop/Plant Disease
2. Pandemic Human Disease
3. Hazardous Materials
4. Infrastructure Failure
5. Radiological Incident
6. Terrorism
7. Transportation Incident

RELEVANCE TO REGION

While all State-included natural disasters and other hazards require at least some level of awareness by the region included in this Plan, not all pose severe or even moderate risk necessitating mitigation actions or specific projects. A summary and assessment of risk level is included herein to serve as a resource and reference for plan participants. Informed awareness of presence and potential effect is essential in community planning and incorporation of this Regional Hazard Mitigation Plan with other jurisdictional planning measure including but not limited to Economic Development, Community Development, Capital Improvement Projects and general programming and maintenance. Included in the 2020 RHMP, but removed from the priority list in the 2026 RHMP are:

- Earthquake
- Expansive Soils
- Landslide

Participants are encouraged to consider such hazards and related conditions when updating building codes and promoting community development. They are not, however, expected to incorporate specific strategies addressing these disasters to be considered FEMA-recognized Mitigation Plan Participants. Some jurisdictions may include related projects for consideration in funding opportunities.

In the same manner, *Other Hazards* as identified and described herein are intended for reference and as a resource in well-rounded planning practices incorporating potential for disaster and relative mitigative measures into all planned projects.

B. Definitions & Regional Impacts

Following are the descriptions and/or definitions of State-Identified Natural and Other Hazards as included in the 2023 Iowa Hazard Mitigation Plan. Except in regard to local commentary or where noted, content below is taken directly from *Section 3 Hazard Analysis and Risk Assessment* in the state plan. Some content is shortened to reduce redundancy. More information about Iowa's hazard definitions can be found in the state plan and in references provided.

Please note that a table pulled from the NOAA Storm Event Database accompanies each jurisdiction including events as applicable to that jurisdiction. To reduce redundancy, a larger table encompassing each event by hazard within the region is not included.

QUANTIFYING PROBABILITY

Each hazard summary includes a value for Geographic Extent, Severity, Future Probability and Regional Significance. Geographic extent refers to the proportion of the region recognized in the potential area of effect. In terms of 54 jurisdictions, removing school districts as they would duplicate occurrences as recorded for host cities, Severity indicates level of expected impact. Future probability reflects likelihood of annual occurrence. Regional Significance puts each of those aspects into context of overall concern for the entire planning area. Values for potential by category are as follows.

Geographic Extent

- Extensive: 50-100% of planning area
- Significant: 10-50% of planning area
- Limited: Less than 10% of planning area

Severity

- Catastrophic: Multiple deaths, shutdown of facilities for 30 days or more, >50% of property is severely damaged
- Severe: Multiple severe injuries, shutdown of facilities for at least 2 weeks, >25% of property is severely damaged

- **Moderate:** Some injuries, shutdown of critical facilities for more than one week, $\geq 10\%$ of property is severely damaged
- **Negligible:** Minor injuries, minimal quality-of-life impact, interruption of facilities and services for 24 hours or less, less than 10% of property is severely damaged.

Probability of Future Occurrence

- **Highly Likely:** ≥ 1 event/year
- **Likely:** 1 event every 1–3 years ($\approx 0.33\text{--}0.99/\text{year}$)
- **Occasional:** 1 event every 4–10 years ($\approx 0.10\text{--}0.25/\text{year}$)
- **Unlikely:** < 1 event every 10 years ($< 0.10/\text{year}$)

Regional Significance (Based on the preceding three factors)

- **High:** widespread potential impact
- **Medium:** moderate potential impact
- **Low:** minimal potential impact

Using the above descriptors, the following table relegates priority potential natural disasters. This provides a baseline for relevant mitigative strategies by participating jurisdictions. While all natural disasters and other hazards as included in the state plan could potentially affect the region, low probability and/or potential effect reduces need for persistent mitigation measures.

As the focus of this plan is mitigation of the effects of natural disasters, Other Hazards are important to take into consideration, but do not require specific projects to be recognized by FEMA.

Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Dam Failure/Levee Failure	extensive	moderate	likely	high
Drought	extensive	moderate	highly likely	high
Extreme Heat	extensive	moderate	highly likely	medium
Flooding - <i>Flash and Riverine</i>	significant	severe	highly likely	high
Grass or Wildland Fire	extensive	negligible	highly likely	medium

Severe Winter Storm	extensive	moderate	highly likely	medium
Sinkholes	significant	negligible	unlikely	low
Thunderstorm - Hail & Lightning	extensive	severe	highly likely	high
Tornado/Windstorm	extensive	moderate	highly likely	high

Non-Priority Natural Disasters and Other Hazards				
Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Earthquake	extensive	negligible	unlikely	low
Expansive Soils	extensive	negligible	occasional	low
Landslide	limited	negligible	likely	low
Other Hazards (Human-caused or Biological Hazards)				
Animal/Plant/Crop Disease	extensive	moderate	likely	medium
Hazardous Materials Incident	extensive	moderate	highly likely	medium
Infrastructure Failure	extensive	moderate	highly likely	medium
Pandemic Human Disease	extensive	moderate	likely	low
Radiological Incident	limited	negligible	unlikely	low
Terrorism	limited	negligible	unlikely	low
Transportation Incident	significant	moderate	highly likely	medium

Severity of threat from all hazards as provided may vary by community based on capabilities and risk factors. A “ Non-Priority “ categorization does not preclude eligibility for mitigation funding. It simply removes the requirement for specific actions to meet “Participant” status under FEMA guidelines.

NATURAL DISASTERS

1. DAM/LEVEE FAILURE

Unlike most naturally occurring disasters, dam and levee failures are typically a result of compounded effects such as flooding and/or extreme storms of varying kinds. Assessed risk in this context is determined by potential for loss in the absence of such dam or levee. Relevance of dam hazard classification and condition assessment ratings and levee risk characteristics provide context for determination as included in the following table.

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Dam Failure/Levee Failure	extensive	moderate	likely	high

At the time of this update, dam and levee failure, due to unprecedented water levels in the summer of 2024, has had a devastating effect for communities in western Iowa and in neighboring communities in southeastern South Dakota. Communities impacted by such events have included discussion regarding needed actions/strategies within the context of respective community profiles. Mitigation planning in a tri-state region presents unique challenges involved in preparing for outcomes resulting from mitigation actions as implemented in South Dakota and Nebraska.

With varying capacities and ratings, it is a fair assumption to consider dams and levees and their respective structural integrity to be significant consideration for mitigation planning. More information about the region’s dams and levees can be found online at <https://www.iowadnr.gov/Environmental-Protection/Land-Quality/Dam-Safety>.

The State Plan identifies Dam/Levee Failure using the following description.

Dam/levee failure is the uncontrolled release of water resulting from a structural failure in a dam, wall, dike, berm, or area of elevated soil that causes flooding. Possible causes of the breach could include flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, terrorism, erosion, piping, saturation, or under seepage.

Dams are constructed for a variety of purposes, including flood control, erosion control, water supply impoundment, hydroelectric power generation, and recreation. In Iowa, dams are classified according to the downstream damage that would occur if they were to fail. The more risk, the higher the standards that must be met when that dam is constructed or modified. There are three dam classifications: high hazard, moderate (aka “significant”) hazard and low hazard. These classifications do not describe the current condition of the dam. High hazard dams have to meet the State's highest level of criteria and are inspected on a two-year cycle.

The classification may change over time because of development downstream from the dam since it was constructed. Older dams may not have been built to the standards of its new classification. Below are the hazard classifications as defined by the Iowa Department of Natural Resources (DNR):

High Hazard – A dam is classified as high hazard when it is located in an area where dam failure may create a serious threat of loss of human life.

Moderate (Significant) Hazard – A dam is classified as moderate hazard when failure may damage isolated homes or cabins, industrial or commercial buildings, moderately traveled roads, or interrupt major utility services. A moderate hazard dam does not present a substantial risk of loss of human life. A dam is also classified as moderate hazard when the dam and its impoundment are themselves of public importance, such as a dam that is associated with public water supply systems, industrial water supply, or public recreation, or is an integral feature of a private development complex.

Low Hazard – A dam is classified as low hazard when damage from a failure would be limited to loss of the dam, livestock, farm outbuildings, agricultural lands and lesser-used roads, and where loss of human life is considered unlikely.

A complete list of statewide dams is available through the U.S. Army Corps of Engineers' National Inventory of Dams (NID). Dams of particular significance to a given community are noted within the discussion points of relevant jurisdictions. The NID includes 700 dams within the region. Of that total, 42 are noted as *Significant* or *High* potential for risk under Hazard Classification. Of the 42 dams with *Significant* or *High* hazard potential, 31 have been given a Condition Assessment rating. Two are rated as *Poor*, three are rated as *Fair*, and 26 are rated as *Satisfactory*. Eleven dams with *Significant* or *High* hazard potential are not rated. Below is a listing of dams rated with *High* or *Significant* Hazard Classification. Additional Dam Inventory data is incorporated into County sections as applicable.

C = CHEROKEE I = IDA M = MONONA P = PLYMOUTH W = WOODBURY

<i>Dam Name</i>	<i>NIDID</i>	<i>Hazard Classification</i>	<i>County</i>	<i>Last Inspection Date</i>	<i>Condition Assessment</i>	<i>EAP</i>
Held Watershed Site E-3	IA01857	High	P	8/3/2020	Fair	Y
Deer Creek Dam	IA02937	High	P	7/18/2019	Satisfactory	NR
Focht & Schindel Dam	IA00860	High	P	7/22/2019	Satisfactory	Y
Held Watershed Site E-4	IA01856	High	P	8/3/2020	Satisfactory	Y
Smokey Hollow Subwatershed Site 4	IA02310	High	W	6/24/2020	Fair	Y
Bacon Creek Watershed Site A-1-1	IA01796	High	W	8/3/2020	Satisfactory	Y
Bacon Creek Watershed Site A-2-4	IA01791	High	W	8/3/2020	Satisfactory	Y
Bacon Creek Watershed Site A-3	IA01797	High	W	8/3/2020	Satisfactory	Y
Bacon Creek Watershed Site A-3-1	IA01795	High	W	8/3/2020	Satisfactory	Y
Bacon Creek Watershed Site C-1	IA01685	High	W	8/3/2020	Satisfactory	Y
Glen Ellen Subwatershed Site 3-1	IA01254	High	W	8/4/2020	Satisfactory	NR
Glen Ellen Subwatershed Site 3-2	IA01253	High	W	8/4/2020	Satisfactory	NR
Smokey Hollow Subwatershed Site 1	IA02311	High	W	6/24/2020	Satisfactory	Y
Smokey Hollow Subwatershed Site 2	IA02312	High	W	6/24/2020	Satisfactory	Y
Smokey Hollow Subwatershed Site 3	IA02313	High	W	6/24/2020	Satisfactory	Y
Crawford Creek Subwatershed Site M-3	IA01851	Significant	I	7/12/2018	Satisfactory	NR
Grell Pond Dam	IA00514	Significant	I	11/3/2015	Poor	NR
Arnold-Armstrong Subwatershed Gully 23	IA00788	Significant	M	11/4/2015	Fair	NR
Horse Lake Dam	IA00893	Significant	P	6/1/2016	Satisfactory	NR
Iowa NoName35	IA00875	Significant	P		Not Rated	NR
Kennedy & Johns Dam	IA01676	Significant	P		Not Rated	NR
Anthon Subwatershed 1-2261	IA01921	Significant	W		Not Rated	NR
Bacon Creek Watershed Site A-2-1	IA01794	Significant	W		Not Rated	NR
Bacon Creek Watershed Site A-2-2	IA01793	Significant	W	6/2/2016	Satisfactory	NR
Bacon Creek Watershed Site A-2-3	IA01792	Significant	W		Not Rated	NR
Bacon Creek Watershed Site A-2-6	IA01790	Significant	W		Not Rated	NR
Bacon Creek Watershed Site H-1	IA02343	Significant	W	8/4/2020	Satisfactory	NR
Bacon Creek Watershed Site H-1-1	IA02139	Significant	W	10/19/2015	Satisfactory	NR
Bacon Creek Watershed Site H-1-2	IA02140	Significant	W		Not Rated	NR
Bacon Creek Watershed Site H-1-3	IA02141	Significant	W		Not Rated	NR
Bacon Creek Watershed Site H-2-1	IA02142	Significant	W	6/2/2016	Satisfactory	NR
Bacon Creek Watershed Site H-2-2	IA02143	Significant	W	8/4/2020	Satisfactory	NR

Bacon Creek Watershed Site H-3-1	IA02344	Significant	W	8/4/2020	Satisfactory	NR
Bacon Creek Watershed Site H-3-2	IA02345	Significant	W	8/4/2020	Satisfactory	NR
Bacon Creek Watershed Site J-1	IA02347	Significant	W	10/21/2015	Satisfactory	NR
Bacon Creek Watershed Site J-3	IA02671	Significant	W	8/4/2020	Satisfactory	NR
Bacon Creek Watershed Site J-5	IA02346	Significant	W	10/21/2015	Poor	NR
Big Whiskey 1 Subwatershed Site 3-1	IA01195	Significant	W		Not Rated	NR
Iowa NoName60	IA01250	Significant	W		Not Rated	NR
Little Whiskey Subwatershed Site M-2	IA02533	Significant	W	8/4/2020	Satisfactory	NR
Smith Dam	IA01232	Significant	W		Not Rated	NR
Woodbury Co Roadgrade Dam 36-86-42	IA02580	Significant	W	7/11/2017	Satisfactory	NR

Plymouth County and Cherokee County do not have any levees listed in the National Levee Database. Following is an overview of levees in, or likely to affect, the region.

	<i>Ida</i>	<i>Mon</i>	<i>Wdby</i>
Levee Systems	6	19	13
Miles of Levees	2	144	18
Levee Structures	6	57	46
Average Levee Age	55	56	53

C = CHEROKEE I = IDA M = MONONA P = PLYMOUTH W = WOODBURY + = OUTSIDE REGION

<i>County</i>	<i>Map #</i>	<i>Levee Name</i>	<i>Location</i>	<i>Risk Characteristics</i>			<i>Assessment Date</i>
				<i>People</i>	<i>Structure</i>	<i>Property Value</i>	
M,W	01	Little Sioux & Wolf Creek	Rodney	37	56	\$7M	2/19/2020
M	02	Little Sioux 2	Whiting	0	10	\$2M	-
M	03	Little Sioux 3	Whiting	9	6	\$1M	-
W	04	Little Sioux LB - Bennet-Smithland	Smithland	0	0	0	6/23/2017
M,W	05	Little Sioux LB - Nagel DD North	Rodney	5	4	\$410K	10/26/2016
M,W+	06	Little Sioux West Fork Ditch RB & Monona-Harrison Ditch RB - Intercounty	Whiting	351	423	\$63M	1/27/2021
M,W	07	Little Sioux West Fork Ditch RB - Intercounty	Hornick	350	205	\$39M	2/18/2020
M,W	08	Little Sioux Wolf Cr RB & W Fork LB - Intercounty	Hornick	22	25	\$3M	3/5/2020

W	09	Sioux City - Big Sioux River LB	Sioux City	2973	1214	\$290M	4/29/2021
W	10	Sioux City - Floyd River LB	Sioux City	2479	326	\$290M	10/27/2016
W	11	Sioux City - Floyd River RB	Sioux City	2383	817	\$470M	10/27/2016
W	12	Sioux City - Perry Creek Left Bank	Sioux City	72	34	\$14M	7/31/2018
W	13	Sioux City - Perry Creek Right Bank	Sioux City	1553	488	\$250M	7/31/2018
M	14	Little Sioux - Intercounty DD	Whiting	0	9	\$2M	-
M	15	Little Sioux LB & Beaver Creek LB - Intercounty	Turin	2	5	\$590K	10/26/2016
M	16	Little Sioux LB & Beaver Creek RB - Intercounty	Turin	7	15	\$2M	6/20/2017
M	17	Little Sioux LB & Cottonwood Cr LB - Intercounty	Blencoe	5	11	\$1M	6/20/2017
M+	18	Little Sioux LB & Hogue Ditch LB - Intercounty	Little Sioux, Harrison County	547	313	\$28M	6/23/2017
M	19	Little Sioux LB & Maple River RB - Intercounty	Turin	88	65	\$6M	10/26/2016
M	20	Little Sioux LB - Castana - Intercounty	Castana	0	3	\$970K	6/23/2017
M	21	Little Sioux LB - Nagel and Intercounty DD	Turin	5	8	\$990K	6/23/2017
M	22	Little Sioux LB – Nagel DD South	Castana	2	7	\$840K	10/26/2016
M	23	Little Sioux Maple River RB North - Intercounty	Castana	2	0	\$920K	6/23/2017
M	24	Little Sioux Maple River RB South - Intercounty	Castana	0	3	\$260K	10/26/2016
M+	25	Little Sioux RB & Monona-Harrison LB - Intercounty	Blencoe	175	186	\$17M	3/5/2020
I	26	Badger Creek Levee LB	Ida Grove	18	9	\$2M	-
I	27	Badger Creek Levee RB	Ida Grove	not screened	-	-	-
I	28	Ida Grove - Maple River LB	Ida Grove	9	6	\$1.51M	12/19/2016
I	29	Ida Grove - Maple River RB	Ida Grove	not screened	-	-	-
I	30	Ida Grove - Odebolt Creek LB	Ida Grove	75	2	\$3.05M	11/15/2017
I	31	Ida Grove - Odebolt Creek RB & Maple LB	Ida Grove	450	110	\$59.1M	12/19/2016

Jurisdictions are generally aware of weak points along dams and levees affecting their expected performance during routine weather patterns. Escalating weather events attributed to Climate

Change complicate predicted behaviors of established mitigation features. For example, extreme weather (unusually high precipitation) in the summer of 2024 in Northwest Iowa reduced effectiveness of water retention systems across the region. Implementation of flood controls in adjacent communities, as demonstrated in North Sioux City, SD in June 2024 result in changes functionality of controls in place – specifically in this situation to Sioux City’s Riverside neighborhood. Further compromising existing controls, increased occurrences of extreme weather patterns prohibit effective repairs and stabilization even when funds are available for such projects.

Maps depicting the potential areas of effect in the absence of such levees as pulled from the US Army Corps of Engineers database are included in Part IV of this plan. **A specific attribution to dam/levee failure is not tracked in the NOAA Storm Event database. However, for jurisdictions where flooding events are directly related to such failure, profiles include that summation.**

2. DROUGHT

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Drought	extensive	moderate	highly likely	high

According to Merriam-Webster, drought, as it pertains to a natural disaster, is generally defined as a prolonged period of dryness with a specific and adverse impact on crops or water supply (www.merriam-webster.com/dictionary/drought). Reduced water levels can result from abnormally low precipitation as well as fluctuations in surface water or ground water, which may be either human-caused or naturally occurring.

In addition to the provided definition, climatologists further categorize drought by the following types, which describe the extent of the drought’s impact. These four types of drought conditions are relevant to Iowa:

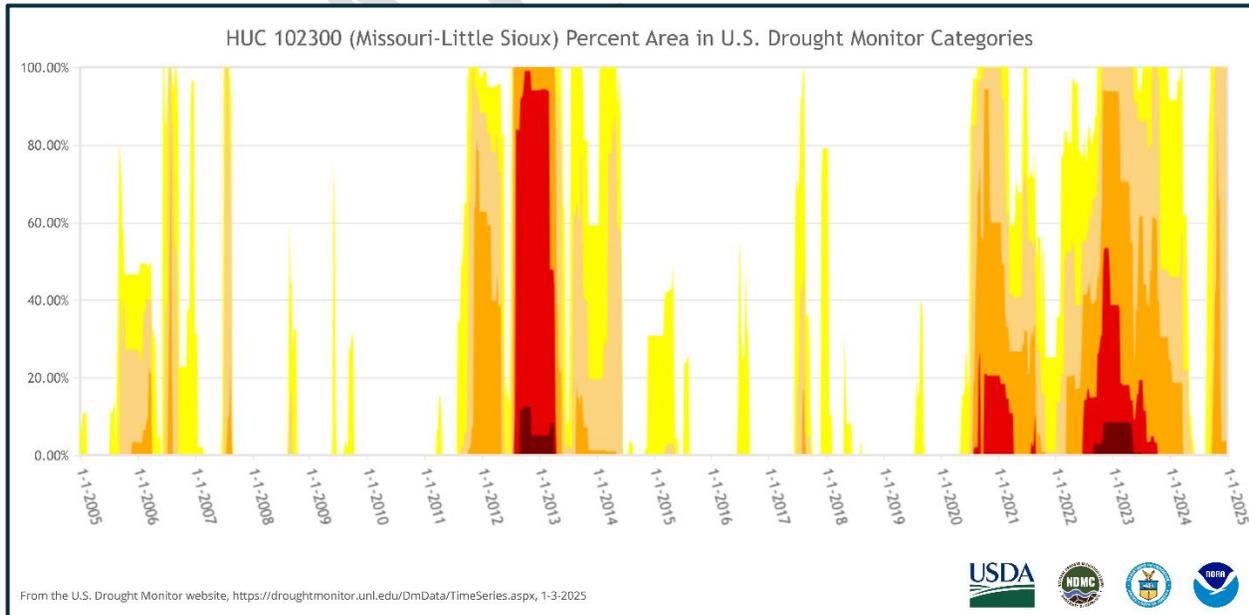
- Meteorological drought, which refers to precipitation deficiency
- Hydrological drought, which refers to declining surface and groundwater supplies

- Agricultural drought, which refers to soil moisture deficiencies
- Socioeconomic drought, which refers to when physical water shortages begin to affect people

The six categories of drought defined in the U.S. Drought Monitor (USDM) are provided below. This tool for tracking drought is a product of the National Drought Mitigation Center.

Category	Description	Example Percentile Range for Most Indicators	Values for Standard Precipitation Index and Standardized Precipitation-Evapotranspiration Index
None	Normal or wet conditions	30.01 or Above	-0.49 or above
D0	Abnormally Dry	20.01 to 30.00	-0.5 to -0.79
D1	Moderate Drought	10.01 to 20.00	-0.8 to -1.29
D2	Severe Drought	5.01 to 10.00	-1.3 to -1.59
D3	Extreme Drought	2.01 to 5.00	-1.6 to -1.99
D4	Exceptional Drought	0.00 to 2.00	-2.0 or less

The highest occurrences of drought conditions with recorded events in Iowa are associated with agricultural and meteorological drought as a result of either low soil moisture or a decline in recorded precipitation.



Droughts can be spotty or widespread and last from a few weeks to a period of years. A prolonged drought can have a serious impact on a community's water supply and economy. Increased demand for water and electricity may result in shortages of resources. Moreover, food shortages may occur if agricultural production is damaged or destroyed by a loss of crops or livestock. While droughts are generally associated with extreme heat, they can and do occur during cooler months.

The USDM records show nearly continuous drought conditions in recent years in the Missouri-Little Sioux watershed between May 2020 and December 2024, with the most severe conditions (category D4) taking place between September 2022 and May 2023. Current conditions according to data from USDA indicate moderate (D1 category) drought across most of the region, including the entirety of Cherokee, Ida, and Monona counties. A portion of northwest Woodbury County and the western half of Plymouth County are in a severe drought (D2 category). <https://www.drought.gov/drought/states/iowa>. Current streamflow conditions and 28-day streamflow at Missouri River stream gages near Sioux City and Decatur are Normal, compared to historical conditions for the same time period. The following graph shows drought intensities in the Missouri-Little Sioux watershed from 2005 through the end of 2024.

It is significant in planning to note that not all factors are mutually exclusive of others. Regional drought may not be of primary concern during the occurrence of river flooding as occurred along the Missouri River in 2024. Although flooding was caused by record rain events and an overall wetter season than average in the summer of 2024, the Region experienced drought conditions concurrently with these river flooding events. Above average precipitation events can overshadow the long-term precipitation trend leading to drought. Furthermore, extreme and prolonged drought in western portions of the United States also tend to overshadow the effects of a similar weather pattern locally.

A 15-year summary of recorded drought events within the region in the NOAA Storm Events Database is provided for reference. Details from significant events within the last five years are included in individual profiles as applicable.

Storm Events Database

Search Results for Cherokee, Ida, Monona, Plymouth and Woodbury Counties, Iowa

Event Types: Drought

Cherokee, Ida, Monona, Plymouth and Woodbury counties contain the following zones:

Plymouth, Cherokee, Woodbury, Ida, Monona

190 events were reported between 01/01/2010 and 12/31/2024 (5479 days)

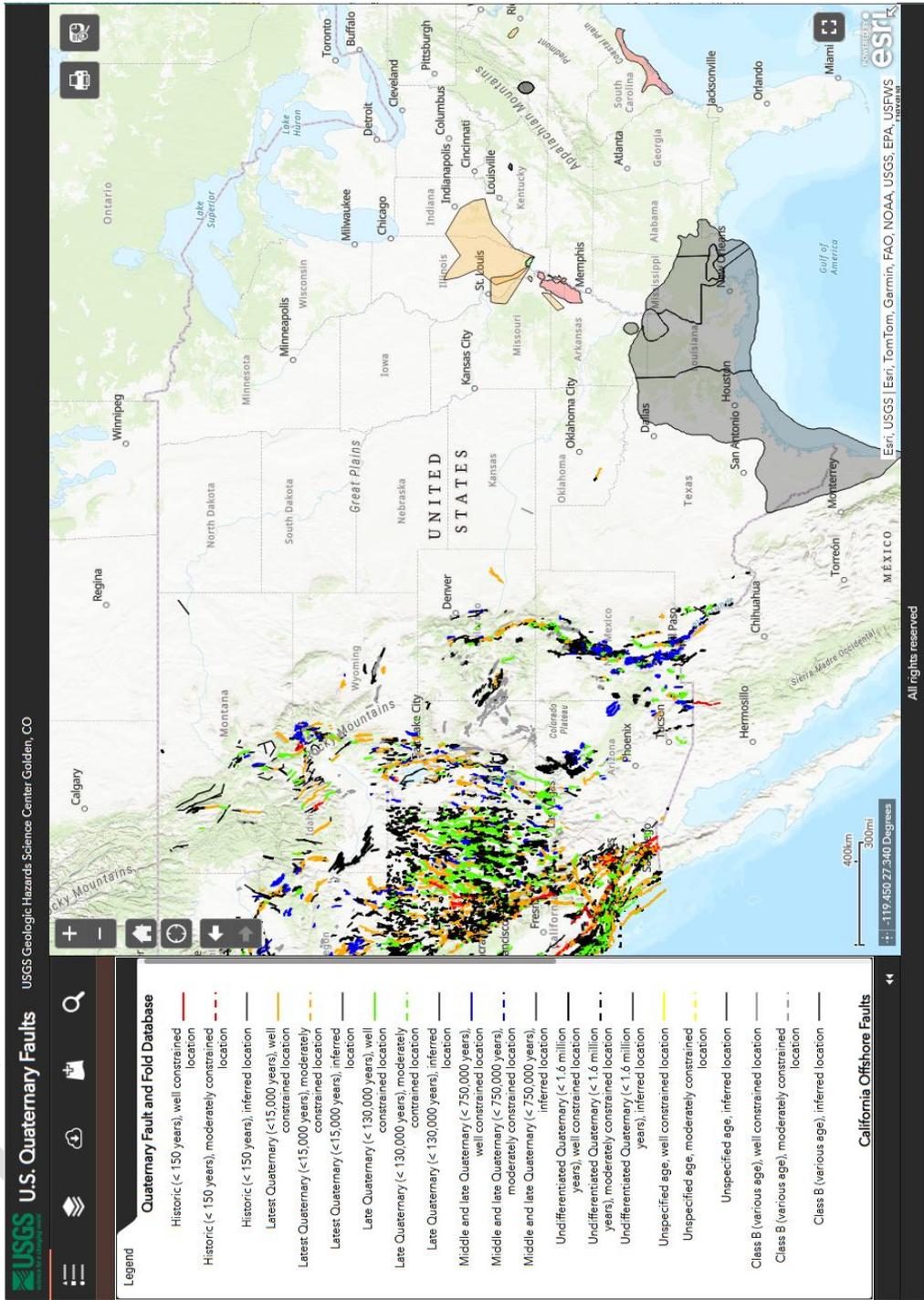
Summary Info:

Number of County/Zone areas affected:	5
Number of Days with Event:	59
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	20
Number of Event Types reported:	1

FINAL DRAFT

3. EARTHQUAKE

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
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Earthquake	extensive	negligible	unlikely	low
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Earthquake Disaster is removed from the 2026 Regional Hazard Mitigation Plan as a significant regional natural disaster concern. No specified mitigative actions or strategies for earthquakes are required to meet jurisdictional participation status.

The image provided ahead of this section depicts a selection of US Quarternary Faults⁵, sourced from the USGS database. Historically, earthquakes have not been a serious concern for the region. Most earthquakes occur along fault lines, the area where two tectonic plates meet. The state of Iowa does not contain any fault lines, resulting in very few earthquakes. However, while rare, these events can still happen. According to the Iowa Geological Survey, 13 earthquakes have occurred in in the State since European settlement. While few earthquakes originate in the State, residents do report feeling tremors that originate in other areas of the country. There have been no serious impacts due to earthquakes in the region.

Following is how the State Plan defines Earthquake.

An earthquake is any shaking or vibration of the earth caused by the sudden release of energy that may impose a direct threat on life and property. It is a sudden, rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. This shaking can cause buildings and bridges to collapse; disrupt gas, electric, and phone service; and sometimes trigger landslides, flash floods, and fires.

More information regarding earthquakes in Iowa can be found on the [USGS website](#), including an interactive map of all recent earthquakes nationwide.

Earthquakes with Epicenters in Iowa

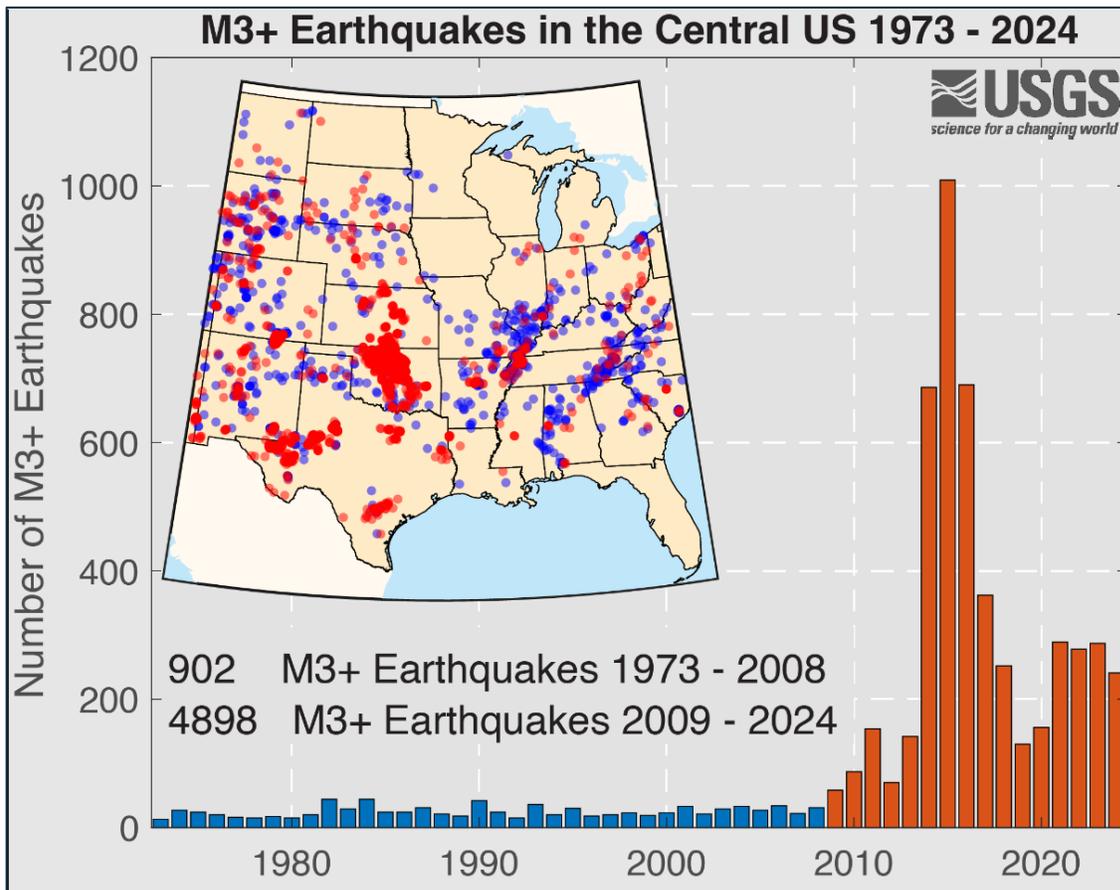
<i>Date</i>	<i>Nearest Town</i>	<i>Mercalii Intensity</i>
April 28,1867	Sidney (IA / Nebraska City (NE)	IV
December 9, 1875	Sidney (IA / Nebraska City (NE)	III

⁵ Source: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>

April 13, 1905	Wayland (MO) / Keokuk (IA)	IV-V
January 26, 1925	Waterloo (IA)	II
November 12, 1934	Davenport (IA) / Rock Island (IL)	VI
January 5, 1935	Rock Island (IL) / Davenport (IA)	IV
January 5, 1935	Rock Island (IL) / Davenport (IA)	III
February 26, 1935	Burlington (IA)	III
October 11, 1938	Inwood (IA)	V
November 8, 1938	Dubuque (IA)	Approx. II
November 24, 1938	Davenport (IA) / Rock Island (IL)	II-III
April 20, 1948	Oxford (IA)	IV
July 16, 2004	Shenandoah (IA)	III
June, 30, 2021	Rembrandt (IA)	II-III

There are no recorded earthquakes centered within the five counties included in this plan. As a result, goals and action items related to earthquake mitigation are not a priority. **Therefore, Earthquake is not considered as a mitigative concern for the Region in this Plan. It is however recommended to jurisdictions throughout the region assess the potential of energy production-related earthquakes and seismic activity, especially when updating or otherwise addressing building code standards/regulations.** According to USGS⁶ data, occurrences of energy production-related quakes are increasing in magnitude and frequency (see image on page 2-13). **While removed as a priority natural disaster in this Plan, the Region may consider earthquake-categorized mitigation actions with emphasis placed on the potential for human-caused incidents.**

⁶ Source: <https://www.usgs.gov/programs/earthquake-hazards/science/induced-earthquakes>,



4. EXPANSIVE SOILS

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Expansive Soils	extensive	negligible	occasional	low

Expansive Soils Disaster is removed from the 2026 Regional Hazard Mitigation Plan as a significant regional natural disaster concern. No specified mitigative actions or strategies addressing expansive soils are required to meet jurisdictional participation status.

Expansive soils expand and contract as a result of moisture content. This movement can damage residential and commercial structures, as well as components of infrastructure. While this hazard lacks the dramatic characteristic of others, such as floods or tornadoes, expansive

soils account for approximately \$2.3 billion in damages annually in the United States. For the Region covered in this Plan, expansive soils have not been notably destructive or otherwise recorded as significant factors in loss from disaster. Expansive soil characteristics require due consideration in ag development as farmers monitor crop potential, viability, sustainability, and stability. Regarding actions and strategies to minimize effects of expansive soils, Iowa SUDAS⁷ standards recognize the properties of expansive soils on infrastructure construction. At this time, such standards guide major projects so no actions at the local level will be required for participation in this Plan. Participants are encouraged to monitor local expansive soil conditions and determine if more attention is needed on a broader scale or the Region at large. Information included herein is intended to serve as a resource and reference for potential of effect from expansive soils.

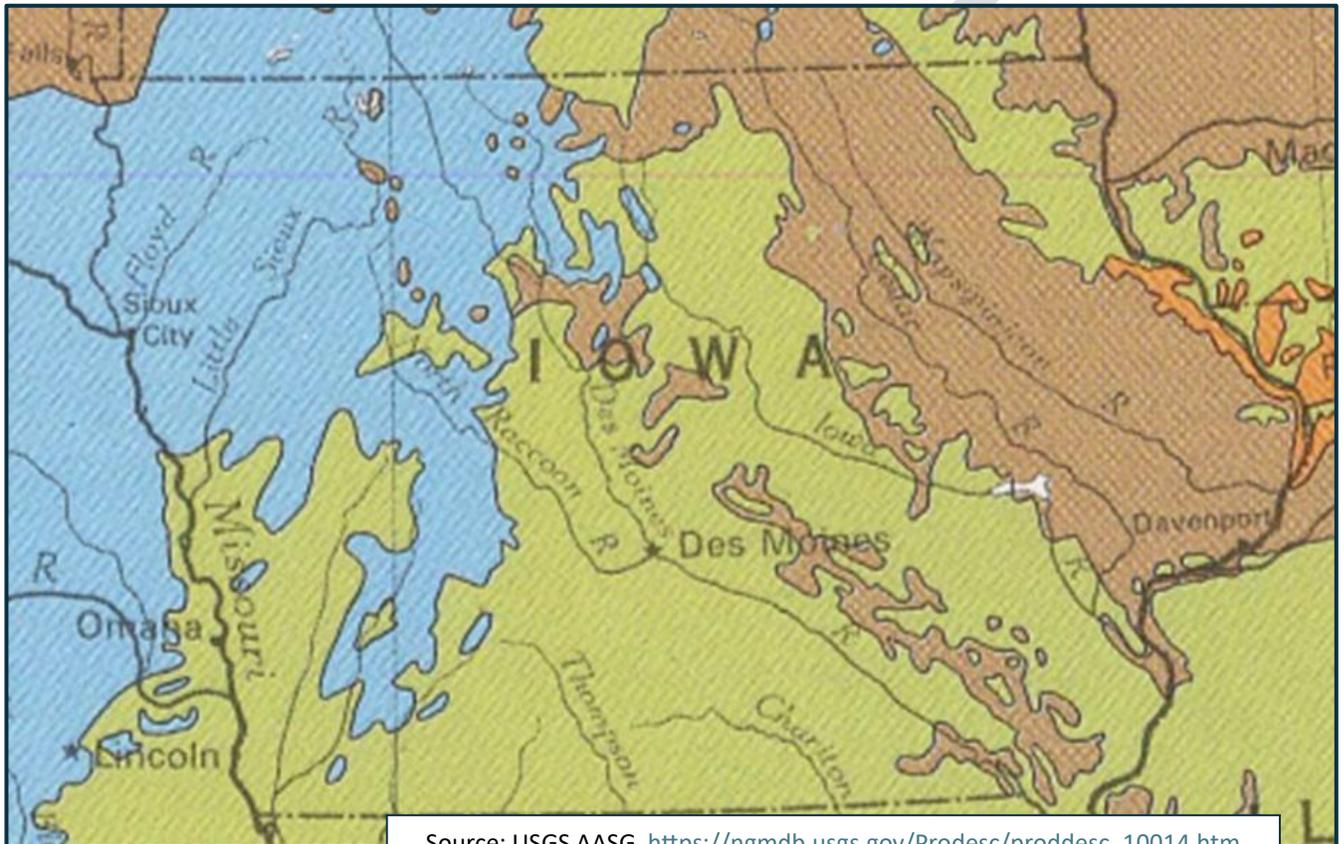
There is not a comprehensive database documenting consequence of expansive soils in Iowa or the United States. Therefore, it is impossible to determine the amount of property damage that has occurred in the five counties within this plan. It is known that expansive soils are present in all participating jurisdictions and will continue to cause future property and infrastructure damage.

Following is the description of Expansive Soils as provided in the State Plan.

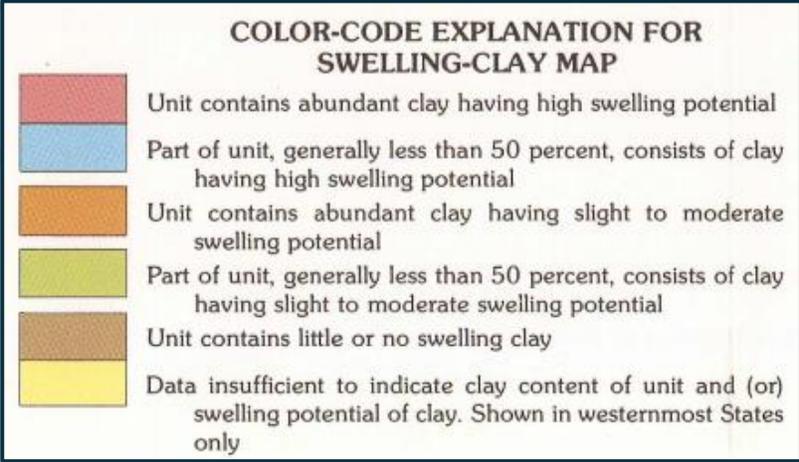
Soils and soft rock that tend to swell or shrink excessively due to changes in moisture content are commonly known as expansive soils, although they may also be referred to as “shrink-swell soils”, “swelling clay soils”, or similar names. The more water such soils absorb, the more their volume increases. Expansions of ten percent or more are not uncommon. This change in volume can exert enough force on a building or other structure to cause damage. Expansive soils will also shrink when they dry out. This shrinkage can remove support from buildings or other structures and result in damaging subsidence. Fissures in the soil can also develop. These fissures can facilitate the deep penetration of water when moist conditions or runoff occurs. This cycle of shrinkage and swelling places repetitive stress on structures, and damage worsens over time. The effects of expansive soils are most prevalent in regions that typically have moderate to high precipitation, with effects especially felt at times when prolonged periods of drought are followed by long periods of rainfall. The hazard occurs in many parts of the southern, central,

⁷ Source: https://www.iowasudas.org/wp-content/uploads/sites/15/2019/12/Chapter_06-2019.pdf

and western United States. Estimates conducted in 1980 put the annual damage from expansive soils as high as \$7 billion, with single-family and commercial buildings accounting for nearly one-third of the total damage amount. (Krohn and Slosson, 1980). However, because the hazard develops gradually and seldom presents a threat to life, expansive soils have received limited attention, despite their costly effects. Expansive soils can also contribute to or cause damage to roadways, bridges, pipelines, and other infrastructure.



Source: USGS AASG https://ngmdb.usgs.gov/Prodesc/proddesc_10014.htm



Probability and frequency analyses have not been prepared because of the nature of occurrence of this hazard. This is consistent with other geologic hazards that occur slowly over time. As such, the duration of response to expansive soils and their associated risk to public property and loss of life is unknown. According to the U.S. Geological Survey (USGS), the northwest section of the state has the highest probability of the incidence of expansive soils. That risk is rated as “less than 50 percent of the soil being of the expansive clay” variety. The USGS Association of American State Geologist (AASG) provides information regarding the presence of expansive soils in the conterminous United States, as found on their website at https://ngmdb.usgs.gov/Prodesc/proddesc_10014.htm. The preceding map provided by the USGS AASG zooms into the state of Iowa.

The entire region is colored blue indicating a high swelling potential. While there is no data pertaining to damage from expansive soils, the frequency of damage is associated with cycles of drought and heavy rainfall. This damage is visually apparent throughout every participating community. The consequences are seen in cracks in the roads, sidewalks, and parking lots throughout the regions. These cracks also exist in property owners’ foundations and walls. Not only is damage visible, but invisible damage to underground utilities negatively affect the region .

There are construction-based best practices that communities can require and monitor with building inspections to mitigate the effects of expansive soils. Mitigation efforts also fall to the property owners to prevent structural damage. General maintenance includes maintaining drainage patterns and consistent landscape watering practices to limit potential consequences.

5. EXTREME HEAT

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Extreme Heat	extensive	moderate	highly likely	medium

Extreme heat events endanger the health and lives of people, pets, and livestock. Deaths due to extreme heat are increasing at an alarming rate, not only in the United States, but globally. In an online article, the National Weather Service shared findings reported by Journal of the

American Medical Association⁸ that states an accounting of more than 2,300 deaths connected to heat in 2023. Other reports from the National Weather Service⁹ provide the following totals, indicating a drastic increase in annual rates as noted in the 2020 plan estimated at an average of 182 such related deaths.

<i>year</i>	2016	2017	2018	2019	2020	2021	2022	2023
<i>total US heat-related deaths reported</i>	94	107	108	187	350	375	383	555

The discrepancy in totals may be a result of system reporting through the weather service being more of a voluntary contribution format while medical journals are drawn from specific analyses of logged medical events. Regardless of the foundation of reports, it is clear that extreme heat incidents are having an alarming effect.

Extreme heat events are particularly harmful to already vulnerable populations. Children, elderly individuals, and those with certain disabilities are not able to withstand long periods of heat exposure without experiencing health consequences. Furthermore, individuals experiencing homelessness or those unable to afford adequate air conditioning are at greater risk of heat stroke or related illnesses and death during these events. Due to the region's relatively high rate of people living below the poverty level, this is a prevalent concern. Furthermore, the aging housing stock may indicate a larger proportion of residents without access to functioning air conditioning.

In addition to human health impacts, extreme heat can affect agriculture by decreasing crop yields and harming livestock. Potential for harm to the economy also exists during these events, as energy and water usage increase.

The following is the description of extreme heat as provided in the State Plan.

⁸⁸ Source: <https://weather.com/news/climate/news/2024-08-26-heat-deaths-by-year-in-us-hit-record>
⁹ www.weather.gov/media/hazstat/heat16.pdf, www.weather.gov/media/hazstat/heat18.pdf,
www.weather.gov/media/hazstat/heat20.pdf, www.weather.gov/media/hazstat/heat22.pdf,
www.weather.gov/media/hazstat/heat17.pdf, www.weather.gov/media/hazstat/heat19.pdf,
www.weather.gov/media/hazstat/heat21.pdf, www.weather.gov/media/hazstat/heat23.pdf

Conditions for extreme heat are defined by summertime weather that is substantially hotter and/or more humid than average for a location at that time of year. Definitions vary by Weather Forecast Office, but the NWS Weather Forecast Office in Des Moines defines excessive heat as heat index greater than 110 degrees Fahrenheit for two or more consecutive days. The heat index is a number in degrees Fahrenheit that tells how hot it really feels when relative humidity is factored into actual air temperature. Exposure to full sunshine can increase the heat index by at least 15 degrees.

Under extreme heat conditions, the National Weather Service can issue either a heat advisory or an excessive heat warning, as described below

1. Heat advisory - A heat advisory is issued when a heat index of 100 degrees Fahrenheit or higher is expected for a period of three hours or more. A heat advisory shall be continued through the overnight hours, following a day with excessive heat, if the heat index is not expected to fall below 75 degrees Fahrenheit. A heat advisory can be issued for a heat index less than 100 degrees Fahrenheit when the cumulative effect of successive days of near advisory-level heat leads to potentially life-threatening conditions.
2. Excessive Heat Warning – An excessive heat warning is used when a heat index of 105 degrees Fahrenheit or higher is expected for a period of three hours or more. An excessive heat warning shall be continued through the overnight hours, following a day with excessive heat, if the heat index is not expected to fall below 75 degrees Fahrenheit. An excessive heat warning can be issued for a heat index less than 105 degrees Fahrenheit when the cumulative effect of successive days of near warning-level heat leads to life threatening conditions.

More information regarding various storm events including extreme heat can be found on the National Centers for Environmental Information [website](#). For reference, the following table lists the dates for all excessive heat events in the region in the past 10 years.

Excessive Heat Events 2015 - 2024				
Cherokee	Ida	Monona	Plymouth	Woodbury
6/10/2016	6/10/2016		06/10/2016	06/10/2016
7/20/2016	7/20/2016		07/20/2016	07/20/2016

6/29/2019	6/29/2019		06/29/2019	06/29/2019
7/26/2023	7/26/2023		7/25/2023	7/25/2023
8/19/2023	8/19/2023		8/19/2023	8/19/2023
8/21/2023	8/21/2023	8/21/2023	8/21/2023	8/21/2023
7/13/2024	7/13/2024		7/13/2024	7/13/2024
			7/31/2024	7/31/2024
8/5/2024	8/5/2024		8/5/2024	8/5/2024
8/25/2024	8/25/2024		8/25/2024	8/25/2024
		8/26/2024		

A 15-year summary of recorded extreme heat events within the region in the NOAA Storm Events Database is provided for reference. Unfortunately, the database does not provide specifics such as temperature and duration. Details as available for significant events within the last five years are included in individual profiles as applicable.

Storm Events Database
 Search Results for Cherokee, Ida, Monona, Plymouth and Woodbury Counties, Iowa
 Event Types: Excessive Heat
 Cherokee, Ida, Monona, Plymouth and Woodbury counties contain the following zones:
 Plymouth, Cherokee, Woodbury, Ida, Monona
 64 events were reported between 01/01/2010 and 12/31/2024 (5479 days)

<i>Summary Info:</i>	
Number of County/Zone areas affected:	5
Number of Days with Event:	20
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	1
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

Because extreme heat events are not uncommon, many jurisdictions have specific mitigation strategies. Furthermore, many communities use websites or social media to distribute information regarding personal safety tips to residents. To find specific action plan items, refer to the county profiles found later in this document.

Numerous reports predict more frequent and extreme heat events due to climate change. This is supported by the *Iowa Climate Statement 2019* citing that “Dangerous Heat Events will be More Frequent and Severe” and is signed by 211 scientists working in the state of Iowa.

6. FLOODING – FLASH AND RIVERINE

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Flooding - <i>Flash and Riverine</i>	significant	severe	highly likely	high

In the past 15 years, the Region has experienced varying flood events, with historical outcomes in 2011, 2014, 2019, and 2024. In 2011, the prolonged flooding of the Missouri River triggered flooding events in communities along not only the Missouri but also its tributaries. Natural absorption processes were ineffective, as ground water levels remained high despite “abnormally dry conditions” as described in the State Climate Summary for Iowa (<https://statesummaries.ncics.org/chapter/ia/>). Even with gradual and steady increase in average temperatures, NOAA National Centers for Environmental Information projections show an expected increase in winter and spring precipitation at a rate greater than 15% by mid-century. This complicated mix of extremes increases flash flooding potential in high precipitation in above freezing weather and river flooding events in warmer temperatures, even in dryer conditions, due to snow melt after high cold weather precipitation events. This is especially significant when temperature increases are sudden and ground is still frozen as demonstrated in the Region in March of 2019.

Communities that have had neither recent nor significant historical flood activity prior to the 2014 Plan were literally under water in spring of 2019. For reference, the City of Hinton enacted an emergency road closure due to high water and it was a first-time experience for the Community’s current population as well as the Iowa DOT. The DOT designated the roadway in question as terminus of a detour route due to other closures, complicating and therefore delaying local closure declaration. As referenced throughout this Plan, unique combinations of weather-related phenomena cannot be prevented, neither have they been given serious consideration in planning response activity. However, the new normal is expecting the extreme.

Furthermore, the NOAA NCICS Iowa State Climate Summary of 2022 indicates that “the frequency of 2-inch extreme precipitation events has increased” since 1900 with the most evident increases since 2005. Nearly 50% of annual precipitation occurs on the ten wettest days of the year in the western region of the state. These data illustrate the extreme precipitation patterns that have been and will likely continue to be more frequent over time. Between June 20th and 22nd of 2024, one such unprecedented rain event occurred in the tri-state region of Northwest Iowa, Southwest Minnesota, and Southeast South Dakota. Volumes reached in the range of 10-15 inches over this period near the communities of Rock Rapids and Rock Valley located in Region-adjacent counties. Due to the extreme influx of water entering tributaries of the Little Sioux, Big Sioux, and Missouri Rivers, the communities of Akron, Hinton, Le Mars, Cherokee, Sioux City, Correctionville, Oto, Anthon, Rodney, and Smithland were flooded to varying degrees.

FEMA data outlines the Presidential Disaster Declaration for Iowa from June 24, 2024 through August 28, 2024. Cherokee, Monona, Plymouth, and Woodbury Counties represented in this plan were included for Individual Assistance and Public Assistance Categories A through G. The following totals are applicable for all eligible counties in Iowa (see FEMA – 4796 DR Map, page 2 – 19).

Individual Assistance Applications Approved:	6,053
Total Housing Assistance (HA) – Dollars Approved:	\$44,490,543.82
Total Other Needs Assistance (ONA) – Dollars Approved:	\$21,012,140.08
Total Individual & Households Program Dollars Approved:	\$65,502,683.90

Reference is made in the State Plan to the Flood Risk Maps on the Iowa DNR website. At this time, the maps of Cherokee, Ida, and Monona Counties have been finalized and are in effect, and the maps of Plymouth and Woodbury Counties are preliminary. Iowa Flood Hazard maps in varying stages of development can be found on the Iowa Flood Center’s Iowa Flood Information System site at <http://ifis.iowafloodcenter.org/ifis/newmaps/hazard/>. The NCEI Storm Events Database shows occurrence of 36 flood events in Cherokee, 8 in Ida, 9 in Monona, 76 in Plymouth, and 30 in Woodbury counties from 2000 to 2024. For a snapshot reference to significance of flooding in the region, a query of flood, flash flood, heavy rain, heavy snow

events between November 1, 2023 and October 31, 2024, 27 events show as reported in the region with cumulative damages costing over \$8.2 million for only five impacted areas – Sloan, James (unincorporated area), Washta, Albaton (unincorporated area), and Rodney. Further details on flood and flash flood events can be found on the NOAA website at <https://www.ncdc.noaa.gov/stormevents/>.

FEMA’s Community Status Book Report¹⁰ provides the following for NFIP participation within the region, separated by County. **Five jurisdictions are not referenced in either data set as most recently drawn from the Community Status Book Report: Marcus, Meriden, and Cleghorn in Cherokee County, Ute in Monona County, and Craig in Plymouth County.**

Community Status Book Report

Communities Participating in the National Flood Program

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Tribal	Reg-Emer Date
190854A	CHEROKEE COUNTY *	CHEROKEE COUNTY	5/6/1977	5/1/2011	12/2/2021	No	5/1/2011
190549A	AURELIA, CITY OF	CHEROKEE COUNTY	4/16/1976	7/1/1987	12/2/2021	No	7/1/1987
190063A	CHEROKEE, CITY OF	CHEROKEE COUNTY	3/29/1974	1/2/1981	12/2/2021	No	1/2/1981
190354A	QUIMBY, CITY OF	CHEROKEE COUNTY		12/2/2021	12/02/21(M)	No	12/2/2021
190064A	WASHTA, CITY OF	CHEROKEE COUNTY	8/30/1974	9/27/1985	12/02/21(M)	No	9/27/1985

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Tribal	Reg-Emer Date
190696A	ARTHUR, CITY OF	IDA COUNTY	6/25/1976	9/1/1987	06/01/22(M)	No	9/1/1987
190423A	BATTLE CREEK, CITY OF	IDA COUNTY	9/26/1975	2/8/1999	06/01/22(M)	No	2/9/1999
190424A	GALVA, CITY OF	IDA COUNTY	9/19/1975	8/19/1986	06/01/22(M)	No	8/19/1986
190593A	HOLSTEIN, CITY OF	IDA COUNTY	9/19/1975	6/1/2022	06/01/22(M)	No	4/21/2024
190156A	IDA GROVE, CITY OF	IDA COUNTY	1/23/1974	9/5/1979	6/1/2022	No	9/5/1979

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Tribal	Reg-Emer Date
190893B	MONONA COUNTY *	MONONA COUNTY		5/2/2002	6/15/2022	No	5/19/2003
190705B	BLENCOE, CITY OF	MONONA COUNTY	10/29/1976	5/2/2002	06/15/22(M)	No	4/29/2024
190208B	MAPLETON, CITY OF	MONONA COUNTY	12/28/1973	9/27/1985	06/15/22(M)	No	9/27/1985
190783B	MOORHEAD, CITY OF	MONONA COUNTY	9/19/1975	5/2/2002	06/15/22(M)	No	4/17/1987
190463B	ONAWA, CITY OF	MONONA COUNTY		5/2/2002	6/15/2022	No	8/31/2010
190921B	RODNEY, CITY OF	MONONA COUNTY	7/4/1978	5/2/2002	06/15/22(M)	No	6/10/1980
190805B	SOLDIER, CITY OF	MONONA COUNTY	8/13/1976	5/2/2002	06/15/22(M)	No	2/28/2012
190951B	TURIN, CITY OF	MONONA COUNTY		5/2/2002	06/15/22(M)	No	3/16/2011

¹⁰ Source: <https://www.fema.gov/cis/IA.html>

190684B	WHITING, CITY OF	MONONA COUNTY	7/2/1976	1/1/1987	6/15/2022	No	1/1/1987
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<i>CID</i>	<i>Community Name</i>	<i>County</i>	<i>Init FHBM Identified</i>	<i>Init FIRM Identified</i>	<i>Curr Eff Map Date</i>	<i>Tribal</i>	<i>Reg-Emer Date</i>
190899A	PLYMOUTH COUNTY*	PLYMOUTH COUNTY	10/25/1977	9/18/1985	10/27/2022	No	9/18/1985
190223A	AKRON, CITY OF	PLYMOUTH COUNTY	3/22/1974	8/1/1986	10/27/2022	No	8/1/1986
190476A	BRUNSVILLE, CITY OF	PLYMOUTH COUNTY	7/2/1976	5/1/2011	10/27/22(M)	No	5/1/2011
190224A	HINTON, CITY OF	PLYMOUTH COUNTY	9/6/1974	9/27/1985	10/27/22(M)	No	9/27/1985
190477A	KINGSLEY, CITY OF	PLYMOUTH COUNTY	8/6/1976	9/27/1985	10/27/22(M)	No	9/27/1985
190225A	LE MARS, CITY OF	PLYMOUTH COUNTY	1/16/1974	5/1/1978	10/27/2022	No	5/1/1978
190478A	MERRILL, CITY OF	PLYMOUTH COUNTY	7/2/1976	11/6/1991	10/27/22(M)	No	11/6/1991
190479A	OYENS, CITY OF	PLYMOUTH COUNTY	7/16/1976	10/27/2022	10/27/22(M)	No	10/27/2022
190480A	REMSEN, CITY OF	PLYMOUTH COUNTY	3/19/1976	8/1/1986	10/27/22(M)	No	8/1/1986
190482A	WESTFIELD, CITY OF	PLYMOUTH COUNTY	8/13/1976	10/20/1999	10/27/2022	No	10/20/1999

<i>CID</i>	<i>Community Name</i>	<i>County</i>	<i>Init FHBM Identified</i>	<i>Init FIRM Identified</i>	<i>Curr Eff Map Date</i>	<i>Tribal</i>	<i>Reg-Emer Date</i>
190536C	WOODBURY COUNTY *	WOODBURY COUNTY	8/2/1977	6/17/1991	7/17/2024	No	6/17/1991
190286C	ANTHON, CITY OF	WOODBURY COUNTY	1/23/1974	9/18/1985	7/17/2024	No	9/18/1985
190287C	BRONSON, CITY OF	WOODBURY COUNTY	8/30/1974	9/1/1986	07/17/24(M)	No	9/1/1986
190288C	CORRECTIONVILLE, CITY OF	WOODBURY COUNTY	2/22/1974	8/15/1990	7/17/2024	No	8/15/1990
190289C	CUSHING, CITY OF	WOODBURY COUNTY	8/9/1974	9/18/1985	07/17/24(M)	No	9/18/1985
190291C	HORNICK, CITY OF	WOODBURY COUNTY	10/18/1974	9/27/1985	07/17/24(M)	No	9/27/1985
190292C	LAWTON, CITY OF	WOODBURY COUNTY	8/16/1974	9/1/1986	07/17/24(M)	No	9/1/1986
190293C	MOVILLE, CITY OF	WOODBURY COUNTY	2/18/1977	9/1/1986	07/17/24(M)	No	9/1/1986
190294C	OTO, CITY OF	WOODBURY COUNTY	9/13/1974	9/29/2011	07/17/24(M)	No	5/20/2024
190295C	PIERSON, CITY OF	WOODBURY COUNTY	9/13/1974	9/18/1985	07/17/24(M)	No	9/18/1985
190296C	SALIX, CITY OF	WOODBURY COUNTY	10/18/1974	9/29/2011	07/17/24(M)	No	4/25/1980
190297C	SERGEANT BLUFF, CITY OF	WOODBURY COUNTY	3/29/1974	9/29/2011	07/17/24(M)	No	3/18/1987
190298C	SIOUX CITY, CITY OF	WOODBURY COUNTY	8/2/1974	8/1/1979	7/17/2024	No	8/1/1979
190299C	SLOAN, CITY OF	WOODBURY COUNTY	5/24/1974	9/29/2011	(NSFHA)	No	6/10/1980
190300C	SMITHLAND, CITY OF	WOODBURY COUNTY	11/12/1976	9/27/1985	07/17/24(M)	No	9/27/1985

Communities Not in the National Flood Program

<i>CID</i>	<i>Community Name</i>	<i>County</i>	<i>Init FHBM Identified</i>	<i>Init FIRM Identified</i>	<i>Curr Eff Map Date</i>	<i>Tribal</i>	<i>Sanction Date</i>
190353A	LARRABEE, CITY OF	CHEROKEE COUNTY	7/2/1976	12/2/2021	12/2/2021	No	7/2/1977
190877A	IDA COUNTY *	IDA COUNTY		6/1/2022	6/1/2022	No	6/1/2023
190462B	CASTANA, CITY OF	MONONA COUNTY	8/29/1975	5/2/2002	6/15/2022	No	8/29/1976
190481A	STRUBLE, CITY OF	PLYMOUTH COUNTY		10/27/2022	10/27/2022	No	10/27/2023
190290C	DANBURY, CITY OF	WOODBURY COUNTY	1/9/1974	9/18/1985	7/17/2024	No	09/18/85(S)

7. GRASS OR WILDLAND FIRE

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Grass or Wildland Fire	extensive	negligible	highly likely	medium

With more than 60 percent of Iowa's population living in urban communities, many communities have expanded into traditionally natural areas. Each year Iowa's beautiful landscapes entice more urban residents to push a little further into those natural, wildland areas. This trend has created an extremely complex landscape, known as wildland/urban interface, and a new set of conditions: houses and businesses constructed amid wooded or wildland areas. By populating natural areas, a wildland fire can now reach beyond its natural fuels like trees, brush, and grass to homes, businesses, and human endangerment.

Regionally, community expansion abuts agricultural lands as well as wooded wildland areas. Depending on climate conditions, grassland and relative risk of wildland fires can be escalated in a very short period of time. Extreme Heat, Drought, and High Wind events contribute to the susceptibility of the majority of participating cities, specifically those with populations under 1,000 and corporate boundaries less than 2 square miles. Relative community size can provide context of potential of windborne embers having opportunity to ignite additional flashpoints with minimal barriers. General sources indicate high variability in speed of travel for grassland fires, with wind and other conditions being of greatest indicators. Regional grassland fires are usually a byproduct of a controlled burn or human influenced situation (discard of lit cigarettes, for example). In such cases, point of origin may be seen at ignition, triggering immediate response – sometimes by individuals as first-on-scene rather than response teams. Rural communities are served by volunteer firefighters, hindering response times, therefore increasing potential for widespread effects. Fortunately, regional instances have been largely infrequent with conditions reasonable favorable to containment to minimize spread. Predictability of spontaneous flashpoints such as those initiated through lightning strikes is difficult to determine. Instances are infrequent.

The state has the largest number of Conservation Reserve Program (CRP) contracts in the nation, totaling over 1.5 million acres. Most of this land is planted in cool and warm season grass plantings, tree plantings, and riparian buffer strips. An additional 230,000 acres are in

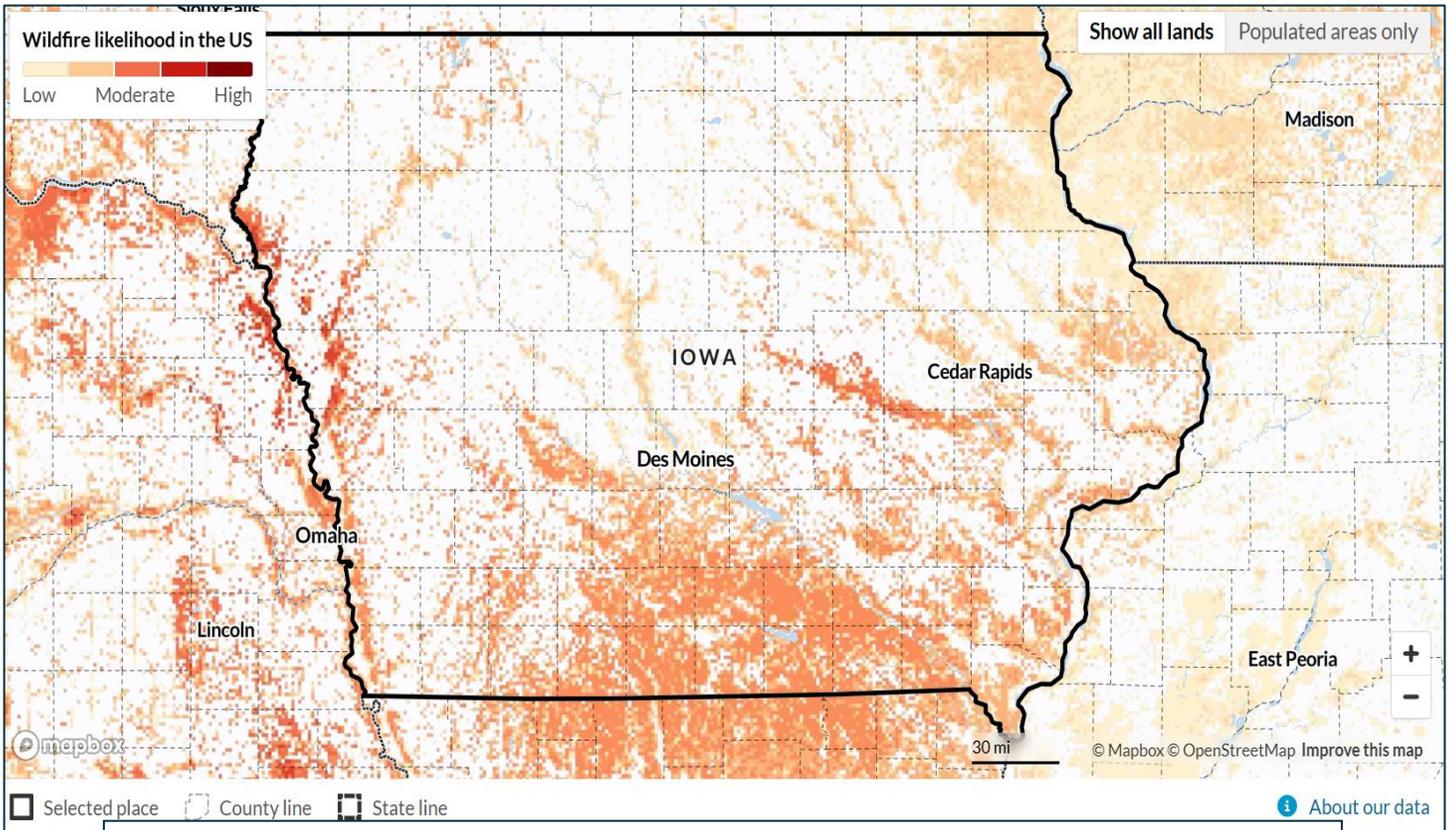
federal ownership and conservation easements. Wildfires are frequently associated with lightning and drought conditions, as dry conditions make vegetation more flammable. As new development encroaches into the wildland/urban interface, an ever-increasing amount of structures and people are at risk.

The following is the description of grass fire and wildfire as presented in the State Plan. A grass fire or wildland fire is an uncontrolled fire that threatens life and property in a rural or wooded area. A grass fire or wildland fire is not a cropland fire. Damage to crops from fire are often covered by insurance, and are on land that is not “wild.” Wildland or grass fires occur in natural, wild areas. Wildland fires are more likely to occur when conditions are favorable, such as during periods of drought when natural vegetation is drier and more combustible.

According to the National Interagency Fire Center, not counting prescribed fires, there were 859 wildfires spanning 20,440 acres from 2018 to 2022 in Iowa. The year 2018 accounted for nearly 45% of those fires (and 39% of the acres burned). The wildfires and resultant acres burned of the last five years is only about a third of that of the previous five year period (2013-2017, which 2438 fires and 69,583 acres burned). Going back further in history, between 2002 and 2012 (inclusive) Iowa experienced 1,817 wildfires spanning 33,122 acres and 1,884 prescribed fires spanning 14,079 acres. No event reported in the state has been a historically-significant wildfire, at least compared to the wildfires experienced in western states.

The USDA Forest Service (USDA) provides information regarding wildfire likelihood and associated risks through their Wildfire Risk to Communities project¹¹. According to this data, Iowa is categorized as “low risk” relative to the rest of the country. However, there are areas on the outskirts of urban areas and along river systems within the region that fall within the moderate or high-moderate categorization for wildfire likelihood. The northwest region of the state has the highest risk of any other region in Iowa. The preceding map is a screenshot from the USDA’s Wildfire Risk to Communities, Wildfire Likelihood Map.

¹¹ Source: <https://www.fs.usda.gov/managing-land/fire/wildfirerisk>



Wildfire Likelihood Map, 2024; Source: USDA Forest Service, Wildfire Risk to Communities, <https://wildfirerisk.org/explore/wildfire-likelihood/19/>

More information regarding wildfires in Iowa, including individual county data, can be found online on NOAA’s online Storm Event database¹². The site provides two recorded wildfires within the five counties included in this plan from January 2014 to December 2024 referenced in the table below.

Location	Date	Magnitude	Est Damage	Inj/Fatalities
Woodbury County	10/11/2020	3,000 acres	\$320,000	0/0
Plymouth County	4/23/2022	1,000 acres	\$0	0/0

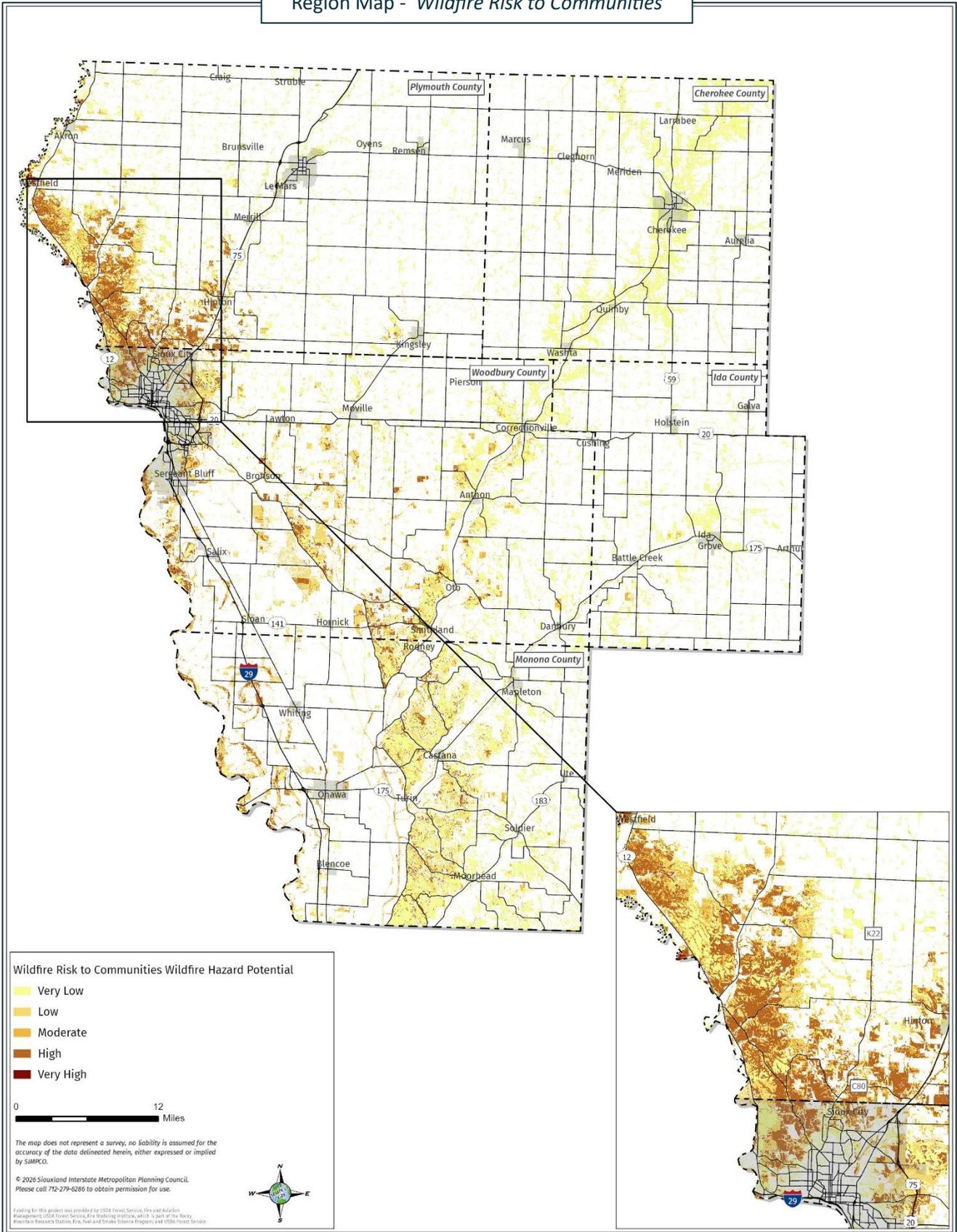
Due to relative low-risk, goals and action items specific to wildfire mitigation are not a priority. Individuals in rural areas often burn trash, leaves, and other vegetation debris. These fires have the potential to get out of control and turn into wildfires. Wildland/Grass fires can occur in city

¹² Source: <https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=19%2CIOWA>

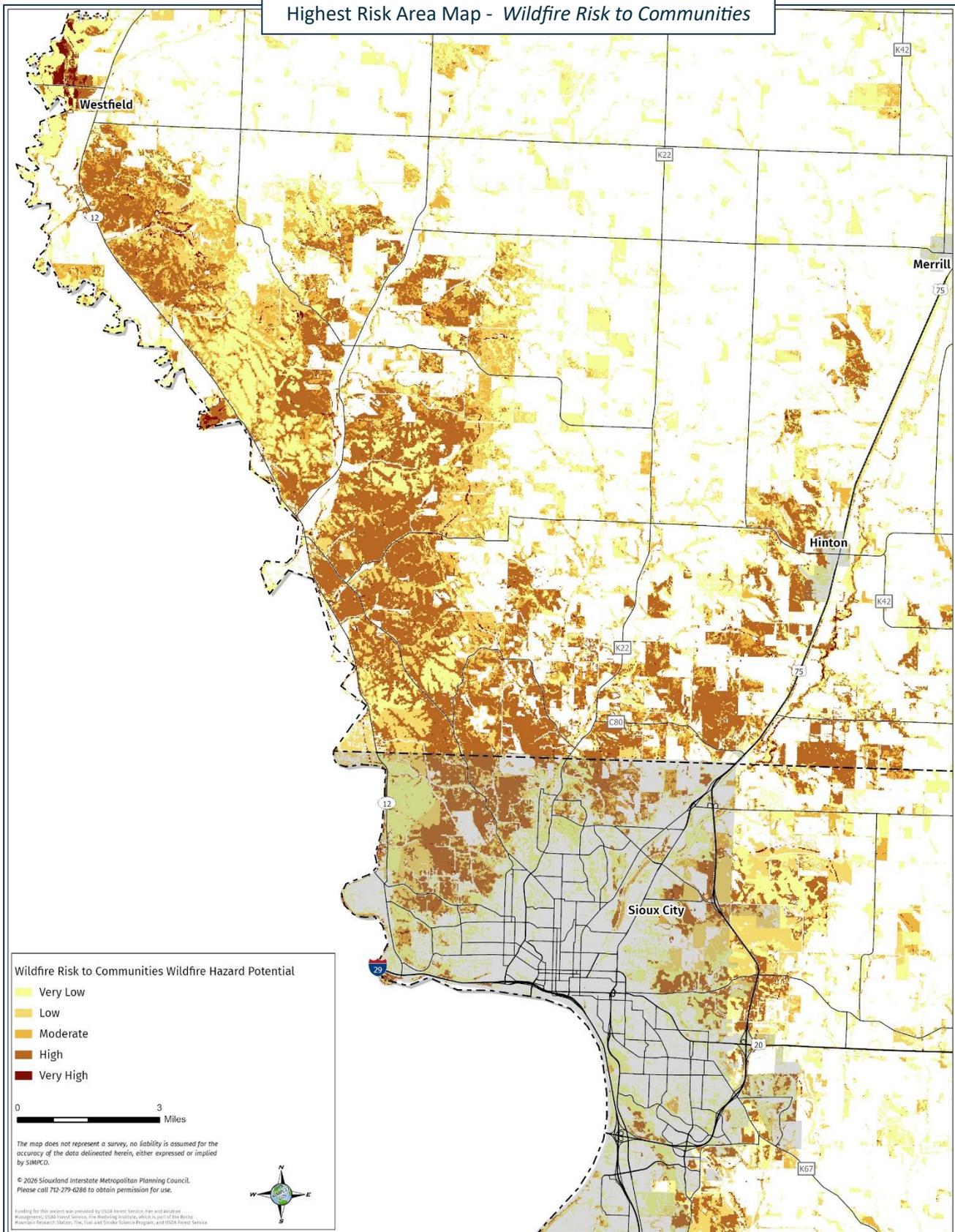
limits. However, the magnitude is generally lower due to proximity to firefighting services. There is less potential for wildland/grass fires affecting schools due to general locations away from Wildland Urban Interface Areas. If a wildland/grass fire were to occur near school buildings, the magnitude would again likely be lower due to close proximity to firefighting services.

FINAL DRAFT

Region Map - Wildfire Risk to Communities



Highest Risk Area Map - Wildfire Risk to Communities



8. LANDSLIDE

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Landslide	limited	negligible	likely	low

Due to an extremely limited area of effect, Landslide Disaster is removed from the 2026 Regional Hazard Mitigation Plan as a priority regional natural disaster concern. No specified mitigative actions or strategies addressing landslides are required to meet jurisdictional participation status. Information as provided is maintained as a resource due to potential effect and for reference when susceptible communities are considering large-scale projects in prone areas.

Landslides are a type of "mass wasting," which denotes any down-slope movement of soil and rock under the direct influence of gravity. The term "landslide" encompasses five modes of slope movement: falls, topples, slides, spreads, and flows. The type of geologic material (bedrock, debris, or earth) further subdivides these. Debris flows (commonly referred to as mudflows or mudslides) and rock falls are examples of common landslide types.

Landslides result from several causes, or a combination thereof, including geological, morphological, physical, or human influence. However, for a landslide to occur, it must be triggered by an external event. An event such as intense rainfall, flooding, or stream erosion may result in a near immediate slope instability. On the other hand, an event such as weathering of material may gradually result in slope instability over a much longer period. Based on the historical Iowa data, the majority of slope failures are a result of change in groundwater levels, groundwater seepage, or other water sources.

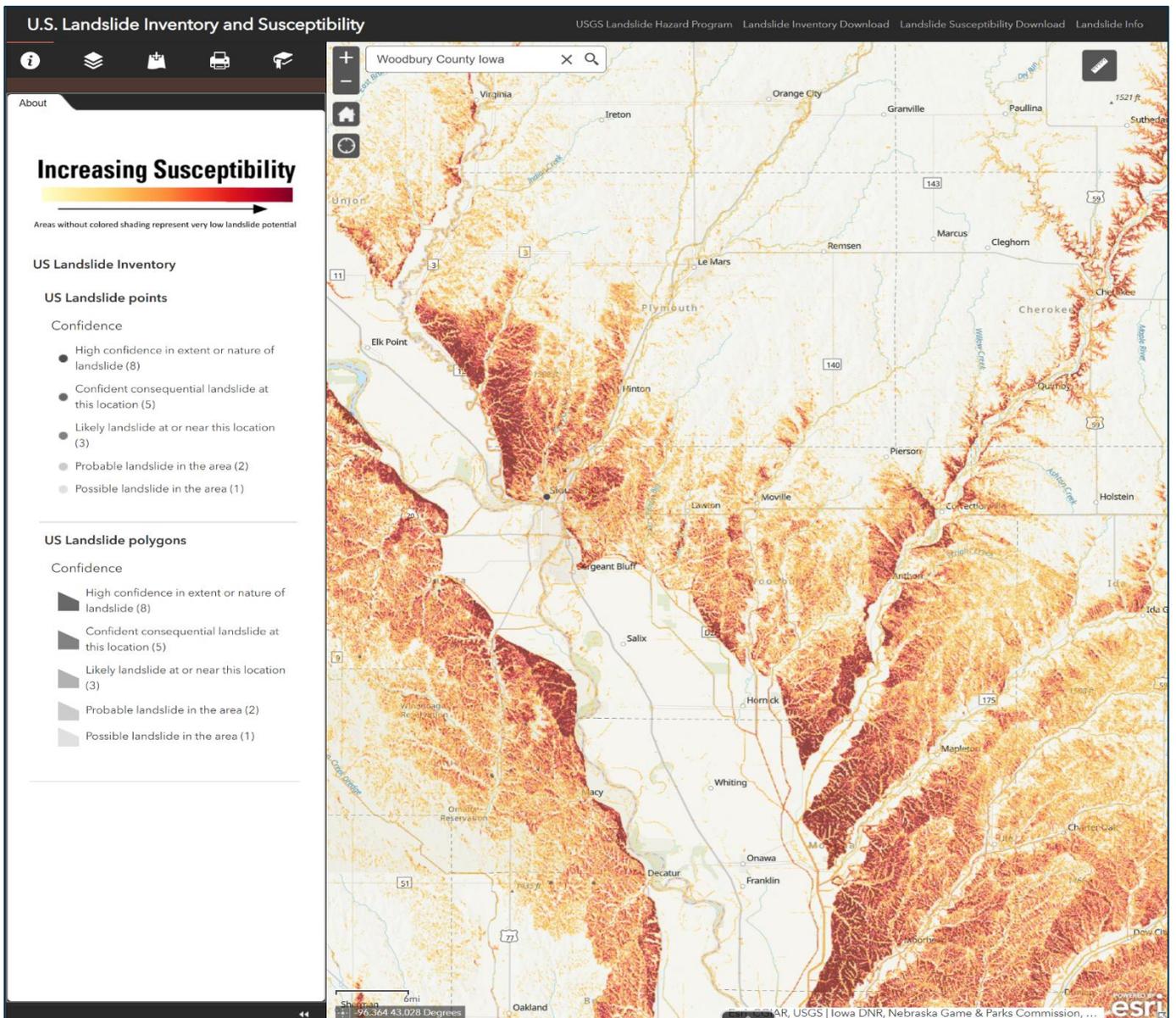
The State Plan provides the following description for landslides.

Landslides occur when susceptible rock, earth, or debris moves down a slope under the force of gravity and water. Landslides may be very small or very large, and can move at slow to very high speeds. A natural phenomenon, landslides have been occurring in

slide-prone areas of Iowa since long before the state was created. Landslides can occur due to rainstorms, fires, or human activities that modify slope and drainage.

A portion of the state is moderately susceptible to landslides. Susceptible areas are found along the adjacent steep terrain associated with the major river valleys such as the Mississippi, Missouri, Des Moines, and Iowa, and in the Loess Hills of western Iowa.

While maps show that there are areas of the state that may be somewhat susceptible to landslides, this is currently not a hazard that has had much impact. At least, jurisdictions have not reported any significant losses to landslides. In order to avoid increasing their susceptibility to damage from landslides, it would be wise for jurisdictions in the areas of moderate and higher landslide susceptibility to include in their land use codes a requirement that developers look carefully at the potential for landslides at specific sites, or a restriction on development in landslide-prone areas. This seems to be even more warranted because of evidence that extreme rain events, which could trigger landslides, appear to be occurring more frequently in Iowa. Another potential mitigation action is to ensure proper drainage above, around, and beneath roads where landslides are most likely (e.g., by having sufficiently sized culverts).



The USGS provides an interactive Landslide Susceptibility map (above) that shows delineated areas in the conterminous U.S. where large numbers of landslides have occurred and areas that are susceptible to landslide. Iowa has low incidents overall but contains moderate susceptibility, and low incidence in all five counties discussed in this plan. Local record of a landslide in Sioux City can be found in records of the Sioux City Journal (July 29, 2014). A section of State Highway 12 was closed for emergency repairs due to deterioration of the shoulder. Prior to this incident, the Burlington Northern Santa Fe Railroad line and I-29 closures resulted

from a landslide in the Riverside area of the city on April 24, 2007. While lack of a categorized record of events may reduce substantiation of specific mitigation actions, contributing characteristics, especially in residentially developed areas, may provide viability for projects that protect from loss due to landslides.

9. SEVERE WINTER STORM

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Severe Winter Storm	extensive	moderate	highly likely	medium

Geographically, the region’s position in northwest Iowa leads to the reasonable expectation of severe winter weather at any given time between October and April. According to the NOAA database of Storm Events (<https://www.ncdc.noaa.gov/stormevents/>), there were 34 events reported during 2024 including Winter Weather, Winter Storm, Cold/Wind Chill, Extreme Cold/Wind Chill, Heavy Snow, Ice Storm, and Blizzard in our region. For the period beginning January 1, 2020 through December 31, 2024, 117 winter weather-related events were reported. Remarkably, no deaths or severe injuries were included in reported events. It can be assumed that indirect injuries and/or deaths due to, at minimum, traffic accidents and falls resulting from complications of winter weather events, have occurred but are not included in the reporting of referenced incidents. **A 15-year summary of recorded events related to severe winter weather within the region in the NOAA Storm Events Database is provided for reference. Details from any significant events within the last five years are included in individual profiles as may be applicable.**

Storm Events Database

Search Results for Cherokee, Ida, Monona, Plymouth and Woodbury Counties, Iowa

Event Types: Blizzard, Extreme Cold/Wind Chill, Frost/Freeze, Heavy Snow, Ice Storm, Sleet, Winter Storm, Winter Weather

Cherokee, Ida, Monona, Plymouth and Woodbury counties contain the following zones:

Plymouth, Cherokee, Woodbury, Ida, Monona

457 events were reported between 01/01/2010 and 12/31/2024 (5479 days)

Summary Info:

Number of County/Zone areas affected:

5

Number of Days with Event:	135
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	2
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	6

The following are descriptive terms based on information as provided in the State Plan and the National Weather Service.

- **Blizzard** — Winds of 35 mph or more with snow and blowing snow reducing visibility to less than ¼ mile for at least three hours.
- **Blowing Snow** — Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
- **Snow Squalls** — Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
- **Snow Showers** — Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
- **Freezing Rain** — Measurable rain that falls onto a surface with a temperature below freezing. This causes it to freeze to surfaces, such as trees, cars, and roads, forming a coating or glaze of ice.
- **Sleet** — Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick to objects.
- **Wind Chill** – The apparent temperature the body feels when wind is factored into the equation. A wind chill warning is issued when wind chill temperatures are expected to be hazardous to life within several minutes of exposure.

Reacting to winter weather successfully depends on community resources. In this situation, equipment is a significant element in minimizing ill effects of extreme winter events. Rural jurisdictions and school districts are often dependent on County resources and contracted services, thereby elevating the need for appropriate equipment at the county and private industry levels. Because of the fluctuations in weather patterns, behaviors in response to winter weather are often inconsistent. In areas north of our region, weather patterns in winter are more regularly occurring resulting in a better mode of preparedness by residents in those

areas. Specific actions related to refuge, power, and snow removal are components of several mitigation measures.

10. SINKHOLES

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Sinkholes	significant	negligible	unlikely	low

Historically, sinkholes have not been a serious concern for the region. Some sinkholes result from human activities such as underground mining of coal, groundwater or petroleum withdraw, and drainage of organic soils. Karst sinkholes result from soil composition containing soluble rocks, such as carbonates and evaporites. According to the Iowa Geological Survey, there are “three areas in Iowa where large numbers of sinkholes exist: (1) within the outcrop belt of the Ordovician Galena Group carbonates in Allamakee, Clayton, and Winneshiek counties; (2) in Devonian carbonates in Bremer, Butler, Chickasaw, and particularly Floyd and Mitchell counties; and (3) along the erosional edge of Silurian carbonates in Dubuque and Clayton counties.” Sinkholes have resulted in the failure of farm and other types of ponds, roads, and one sewage-treatment lagoon. As sinkholes sometimes allow surface runoff to directly enter bedrock aquifers, their presence has implications for groundwater quality. As stated above, karst sinkholes tend to occur in other areas of Iowa outside of the region and therefore, there have been no serious impacts due to sinkholes in the region.

The State Plan provides the following summation of sinkholes.

A sinkhole is the loss of surface elevation due to the removal of subsurface support. Sinkholes range from broad, regional lowering of the land surface to abrupt localized collapse. The primary causes of most subsidence are human activities such as underground mining of coal, groundwater/petroleum withdrawal, or drainage of organic soils. Sinkholes can aggravate flooding potential, and collapse of an abandoned mine may destroy buildings, roads, and utilities. Sinkholes often are found among karst landscapes.

Therefore, in regard to naturally occurring conditions contributing to sinkholes, the Region is at minimal risk. However, displacement of groundwater in addition to failing underground infrastructure, there is an ever-increasing likelihood of occurrence – especially when further compromised by heavy rain causing rapid washout conditions or multiple freeze/heave cycles that contribute to destabilization of soil. Documentation is not readily available for several sinkholes that have occurred in Woodbury County, mostly attributed to the washing out of underlay or foundation due to “failure of an underground storm sewer”, as recalled in the Sioux City Journal (April 2, 2017). Additional sinkholes have resulted after water main breaks. Circumstances substantiate need for mitigation within the region.

11. THUNDERSTORM – HAIL/LIGHTNING

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Thunderstorm - Hail & Lightning	extensive	severe	highly likely	high

Severe thunderstorms most often occur in Iowa in the spring and summer, though fall and winter thundershowers are not uncommon. The region, as with the Midwest in general, is susceptible to thunderstorms, severe in nature, including lightning and hail.

The State Plan provides the following description for thunderstorm with hail and/or lightning.

Thunderstorms are common in Iowa and can occur singly, in clusters, or in lines. Thunderstorms can result in heavy rains, high winds (reaching or exceeding 58 mph), tornadoes, or hail. For the purposes of this hazard analysis and risk assessment, the thunderstorm effect of flooding due to rain is primarily analyzed in the profile of flash flood and flood, and the effects of high wind are included in the profile of tornado/high wind. In this profile, the thunderstorms’ effects and risks of lightning and hail are those primarily analyzed and assessed.

Lightning is an electrical discharge that results from the buildup of positive and negative charges within a thunderstorm. When the buildup becomes strong enough, lightning appears as a “bolt” or flash of light that occurs within the clouds or between the clouds and the ground. A bolt of lightning reaches temperatures approaching 50,000 degrees

Fahrenheit in a split second. This rapid heating, expansion, and cooling of air near the lightning bolt creates thunder.

Hailstorms are a product of a severe thunderstorm in which pellets or lumps of ice (of most concern when greater than 1 inch in diameter) fall with rain. Hail is produced in many strong thunderstorms by strong rising currents of air carrying water droplets to a height where freezing occurs, the ice particles grow in size until they are too heavy to be supported by the updraft and fall back to earth. Hail can be smaller than a pea or as large as a softball and can be very destructive to plants and crops. Pets and livestock are particularly vulnerable to hail

The NOAA Storm Events database (<https://www.ncdc.noaa.gov/stormevents/>) shows 115 hail, lightning, or thunderstorm wind events reported in the region between January 1, 2015 and December 31, 2024. Property damage costs associated with reported events totaled \$897,000 incurred during 42 of those reported events. Crop damage costs associated with these events totaled \$6.087 million incurred during 19 of those reported events. Lightning events in isolation, and those associated with thunderstorms have the potential to damage vulnerable assets in the region including crops, vehicles, and built structures. Most lightning damages occur to electronic equipment located inside buildings, but structural damage can also occur when a strike causes a building fire. Communications equipment and warning transmitters and receivers can also be knocked out by lightning strikes.

Hailstorms in Iowa cause damage to property, crops, the environment in general, and may kill or injure livestock. In the United States, hail causes more than \$1 billion in damage to property and crops each year. Much of the damage inflicted by hail is to crops. Even relatively small hail can shred plants to ribbons in a matter of minutes. Vehicles, roofs of buildings and homes, and landscaping are the other things most commonly damaged by hail. Hail has been known to cause injury to humans, occasionally fatal injury.

A 15-year summary of thunderstorm, hail, and lightning events within the region recorded in the NOAA Storm Events Database is provided for reference. Details from significant events within the last five years are included in individual profiles as applicable.

Storm Events Database

Cherokee, Ida, Monona, Plymouth and Woodbury counties contain the following zones:

Plymouth, Cherokee, Woodbury, Ida, Monona

Event Types: Thunderstorm Wind

298 events were reported between 01/01/2010 and 12/31/2024 (5479 days)

<i>Summary Info:</i>	
Number of County/Zone areas affected:	5
Number of Days with Event:	96
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	2
Number of Days with Event and Property Damage:	28
Number of Days with Event and Crop Damage:	6
Number of Event Types reported:	1

Event Types: Lightning

2 events were reported between 01/01/2010 and 12/31/2024 (5479 days)

<i>Summary Info:</i>	
Number of County/Zone areas affected:	2
Number of Days with Event:	2
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	2
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

Event Types: Hail

335 events were reported between 01/01/2010 and 12/31/2024 (5479 days)

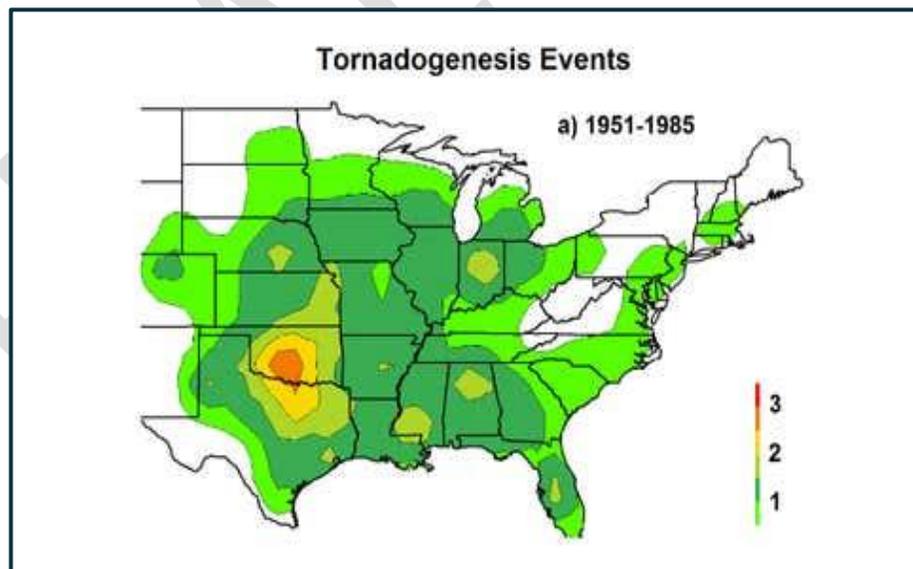
<i>Summary Info:</i>	
Number of County/Zone areas affected:	5
Number of Days with Event:	120
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	5
Number of Days with Event and Crop Damage:	8

12. TORNADO / WINDSTORM

Hazard	Geographic Extent	Severity	Future Probability	Regional Significance
Tornado/Windstorm	extensive	moderate	highly likely	high

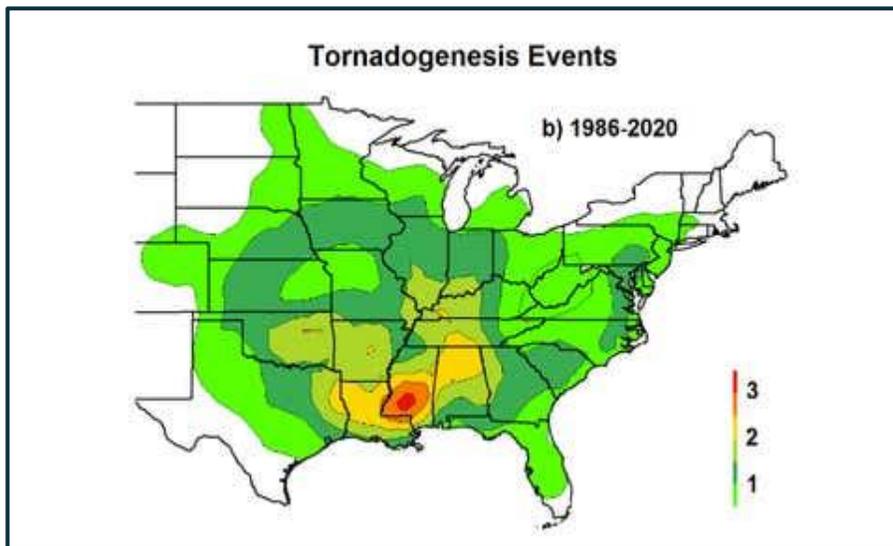
Bordering, sometimes overlapping, the edge of the area commonly known as “Tornado Alley”, the region’s proximity indicates a very high susceptibility to tornadoes. While there is not a universal acceptance of Tornado Alley boundaries, the western boundary of the state is typically included in discussions regarding such. Weather.com provides the following maps to depict the areas that are most prone to tornadoes and how this geographical probability has shifted over time, according to a recent study by Coleman, Thompson and Forbes for the American Meteorological Society’s Journal of Applied Meteorology and Climatology.

The following map shows the number of F/EF1 or stronger tornadoes that formed in each 1-degree latitude by 1-degree longitude grid box each year from 1951 through 1985¹³.



¹³ Source: Coleman, Thompson and Forbes, 2024, JAMC. © American Meteorological Society

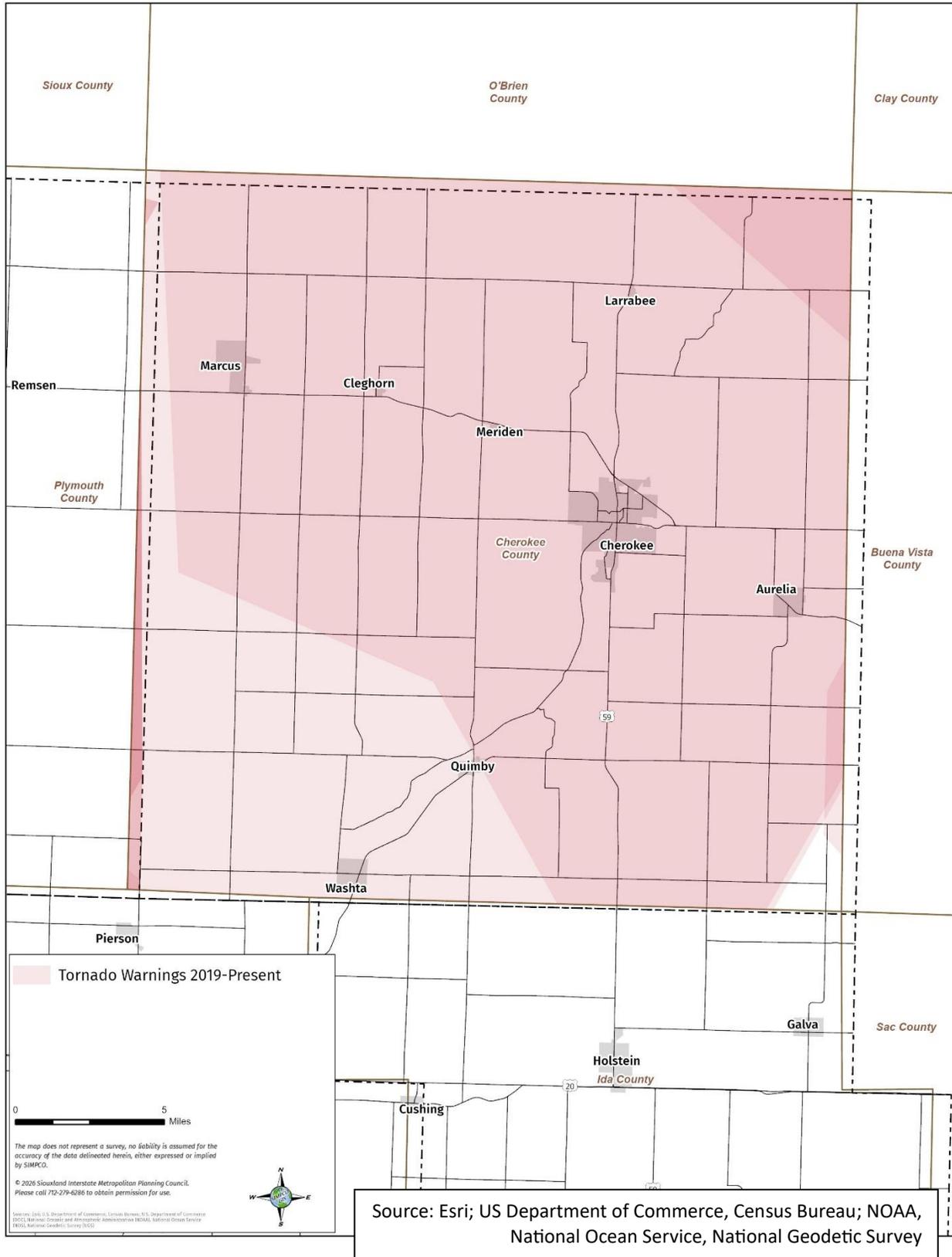
Similarly, the next map shows the number of F/EF1 or stronger tornadoes that formed in each 1-degree latitude by 1-degree longitude grid box each year from 1986 through 2020¹⁴.



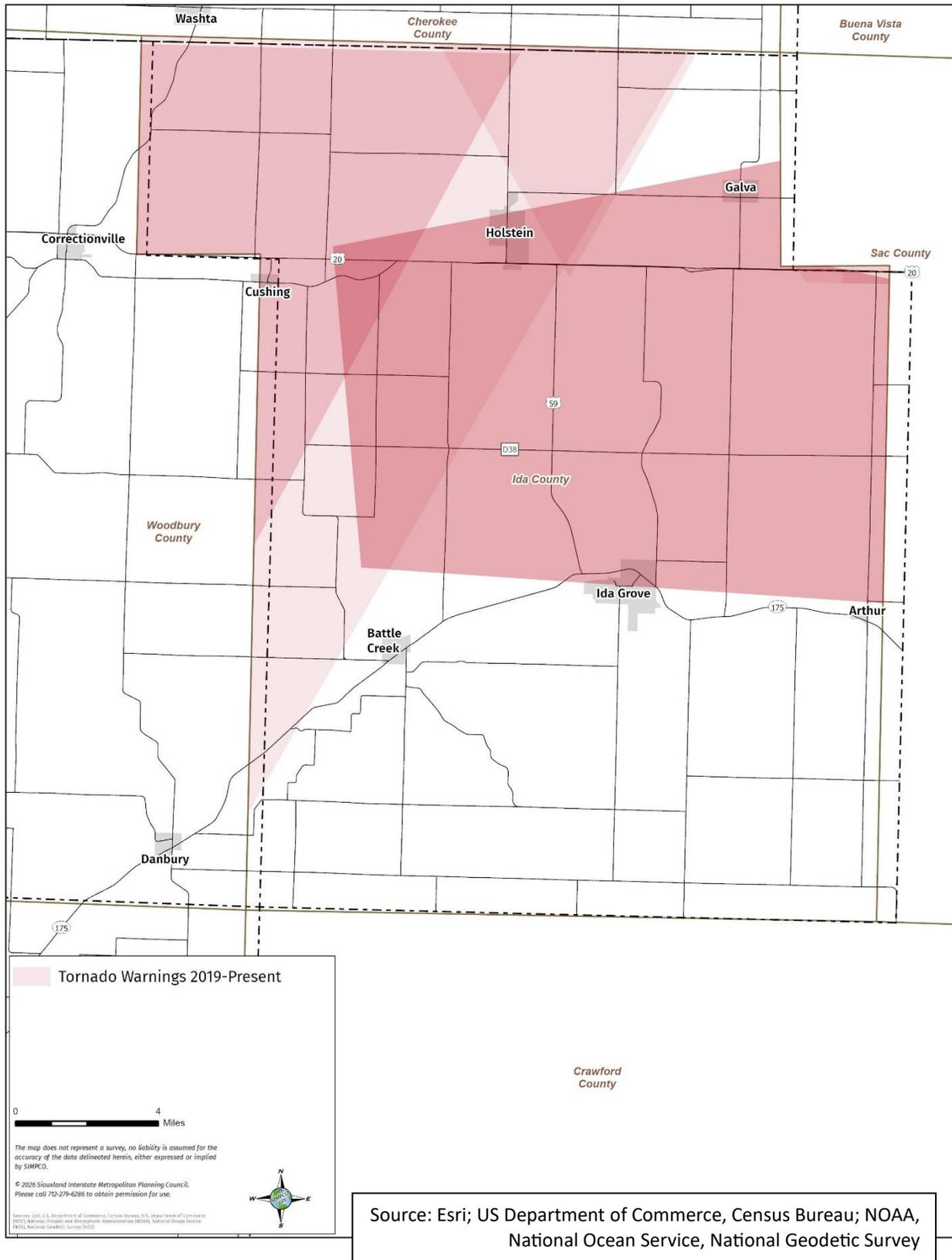
The following set of maps depict tornado warnings by county from 2019 through the most recent available data. This historical pattern lends to the valid assumption of tornado being a viable threat. Historic incidents have varied but damage potential is moderately high and likelihood of occurrence is high.

¹⁴ Source : (Coleman, Thompson and Forbes, 2024, JAMC. © American Meteorological Society - <https://weather.com/storms/tornado/news/2024-06-04-tornado-alley-shifted-study-coleman-et-al-2024>

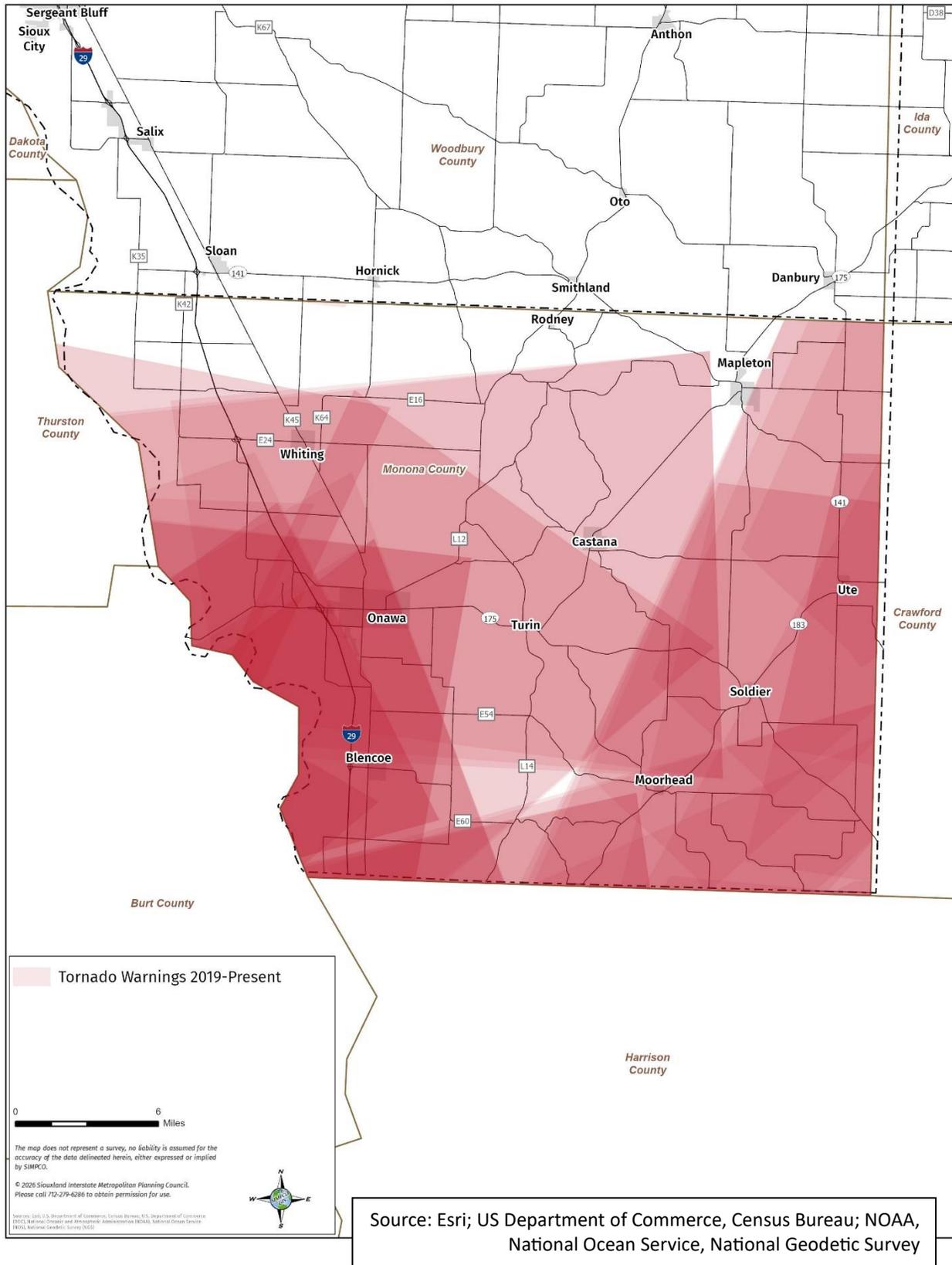
Cherokee County



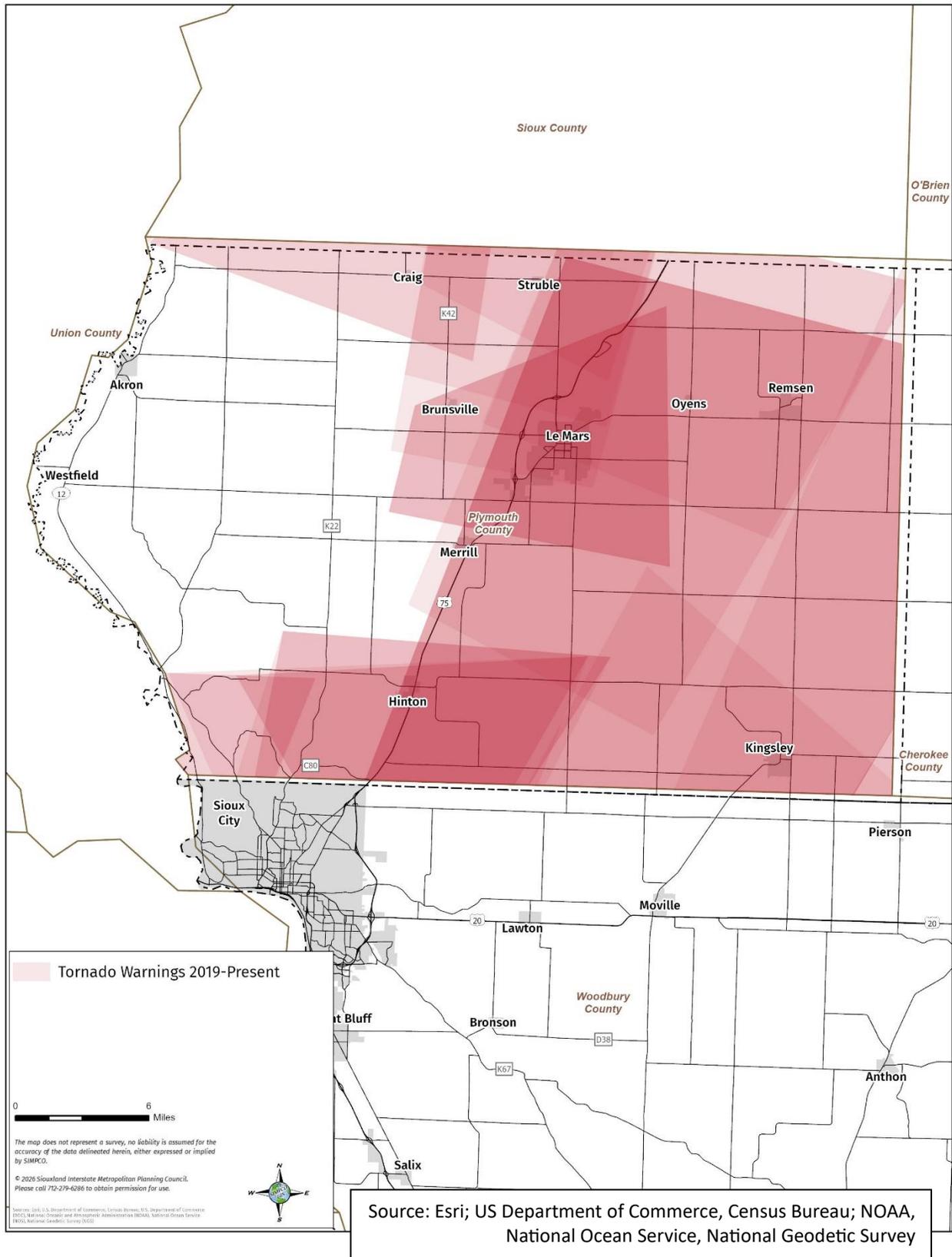
Ida County



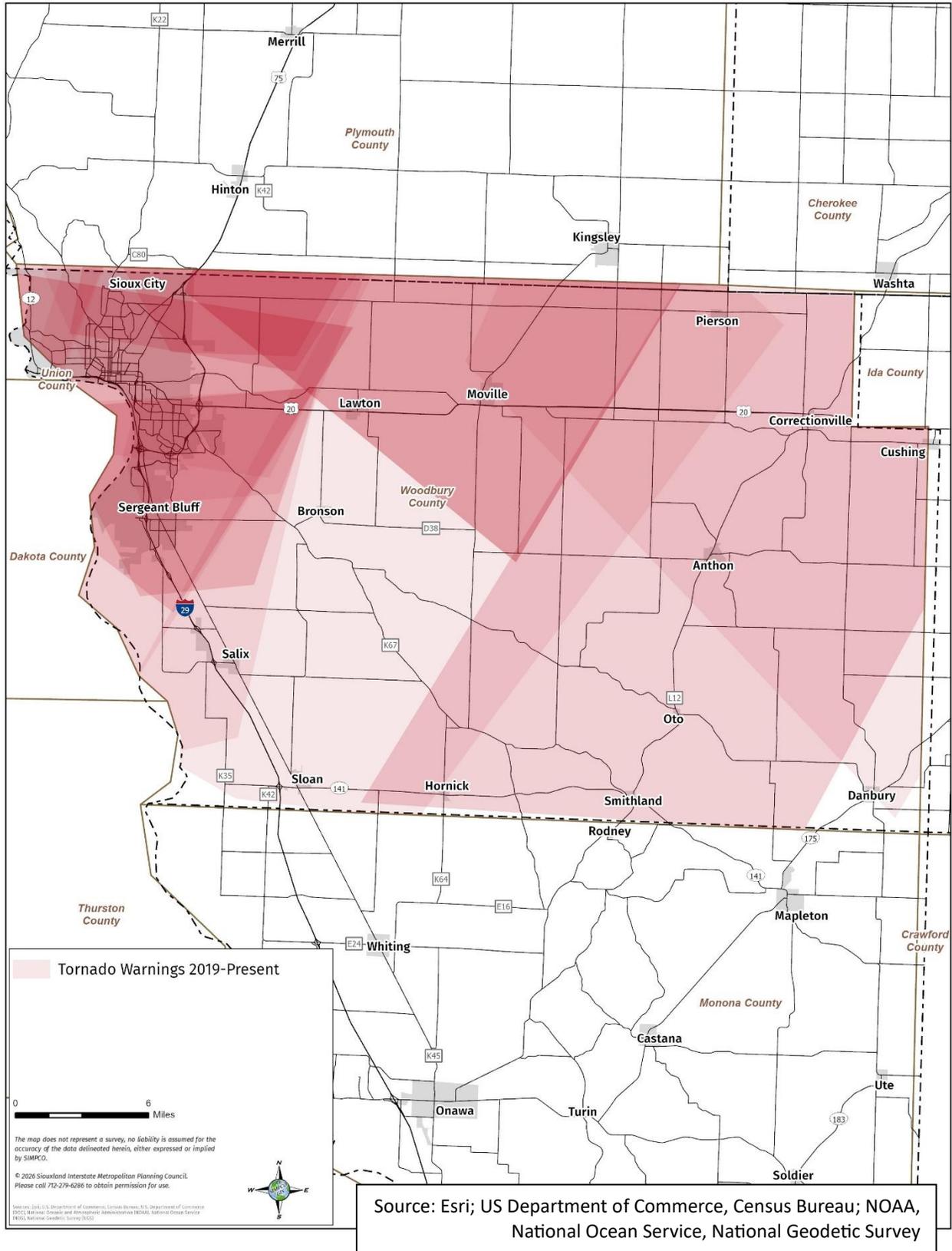
Monona County



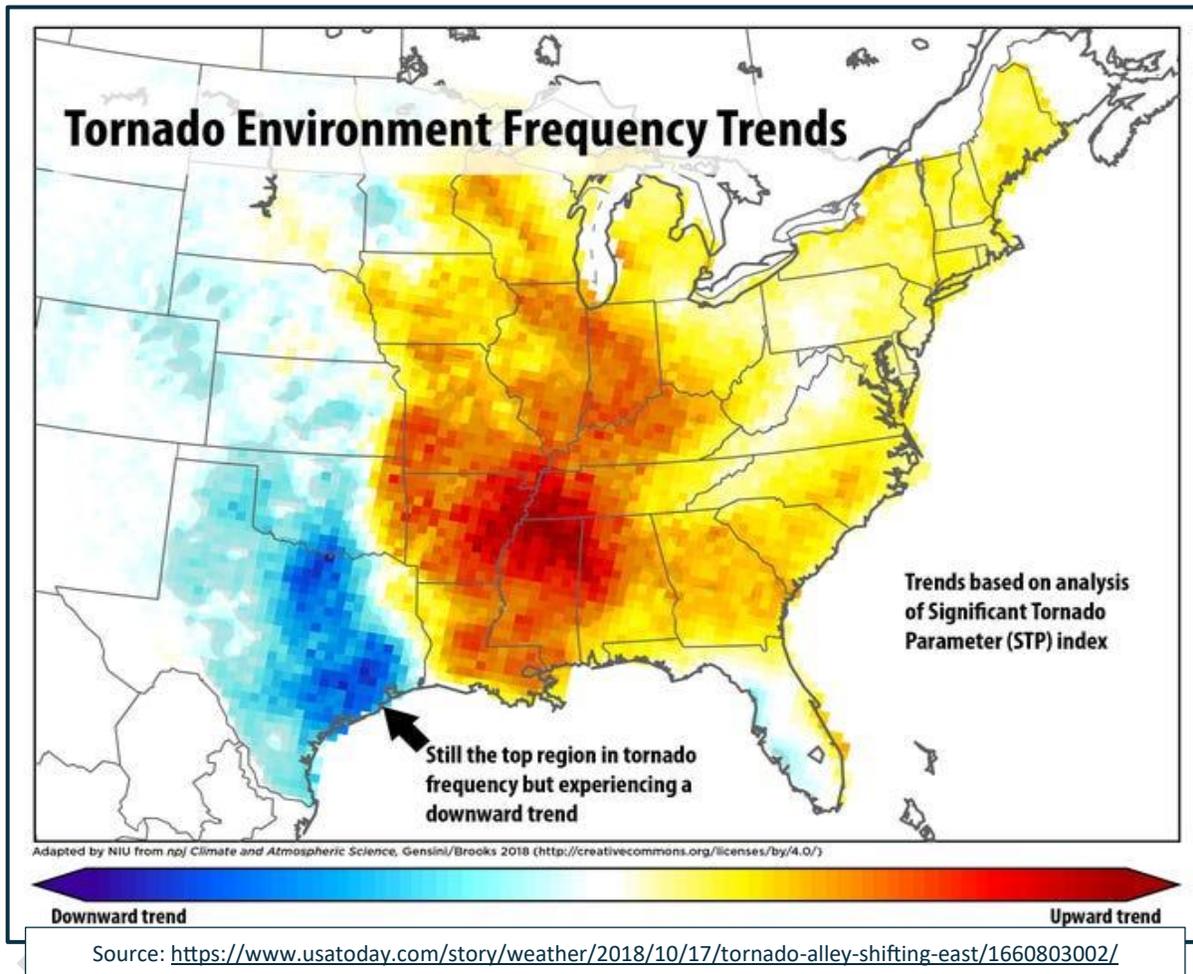
Plymouth County



Woodbury County



An older article which holds true more than seven years later, USA Today Online reported an average of \$5.4 billion in damages each year, with \$10b events “no longer uncommon”¹⁵. This article, as illustrated with the following *Tornado Environment Frequency Trends* map, reflects that tornado frequency is increasing in northwest Iowa.



NOAA Storm database shows 19 Tornado and 19 High Wind events reported in the region between January 1, 2019 and December 31, 2024, accounting for \$2,536,000 in damages. Of the 19 tornados, ten were produced from the same thunderstorm cell. Damage from high and/or straight-line winds can be mistaken for tornado damage due to intensity. The State Plan provides the following descriptions of tornado and windstorm activity.

¹⁵ Source : <https://www.usatoday.com/story/weather/2018/10/17/tornado-alley-shifting-east/1660803002/>

A tornado is a violent whirling wind characteristically accompanied by a funnel-shaped cloud extending down from a cumulonimbus cloud. It progresses in a narrow, erratic path. Rotating wind speeds can exceed 300 mph and travel across the ground at average speeds of 25-30 mph. A tornado can be a few yards to approximately one mile wide where it touches the ground. An average tornado is a few hundred yards wide. A tornado can move over land for distances ranging from short hops to many miles, causing damage and destruction wherever it descends. The funnel is made visible by the dust that is sucked up and condensation of water droplets in the center of the funnel.

Windstorms are extreme winds associated with severe winter storms, severe thunderstorms, downbursts, derechos and very steep pressure gradients. Windstorms, other than tornadoes, are experienced in all regions of the United States. Unlike tornadoes, windstorms may have a destructive path that is miles wide and the duration of the event could range from hours to days. These events can produce straight-line winds in excess of 64 knots (73 mph) causing power outages, property damage, impaired visibility, and crop damage. It is often difficult to separate windstorms and tornado damage when winds get above 64 knots. For this reason, the SHMT chose in 2013 to combine the formerly separate hazards of tornado and windstorm.

Going back 50 years in the NOAA database¹⁶, the region experienced only three incidents of F4 or EF4 tornadoes, one in Monona County and Woodbury County, likely the same funnel, in July 1986 (no community specified) and one in Climbing Hill, Woodbury County in October 2013. The system in 1986 is listed showing \$250,000,000 in damages/loss to property and one recorded injury. The Climbing Hill tornado incurred \$2,000,000 in damage to property and no injury or death recorded. While historically notable EF3 tornadoes in Blencoe (June 2008) and Mapleton (April 2011) incurred significant damages. The NOAA database does not include a dollar amount summarizing property loss/damage. Mapleton lost several public, commercial, and residential properties and continue rebuilding the community today. Blencoe's tornado hit a Boy Scout camp during camping season resulting in four deaths and 48 injuries recorded.

Storm Events Database

Search Results for Cherokee, Ida, Monona, Plymouth and Woodbury Counties, Iowa

¹⁶ Source: <https://www.ncei.noaa.gov/stormevents/listevents>

Event Types: Tornado

134 events were reported between 01/01/1975 and 12/31/2024 (18263 days)

<i>Summary Info:</i>	
Number of County/Zone areas affected:	6
Number of Days with Event:	72
Number of Days with Event and Death:	1
Number of Days with Event and Death or Injury:	6
Number of Days with Event and Property Damage:	40
Number of Days with Event and Crop Damage:	6
Number of Event Types reported:	1

Windstorm events are extensive in the region with 364 recorded events in the NOAA database over a 15-year period between 01/01/2010 and 12/31/2024. Provided summary of property loss/damage is \$1.64M and Crop loss/damage at \$274, 000.

Storm Events Database

Search Results for Cherokee, Ida, Monona, Plymouth and Woodbury Counties, Iowa

Event Types: High Wind, Strong Wind, Thunderstorm Wind

Cherokee, Ida, Monona, Plymouth and Woodbury counties contain the following zones:
Plymouth, Cherokee, Woodbury, Ida, Monona

364 events were reported between 01/01/2010 and 12/31/2024 (5479 days)

<i>Summary Info:</i>	
Number of County/Zone areas affected:	10
Number of Days with Event:	119
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	2
Number of Days with Event and Property Damage:	30
Number of Days with Event and Crop Damage:	6
Number of Event Types reported:	3

While FEMA-regulated tornado shelters are often too cost prohibitive for communities to construct, presence and severity of high wind and tornado activity offers significant motivation to incorporate mitigation elements into remodel, renovation, and new construction projects. Maintenance of tornado/wind sirens is critical to ensure adequate warning ahead of these

events for residents to seek shelter, while backup generators for essential operations are also critical for cities in case of power outages.

OTHER HAZARDS

In addition to naturally occurring hazards, there exist numerous human-caused and biological incidents that often seem to be beyond the scope of control of those impacted by such hazards. Included in this Plan are “other hazards” that may benefit, or further support implementation of, scheduled mitigation actions and strategies. Plan participation is not dependent upon actions or strategies for Other Hazards.

13. ANIMAL/PLANT/CROP DISEASE

Human-caused or Biological Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Animal/Plant/Crop Disease	extensive	moderate	likely	medium

While some outbreaks are inevitable, the region does need to concern itself with the escalating outbreaks or new infestations and pathogens. Occasional cases of Bovine Tuberculosis are found in the state and surrounding region. These outbreaks have been small enough as to not affect Iowa’s Tuberculosis Free status, however, this serves as a reminder that previously eradicated diseases can return at any moment. One disease deemed likely to escalate is Johne’s Disease. This disease has a significant economic impact on calf-cow operations and a growing number of researchers have drawn an association between this bovine disease and human Crohn’s disease, according to an article from the Bovine Veterinarian publication. Of national concern at the moment is the HPAI H5N1 Avian Flu, which has spread to poultry farms and dairy herds, primarily on the west coast. Iowa has only one confirmed case documented by CDC, but this virus exposes the risks associated with such diseases and their potential for economic devastation.

The State Plan includes the following summation related to Animal/Plant/Crop Disease.

An outbreak of disease transmitted from animal to animal or plant to plant represents an animal/crop/plant disease. A disease outbreak will likely have a severe economic implication

and/or public health impact well beyond the borders of Iowa. A crop/plant pest infestation will likely have severe economic implications, cause significant production losses, or significant environmental damage.

The introduction of some high consequence diseases could significantly limit or eliminate our ability to move, slaughter, and export animals and animal products. An outbreak will have widespread economic and societal implications for our state, the nation, and potentially the world. Response to and recovery from infectious animal disease outbreaks will be lengthy, and many producers may never be able to return to business. There would also be many indirect effects on our economy.

Pest infestations can cause widespread crop/plant loss and resulting economic hardships on farmers, landowners, and related businesses. Once infestation occurs, the pest may become endemic, causing repeated losses in subsequent growing years. Loss of production could affect all related industries including fuel, food, synthetics, processors, etc.

Surface wind speeds (standard measurement height of 32 feet) over Iowa declined from the 1980s until about 2010, which provides less crop ventilation and more heat stress for plants and animals. However, this trend has since reversed and global surface wind speeds have instead increased in the past decade. The future of wind speed trends is uncertain. Reduced winds would create favorable conditions for survival and spread of unwanted weeds, fungi, pests, and pathogens. Waterlogged soil conditions during early plant growth often result in shallower root systems that are more prone to disease, nutrient deficiencies, and drought stress later in the season. In 2010 wet soil conditions are cited as cause for the epidemic of soybean sudden death syndrome that occurred that year. Other crop diseases and pests (such as Asian soybean rust) have not been observed in Iowa as of yet, but if warming winter trends persist they could expand their ranges to include Iowa.

The [Iowa Department of Agriculture & Land Stewardship](#) and the [USDA](#) websites provide information related to Animal Diseases.

This types of hazard occurs with infection of vegetation, including crops and other plant life, or animals, including livestock, pets and wild animals, with infestation of insects, vermin, or diseases. When affecting crops and livestock, this hazard can render these agricultural products unfit for consumption. Agriculture is a significant component of the regional economy

and plays an important role in the state and national economy as well. The state of Iowa produces more corn and eggs than any other state and one-third of the nation's hogs are raised in Iowa. As a result, any Animal, Crop, or Plant Disease that affects agriculture can have huge economic consequences in addition to posing human health risks. Below is a summary of the agriculture economy in each of the participating counties.

<i>County</i>	<i>Cherokee (Chke)</i>	<i>Ida</i>	<i>Monona (Mon)</i>	<i>Plymouth (Ply)</i>	<i>Woodbury (Wdby)</i>
Acres of farmland	327,342	210,663	406,263	544,068	468,824
Market value of products sold	\$551,667,000	\$327,840,000	\$324,954,000	\$1,116,816,000	\$576,980,000

<i>Top Livestock Inventory</i>	<i>Top Crops</i>
Region-wide	Region-wide
<ul style="list-style-type: none"> • Hogs & Pigs • Cattle & Calves • Sheep & Lambs 	<ul style="list-style-type: none"> • Corn for grain • Soybeans for beans • Forage (hay/haylage) • Corn for silage or greenchop
Additional Per County	Additional Per County
Chke Add'l Top Livestock Inventory	Chke Add'l Top Crop
<ul style="list-style-type: none"> • Turkeys • Horses & Ponies 	<ul style="list-style-type: none"> • Oats for grain
Ida Add'l Top Livestock Inventory	Ida Add'l Top Crop
<ul style="list-style-type: none"> • Horses & Ponies • Layers 	<ul style="list-style-type: none"> • Oats for grain
Mon Add'l Top Livestock Inventory	Mon Add'l Top Crop
<ul style="list-style-type: none"> • Broilers & other meat-type chickens • Layers 	<ul style="list-style-type: none"> • Rye for grain
Ply Add'l Top Livestock Inventory	Ply Add'l Top Crop
<ul style="list-style-type: none"> • Layers • Goats 	<ul style="list-style-type: none"> • Oats for grain
Wdby Add'l Top Livestock Inventory	Wdby Add'l Top Crop
<ul style="list-style-type: none"> • Layers • Goats 	<ul style="list-style-type: none"> • Popcorn

A regional outbreak of the avian flu was termed “a nightmare” by Senators Chuck Grassley and Joni Ernst in a July 8, 2015 article in the Omaha World-Herald, but failed to receive a Presidential disaster declaration. A report published through the University of Minnesota estimates a \$1.2b in damages resulting from the outbreak. Due to the episodes that defined the industry that year, producers in the region took independent mitigation measures to reduce replication and spread of the disease. Those measures were strengthened through state-mandated actions when entering/exiting production facilities. With the current outbreak of HPAI H5N1 avian flu that has been circulating around the world beginning in 2021, it is clear that continual monitoring and strengthening of mitigation measures will be necessary to prevent exposure in our region’s livestock.

The Iowa Department of Agriculture and Land Stewardship monitors and reports on many animal diseases in Iowa, including the following:

- Avian Influenza
- Bovine Spongiform Encephalopathy (BSE) Disease
- Chronic Wasting Disease
- Exotic Newcastle Disease
- Food and Mouth Disease
- Johnes Disease
- Pseudo Rabies
- Scrapie
- West Nile Virus

The complete list of what the United States Department of Agriculture’s (USDA) Animal and Plant Health Inspection Service (APHIS) considers foreign to the U.S. can be found on the [APHIS Notifiable Diseases and Conditions webpage](#). The list of reportable animal diseases in Iowa is in [Chapter 64: Infectious and Contagious Diseases](#).

In addition to those listed above, the Emerald Ash Borer is also being monitored by the state of Iowa. Several communities with varying levels of commitment are addressing the infestation

of this pest. Specific measures are included for discussion within applicable jurisdiction profiles.

14. HAZARDOUS MATERIALS INCIDENT

Human-caused or Biological Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Hazardous Materials Incident	extensive	moderate	highly likely	medium

In terms of hazardous materials, the region has potential to be volatile. Using the Region IV LEPC HazMat Response Mapping Application as developed by SIMPCO, 2018 reporting shows 1,000 Tier II facilities in the Region. Though Ethanol production is worth noting, Subbituminous Coal, Granular Urea, Urea Ammonium Nitrate, and Anhydrous Ammonia are significant contributors to the region’s economic picture with the largest average daily presence. Whether in production or for use in operations, these and more hazardous materials are abundant. In addition to truck and over the road transport of hazardous chemicals, there are three national railroads and nine companies operating pipeline infrastructure throughout the region. The 2018 Hazardous Materials Commodity Flow Study completed for the Region IV LEPC included an assessment of not only transportation of hazardous materials, but production, storage, and consumer sites reliant upon the industry. Data shows that in 975 traffic incidents, over 20% involved vehicles transporting hazardous materials. Data from the study also shows a volume of 25,634 tons of hazardous materials imported into the region in 2017 alone (this based on responses from only 52 participants of survey administered in the completion of the study).

The State plan includes the following descriptors.

... accidental release of flammable or combustible, explosive, toxic, noxious, corrosive, oxidizable, irritant, or radioactive substances or mixtures that can pose a risk to life, health, or property, possibly requiring evacuation. Chemicals are manufactured and used in ever-increasing types and quantities and as many as 500,000 products pose physical or health hazards and can be defined as hazardous chemicals.

Found at <https://programs.iowadnr.gov/focomp/Search/Spills>, the Iowa DNR Hazardous Material Release Database shows 48 spills in the region between January 1, 2019 and December

31, 2024. Local emergency response teams within the region do have at minimum, an annual opportunity to participate in full-scale hazardous materials incident exercises through the Region IV LEPC.

15. INFRASTRUCTURE FAILURE

Human-caused or Biological Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Infrastructure Failure	extensive	moderate	highly likely	medium

Based on its inclusion in the State Plan, Infrastructure Failure “encompasses a variety of occurrences, including communication failure, energy failure, structural failure, and structural fire. This includes an extended interruption, widespread breakdown, or collapse (part or all), of any public or private infrastructure, that threatens life and property. Potential causes of infrastructure failure include severe weather, space weather/solar flare, excessive use, poor maintenance, poor design or construction, or supply chain issues, among others.”

Regionally, jurisdictions expressed concern regarding transportation infrastructure failure such as bridge collapse, losses of power, and communications systems failure, especially in terms of cellular service or broadband coverage in rural areas. Probably more than other hazards, this category ties in as an outcome of many natural and human-caused hazard occurrences. Considering mitigation strategies within infrastructure implementation is primary in the development of this and other comprehensive community development plans. Interest in the promotion of standardized and specialized building codes is a common discussion regarding local mitigation efforts. A barrier to this sort of regulation is the lack of funding to enforce such measures.

16. PANDEMIC HUMAN DISEASE

Human-caused or Biological Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Pandemic Human Disease	extensive	moderate	likely	low

Several factors elicit concern regarding pandemic human disease. There is an increasing presence of previously (assumed) eradicated disease. Communicable diseases seem to be rampant, despite availability of vaccines and inoculations. Complicated by weather extremes resulting in high precipitation in winter and spring and steamy summer months, mosquito-borne illness is an increasing concern for the Region. In data presented by States at Risk (<https://statesatrisk.org/iowa/all>), Iowa is trending toward an increase in mosquito season by as much as 25% from the averages recorded in the 1980s and '90s.

The state provides the following regarding pandemic disease.

A pandemic human disease is one that is prevalent over a whole country, region, continent, or world. Many diseases throughout the history of the world have been pandemic. The 1918 influenza pandemic killed an estimated 50 million people. More than 25 percent of United States population was afflicted and in one calendar year average life expectancy dropped by 12 years. Influenza pandemics in 1957 and 1968 killed 70,000 and 34,000 people respectively worldwide. The H1N1 pandemic flu may have killed as many as 18,000 people in 2009-2010. A pandemic will have widespread economic and societal implications for our state. Response to and recovery from a pandemic will likely be lengthy if Iowa is severely infected. The death rate of a pandemic depends on the number of people infected, the virulence of the virus, characteristics and vulnerability of the population, and availability and effectiveness of preventative measures. Response to future pandemics will depend on the severity of the pandemic.

The COVID-19 pandemic, which began in China in 2019 and was declared an emergency in the United States in early 2020, killed over 10,700 people in Iowa by March of 2023, according to the CDC. The pandemic led to unprecedented levels of quarantining and social distancing, causing massive disruptions to the U.S. economy and society. Response to the pandemic varied by state and local jurisdiction, with some issuing “stay at home” orders, limiting large gatherings; closing schools, daycares, bars, and restaurants; mandating mask usage (and eventually vaccines). Others went in the opposite direction, even going so far as to ban mask or vaccine mandates. The CDC reported an age-adjusted death rate in Iowa of 76 deaths per 100,000 people for the year 2021, which is relatively low on the national scale, but higher than all neighboring states except Missouri. With billions of dollars invested and with extraordinary international cooperation, vaccines against the novel virus were developed within a year of the

pandemic's onset. One study estimates vaccines saved 14 to 20 million lives from COVID-19 worldwide, while another study estimated three million lives saved in the U.S. alone.

Records from Siouxland District Health in Woodbury County show the following statistics for reportable illnesses in Woodbury County in 2020 and 2024. Information shown as provided (<https://www.sioxlanddistricthealth.org/disease-prevention/disease-tracker>).

<i>Infection</i>	<i>2024</i>	<i>2023</i>	<i>2022</i>	<i>2021</i>	<i>2020</i>
Campylobacter	37	21	26	26	14
Chlamydia	662	674	806	822	838
Cryptosporidium*	12	6	14	8	15
Cyclospora	1	0	1	4	0
E. coli / Shiga toxin**	9	6	13	12	5
Giardia	12	7	6	4	4
Gonorrhea	261	178	321	426	424
Hepatitis A	0	1	0	0	0
Hepatitis B (acute)*	1	0	0	1	0
Hepatitis B (chronic)*	18	15	21	20	8
Legionella*	0	1	2	2	0
Lyme Disease	0	1	1		
Malaria	2	0	0	0	0
Monkeypox	0	0	3		
Mumps*	0	0	1	0	0
Pertussis*	7	0	0	1	0
Salmonella*	24	21	29	25	15
Shigella**	5	10	2	2	1
Syphilis (all stages)	57	107	98	25	1
West Nile Virus*	0	1	1	2	0

*Requires public health follow up investigations by local public health

**Requires the enforcement of exclusions if they are a food worker, daycare worker, child in daycare, or a healthcare worker who has direct patient care.

Other County data is not readily available but similar characteristics of occurrences is expected to be proportionate to the region. Assistance in monitoring, controlling, and/or preventing 120 diseases/variations of diseases is provided through the National Notifiable Diseases

Surveillance System (NNDSS) at <https://wonder.cdc.gov/nndss-annual-summary.html> as found on the CDC website. An infographic on the process of surveillance can be found at <https://www.cdc.gov/nndss/docs/nndss-infographic-508.pdf>. Aside from promotion of healthy and sanitary personal habits and immunization, awareness is key to reducing potential for pandemic episodes. While not ranking among top concerns for the region, participating jurisdictions expressed concerns regarding this hazard.

It should be noted that individual cases of common illnesses such as influenza and norovirus (also known as "stomach flu") are not reportable, so numbers of those cases are not shown. Those illnesses are only reportable during outbreaks and other special circumstances.

17. RADIOLOGICAL INCIDENT

Human-caused or Biological Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Radiological Incident	limited	negligible	unlikely	low

Radiological incidents are not a marked concern for the region based on public input and jurisdictional assessment. The State Plan includes the following description.

A radiological incident is an occurrence resulting in a release of radiological material at a fixed facility or in transit. An incident resulting in a release of radiological material at a fixed facility includes, but is not limited to, power plants, hospitals, and laboratories. Although the term "nuclear accident" has no strict technical definition, it generally refers to events involving the release of significant levels of radiation. Most commercial nuclear facilities in the United States were developed in the mid-1960s and are designed to withstand aircraft attack. With this level of design they should withstand most natural hazards, but events that occurred in 2011 at the Fukushima nuclear plant in Japan illustrate the possibilities of what can happen in a worst-case scenario. The Japanese plant may have been able to withstand either the earthquake or the tsunami, but both hazards together caused release of radioactive materials.

Though local concern is minimal, it is imperative to consider occurrence of radiological incident based on proximity of the Ft Calhoun Nuclear Generating Station in Blair, NE. Ready Iowa

(<https://ready.iowa.gov/disasters-emergencies/nuclear-power-plants>) provides the following Emergency Classification Levels.

Preparedness for commercial nuclear power plants includes a system for notifying the public if a problem occurs at a plant. The emergency classification level of the problem is defined by these four categories:

- **Minor Event** is the lowest classification, and means that a minor plant event, either an operational event or security threat. Has occurred, but no radiation release is expected. No action by the public is necessary.
- **Alert** is declared when an actual or potential reduction in the plant's safety level or a security event that could threaten site personnel or damage plant equipment. No radiation release is expected.
- **Site Area Evacuation** is declared when major safety equipment either has failed or is deemed likely to fail. There is the potential for a minor radiation release that would not exceed Environmental Protection Agency Protective Action Guidelines (PAGs) beyond the site boundary. No action by the public is necessary.
- **Emergency** is the most serious of the four classifications. If such an event occurs, radiation could be released that would travel beyond the site boundary. State and local authorities will take action to protect the residents living near the plant.

Additional information including *Preparing for an Emergency, Radiation FAQs*, and *Iowa Homeland Security and Emergency Management's Radiological Emergency Preparedness (REP) Program* can be found at the above provided link.

18. TERRORISM

Human-caused or Biological Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Terrorism	limited	negligible	unlikely	low

The unpleasant truth of terrorism is perhaps even more apparent now than in the 1950's and into the 60's when schoolchildren were practicing for protection from air raids and before that

with gas masks in the late 30's and early 40's. The State Plan includes the following description for Terrorism.

This hazard encompasses a wide variety of human-caused threats including enemy attack, biological terrorism, agroterrorism, chemical terrorism, conventional terrorism, cyber terrorism, radiological terrorism, and public disorder. This includes the use of multiple outlets to demonstrate unlawful force, violence, and/or threat against persons or property causing intentional harm for purposes of intimidation, coercion, or ransom in violation of the criminal laws of the United States. These actions may cause massive destruction and/or extensive casualties.

Several school districts and some communities continue to enhance security procedures including installation of warning and surveillance systems, controlled access to facilities, and unspecified measures for protection. Active Shooter Training has been offered throughout the region with high levels of participation from professionals and residents alike. While not a component for formal strategies, communities indicate an ongoing interest in awareness, communication, and active response in situations that may become volatile.

19. TRANSPORTATION INCIDENT

Human-caused or Biological Hazards	Geographic Extent	Severity	Future Probability	Regional Significance
Transportation Incident	significant	moderate	highly likely	medium

According to Iowa DOT statistics on vehicle registrations, a total of 4,662,571 vehicles were registered in Iowa in 2024, consistent with data from the previous four years: 4,612,891 in 2023, 4,596,501 in 2022, 4,590,386 in 2021, and 4,549,289 in 2020. Registration includes Autocycle, Automobile, Bus, Moped, Motor Home (Classes A, B, C), Motorcycle, Multipurpose, various Trailer types/classes, and various Truck types/classes. The total for vehicle registration in 2024 for the region is 238,128 with per county numbers as provided below.

Cherokee	22,458	Plymouth	47,731
Ida	13,869	Woodbury	136,833
Monona	17,237		

Referencing the 2018 Hazardous Materials Commodity Flow Study completed for the Region IV LEPC, 15,235 vehicle crashes occurred in the Region between 2013 and 2017. Based on the Iowa Crash Analysis Tool at <https://icat.iowadot.gov/>, crash statistics show 114 fatalities in the region and 19,183 total crashes from 2019 through 2024. A full scope of vehicle accidents and incidents on state roadways can be found on the Iowa DOT website. This is significant for several reasons. Not only is there notable presence of hazardous materials in our transportation network, but with major expansion projects nearing completion, flow of traffic is expected to increase pointedly. In addition to road traffic, there is an airport in each county in the region, one of which is for commercial use and is adjacent to Air National Guard operations. As included for discussion under hazardous materials, the region hosts three (3) major railroad lines – Canadian National, Burlington Northern Santa Fe, and Union Pacific.

Establishment of rules/guidelines is purely preventive when assessing transportation related hazards. Mitigation by way of awareness is in place with Airport Zoning (Overlay/Height) Ordinances where applicable, reducing negative impact of built and natural environments on the take-off and landing of planes. Heightened awareness of train/vehicle and pedestrian incidents are becoming more prevalent with social media presence. Additional mitigation by way of vehicle and driving safety is available through social media campaigns through the FTA, NHTSA, and state and local transportation authorities. The adoption of best practices of the Safe System Approach to roadway safety as promoted by FHWA and Iowa DOT by regional jurisdictions can also improve roadway design proactively. In addition, a case can be made for enforcement of blatant misconduct while driving – especially pertaining to texting while driving and distracted driving offenses.

~~C. Effects of Climate Cycles~~

~~Climate Change is a term used to categorize significant variations in expected weather events ranging from extreme temperatures, weather occurrences outside of average date ranges for that specific weather, and weather events not typical for a given geographic location. This summation is not exclusive; however, it includes the most observable characteristics of this controversial phenomenon. While acceptance of Climate Change as scientific fact as opposed to theory is far from universal, existing conditions – whether human-caused or cyclical – do~~

remind planners that there is rarely a thing so unpredictable as weather. As outcomes of even routine weather events are compounded by human-imposed factors, it is imperative to assess not only new development but also existing conditions, which if re-worked, would improve resiliency to naturally occurring events.

When communities consider all contributing factors, they are better able to address mitigation actions. While full impact studies are not practical, especially in small and rural towns, research can still provide guidance in developing building standards that minimize the effects of reducing natural groundcover. For the sake of planning for what is largely an unknown, the Iowa DNR provides key impacts on the Midwest resulting from Climate Change. Key impacts and related characteristics as identified in the State of Iowa's Hazard Mitigation Plan are shown below.

PROJECTED CHANGES

In Iowa over the next 20-30 years

These projections come from the NCA4 (4th National Climate Assessment, U.S. Global Change Research Program), unless otherwise noted.

- More of the effects already seen, magnified as temperatures rise
- Annual average temperatures at least 2.4°F higher compared to the first half of the 20th century, according to NOAA27
- Increased heat waves
- By 2050, most of Iowa is projected to see about one extra month per year of daily high temperatures above 90°F than was observed from 1961 to 1990, according to the U.S. Climate Resilience Toolkit. Lower numbers are under the RCP 4.5 scenario; higher numbers are under the RCP 8.5 scenario
 - Lyon (NW): 33 to 37 more days (49 to 53 days total)
- Heat stress affects both urban and rural populations, especially those without air conditioning. Livestock are also vulnerable to heat stress
- Increased humidity

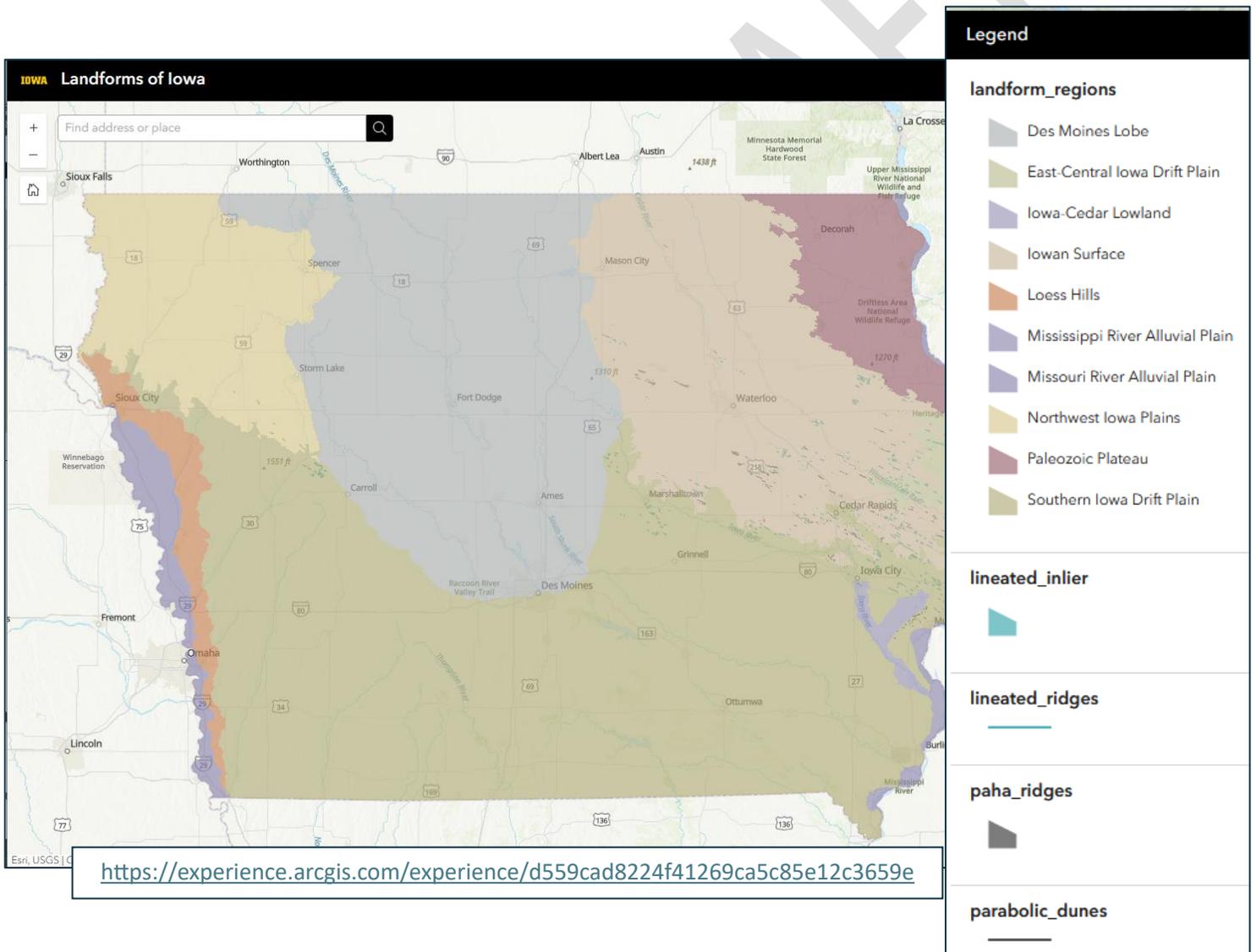
- Leads to increased spring rainfall, soil erosion, and fewer planting-season work days
- Lower air quality
 - Warmer temperatures lead to higher surface-level ozone. NCA4 notes that higher ozone levels could lead to 200 to 550 more premature deaths annually across the Midwest by 2050
 - Livestock are also vulnerable to higher ozone levels
- Frost-free seasons increasing by up to 10 days by 2045 and 20 days by 2065, compared to the period of 1976-2005, according to NCA4 (these numbers are projections under the RCP 8.5 scenario)
- Increased spread of some diseases
- Increased heavy precipitation and flooding events
- Increased drought
 - With warmer air, the atmosphere pulls more moisture from plants, leading to increased tree mortality and stressed crops.
- Loss of plant and animal habitat and ecosystems in flux
- Invasion by non-native species and tropical pests and diseases

III. REGION

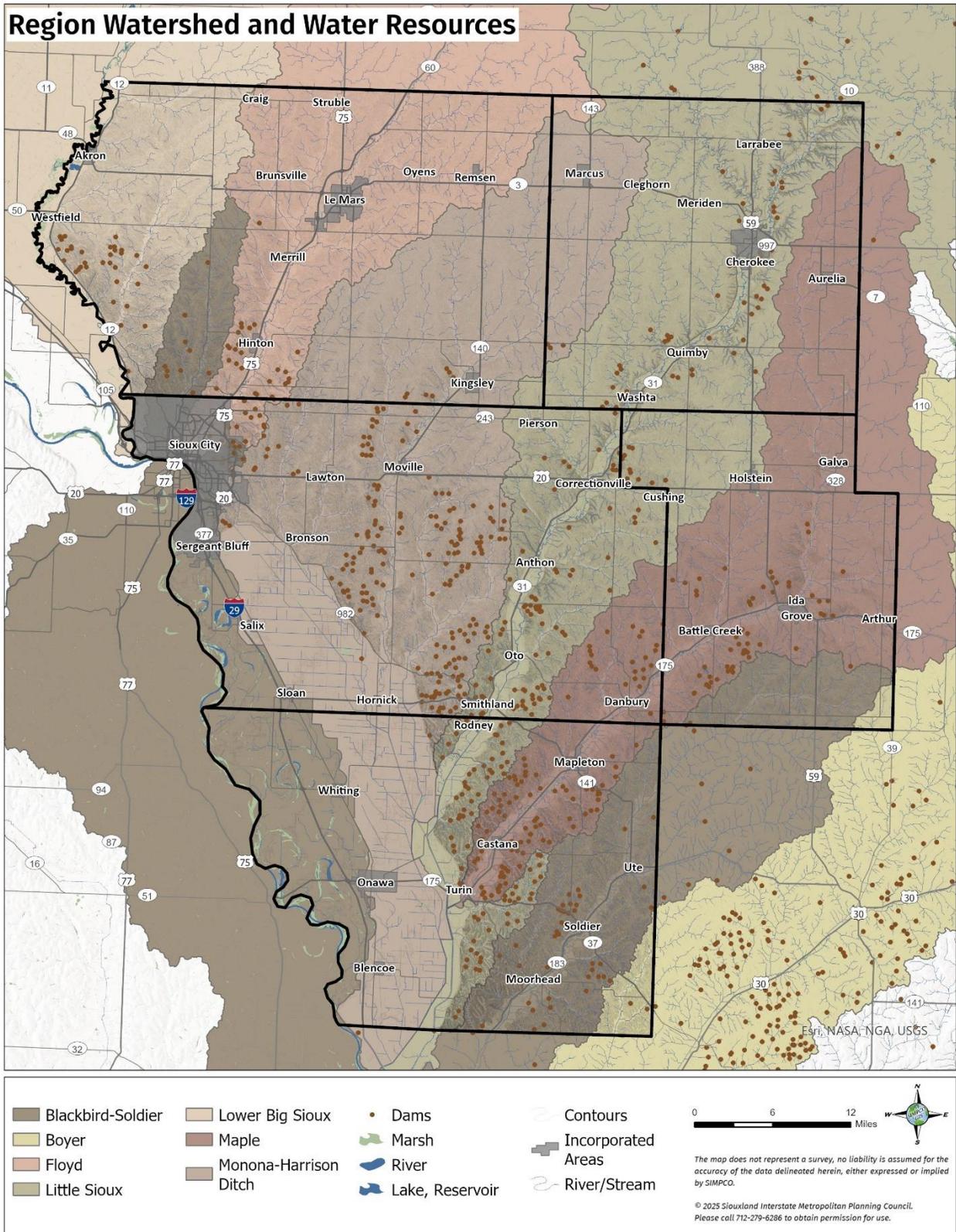
A. Profile

LANDFORMS & GEOLOGY

The Region is characterized by four (4) landforms. As provided by the Iowa Geological Survey, the following map shows how those designations lie within our county borders. Information specific to each County is included in respective profiles.



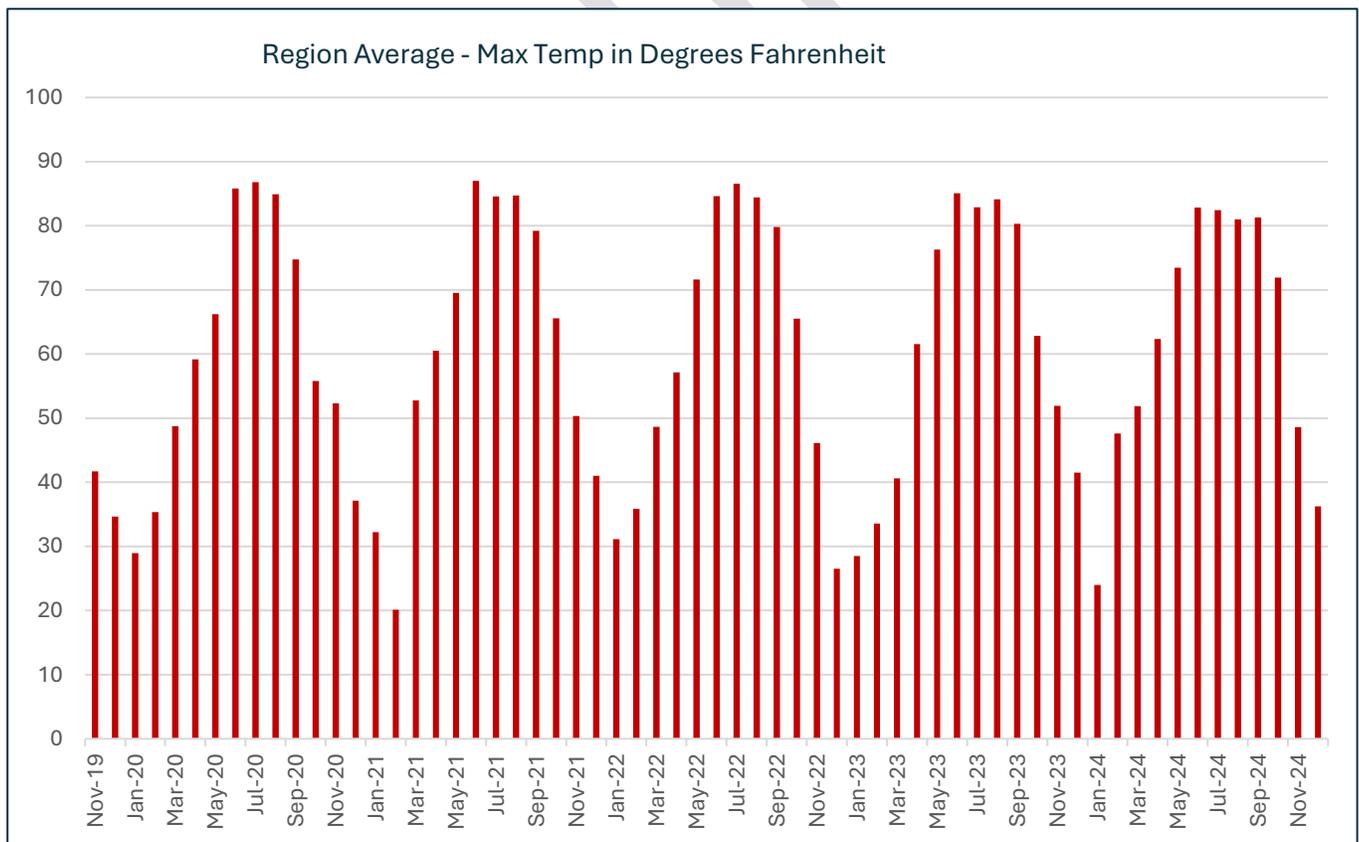
BODIES OF WATER & WATERSHEDS



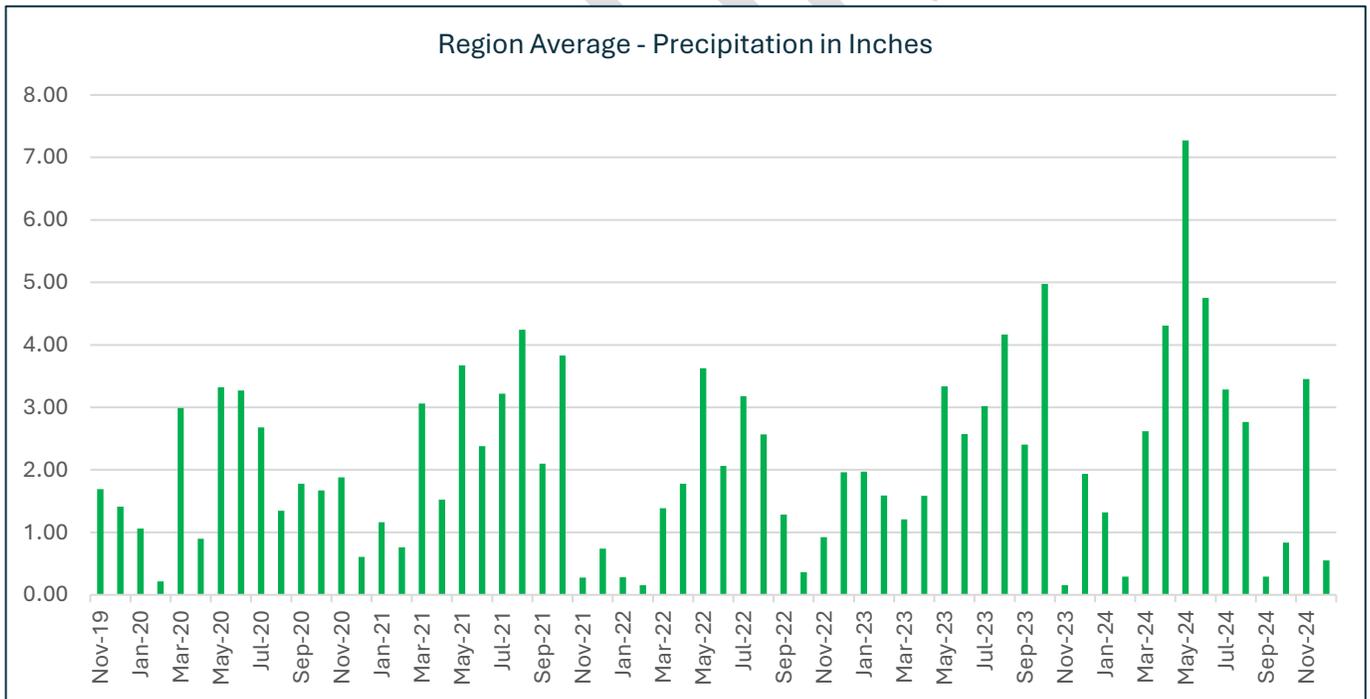
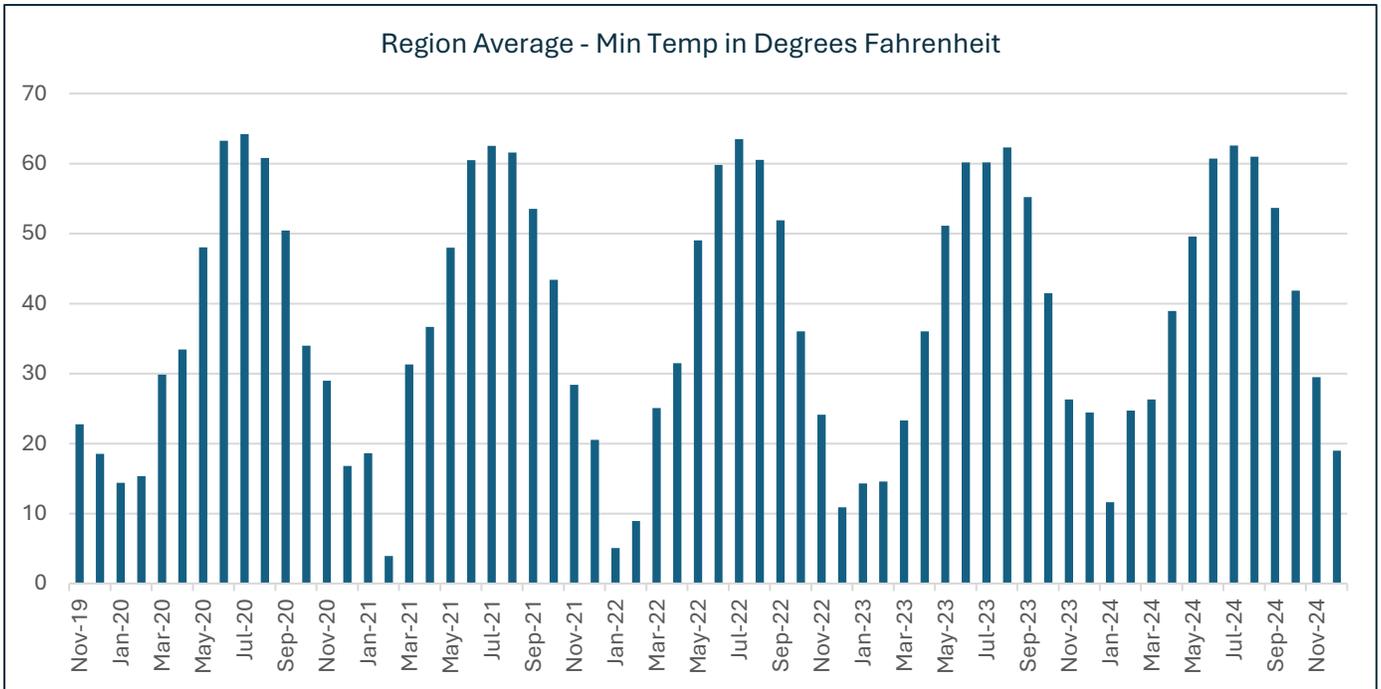
The planning area includes several bodies of water and watersheds that are significant to plan development. Watersheds are categorized on varying levels of detail. Previously shown is a map depicting general water resource and resource watershed detail. For each county, a mapping of sub-watershed boundaries is provided within respective profiles for reference. Ten (10) watershed boundaries shown include relational placement of bodies of water and dams.

WEATHER & CLIMATE

The climate for the Region is characterized by a variety of temperatures and weather patterns throughout the year but is fairly consistent between counties. Averages as provided are based on recorded averages per county. Using NOAA's *Climate at a Glance County Time Series*¹⁷ navigator, data was gathered for each county. The following charts depict region averages for minimum temperature, maximum temperature, and precipitation by month for November 2019 through December 2024.



¹⁷Source: www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/county/time-series/IA



As provided in Section II: *Hazards*, the region is prone to several extreme weather conditions including drought, extreme heat, flooding, grass and wildland fire, severe winter storm, thunderstorm (with lightning/hail), and tornado. Peak periods for these events or conditions fluctuates with annual weather patterns, and may intensify with cyclical trends.

B. Participation

Components of this Regional Plan were drawn from meetings and public input surveys. A long-form survey was available online and shortened paper surveys were distributed and collected at every meeting attended. The project coordination team sought public input at the Cherokee, Plymouth, and Woodbury County fairs. A display board with a QR coded link to the online survey and paper surveys were available at designated locations. To include perspective from region youth, the online survey was adapted for student input with a link provided to all school districts within the region. A total of 316 surveys were collected with 65 resulting from student input from 3 school districts.

Planning meetings with each jurisdiction and through discussion as held at several meetings involving hazard mitigation, related topics, projects, and potential outcomes. Meetings attended and purpose for each meeting is shown. Please note that meetings as scheduled and facilitated by the project coordinator do not include the coordinator in attendee counts.

<i>Date</i>	<i>Meeting purpose</i>	<i>Location</i>	<i># Attending</i>
11/01/23	Region Planning Team meeting	The Security Institute, Lower Level – WITCC	6
04/24/24	Region Planning Team meeting	The Security Institute, Lower Level – WITCC	6
7/10/24	Flood Resource Fair (Riverside)	Riverside Lutheran Church, 1817 Riverside Blvd	50+
7/11/24	Flood Resource Fair (Riverside)	Riverside Lutheran Church, 1817 Riverside Blvd	50+
09/23/24	Siouxland Coalition to End Homelessness	Sioux City Public Library, Gleason Room	20
10/16/24	Region Planning Team meeting	The Security Institute, Lower Level – WITCC	5
12/13/24	Plymouth County Health Planning Committee Mtg	Floyd Valley Healthcare	20
01/15/25	Region Planning Team meeting	SIMPCO, 6401 Gordon Dr, Sioux City	6
04/23/25	Region Planning Team meeting	SIMPCO, 6401 Gordon Dr, Sioux City	8

06/18/25	SIMPCO Water Resource Committee meeting	SIMPCO, 6401 Gordon Dr, Sioux City	9
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<i>Date</i>	<i>Group/Audience</i>	<i>Information Shared</i>	<i># Contacts</i>
10/10/24	Ida County Community Alliance	Survey Distribution - Flyers, paper format pdf, social media template, Natural Disasters and Other Hazards posting	67

The Regional Planning team met in person as indicated and communicated information via email throughout the entire plan development process.

SIMPCO’s Water Resource Committee meets periodically, as often as monthly when conditions are deemed necessary. Representatives from communities in Iowa, Nebraska, and South Dakota discuss current levels and dam release schedules to coordinate activity as needed along the Missouri River and its tributaries. Discussion from this group is communicated with the Missouri River Recovery Implementation Committee (MRRIC) and federal representatives for consideration when determining future dam releases especially as they pertain to heavy precipitation years.

SIMPCO staff attended several established community-based meetings and presented on mitigation planning and Regional Plan development. Surveys were distributed at meetings and attendees were invited to forward the survey links or paper surveys to their respective program participants. Community Health Planning Meetings are held throughout the region by County. Meeting attendees represent vulnerable populations and provide valuable feedback on resident needs, especially in crisis situations. Particularly relevant in light of the severe flooding in June 2024, the Siouxland Coalition to End Homelessness allowed SIMPCO to present on development of the regional hazard mitigation plan, and how it ties back to the work they are doing. **The presentation included interactive discussion and survey completion by all attendees.** SIMPCO Set up a table at the Riverside Flood Recovery Resources Fair, enabling conversation with those directly affected by unprecedented flooding in Sioux City’s Riverside neighborhood.

C. Updates to 2020 Actions and Strategies

Updates to projects included in the 2020 Regional Hazard Mitigation Plan are shown in table format. It is important to note that actions not completed, whether deferred due to funding or other barrier, imply an increased vulnerability for that jurisdiction. For projects deemed unnecessary and therefore having no effect on community vulnerability, that determination is included in the update table. Additional variables as applicable are outlined in jurisdiction profiles under *Capabilities* where risk has been reduced or otherwise improved and under *Risk Assessment* for items needing attention but not currently planned.

To clarify impact and potential effects of actions, strategies, and projects, the following serves as a key for addressing these components.

1. project categories
2. areas of impact
3. application
4. project type
5. goals/objectives reached upon implementation (see Title III, Section E), and
6. hazard(s) mitigated upon implementation (see Title II, Section B)

This also serves as a key for new and carried over projects in the 2025 HMP found in part *III. Region, Section F. Mitigation Actions, Strategies, & Projects.*

Actions/Strategies for Region		
Project type	Goals met by strategy/action/project	Hazard addressed
communication /education	Local county region	<ul style="list-style-type: none"> • Increase interactive communication and education of natural hazard awareness, preparedness, and available resources to improve capacity for response and loss prevention.
Promotional/informational (promoting use of and providing information on existing services and resources)	<ol style="list-style-type: none"> 1: make use of existing communication channels/modes and available informative resources 2: expand reach through additional means of communication 4: expand access and therefore application of preparedness resources 	- All Natural and Other Hazards

Warning sirens & other alert systems	2: communicates urgent disaster prep and awareness 3: communicates need to seek protection/shelter	- Dam Failure/Levee Failure - Tornado/Windstorm - Flooding - Flash and Riverine
Programs and educational opportunities, resources	1: Maximize use of programs as available or implemented in comparable jurisdictions or otherwise renowned as a best practice; Investigate available human and organizational resources through existing collaborations and civic supports such as County Emergency Management Agencies, regional training opportunities through emergency response associations, the LEPC, local businesses and health and human services agencies. 4: Continue function of operations in the event of a natural disaster through established chain of command and/or order of operations. 5: Implementation supports well-planned projects that address multiple issues or serve more than one purpose.	- All Natural and Other Hazards
Assessments, studies, project planning & engineering	1: assess issue in context of existing resources to determine best course of action including but not limited to natural, human, organizational, and technological resources -- internal and collaborative. 4: considers continuity of operations 5: consideration given to mitigative aspects in all new projects.	- All Natural and Other Hazards

tools/equipment	power supply safety/security access	<ul style="list-style-type: none"> Acquire equipment and tools that will facilitate access to and protection of residents and visitors, critical facilities, and utility infrastructure during extreme weather events including but not limited to generators, surveillance tools, all-weather ATV, or snow machine.
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Project type	Goals met by strategy/action/project	Hazard addressed
Generator & related projects	1: Enables use of existing resources in the event of power outage. 2: Facilitates communication in the event of power outage. 3: facilitates protection of people and property enabling operations and equipment to function during power outage 4: allows functional operation in the event of power outage. 5: meets multiple goals in reducing vulnerability during power outages.	- Flooding - Flash and Riverine - Tornado/Windstorm - Grass or Wildland Fire - Hazardous Materials Incident - Severe Winter Storm - Terrorism - Thunderstorm - Hail & Lightning - Transportation Incident
Equipment (any equipment that improves ability to maintain functional operations during disaster or extreme event)	3: protect existing infrastructure allowing function during varying conditions resulting from a natural or other disaster	- Dam Failure/Levee Failure - Thunderstorm - Hail & Lightning - Earthquake - Tornado/Windstorm - Expansive Soils

	4: enables functionality of infrastructure by maintaining or improving access &/or operation	<ul style="list-style-type: none"> - Hazardous Materials Incident - Flooding - Flash and Riverine - Infrastructure Failure - Grass or Wildland Fire - Radiological Incident - Landslide - Terrorism - Severe Winter Storm - Transportation Incident - Sinkholes
Safety & security equipment	<p>1: protect existing resources via new and/or enhancements to existing tools, tech, and equipment</p> <p>3: protection of people, public and private environments, facilities, and assets</p> <p>5: incorporate security and safety into other projects as applicable</p>	<ul style="list-style-type: none"> - Hazardous Materials Incident - Terrorism - Radiological Incident - Transportation Incident

development	<p>mutual benefit; integrated project design/planning</p> <p>acquisition – local</p> <p>local building standards/controls</p> <p>development guidance/regulations</p> <p>local relocation/fortification</p>	<ul style="list-style-type: none"> • Correlate Capital Improvement Projects, Economic Development projects, scheduled maintenance and repairs to necessary mitigation actions. • Consider (additional) properties for acquisition in high flood risk areas. • Monitor effectiveness and applicability of adopted and/or referenced ordinances, policies, and programs guiding community growth such as development regulations and established building standards. • Evaluate locations of critical facilities and utility infrastructure. Identify relocation and/or improvement projects that will allow continued function during and after natural hazard events.
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Project type	Goals met by strategy/action/project	Hazard addressed
Improve existing facilities & infrastructure	1: enhance, stabilize, or otherwise improve existing infrastructure/facilities	<ul style="list-style-type: none"> - Dam Failure/Levee Failure - Severe Winter Storm - Earthquake - Thunderstorm - Hail & Lightning - Expansive Soils - Tornado/Windstorm - Flooding - Flash and Riverine - Infrastructure Failure - Landslide - Transportation Incident
Policy Implementation/Updates	1: improve or expand upon existing policies, processes, and procedures to incorporate mitigative improvements including but not limited to adoption of standardized building codes.	- All Natural and Other Hazards

Relocate existing facilities	<p>1: enhance, stabilize, or otherwise improve existing infrastructure/facilities; relocate existing when possible. Incorporate location changes in updating/improvement projects.</p> <p>3: take advantage of protections in place or available at alternate site</p> <p>4: address known/potential hazards to prevent disruption to continuity and full function of operations</p> <p>5: serve multiple purposes within single project</p>	- Flooding - Flash and Riverine
Bridges & roads	<p>1: Maximizing use of existing resources and collaborations by way of ensuring access, especially in the event of a disaster.</p> <p>3: Protection of our people, public and private environments, facilities, and assets. Implement actions and strategies that significantly decrease risk associated with the effects of natural and other hazards that may otherwise result in the loss of life or damage to or loss of property -- primarily by way of maintaining adequate access/egress allowing for response teams and end/or evacuation as dictated by situation.</p> <p>4: enabling continued functionality within and between jurisdiction operations</p> <p>5: addressing multiple issues within a single project (i.e. improved drainage controls &/or structural integrity under extreme conditions)</p>	<ul style="list-style-type: none"> - Flooding - Flash and Riverine - Severe Winter Storm - Infrastructure Failure - Transportation Incident

flow control	Roadways drainage	<ul style="list-style-type: none"> • Assess repair/replace/redesign roadways to improve function during natural hazard events. Consideration to be given to elevation, implement/improve water flow controls such as culverts, ditches and gutter systems. • Improve drainage patterns in flood-prone areas by implementing features that improve flow and/or absorption and reduce runoff.
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Project type	Goals met by strategy/action/project	Hazard addressed
Flood protection (runoff controls, levee/dike/dam)	<p>1: Maximizing use of existing resources and collaborations.</p> <p>3: Protection of our people, public and private environments, facilities, and assets; significantly decrease risk associated with the effects of natural and other hazards</p> <p>4: enabling continued functionality within and between jurisdiction operations</p> <p>5: address multiple issues while resolving primary concern</p>	- Flooding - Flash and Riverine
Drainage projects (including road projects specific to drainage)	3: protects existing infrastructure by diverting water flow, alleviating erosion	- Flooding - Flash and Riverine

	4: enables function of roadways and other access points during and immediately following heavy rain/snow melt or other flood-inducing events.	
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refuge	mutual benefit integrated project design/planning	<ul style="list-style-type: none"> Identify, evaluate, and assess informal shelter locations.
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Project type	Goals met by strategy/action/project	Hazard addressed
Shelter – structural additions or fortifications; designated locations at alternate sites	3: provide protection from extreme weather conditions 4: Continued functionality of operations in the event of a natural disaster; Establish means of maintaining function of city operations and response efforts regardless of circumstance, ensuring availability of appropriate equipment as needed. 5: Implement refuge for residents while planning alternate work sites for critical services during and after extreme weather events.	<ul style="list-style-type: none"> Extreme Heat Hazardous Materials Incident Severe Winter Storm Terrorism Thunderstorm - Hail & Lightning Transportation Incident Tornado/Windstorm

technology	Improve access Increase use of existing	<ul style="list-style-type: none"> Implement technology to more effectively assess, respond to, and recover from dangers associated with hazard events.
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Project type	Goals met by strategy/action/project	Hazard addressed
Improve effectiveness of existing systems	1: Maximizing use of existing resources. 3: Protection of our people, public and private environments, facilities, and assets. Implement actions and strategies that significantly decrease risk associated with the effects of natural and other hazards that may otherwise result in the loss of life or damage to or loss of property. 4: Functional Continuity of operations in the event of a natural disaster. 5: project planning to address multiple issues or serve more than one purpose.	<ul style="list-style-type: none"> Dam Failure/Levee Failure Hazardous Materials Incident Flooding - Flash and Riverine Infrastructure Failure Grass or Wildland Fire Terrorism Thunderstorm - Hail & Lightning Transportation Incident Tornado/Windstorm

natural barriers/supports	Develop plan Determine if plan is needed	<ul style="list-style-type: none"> Stabilize or increase naturally occurring mitigation features such as tree cover, wetlands, and/or greenspace. Improve effectiveness of existing natural systems for water management
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Project type	Goals met by strategy/action/project	Hazard addressed
Retention Pond	1: enhance natural landscape to better accommodate excess water from rain or rapid snow melt.	<ul style="list-style-type: none"> Flooding - Flash and Riverine Severe Winter Storm
Dike improvement, Levees/Berms	1: enhance or maximize benefits of naturally occurring barriers 3: protection from flood and wind to an extent	<ul style="list-style-type: none"> Dam Failure/Levee Failure Flooding - Flash and Riverine

Addition of natural/native vegetation to improve sustainability (i.e. Trees to stabilize soil, add wind barrier, respite from extreme heat/sun)	1: enhance or maximize benefits of naturally occurring barriers 3: protection from extreme heat, direct sun, erosion, and wind (when trees are healthy)	- Drought - Thunderstorm - Hail & Lightning - Extreme Heat - Tornado/Windstorm - Severe Winter Storm
Stabilization – substantiate existing water channels to reduce erosion	1: enhance natural structures to reduce erosion 4: improve sustainability of natural waterways, reducing erosion and meandering	- Flooding - Flash and Riverine - Infrastructure Failure

Updates to projects from the 2020 plan are as follows.

Completed
New project or carried over from previous (still needed)
Not implemented; no longer planned/needed; deemed not feasible in the near future

Communication /Education		
Promo/Info	Aurelia	2020: Interest in promoting Smoke Detector programs, and similar supports, when offered at County or Region levels. <i>City Clerk, Public Health, EMA</i> (for promo: No dedicated funding necessary. For detectors: Community grants, pre-disaster funds) HIGH PRIORITY
Promo/Info	Aurelia	Update. No action taken as program has not been made available through FD or Public Health. City wishes to carry this project over to 2025.
Promo/Info	Blencoe	Implemented: Blencoe. Implemented promotion of existing alerts system and continues to do so.
Promo/Info	Cleghorn	2020: Interest in promotion of established notification networks such as the Alert Iowa system; Promote programs as available through regional resources. <i>City Clerk, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY
Promo/Info	Cleghorn	Closed. Update was not provided by community.
Promo/Info	Galva	2020: Need for secured gate and "Restricted" signage at the sewer plant; <i>City Maintenance/Public Works</i> (Local Funds, Community benefit grants) HIGH PRIORITY
Promo/Info	Galva	Update (In progress): Galva is in the process of implementing a Sewer systems project. Securing point of access is part of the project.
Promo/Info	Galva	2020: Interest in obtaining weather radio and additional communications equipment such as handheld radios for direct communication with responders; <i>City Council, County EMA to assist</i> (local funds, PDM funds, Community benefit grant funds) MEDIUM PRIORITY

Promo/Info	Galva	Update: Handheld radios are not in place. Carry over to 2025 HMP.
Promo/Info	Hinton	2020: City is interested in formalizing communications with DOT to address default road closures and local authority on road closures to avoid ineffective detours; <i>City Administration & Public Works, County Engineer, Iowa DOT</i> (necessity for dedicated funds not anticipated) HIGH PRIORITY
Promo/Info	Hinton	Update: Need for enhanced communications continues. Carry over. Some lines have improved but concern remains a factor in communicating course of action and conflicting chain of command.
Promo/Info	Ida Co	2020: Actively promote available trainings; <i>County EMA, County Admin Staff</i> (no funding need anticipated) HIGH PRIORITY
Promo/Info	Ida Co	Update: County intends to continue promoting state-funded training programs as available. Carry over. Improve awareness of program availability.
Promo/Info	Larrabee	2020: Interest in developing improved means of communicating urgent information through existing networks such as Alert Iowa. Also, further develop local intercommunications tools such as texting and internal posting options. <i>City Clerk, City Council</i> (No costs associated with this project)
Promo/Info	Larrabee	Implemented. Additional efforts ongoing. City installed new community message board to better relay information in real time and for scheduled messaging (about \$1,500). City makes use of existing informational formats such as the County website, Facebook postings, and physical postings at the post office.
Promo/Info	Plymouth Co	2020: Signage needed to better define restricted areas; <i>County Engineer, Sanitarian</i> (County funds) HIGH PRIORITY
Promo/Info	Plymouth Co	Implemented: Plymouth County continues to administer general alerts. Assessing feasibility of adding employees to enable uniform communications and enabling external use specific to departments. System is used by Communications Center, CERT Team including Floyd Valley Hospital.
Promo/Info	Remsen	2020: Interest in promotion of established warning systems such as Alert Iowa system; <i>City Clerk, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY
Promo/Info	Remsen	Update. Remsen includes periodic postings recommending resident enrollment in Alert Iowa and similar online alert systems. Community will continue to do so but this will not be continued as an Ongoing mitigation-specific project into the 2025 plan.
Promo/Info	Struble	2020: Interest in promotion of established warning systems such as Alert Iowa system; Promote programs as available through regional resources. <i>City Clerk, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY

Promo/Info	Struble	Update. informal promotion of available alert systems is provided through council discussion and interactions with residents. The city plans to continue promotional efforts to expand effectiveness of existing resources. Carry over to 2025 HMP as an ongoing project.
Promo/Info	Whiting	2020: PSA program to promote education about tree types and planting; <i>City Clerk</i> (no funding anticipated) LOW PRIORITY
Promo/Info	Whiting	Completed. PSA was communicated through schools at no cost.

Warning Sirens	Akron	2020: Assess need for additional warning siren near school; <i>School Board, City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Warning Sirens	Akron	Resolved. City assessed function of existing equipment and determined additional siren is not necessary. School facilities are adequately served by existing warning siren.
Warning Sirens	Blencoe	2020: 2nd warning siren placement - northwest end of town; Location Simpson & Mack; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Warning Sirens	Blencoe	Update. Action not taken. Carry over. The City still needs a second warning siren to sufficiently serve its corporate boundaries and nearby rural residents.
Warning Sirens	Bronson	2020: Considering warning siren replacement; Recent repairs were necessary on current siren; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) LOW PRIORITY
Warning Sirens	Bronson	Implemented. The warning siren was replaced in June 2022, at the cost just over \$19,000.
Warning Sirens	Danbury	2020: Warning Siren needs replacing; <i>City Council, County EMA</i> (Local funds, County Funds, PDM, Community Benefit funds) HIGH PRIORITY
Warning Sirens	Danbury	Complete. Warning siren installed 2020+/- . Project was funded through various local grant programs.
Warning Sirens	Holstein	2020: Additional warning siren would benefit City - potential location near south end of town near CharMac, Ridgeview, Cobblestone Inn; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Warning Sirens	Holstein	Update. Project carried over to 2025
Warning Sirens	Ida Co	2020: An additional warning siren would benefit Crawford Creek; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Warning Sirens	Ida Co.	Objective Met. Review of available resources indicates siren is not needed. County will promote existing internet system with improved coverage capacity. The County plans to provide signage and other promotions on social media forums to promote subscriptions to alert services.
Warning Sirens	Monona Co / Rodney	2020: Additional sirens in rural recreation areas such as the Rodney Recreation Pits; <i>County EMA</i> collaboration w/Rodney <i>City Council</i> , (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY

Warning Sirens	Monona Co / Rodney	Update. Not completed, still needed. Project carries over to 2025 HMP. Carry over. Additional sirens in rural recreation areas such as the Rodney Recreation Pits.
Warning Sirens	Monona Co	2020: Warning Siren at Lewis & Clark Lake would be beneficial to improve warning efforts in the recreation area. <i>County Board of Supervisors, EMA, various departments.</i> (County funds, PDM, community benefit fund programs) MEDIUM PRIORITY
Warning Sirens	Monona Co	Update. Project not implemented but siren is still needed in rec area. Project will carry over to 2025 HMP. Carry over. Warning Siren at Lewis & Clark Lake needed to improve warning efforts in the recreation area.
Warning Sirens	Moorhead	2020: Warning siren needs replacing. Existing prone to malfunction, in need of constant repair. Necessary in maximizing efforts to reduce repercussion from severe weather conditions. <i>City Council, County EMA.</i> (Local funds, County support funds, PDM, community benefit programs) HIGH PRIORITY
Warning Sirens	Moorhead	Update. Project still under consideration, maintain in 2025 Plan. Carry over. City siren needs rewiring/electrical replacement.
Warning Sirens	Moville	2020: Add warning sirens to supplement existing. Assess need for additional at southeast edge of town and at Ridge Park; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Warning Sirens	Moville	Update. Maintain project for 2025 Plan. Carry over. City still interested in fully assessing need for additional siren(s).
Warning Sirens	Oto	2020: Warning siren needed immediately. Malfunction due to lightning strike. <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Warning Sirens	Oto	Resolved. Oto's warning siren is now functioning.
Warning Sirens	Salix	2020: Warning sirens – Replace existing in town; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Warning Sirens	Salix	As amended 01/12/2022: Complete. A new weather siren was installed in December 2020. The weather siren is connected to the County Communications Center as a primary means of notifying residents and visitors to Salix of imminent danger due to extreme weather conditions such as tornado and/or windstorms. The siren is multi-tonal allowing variation in sounds to differentiate the causes for warning.
Warning Sirens	Sloan/ Westwood Schools	2020: Warning siren at south end of town, serving school & rec facilities; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Warning Sirens	Sloan	Complete. A siren was installed to better serve the areas of outdoor school facilities.
Warning Sirens	Smithland	2020: Warning siren improvement/replacement needed to better perform alerts for residents. Replacement or updating must include connection to County Communications Center. City Council. City staff,

		County EMA. (Local funds, county supports, community benefits programs, fundraising, PDM) HIGH PRIORITY
Warning Sirens	Smithland	Update. City has determined replacement of siren is necessary as parts are no longer available to maintain current siren. Carry over. Replace warning siren.
Warning Sirens	Turin	2020: City needs to install 2 nd warning siren to increase alert capacity during severe weather conditions. <i>City Council, County EMA.</i> (Local funds, County supports, PDM) HIGH PRIORITY
Warning Sirens	Turin	Completed. Second warning siren was added to increase awareness of pending severe weather. Hill served as barrier to single siren effectiveness for all residents.

Programs	Hornick	2020: Assess opportunities for homeowners with uninhabitable properties months after flood events of 2019; <i>City Council/Administration SIMPCO</i> (no cost allocated outside of staff hours for assessment) MEDIUM PRIORITY
Programs	Hornick	Closed. Based on city finances, skewed market value of homes/property, and ability to repurpose flood-prone areas, the city determined implementation of a home acquisition program is not feasible. City will continue to monitor potential of opportunities as they arise, however, the project is removed from the priority list.
Programs	River Valley CSD	2020: Interested in funded First Aid/CPR training for staff; <i>School Board, Collaborate with EMA to coordinate training</i> (District training funds, Community Benefit funds, fundraising, Response support funds) MEDIUM PRIORITY
Programs	River Valley CSD	Completed. District implements mandatory training on annual basis. Funds still needed to support training, with expense review and new programming pending review. Project will remain HIGH PRIORITY in updated plan as district continues to seek training and funding partners.

Assessment/Study	Le Mars	2020: Flood Risk Options Study. Improve elevation of roadway @ 4th Ave SE (Mahogany Ave). Primary access road to this portion of town, limiting access for response teams. A full study on options is needed in preparation of presenting issue of road closure to resident. <i>City Administrator, Engineer, County Roads communication, IDOT</i> (City funds, Planning funds, IDNR/IDOT programs, State/Federal programs, TIP, CIP) HIGH PRIORITY
Assessment/Study	Le Mars	Complete. Surveys were completed and discussion held with IDNR, Army Corps of Engineers to assess potential improvements. Determination that a bridge is the only solution is not a feasible project for the City to consider. No further action is planned regarding this issue.
Assessment/Study	Moorhead	Added by amendment 2021. Still needed – Study needed to determine source/cause of sinkholes believed to be a delayed effect of extensive area flooding in 2019. City’s initial assessment revealed no visible effects of that year’s flood. By 2021, sinkholes appeared throughout town affecting roadways and sidewalks. It is expected that underwashing

		<p>caused by high velocity runoff is the primary cause of the sinkholes, however a study is needed to confirm that. Included in the study is an review of solutions for implementation that would eliminate the cause and prevent recurrence. City public works, State Homeland Security and Emergency Management, County EMA, USDA, potentially IDNR, other state departments as may be appropriate. (FEMA BRIC/FMA technical assistance, USDA programs, local funds) HIGH PRIORITY.</p> <p>Update. Initial application was not funded (2023). City is carrying project into 2025 plan with the intent of continuing to pursue funds to determine feasible solution(s) to the sinkhole issue. Carry over.</p>
Assessment/Study	Woodbury Co	2020: Econ Dev - Work on measures necessary to reduce NFIP participant costs for communities. County Economic Dev, IDNR (County funds as needed) HIGH PRIORITY
Assessment/Study	Woodbury Co	Project closed. Economic Development department consolidated into Zoning. Project deemed not immediately feasible, though county will reassess situation given an opening to such opportunity.

Tools/Equipment		
Generator & Related Projects	All Counties	2020: Assess availability of generators for all critical facilities, portable or permanent. Prep all critical facilities for connection to generators as applicable; <i>County EMA</i> (Varying levels of funds needed. Support may come through County, State, and Federal grant and loan programs) HIGH PRIORITY
Generator & Related Projects	Ida County	Completed. Community assessments of critical facilities and generator compatibility have been completed. The Courthouse addition is ready. Transfer switches are in place where needed for City offices in Battle Creek and Holstein. Findings where more transfer switches are needed have been included as new projects as collaborative efforts between the County and applicable communities.
Generator & Related Projects	Plymouth County	Implemented. County Courthouse, Courthouse Annex, and Law Enforcement office have added a generator with a \$300,000 investment. Portable generators are available for communities; no additional need for transfer switches.
Generator & Related Projects	Akron	2020: Transformer needed at wells to make ready for generator connections; <i>City Public Works & Waterworks Depts</i> (Local funds, Community benefit fund grants) HIGH PRIORITY
Generator & Related Projects	Akron	Update. Well #4 has been updated with a transformer switch and is ready as needed. Second is still needed for the North Well and is carried over to the 2025 project list. Carry over. Transformer needed at wells to make ready for generator connections
Generator & Related Projects	Akron	Implemented. A generator is in place at the Fire Station and 2 generators are incorporated into the Water Treatment Plant U.V. project underway (03/2025).
Generator & Related Projects	Arthur	2020: Interest in a dedicated generator for the waterworks; <i>City Waterworks/Public Works Maintenance</i> (Local Funds, PDM, Community Benefits grants) HIGH PRIORITY

Generator & Related Projects	Arthur	Complete. A mobile generator was added in 2020 using safety funds through insurance provider. City accrued annual allocation to help meet expense.
Generator & Related Projects	Arthur	2020: Fire Dept - generator to maintain function of doors and building during a power outage; <i>Fire Chief, City Council</i> (Department funds, Community Benefit funds, Firefighter Association supports, PDM) HIGH PRIORITY
Generator & Related Projects	Arthur	Update. Project not completed due to lack of funds. Carry project into 2025 HMP. Department did attain mobile generator for use with the grass truck pump, but none are available for the facility. Priority based on likely funding opportunity, not need. Carry Over. Fire Dept - generator to maintain function of doors and building during a power outage; <i>Fire Chief, City Council</i> (Department funds, Community Benefit funds, Firefighter Association supports, PDM) LOW PRIORITY
Generator & Related Projects	Blencoe	2020: Generators; city hall/community ctr which operates as command center as needed; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Blencoe	Update. Generators were included for lift stations in two water works project – Sewer (2022) and Wastewater Treatment Plant (2019). Carry over. Generators as noted in 2020 are planned for implementation at the N Manley Lift Station.
Generator & Related Projects	Bronson	2020: Generator for Community Center/City Hall and critical facilities; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Bronson	Update. Due to lack of funding, the project was not implemented. Carry over. The City is still seeking funding supports and will carry project into 2025 Plan with modified priority level.
Generator & Related Projects	Cherokee (City of)	2020: Generators needed for Water Plant and Wastewater Plant; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Cherokee (City of)	Update. The Wastewater Treatment Plant is in the process of being relocated due to flooding. In progress. Generator for the Water Plant has been purchased, installation pending.
Generator & Related Projects	Cherokee County	2020: Two trailer-mounted generators to facilitate county response efforts <i>County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Cherokee County	Update. 1 in place 100kw unit owned by the state is housed at the EMA offices. 2 nd unit as well as other generator needs are carried into the 2025 HMP.

Generator & Related Projects	Cherokee County	(cont'd from phased project) Carry over. trailer-mounted generator needed to facilitate county response efforts
Generator & Related Projects	Cherokee County	2020: On-site permanent generator for Courthouse; <i>County EMA</i> (County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Cherokee County	Update. Not implemented as funding has not been dedicated to project. Still needed and carries over to 2025 HMP. Carry over. On-site permanent generator for Courthouse
Generator & Related Projects	Danbury	2020: Portable generator <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Danbury	Update. Project still needed. Lagoon project has taken precedence for current year. Project will carry to 2025 HMP. Expanded - carry over. Portable generator needed for water plant with potential to serve various facilities. Added: Transformer switches needed to enable connections.
Generator & Related Projects	Hinton	2020: Generators for Lagoon Lift Station & @ 1 well location; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Hinton	Complete. Part 1 of this project is complete with a generator added at the well location in 2022.
Generator & Related Projects	Holstein	2020: Permanent, dedicated generators @ lift stations & water plant; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Holstein	Update: The City has received quotes to initiate the project. Planned cost is \$197,000. Support funding has not been secured. This carries over into the project list for the 2025 Plan. Carry over. Permanent, dedicated generators @ lift stations & water plant
Generator & Related Projects	Ida Grove	2020: Transfer switches at all critical facilities to enable use of generators; Generators @ Critical Facilities including Waste Water Plant; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Ida Grove	Completed. Water Tower and Well Site improvements included necessary connections. Odebolt Creek Lift Station is ready for portable connection. Water Plant updates included a transfer switch and plumbing of gas lines (\$30,000) Additional connections and generators are still needed and project will carry into 2025 Plan.
Generator & Related Projects	Ida Grove	Carry over. Dedicated generators still needed at City Hall and Moorhead Avenue.
Generator & Related Projects	Kingsley	2020: Generators needed at lift station, water plant, and lagoon; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Kingsley	Partially completed. Generators are in place at the lift station and lagoon.
Generator & Related Projects	Kingsley	Carry over. The remaining scope of project will be carried into the 2025 project list.

Generator & Related Projects	Lawton	2020: Generator needed for Fire Department; <i>Fire Chief, City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Lawton	Complete. Phase I is complete. A generator has been purchased for the Fire Department. A new project for 2025 HMP is for hook-up and installation.
Generator & Related Projects	Mapleton	Correction to the 2020 Plan stating generator was added. Additional generators are needed to maintain function of critical facilities during disastrous and other extreme events. <i>City Administrator, Waterworks, County EMA</i> (City funds, community benefit funds, IDOT program funds, PDM funds) HIGH PRIORITY Update. Project not completed due to lack of dedicated funding. Transfer switches were installed at light plant, equipped to handle in-the-moment outages, primarily intended for short-term.
Generator & Related Projects	Marcus	2020: Generator for Fire Department to enable use as emergency shelter. <i>Fire Chief, City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Marcus	Update. Project is in progress as an included component of a Fire Station Expansion Project. As of late 2024, the pad has been laid, and a dedicated generator is planned. As of December 2024, local budget is the primary funding source with the city continuing to consider additional options. Carry over.
Generator & Related Projects	Marcus	2020: Generator Water Plant – maintain function during power outage; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Marcus	Closed. Community will coordinate with county for mobile generator use as needed.
Generator & Related Projects	Marcus	2020: Generator at Shelter house, also for use in the event of power outage during an emergency; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Marcus	Update. Action not taken due to lack of dedicated funding. Project is still needed and carries over to the 2025 project list.
Generator & Related Projects	Moorhead	2020: Generators - city hall/community ctr that operates as command center as needed; Potential partnering with County to establish Command Center capacity in the event of an emergency; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Moorhead	Update. No action has been taken on this project due to lack of funding availability. The project is still needed and therefore will be carried over to the 2025 project list.
Generator & Related Projects	Onawa	2020: Additional generators; <i>City Administrator, Waterworks, County EMA</i> (City funds, community benefit funds, IDOT program funds, PDM funds) HIGH PRIORITY
Generator & Related Projects	Onawa	Update: Some generator work has been completed, replacing generators at 3 sites (Fire Station, Electric Building, and Waterworks) and one new

		generator installed at Sewer Plant. A generator is also onsite at the hospital. The community center is still in need of a generator. This will be carried over to the 2025 HM project list.
Generator & Related Projects	Onawa	Carry over. Generators needed for Community Center and Nursing Home. <i>City Administrator, Waterworks, County EMA</i> (City funds, community benefit funds, IDOT program funds, PDM funds) HIGH PRIORITY
Generator & Related Projects	Pierson	2020: Generator for Community Building for continuation of use as refuge location in the event of power outage; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Pierson	Update. Action not taken as other projects took precedence. Carry over to 2025 HMP. Carry over. Dedicated generator for Community Building for continuation of use as refuge location in the event of power outage.
Generator & Related Projects	Sgt Bluff	2020: Generator for PD; <i>Police Chief, City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Sgt Bluff	Project closed. One large portable generator is available as needed. Police Department is prepared for such connection if needed. Fire Station has been designated as command center in the event of an emergency and is equipped to serve that role.
Generator & Related Projects	Sioux City	2020: Generators for critical facilities where none are currently in place; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Sioux City	Update: Some generator acquisition/placement still needed. Carry over. Generators still needed at Police Department and other City Facilities. Project remains necessary and carries into 2025 plan.
Generator & Related Projects	Ute	2020: Generator for community building; City Hall; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Ute	Update. Ute implemented several projects in the past 5 years, resulting in this one being delayed. This project carries over into the 2025 HMP with continued high priority. Carry over. Generator for community building.
Generator & Related Projects	Westwood CSD	2020: Generator for backup during crisis events & to maintain use as refuge location in event of power outage; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Westwood CSD	Update. Project has not been completed with funding and other projects taking precedence. Still interested in dedicated generator and transfer witches at minimum. Carry over. Generator for backup during crisis events & to maintain use as refuge location in event of power outage or other emergency.
Generator & Related Projects	Woodbury Co	2020: All communities: Standby generator on site for each Community Center/City Hall as may be designated for command center during a disastrous event) LOW PRIORITY

Generator & Related Projects	Woodbury Co	Update. Some communities have added generators and/or transfer switches to accommodate mobile equipment. The county will continue to pursue opportunity to install dedicated generators where necessitated and transfer switches where still needed. Carry over. Standby generator still desired on site for each Community Center/City Hall
Generator & Related Projects	Woodbury Co	2020: A generator needed at Courthouse; <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Woodbury Co	Update. Carry over to 2025 plan. Generator still needed.

Equipment	Aurelia	2020: Additional equipment for Emergency Response needed in lieu of resident-owned materials. Items considered include but are not limited to ATV and Rescue Boat. <i>City Council, Fire & Rescue Services, Police Department</i> (Local funds, fundraising, community betterment funds) MEDIUM PRIORITY
Equipment	Aurelia	Complete. City added ATV to city inventory. No further action anticipated for this project.
Equipment	Battle Creek	2020: Equipment updates and additions needed for Fire Department and Ambulance Services. <i>City Council, Fire Chief, Ambulance Director.</i> (Local funds, fundraisers, community benefit funds, firefighter association funding programs). HIGH PRIORITY
Equipment	Battle Creek	Complete. The FD and Ambulance service added several pieces of equipment in recent years including: <ul style="list-style-type: none"> • 2 grass rigs & tanker (\$275,000) – fundraisers, grants • Transfer switch for FD • Compressor to fill air cans • Power Cot (\$30,000) • New ambulance ordered – (\$287,000) fundraising, grants, service billings, donations
Equipment	Bronson	Implemented. City purchased Stair Chair (lift) for ambulance to facilitate building exit for persons otherwise requiring use of a mobility device (such as a wheelchair or walker) in the event of an emergency and/or evacuation when stairs are involved. Cost: \$990. Local funds.
Equipment	Correctionville	2020: ATV with water tank capacity - remote access for fire response and other uses as applicable; <i>City Council, Fire Chief</i> (City funds, Fire Department funds, Fire Association funds, fundraisers, Community Benefit funds, Federal funds for response programs) HIGH PRIORITY
Equipment	Correctionville	Complete. \$55,000 project complete 2022 – funded through grant (USDA).
Equipment	Danbury	2020: Pumps; <i>City Council, Public Works, collaboration with County EMA</i> (Local funds, County funds, Community Benefit funds, fundraising, Federal programs, PDM) HIGH PRIORITY
Equipment	Danbury	Resolved. City has worked out agreement with Fire Department. FD will provide equipment as needed.

Equipment	Danbury	2020: Utility ATV/snowmobile; <i>City Council, Fire Chief, Public Works, collaboration with County EMA</i> (Local funds, County funds, Community Benefit funds, fundraising, Federal programs, PDM) MEDIUM PRIORITY
Equipment	Danbury	Complete. City purchased a Gator in 2020 using local funds.
Equipment	Hinton	2020: Mobile pump; <i>City Maintenance/Public Works</i> (City funds) MEDIUM PRIORITY
Equipment	Hinton	Carry over. Project still needed and funds were not sourced.
Equipment	Hinton	2020: ATV for use during road blockage and flood staging; <i>City Council, Streets Dept</i> (City funds, Community Benefit funds, Response support funds) MEDIUM PRIORITY
Equipment	Hinton	Completed. City purchased ATV for use when roadways or points of entry are inaccessible (storm debris, etc.) in 2022.
Equipment	Holstein	2020: Additional snow removal equipment; <i>City Council, Public Works/Maintenance</i> (Local funds) LOW PRIORITY
Equipment	Holstein	Completed (pending delivery). Equipment has been purchased but item is on backorder. Expected availability May 2025.
Equipment	Holstein	Implemented (pending delivery). City has ordered an ambulance. Cost not provided. City council, Emergency Services. (Local funds, fundraising).
Equipment	Ida County	2020: Sandbag fillers. Only 2 are available in the region and flooding often impacts several counties concurrently. Interest in accumulating a stockpile to meet multiple community needs. <i>County Engineer, EMA, Regional collaboration</i> (Collective County funds, PDM) HIGH PRIORITY
Equipment	Region (Initiated by Ida County)	Update. No action taken. Still interested in have available for extreme events. Carry to 2025 HMP as a Region project.
Equipment	Ida County	2020: ATV for access to levees for inspection regardless of road conditions. <i>County EMA</i> (County funds) MEDIUM PRIORITY
Equipment	Ida County	Resolved. Roads Dept and Sheriff's department added side-by-sides to inventory. Anticipated availability if needed, especially for scheduled inspections.
Equipment	Ida County	2020: Additional road closure barricades are needed with consideration to be given to another trailer in order to haul to multiple locations. To accommodate approximately 80 roadways are subject to closure in the event of an emergency. <i>County Engineer, EMA</i> (County Funds, PDM) HIGH PRIORITY
Equipment	Ida County	Update: No action taken. Additional barricades still needed. Carry over. Additional road closure barricades are needed with consideration to be given to another trailer in order to haul to multiple locations.
Equipment	Ida Grove	2020: Snow removal equipment needs updating. <i>City Streets Department</i> (City funds) LOW PRIORITY
Equipment	Ida Grove	Update. Action not taken. Project still needed. Carry to 2025 plan. Carry over. City in need of small tractor with can and blower on front to facilitate and improve snow removal. <i>City Streets Department</i> (City general funds) LOW PRIORITY
Equipment	Ida Grove	2020: Motor in the grader needs updating. <i>City Streets Dept</i> (City funds) MEDIUM PRIORITY

Equipment	Ida Grove	Completed. Motorgrader replaced in 2022.
Equipment	Ida Grove	2020: Larger capacity pump; <i>Public Works, Streets Dept</i> (City Funds, PDM, Community Benefit funds) HIGH PRIORITY
Equipment	Ida Grove	Update. Action not taken. Project still needed. Carry to 2025 plan. Carry over. large pump our 4" gas powered pump needs replaced. <i>Wastewater dept.</i> (Loca general fund) HIGH PRIORITY.
Equipment	Ida Grove	2020: New booster pump is needed to support fire hydrant performance. <i>Fire Chief, City Administrator</i> (City funds, Fire Dept funds, Response support funds) MEDIUM PRIORITY
Equipment	Ida Grove	Action not reported. Project is removed from the priority list.
Equipment	Mapleton	2020: Lift station for water plant; <i>City Water Supt</i> (City funds, PDM) HIGH PRIORITY
Equipment	Mapleton	Update: Project has not been completed and carries over to the 2025 HMP. Carry over. Lift station for water plant.
Equipment	Monona Co	2020: Region-shared equipment such as high capacity snow blower. <i>County Roads, collaboration between County Roads departments</i> (County funds—potentially multiple, IDOT funds) LOW PRIORITY
Equipment	Monona Co	Update. No action has been coordinated between counties for shared use of high-performance equipment. This project will carry over to 2025 HMP. Carry over. Region-shared equipment such as high capacity snow blower. <i>County Roads, collaboration between County Roads</i>
Equipment	Monona Co	2020: Communications Trailer. <i>County Board, EMA</i> (County funds, PDM) MEDIUM PRIORITY
Equipment	Monona Co	Complete. The EMS department has a fully equipped trailer that serves as a mobile response unit, training, center, and refuge/shelter location as needed.
Equipment	Monona Co	2020: Trailer designated for road barricade set-up; <i>County Engineer</i> (County funds, IDOT, PDM) HIGH PRIORITY
Equipment	Monona Co	Update. No action taken on this item but project is still needed. Project carries over to 2025 HMP. Carry over. Trailer designated for road barricade set-up; <i>County Engineer</i> (County funds, IDOT, PDM) HIGH PRIORITY
Equipment	Moorhead	Implemented. Fire Department assed UTV to improve access to wild fires and other emergency needs not accessible by roadway. Project was funded through grants and local fundraising efforts.
Equipment	Moville	2020: Drone for Fire Department -- assess and prepare before entering situation; determine best approach for grass fires, etc.; Assess areas of concern. <i>Fire Chief, City Council</i> (Department funds, Response support funds, PDM) MEDIUM PRIORITY
Equipment	Moville	Update not provided.
Equipment	Onawa	2020: Snow removal equipment; <i>City Streets Dept</i> (City funds, transportation funds) LOW PRIORITY
Equipment	Onawa	In progress. A newer plow truck is added to the budget for 2026. Carry over. Additional equipment is still needed. Snow removal equipment.
Equipment	Onawa	2020: Pump with greater than 6" capacity – function @ 1,000 gallon per minute; <i>City Administrator</i> (City funds, PDM) HIGH PRIORITY
Equipment	Onawa	Update. Action not taken. Portable pump is still needed and carries over to the 2025 HMP with modified priority level.

Equipment	Onawa	2020: Boat; <i>City Administrator, Fire Chief collaboration</i> (City Funds, Response support funds, PDM) LOW PRIORITY
Equipment	Onawa	Project closed. Action not taken. FD has not indicated dire need for new rescue boat Project removed from priority list.
Equipment	Oto	2020: Fire Dept in need of equipment and new facility; <i>Fire Chief</i> (City support, Department funds, Fire Association funds, FEMA AFG, CDBG facilities funds, State Revolving Fund loan) LOW PRIORITY
Equipment	Oto	Update. Facility and equipment improvements are still needed for the Oto Volunteer Fire Department. No action has been taken due to lack of funds. This project will carry into the 2025 HMP. Priority reflects feasibility, not need. Carry over. Fire Dept in need of equipment and new facility.
Equipment	Pierson	2020: ATV for use during road blockages; <i>City Council</i> (City funds, PDM) LOW PRIORITY
Equipment	Pierson	Update. Action not taken. Carry into 2025 HMP with same priority level. Carry over. ATV for use during road blockages.
Equipment	Plymouth County	Implemented. Plymouth County Law Enforcement added equipment to increase efficiency of services, especially in emergency situations. Additions include Bearcat, Incident Command Trailer, and multi-use (80-person capacity) Shelter trailer. <i>County law Enforcement.</i> (ARPA funds).
Equipment	Sgt Bluff	2020: Pumps for clean water transfer; <i>City Administrator, Streets Department</i> (City funds, PDM) HIGH PRIORITY
Equipment	Sgt Bluff	Complete. Pumps for use in diverting accumulated water during flooding and heavy rain events have been added to city equipment inventory. Cost of project completion not provided.
Equipment	Sgt Bluff	2020: Replace rescue boat. <i>Fire Department/EMS</i> (Department funds, City supports, Response support funds, fundraisers, PDM) LOW PRIORITY
Equipment	Sgt Bluff	Update. Fire Department has replaced pump tanker. Some additional equipment on budgeted (see new projects). Rescue boat replacement removed from priority list.
Equipment	Sgt Bluff	In progress. Handheld radios are in process of being replaced. Spring 2025 10 replaced with 4 still pending. <i>City, Fire Department.</i> (Local funds for those already replaced, Local funds and response funds as available for remaining) HIGH PRIORITY
Equipment	Sgt Bluff	2020: ATV for police Department to minimize access issues. <i>Police Dept</i> (Department funds, City supports, fundraisers, PDM) LOW PRIORITY
Equipment	Sgt Bluff	Update: UTV replacement has been initiated in budget conversations with a plan to replace at least one UTV within the next five years. Carry over. Replace 1 of 2 UTVs within 5 years.
Equipment	Whiting	2020: Interest in additional/better performing snow removal equipment; <i>City Council</i> (City funds, IDOT program funds, PDM) LOW PRIORITY

Equipment	Whiting	Complete. The city has a box plow for tractor, new scraper, refurbished plow, and new (used) sander. Better removal plan is in place which included the addition of a part time position.
Equipment	Woodbury County	2020: Sandbagging equipment/HESCO bags; <i>County Engineer, potential collaboration with partner County</i> (County funds, IDOT program funds, PDM) HIGH PRIORITY
Equipment	Woodbury County	Complete (with ongoing inventory maintenance required). County acquired 10 pallets of HESCO bags in addition to two 2" pumps, a 6" pump. Bags and sandbagging equipment was issued to address current year flooding. Old stock was used first with remainder stored for future use. Bags hold an approximate 10-year useful life so no additional are needed at this time.
Equipment	Woodbury County	2020: Additional trailer w/ 5 sets of road barricades. 3 trailered and ready to roll. 5 sets per trailer; <i>County Engineer</i> , (County funds, IDOT program funds, PDM) LOW PRIORITY
Equipment	Woodbury County	Project Closed. County determined that while extra equipment would be beneficial, it is not a practical cost consideration in the near future with county funds, nor response funding as may become available.
Equipment	Woodbury County	2020: Additional pumps - 12" & 18" capacity; <i>County Engineer</i> (County funds, IDNR program funds, PDM) HIGH PRIORITY
Equipment	Woodbury County	Update: Current practice is to borrow from established resources as needed (local farmer). Carry over. Should funding be available, county will further consider addition of such pumps to their inventory.

Development		
Policy	Sioux City	Implemented. City implemented standards of practice during COVID that serve as basis for future events that may require such measures including but not limited to public health and safety protections.
Policy	Onawa	2020: Review/revision of subdivision regulations to address runoff concerns resulting from displacement; <i>City Council, Zoning Commission, City Attorney</i> (Local funds) MEDIUM PRIORITY
Policy	Onawa	Update. No action taken on this item. Needs have been clarified, necessitating the inclusion of water diversion in plans. Formalizing discussed recommendations to subdivision plans is carried over to the 2025 HMP, with elevated priority. Carry over. Review and formal revision of subdivision regulations to address runoff concerns resulting from displacement.
Policy	Whiting	2020: Consider formalizing reference to DNR for Floodplain Development; <i>City Council, Zoning Commission, City Attorney</i> (Local funds) LOW PRIORITY
Policy	Whiting	Complete. City completed floodplain update in coordination with IDNR. City is participating in county-wide efforts to counter flooding. No cost associated with project outside of staffing hours.

Improve existing facilities & infrastructure	Aurelia	2020: Improve capacity for Community Center to be designated as cooling shelter and/or refuge location for extreme weather conditions. <i>City Council, City Maintenance</i> (Local Funds, Community Betterment Funds, PDM)
Improve existing facilities & infrastructure	Aurelia	Update. City still interested in improving facility prep for use as shelter/refuge with specific project identified: add generator. Carry over. Project for generator added under appropriate category.
Improve existing facilities & infrastructure	Cherokee	2020: Improve capacity and function of sewer system; <i>City Waterworks</i> (City funds, USDA program funds, IDNR program funds) MEDIUM PRIORITY
Improve existing facilities & infrastructure	Cherokee	Update: The city has made some improvements, additional are still needed. Project priority remains the same. Carry over. Improve capacity and function of sewer system.
Improve existing facilities & infrastructure	Cleghorn	2020: Improve infrastructure to better accommodate weather extremes such as heavy rain, frost/heave conditions – especially water lines and related infrastructure. <i>City Council, City Staff</i> (Local funds, capital improvement funds, DNR program funds). HIGH PRIORITY
Improve existing facilities & infrastructure	Cleghorn	Update. No specific action was taken to permanently address this concern. City will continue to implement mitigative measures within funded projects but will not continue to carry this as a priority item in the 2025 HMP.
Improve existing facilities & infrastructure	Cushing	2020: Extensive repairs on City Hall/Community Building necessary due to cumulative damages from wind, heavy snow, heavy rain, and fluctuating weather conditions. <i>City Council, City Maintenance</i> (City funds, Community Catalyst Building Remediation funds, Facility Improvements funds, PDM) HIGH PRIORITY
Improve existing facilities & infrastructure	Cushing	Completed. \$20- to \$30,000 has been invested in City hall improvements. Over \$1M have been invested in water systems improvements including a lift station and water distribution system improvements. Funding included \$350,000+ DNR grant, IFA funds, \$890,00 loan, and \$150,000+ in imminent threat funds (water mains).
Improve existing facilities & infrastructure	Galva	2020: Wastewater Plant upgrades are pending response from Iowa DNR. <i>City Council, IDNR</i> (IDNR program funds, City funds, State/federal loan programs) HIGH PRIORITY
Improve existing facilities & infrastructure	Galva	Substantially Completed. Anticipated project closure Feb 2025. Project costs not provided.
Improve existing facilities & infrastructure	Hinton	2020: Water booster to improve capacity as accesses through fire hydrants. <i>City Waterworks, Fire Chief</i> (City funds, Fire Department funds, PDM) MEDIUM PRIORITY
Improve existing facilities & infrastructure	Hinton	Update: No specific actions were taken to address this strategy. Carry over. Capacity improvements are still desired through specific fire hydrants.
Improve existing facilities & infrastructure	Hinton	2020: Lining sewer and manholes in flood plane to eliminate infiltration from flooding and water table; <i>City Maintenance & Waterworks departments, IDNR</i> (IDNR program funds, City funds, PDM) HIGH PRIORITY
Improve existing facilities & infrastructure	Hinton	Partial Completed. Manholes were lined in 2021. Project cost not provided.
Improve existing facilities & infrastructure	Hinton	Carry over. Sewer linings in floodplain to eliminate infiltration from flooding and water table. Project priority remains. <i>City Maintenance & Waterworks departments, IDNR</i> (IDNR program funds, City funds, Disaster Mitigation or Response/FMA as applicable) HIGH PRIORITY
Improve existing facilities & infrastructure	Hinton	2020: Repair golf course crossings damaged and washed away during high flow events. <i>City Parks Dept, City Maintenance</i> (City funds, Active

		Transportation funds, Healthy Community/Recreation funds, PDM) LOW PRIORITY
Improve existing facilities & infrastructure	Hinton	Complete. Project was implemented in 2020. Project cost not provided.
Improve existing facilities & infrastructure	Ida County	2020: Waterlines are not looped at MidWest Industries, reducing the available water pressure at fire hydrants. <i>County engineer, Midwest Indus business manager, EMA</i> (County funds, private funds, Response support funds, PDM) MEDIUM PRIORITY
Improve existing facilities & infrastructure	Ida County	Update. Jurisdictional oversight of need has been relegated to the City of Ida Grove. Related work is included for consideration under their new projects. While improvements specific to this site are still necessary, Project is closed at County level.
Improve existing facilities & infrastructure	Ida County	2020: Not all outlying shops are insulated. New project needed to add heat and insulation. Access and issues accelerating due to ice accumulation. <i>County Department of Secondary Roads</i> (County funds, Transportation facilities program funds, Building remediation funds) LOW PRIORITY
Improve existing facilities & infrastructure	Ida County	Update. Insulation and heating improvements still needed at Battle Creek shop, affecting access hindered by ice accumulation. Should funding become available, facility replacement is needed in Holstein. Carry Over. Insulate outlying shops.
Improve existing facilities & infrastructure	Ida Grove	2020: Casements along 7th St (Badger Creek); <i>City Roads Dept, collaborate with County Engineer</i> (City funds, IDOT Program funds, PDM) HIGH PRIORITY
Improve existing facilities & infrastructure	Ida Grove	Update: Still needed. Action not taken due to lack of dedicated funding. Continues to be a very big issue. Cost estimates around \$200,000 for mitigation. Carry over. Casements along 7th St (Badger Creek)
Improve existing facilities & infrastructure	Ida Grove	NOTE: This project was miscategorized under “Bridges & Roads” in the 2020 Plan. It has been moved to “Improve existing facilities & infrastructure. 2020: Full renovation of City Hall & attached community center/senior center, starting with roof. City project Manager, Council (Community Catalyst Building Remediation funds, Private funds, City funds, Connections Area Agency on Aging, AARP Healthy Communities funds) MEDIUM PRIORITY
Improve existing facilities & infrastructure	Ida Grove	Complete. City Hall was completely reconstructed.
Improve existing facilities & infrastructure	Le Mars	2020: Pedestrian bridge connecting rec trail to golf course. In interest of maintaining natural open spaces, and recoup loss due to lack of development in those areas, the city has invested in a thriving outdoor recreation network. Intending to be interconnected, rec trails connect most facilities. At present, a pedestrian bridge that connects the rec trail to the golf course is in need of major renovation or replacement. A temporary bridge is in place but it is not a long-term solution. The city is determining the best solution for the trail bridge, therefore costs are not yet determined. <i>City Administrator, Streets, Parks Depts</i> (City funds, Active Transportation funds, Health & Wellness program funds, Transportation Alternatives Program funds, Community Benefit funds) HIGH PRIORITY

Improve existing facilities & infrastructure	Le Mars	Update: Active implementation. Funding for this project are in place with work planned for 2025/2026. City streets and parks departments are involved in oversight. TAP funds with local match from City budget will cover project.
Improve existing facilities & infrastructure	Mapleton	2020: New motor needed to maintain operation of one of the municipal wells (Willow Vale unit) <i>City Water Dept., IDNR</i> (City funds, IDNR Clean Water/Drinking Water program funds) HIGH PRIORITY
Improve existing facilities & infrastructure	Mapleton	Complete. \$30,000 project has been completed.
Improve existing facilities & infrastructure	Mapleton	2020: Rebuild needed for lift station @ 8th & Ring; <i>City Water & Public Works Depts</i> (City funds, IDNR, PDM) HIGH PRIORITY
Improve existing facilities & infrastructure	Mapleton	Complete. Estimated project cost of \$50,000 – project has been completed.
Improve existing facilities & infrastructure	Quimby	2020: Wastewater infrastructure improvements needed to address increased waterflow through and near river, which has accelerated deterioration of stabilization. Redirection of wastewater lines necessary. <i>City Council, DNR as applicable, County departments as applicable.</i> (Local funds, approved loan and bond programs, CDBG) HIGH PRIORITY
Improve existing facilities & infrastructure	Quimby	Complete. Pipeline crossing river was relocated and reconstructed to pass over an area that runs straighter, reducing wear, length of exposed lines, and risk of contamination. Project included relocation of lift station to the east. Project funded in part by CDBG (\$300K) and FEMA (\$350K).
Improve existing facilities & infrastructure	Sioux City (amended & adopted 01/13/25)	2025: Carry over to 2025 HMP. Bacon Creek Conduit. Estimated \$35M project - Reconstruction and relocation beginning at Rustin Street continuing to the outlet west of Lewis Boulevard. The project addresses the deteriorated condition of the existing conduit underneath Gordon Drive and the risk of structural failure, posing a risk to the traveling public on Gordon Drive. The conduit will be relocated from underneath Gordon Drive off-alignment and the capacity will be expanded to withstand a 100-year flooding event. The project improves resiliency of the utility, transportation infrastructure, and the region. <i>City of Sioux City, IA DOT.</i> (City of Sioux City Engineering Dept, CIP FY 2028) HIGH PRIORITY.
Improve existing facilities & infrastructure	Sioux City (amended & adopted 01/13/25)	2025: Carry over to 2025 HMP. Bacon Creek Channel Reconstruction. Estimated \$18M project is a collaborative effort to stabilize the channel built in 1930. Flooding events have resulted in Missouri River backing up channel, causing entry to the combined sanitary sewer system. Backwater infiltration has caused significant damage to Wastewater Treatment Plant. Project addresses the compromised combined sanitary system and includes repurposing the existing site to coordinate with economic development and urban use vision planning. <i>City of Sioux City, IA DOT.</i> (City of Sioux City Engineering Dept., CIP FY2028) HIGH PRIORITY.
Improve existing facilities & infrastructure	Soldier	2020: Improve waterworks-related infrastructure to better sustain extreme weather conditions and extremes in temperatures resulting in damages from frost and heave activity. Specific attention to water tower and waterlines throughout City. <i>City Council, City maintenance/waterworks.</i> (Local funds, CDBG funds, approved loan opportunities) HIGH PRIORITY

Improve existing facilities & infrastructure	Soldier	Carry over. In progress - The city has completed phase I of its \$3.2M water tower replacement project, with expectation of going live fall 2025.
Improve existing facilities & infrastructure	Ute	2020: Waterworks and water tower project including generator backup system. <i>City Clerk, Project administrator, Engineering consultant</i> (City funds, Loans, CDBG) HIGH PRIORITY
Improve existing facilities & infrastructure	Ute	Complete. Water tower replaced – higher capacity, updated system (December 2024). Project cost exceeded \$3M. Segment of water mains replaced, and generator added. Funded through USDA RD , CDBG, local funds, GO Bonds.

Relocate critical facilities	Battle Creek	2020: Complications from 2019 flooding resulted in need for elevation of the city’s sewer lift station. <i>City Council, City maintenance/waterworks, collaboration with County EMA & Engineer as applicable.</i> (Local funds, PDM, Bonds/Loans through approved programs) HIGH PRIORITY
Relocate critical facilities	Battle Creek	Update. Project was not implemented but is still needed. No estimated timeline for completion as this is highly reliant on available funding sources. Project will carry into 2025 HMP. Carry over. Past flood issues resulted in need for elevation of the city’s sewer lift station.
Relocate critical facilities	Cherokee	2020: Move/raise lift station at Beech St; <i>City Water & Public Works Depts</i> (City funds, IDNR, PDM) HIGH PRIORITY
Relocate critical facilities	Cherokee	Update: Carry Over. Cherokee is expanding project scope to include several infrastructure improvements. In addition to Beech Street, lift stations at E Sumner< Riverview, Emmet Dr (MHI), E Bluff, and Spruces need rising and/or repairs. Cost estimates not immediately available. <i>City Water & Public Works Depts</i> (City funds, IDNR, Disaster Response/Disaster Mitigation funds as may be available) HIGH PRIORITY
Relocate critical facilities	Ida Grove	2020: Lift station needs raising -- Hillcrest (Off 5th St); <i>City Water & Public Works Depts</i> (City funds, IDNR, PDM) HIGH PRIORITY
Relocate critical facilities	Ida Grove	Update. Carry Over. Lift replacement still needed at Hillcrest Lift Station. Cost estimate not immediately available
Relocate critical facilities	Quimby	2020: Relocation or elevation needed for Lift Station to address flooding impacts. <i>City Council, City maintenance/waterworks, Coordination with County EMA as applicable.</i> (Local funds, DNR program funds, PDM funds, approved bond and loan programs) HIGH PRIORITY
Relocate critical facilities	Quimby	Complete. Lift station moved east as part of line improvements as noted under <i>Improve existing facilities & infrastructure</i> category of projects.
Relocate critical facilities	Sgt Bluff	2020: Interest in relocating 2nd Fire Station for improved response to more areas; <i>City Admin, Fire Chief, Zone Administrator</i> (City Funds, Fire Dept Funds, Fire Assoc funds, fundraisers, Response Support funds) LOW PRIORITY
Relocate critical facilities	Sgt Bluff	Update. Project not completed. Carry over to 2025 HMP. Carry over. Interest in relocating 2nd Fire Station for improved response to more areas.

Bridges & Roads	Cherokee	2020: Collaborate w/County and State on review of and implementation of roadway elevation improvements along Hwy 3 and/or Hwy 59; <i>City Administrator & Streets Dept, County Roads Dept, IDOT</i> (Transportation funds, City/county funds) MEDIUM PRIORITY
Bridges & Roads	Cherokee	Update. Several road/bridge projects are planned with 3 in progress and others pending. Bridges pending work: Railroad Creek Bridge and E Cherry St Bridge. Needed but not yet planned: Maple Street Bridge Work on Bypass scheduled with preparation in progress. Projects as listed are carried over to 2025 HMP with HIGH PRIORITY. Carry Over. Collaborate w/County and State on review of and implementation of roadway elevation improvements along Hwy 3 and/or Hwy 59
Bridges & Roads	Danbury	2020: Road repairs from runoff damages. Interest in preventive measures by way of redirection and retention methods. <i>City Maintenance/Council, County Engineer collaboration</i> (City funds, Transportation funds) HIGH PRIORITY
Bridges & Roads	Danbury	Complete. Road repairs necessitated by runoff from flood events have been completed and were covered by FEMA funds.
Bridges & Roads	Hinton	2020: Resurface alleys due to washout during rain events. <i>City Streets Dept</i> (City funds, PDM) HIGH PRIORITY
Bridges & Roads	Hinton	Update: Some resurfacing has been completed with other still pending. and is carried over to the 2025 HMP, reduced to lesser priority. Carry over. Resurface alleys due to washout during rain events
Bridges & Roads	Ida County	2020: At Ida Grove: Potential for work to add shoulder along Old Hwy 59 and M15, also trap area attention. Work is needed along Jasper Ave; County Engineer, Collaborate w/City Admin (County funds, Transportation funds, PDM) LOW PRIORITY
Bridges & Roads	Ida County	Complete. Shoulders as provided have been rebuilt. Project cost ranged from \$8-9M.
Bridges & Roads	Ida County	2020: At Ida Grove: When flooded, no access to city wells along Keystone Ave. Mapping of well needed north of 387th St, off M15. County has access road to maintenance sheds. Improvements needed. <i>County Engineer, Collaboration with City Streets Dept.</i> (County funds, City support, transportation funds, PDM) MEDIUM PRIORITY
Bridges & Roads	Ida County	Update: Carry over. <ul style="list-style-type: none"> • Collaborative project needed to develop west access point to City of Ida Grove to improve access to Keystone Ave wells. • Necessity of mapping of 387th is under consideration but is carried over to 2025 plan. • County shop south of town is needing access improvements – surface repairs. Grading/straightening is planned along 235th Street.
Bridges & Roads	Ida Grove	2020: Potential paving project on 6th St to improve drainage; <i>City Streets Dept</i> (City funds, Transportation funds, PDM) LOW PRIORITY

Bridges & Roads	Ida Grove	Update: Carry over. Project still needed. Cost estimated at \$1.4M includes drainage along with noted street repair needs.
Bridges & Roads	Ida Grove	Completed. E. 2 nd St resurfacing. \$300K investment. <i>City Streets Dept.</i> (Local funds).
Bridges & Roads	Meriden	2020: Street repaving project to address washout and weather-related deterioration. <i>City maintenance, City Council.</i> (Local funds) MEDIUM PRIORITY
Bridges & Roads	Meriden	Closed. Project not completed. Some work completed to maintain function. Work will be implemented incrementally without anticipation of PDM funding supports.
Bridges & Roads	Monona County	2020: Bridge and tube projects needed throughout the county; improve drainage patterns, reduce rate of deterioration on bridge components/foundation; <i>County Roads Dept.</i> (County funds, Transportation funds, PDM) HIGH PRIORITY
Bridges & Roads	Monona County	Update not provided. Several road and bridge projects were implemented with several more pending. Unless a specific drainage or access barrier is specified, such projects are not included in the mitigation plan.
Bridges & Roads	Onawa	2020: Resurfacing projects that will address drainage issues and minimize the effects of inclement weather-caused deterioration. <i>City Streets Dept, collaborate with County Roads</i> (City funds, Community Benefit funds, Transportation funds) HIGH PRIORITY
Bridges & Roads	Onawa	Update. No resurfacing projects have been completed. Patchwork is implemented as needed. Current projects anticipated at \$50,000 are set to begin in 2025. Full resurfacing is still needed and carries into the 2025 HMP. Carry over. Resurfacing projects that will address drainage issues and minimize the effects of inclement weather-caused deterioration.
Bridges & Roads	Plymouth County	2020: Roadway access/elevation projects identified @ Floyd River Basin and Deep Creek Basin areas. While floodmap revisions continue, the County does not anticipate significant changes in unincorporated areas. <i>IDNR, County Conservation, County Engineer</i> (Clean Water Conservation program funds, County funds, IDNR funds, Transportation funds) LOW PRIORITY
Bridges & Roads	Plymouth County	Update was not provided. Project removed from Priority List.
Bridges & Roads	Remsen (as amended at local level 8/10/2020)	Amendment: Box culvert replacement in flood prone area (5 th St between Jackson and Marion Streets). <i>City of Remsen, Beck Engineering contracted services, City Clerk, Public Works.</i> (anticipated funding: FMA/BRIC, local match via Road Use funds, and local option funds) HIGH PRIORITY Complete. Flood mitigation project was completed with addition of box culvert and redirection of runoff. Project cost was \$475,000 - paid using entirely local funds.
Bridges & Roads	Rodney	Moved to Drainage Projects section under "Flow Control". 2020: Interest in roadway drainage improvements; <i>City Council</i> (City funds, transportation funds, Community Benefit funds) LOW PRIORITY

Bridges & Roads	Soldier	2020: Road construction improvements needed to address buckling and weather-related deterioration. Specifically needed on road serving access to Ute. Additional throughout City. <i>City Council, Streets department, collaboration with County Roads dept & City of Ute as applicable.</i> (Local funds, transportation funds, approved bonding and local programs) HIGH PRIORITY
Bridges & Roads	Soldier	Update: In progress and ongoing. Phase I of the project has been completed. Scheduled improvements will continue through Spring and Fall on a rotating basis through 2030. Process will start over with overlay. At this time, this project will be removed from the priority list with mitigative actions met. The city may amend project back in if underwashing and runoff become prohibitive to routine maintenance, requiring more developed remediation.
Bridges & Roads	Whiting	2020: West St Bridge - pending evaluation and cost estimate; <i>City Council, Collaborate with County Engineer</i> (City funds, transportation funds, Community Benefit funds) HIGH PRIORITY
Bridges & Roads	Whiting	Complete. West St bridge and K45 bridge both redone in 2020. Project cost @ \$98,000. Loan balance remaining is \$45,000. K45 still needs new guard rails – pending (entered as new project).
Bridges & Roads	Whiting	2020: Elevate portion of roadway to correct dip in the road at Bertram intersection; <i>City Council</i> (City funds, transportation funds, Community Benefit funds) MEDIUM PRIORITY
Bridges & Roads	Whiting	Complete. Roadway elevation completed summer 2023.
Bridges & Roads	Woodbury Co	2020: Secondary Roads - about 30 bridge replacements necessary -- some immediate, <i>County Engineer, Contracted services</i> (County funds, IDOT Transportation funds) HIGH PRIORITY
Bridges & Roads	Woodbury Co	Specifics regarding completed and pending bridge projects were not provided, though the county continues to address its bridge repair backlog annually. Unless incorporated into a specific event-related recovery or prevention effort and amended, this item will not carry over to the 2025 HMP.
Bridges & Roads	Woodbury Co	2020: Secondary Roads - about 50 bridge needing rip rap, scour, overlay or other maintenance; <i>County Engineer, Contracted services</i> (County funds, IDOT Transportation funds) HIGH PRIORITY
Bridges & Roads	Woodbury Co	Specifics regarding completed and pending rip rap restoration/fortification projects were not provided. Replacement of rip rap is an annual maintenance item, with additional attention given post extreme weather event (flood, heavy rain, heavy snow, other incurred displacement). Unless incorporated into a specific event-related recovery or prevention effort and amended, this item will not carry over to the 2025 HMP.
Bridges & Roads	Woodbury Co	2020: Further incorporate mindful planning to accommodate overflow at some road points such as Old Hwy 141 and D38; <i>County Engineer, Contracted services</i> (County funds, IDOT Transportation funds) HIGH PRIORITY
Bridges & Roads	Woodbury Co	Update was not provided at the county's mitigation planning meeting.

flow control		
Flood protection	Cherokee	2020: Berm preventing runoff and Little Sioux Floodwaters from entering Spring Lake; <i>City Administrator, Parks Dept, IDNR</i> (City funds, IDNR Clean Water programs/Runoff control) HIGH PRIORITY
Flood protection	Cherokee	Completed. Project complete with construction of flood wall in 2021. Project cost & funding source not provided. However, 35' crest from 2024 flooding has presented additional concern for potential road washout. The city is interested in conducting a study to review options including but not limited to extending the wall. That is included as a new project in the 2025 HMP.
Flood protection	Hinton	2020: Floodgates @ dike; <i>City Council, IDNR</i> (City funds, PDM) HIGH PRIORITY
Flood protection	Hinton	Complete. Floodgate project completed 2021-2022. Cost & fund sources not provided.
Flood protection	Hornick	2020: Berm/raised rec trail to protect city from Ditch flooding; <i>City Council, County EMA, engineering consultant</i> (PDM and FEMA Disaster funds) HIGH PRIORITY
Flood protection	Hornick	Update – Phase 1, the mitigation portion of the project is complete . Berm has been substantially raised with primary phase of project completed 12/2024. Funded with IA Flood Mitigation dollars, the \$2.1M project included the development of a local Flood Mitigation Board. Phase 2 of the project, the trail, is not complete. The trail remains on the city's project list but will not be carried into the 2025 HMP as a mitigation action.
Flood protection	Le Mars	2020: Airport Flooding Protection - Implement protections to minimize erosion damage to runway & property overall. Floyd River w/in 50" of north end of runway. Measures to further improve previous bank stabilization efforts. Option: Reroute river; channelize. <i>City Administrator, Airport administration, IDNR</i> (Local funds, Economic Development funds, PDM) HIGH PRIORITY
Flood protection	Le Mars	Update: Project was not implemented and will be carried over to the 2025 HMP. Carry over. Further efforts are needed to stabilize riverbanks and creekbanks
Flood protection	Meriden	2020: Interest in flood control implementation to protect lagoon at north end of town. Flooding risk with heavy rain and/or rapid snowmelt. <i>City Council, city staff/maintenance</i> (Local funds, capital improvement funds, betterment funds, DNR program funding). HIGH PRIORITY
Flood protection	Meriden	Update. No action taken. City stated due to lack of funding, no major projects were completed. Project removed form priority listing.
Flood protection	Westfield	2020: City assessing options to reinforce lagoon to protect from flooding. <i>City Council, City maintenance/waterworks, County EMA and DNR as applicable.</i> (Local funds, PDM, approved bond/loan programs as applicable)

Flood protection	Westfield	Update. This project did not advance to a more permanent solution due to expenses attributed to 2019 flood recovery and again in 2024. Substantial berm repairs were completed. However, they proved insufficient for unprecedented flooding as occurred in 2024. Lack of funding and available resources contributed to delay in permanent solution. Project is still needed and will carry over to the 2025 HMP. Carry over. City seeking options to substantially reinforce berm and/or other flood protections around lagoon.
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Drainage projects	Correctionville	2020: Implement drainage projects as identified; <i>City Administrator/Streets/Public Works</i> (Local funds, IDNR project funds, PDM) HIGH PRIORITY
Drainage projects	Correctionville	Update: Driftwood Street ditches completed. Carry over. Continue implementation of drainage projects. Additional areas need attention.
Drainage projects	Hinton	2020: Stormwater management projects - drainage improvements; <i>City Administration, Contracted services, IDNR</i> (Local funds, IDNR program funds, Disaster funds, PDM) HIGH PRIORITY
Drainage projects	Hinton	Update: Annual road maintenance projects have included some drainage improvements. Carry over. Starview is in need of stormwater management improvements.
Drainage projects	Holstein	2020: Sidewalk trail at ball field and rec center with drainage project incorporated; <i>City Administration, Contracted services, County collaboration for trail projects</i> (Health & Wellness funds, Transportation Alternatives funds, Local funds, fundraisers, Walk/Bike program funds) LOW PRIORITY
Drainage projects	Holstein	Update. No work has been done to date. Project is still needed, but remains low priority due to lack of readily available funding supports. Carry over. Sidewalk trail at ball field and rec center with drainage project incorporated.
Drainage projects	Ida Co	2020: At Quimby drainage ditch dredging from Quimby and establishing routine/scheduled maintenance; <i>County Engineer, Collaborate with City staff, IDNR</i> (County Roads funds, local funds) HIGH PRIORITY
Drainage projects	Ida Co	Update: Dredging has been completed for some areas, however major maintenance is still needed. Carry over. Areas of particular need of drainage ditch dredging include 7 th Street at Rowher, Jasper, and M15. Old Hwy 59 still needs attention. Project carries over to 2025 HMP
Drainage projects	Ida Grove, OABCIG	2020: Drainage improvements are needed between the high school and Badger Creek; <i>City Administrator, School Board or Plant Engineering, IDNR</i> (Local funds, School District funds, IDNR program funds) HIGH PRIORITY
Drainage projects	Ida Grove	2020: There is interest in improving drainage at Cobb Park - raise elevation, pump to drain; <i>City Administrator, IDNR</i> (Local funds, IDNR program funds, PDM) LOW PRIORITY
Drainage projects	Ida Grove	Complete. Addressing some of the needs expressed in the 2 projects indicated above, the City has implemented a \$200,000 drainage project, installing a 36" tube along 7 th Street.

Drainage projects	Kingsley	2020: Terracing needed to ease floodplain restrictions. <i>City Administration, County Engineer collaboration, IDNR, Contracted services</i> (Local funds, County funds, IDNR Program funds, USDA program funds/loan program, Disaster funds, PDM) LOW PRIORITY
Drainage projects	Kingsley	Project closed. Updated floodplain resources decreased significance of potential impacts to indicated areas, thereby removing restrictions. City will continue to consider opportunities for terracing when implementing projects, however, this item has been removed from the priority list.
Drainage projects	Mapleton	2020: Wetlands designation within city limit; <i>project led by Mapleton Community Development Corps in collaboration with the Department of Agriculture and the DNR</i> (Limited expense anticipated) HIGH PRIORITY
Drainage projects	Mapleton	Project Closed. Project will not be implemented as cost of maintenance if enacted is not feasible.
Drainage projects	Merrill	2020: Improve ditch and drainway management. Conduct through clearing and implement maintenance plan. <i>City Council, City staff</i> (Local funds) HIGH PRIORITY
Drainage projects	Merrill	Update. Issues addressed at north end of town including routine maintenance. Problems still present with particular concern over riverine flooding. Additional attention is needed to determine prevention options. Ditch maintenance is ongoing and will continue. New project added for 2025 for other options to be determined.
Drainage Projects	Moorhead	AMENDMENT. 8/2023 – City is seeking to better address stormwater runoff. Sinkholes have been appearing throughout town. A study is needed to confirm cause and viable options for correction and mitigation. Council approved the amendment to include a scoping project and implementation plan, and re-adopted the Regional Hazard Mitigation Plan as amended.
Drainage Projects	Moorhead	Update: Action not implemented but still needed. Carry over. City is seeking options to improve stormwater drainage.
Drainage Projects	Rodney	Pulled from “Bridges & Roads” category. 2020: Interest in roadway drainage improvements
Drainage Projects	Rodney	Update: Some work has been done on 1st, 2nd, 3rd, and Main Streets. Carry over. Remaining streets throughout town still need work to improve drainage and drainage paths. Project is carried to 2025 HMP.
Drainage Projects	Salix (As amended 01/12/2022)	2022. Recent changes in permissible stormwater drainage methods have increased flood risk in Salix during periods of heavy rainfall and/or rapid snow/ice melt. Phase I: The City plans to pursue technical assistance including but not limited to a study or preliminary engineering to assess probable solutions. Phase II: Implement stormwater drainage system to resolve issues created by cancelation of agreement to direct stormwater into nearby Drainage District. Public Works, County Board of Supervisors, IDNR, USDA, other regulatory bodies as applicable (FEMA BRIC/FMA, local funds) HIGH PRIORITY
Drainage Projects	Salix	Update – Phase I: Complete. City worked with Farmer’s Drainage District and Woodbury County, assisted with contracted engineering firm, to conduct

		study and form a new drainage district – Approved 12/10/2024. Phase II will now be implemented under status as a drainage district, enabling a more expeditious and streamlined process.
Drainage Projects	Salix	Carry over. Phase II - The project identified through the study included the construction of a flow channel connecting the Salix Drainage District to the Farmers Drainage District, including a retention pond and other flow diversions.

Shelter	Correctionville	2020: Considering means of enabling refuge when community center and city hall are not open. Assess feasible options in accessing when otherwise closed, or alternate location available 24 hrs. <i>City administration, Local services, agencies, businesses</i> (Local funds – additional supports unknown until solution has been identified) MEDIUM PRIORITY
Shelter	Correctionville	Implemented. Community Center remains unlocked during anticipated extreme weather events, particularly in winter. The school was designated as command center, recovery center, and temporary residence for displaced families during the 2024 flood events.
Shelter	Hinton	2020: Storm Shelters @ City Parks; <i>City Administration, County EMA collaboration</i> (Local funds, Improving public spaces funds, PDM) LOW PRIORITY
Shelter	Hinton	Update: The Elementary School is designated as a refuge site for large scale disaster vents. Carry over. Additional shelter options needed.
Shelter	Ida Grove	2020: Issue formal recommendation for owners to add cement refuge shelter to trailer park to accommodate its four (4) residents; <i>City Administrator, Property Owner(s), Residents</i> (Local funds, private funds, Response support funds, PDM pending classification of facility) MEDIUM PRIORITY
Shelter	Ida Grove	Update - Resolved. The City has opted to designate the Rec Center as refuge/shelter location in the event of disasters. As such, a new project is added under “Generators” to substantiate use during extreme events that may include power outages.
Shelter	Lawton	2020: Include tornado-rated safety features in plans for new community center; <i>City administration, Project coordinator, EMA collaboration</i> (Local funds, private funds, fundraisers, PDM) MEDIUM PRIORITY
Shelter	Lawton	Implemented. City constructed a new city hall/community center/maintenance facility that enables reasonable shelter from extreme weather. While not FEMA-level designated, the center has interior space designated as a safe area. The county has designated the new facility has been designated by the county as a recovery center as needed. Project overall cost is about \$1.3M. In addition to city staff, the fire department has access to the building in the event of an emergency or extreme weather conditions.
Shelter	Marcus	2020: Interest in improvements of Fire Department to enable Safe Room designation. City Council, Fire Chief, County EMA as applicable. (Local funds, community benefit fund programs, PDM) HIGH PRIORITY

Shelter	Marcus	Implemented. An addition to the Fire Station has been completed allowing adequate space to serve as shelter site in the event of mass displacement. An ongoing concern is coordination of supplies in the event of such disaster. City will work with county and federal/state/local response teams as appropriate to attain and allocate supplies (such as cots) as needed.
Shelter	Merrill	2020: Interest in designating refuge locations at City Park and Campgrounds. Structural enhancements to be considered for formal designation. <i>City Council, City staff County EMA as applicable.</i> (local funds, community benefit programs, local groups, fundraising)
Shelter	Merrill	Update. No action taken due to lack of dedicated funding options. Project is still needed and carries into the 2025 HMP project list. Priority is due to funding constraints, not level of need. Carry over. Interest in designating refuge locations at City Park and Campgrounds.
Shelter	Monona County	2020: At Onawa: Interest in adding formal storm shelter with tornado designation at the Fairgrounds and at the Christian Camp within the State Park. <i>County Conservation/Parks Dept, EMA, IDNR/State Parks Dept, City administration</i> (County funds, IDNR Program funding, PDM, Community Benefit funds) LOW PRIORITY
Shelter	Monona County	Update. Project not completed as funding source has not made project feasible. Project will carry over to 2025 HMP. Carry over. At Onawa: Interest in adding formal storm shelter with tornado designation at the Fairgrounds &/or at the Christian Camp within the State Park
Shelter	Monona County	2020: Shelter at Peters Park; <i>County Conservation/Parks Dept, EMA, IDNR/State Parks Dept,</i> (County funds, IDNR Program funding, PDM, Community Benefit funds, fundraisers, PDM) LOW PRIORITY
Shelter	Monona County	Update. Not implemented. County still interested in pursuing project at low priority due to lack of funding. Project will carry into 2025 HMP. Carry over. Shelter at Peters Park.

technology		
Improve effectiveness	Akron-Westfield CSD	2020: Fire Alert System is under review to determine options for audio alerts and direction cues for visually impaired students/staff – Flashing beacon in place for hearing impaired persons; <i>School Board, Plant Engineering/Maintenance</i> (District funds, ADA supports, local funds, fundraisers, PDM) HIGH PRIORITY
Improve effectiveness	Akron-Westfield CSD	Complete. District invested \$150,000 on updates to its emergency alert system (2023). Already suited with flashing lights for deaf/hard of hearing students/staff/visitors, audio commands are now incorporated into the system to better serve visually impaired individuals.
Improve effectiveness	MMC-RU CSD	2020: District would like to place weather radios in each building; <i>School Board, Collaboration with EMA</i> (District funds, potential PDM funds) MEDIUM PRIORITY
Improve effectiveness	Marcus-Meriden-Cleghorn (MMC) CSD	Implemented. Both Systems within the MMC-RU School District are fully equipped with weather radios.
Improve effectiveness	Remsen Union (RU)	Implemented. Remsen Union system within the MMC-RU School District is equipped with handheld radios to better accommodate interdepartmental communications all at once.

Improve effectiveness	Moville	2020: Increase supply of handheld radios to improve inner and inter-department communications; <i>City Council, Collaboration with EMA</i> (City funds, potential PDM funds) LOW PRIORITY
Improve effectiveness	Moville	Implemented. The city police and fire departments are inter-connected allowing for immediate, in-time communications as needed. The city offices use All Contact enabling constant communication through departments.
Improve effectiveness	Rodney	2020: Promote available weather alert subscription services such as Alert Iowa and storm-spotter training as available. <i>City Clerk</i> (no cost anticipated) HIGH PRIORITY
Improve effectiveness	Rodney	Update: No action specific was taken to on this project, however staff would like to revisit available opportunities and share with residents. Carry over. Promote available weather alert subscription services such as Alert Iowa and storm-spotter training as available
Improve effectiveness	Rodney	2020: Improved communication w/County re: warning siren test schedule; <i>City administration, County EMA</i> (no cost anticipated) HIGH PRIORITY
Improve effectiveness	Rodney	Implemented. Siren was fixed in 2021 and testing is uniformly conducted on a routine schedule.
Improve effectiveness	Woodbury Co	2020: EMA - Improve weather radio/communication receptors in southeast area of county; County EMA, County Board, State Communications (County funds, state program funds, PDM) MEDIUM PRIORITY
Improve effectiveness	Woodbury Co	Implemented. The county completed an upgrade of their communications systems, improving reception in problem areas. Funding source and cost were not provided.

natural barriers/ supports		
Retention Pond	Bronson	2020: Consideration to addition of Retention Pond to mitigate flooding; improve effectiveness of natural space in mitigation; <i>City administration, IDNR, Collaboration with County EMA, Contracted engineer services</i> (Local funds, Community Benefit funds, IDNR Program funds, PDM) LOW PRIORITY
Retention Pond	Bronson	Update: Action has not been taken due to other priorities, however project remains a concern for the city and will continue through the 2025 HMP planning period. Carry over. Assess opportunity to implement retention pond to mitigate flooding through natural methods.
Dike improvement	Merrill	2020: Implementation of improvements to substantiate dike as barrier to flooding. <i>City Council, County, and DNR collaboration as applicable.</i> (Local funds)
Dike improvement	Merrill	Update. Cells were raised in lagoon project completed in 2019. Area was still severely impacted by floods in 2024 necessitating further consideration and expanded options.
Trees	Rodney	2020: Funding support to sustain/improve tree population; <i>City administration</i> (City funds, IDNR programs, UPS Tree Grants and similar community reforestation funds, private funds) LOW PRIORITY
Trees	Rodney	Update: No action has been taken due to lack of available funds (including local match). Community will continue to seek funding opportunities to re-substantiate its tree population. Carry over. Funding support to sustain/improve tree population.

Stabilization	All Counties	2020: Assess and test drainage controls on routine schedule. Additional assessment during heavy periods of rain/snow melt. Include efforts to stabilize guideways. Respective departments under Secondary Roads, contracted professionals as needed (annual budget funding for maintenance once established, Additional funds to develop program may require additional budget requests, grant funds through State and Federal programming) HIGH PRIORITY
Stabilization	All Cities	2020: Assess and test drainage controls on routine schedule. Additional assessment during heavy periods of rain/snow melt. Include efforts to stabilize guideways. Respective departments under Public Works, Streets, City Council, contracted professionals as needed (annual budget funding for maintenance once established, Additional funds to develop program may require additional budget requests, grant funds through State and Federal programming) HIGH PRIORITY
Stabilization	All School Districts	2020: Assess and test drainage controls on routine schedule. Additional assessment during heavy periods of rain/snow melt. Include efforts to stabilize guideways. Respective departments under Plant Engineering, Maintenance, School Board, contracted professionals as needed (annual budget funding for maintenance once established, Additional funds to develop program may require additional budget requests, grant funds through State and Federal programming) HIGH PRIORITY
Stabilization	Anthon	2020: Riverbank stabilization @ access point; City administration (City funds, Disaster funds, PDM) HIGH PRIORITY
Stabilization	Anthon	Update. Stabilization was implemented, however, the city would like a more permanent solution to reduce continuous rip rap replacement. Project will carry into 2025 HMP. Carry over. Riverbank stabilization @ access point; City administration (City funds, Disaster funds, PDM) HIGH PRIORITY
Stabilization	Castana	2020: Modify road overlay with "packable rock" or more stable substance to minimize washout episodes; City Maintenance (City funds, PDM) MEDIUM PRIORITY
Stabilization	Castana	Update. Carry over. Due to multi-faceted and severe funding constraints, action was not taken on this project. The city is interested in stabilizing the gravel roads throughout its hilly terrain to address proneness to wash out. Carry over. Modify road overlay with "packable rock" or more stable substance to minimize washout episodes
Stabilization	Holstein	2020: Drainage projects to stabilize dirt in areas prone to washout; City Maintenance/Streets (Local funds, PDM) HIGH PRIORITY
Stabilization	Holstein	Update: Carry over. Efforts are ongoing with consideration being given to more long-term solutions. Determination of such action has not been made. Project will carry to 2025 Plan, retaining HIGH PRIORITY.
Stabilization	Holstein	2020: Substantiate barriers @ gateway to community; City administration, County Engineer, EMA (Local funds, County funds, PDM, Community benefit grant funds) HIGH PRIORITY
Stabilization	Holstein	Project closed. No update on this activity is available. Community is not intending further action on this project at this time.
Stabilization	Ida Grove	2020: Rip rap needed @ Moorhead Ave Bridge; City administration & Streets Dept, County Engineer (Local funds, if scheduled accordingly State/Federal Transpo funds PDM) HIGH PRIORITY
Stabilization	Ida Grove	Update. Bridges are inspected every 2 years. 6 bridges are receiving ongoing erosion control (rip rap). Two bridges are scheduled for major repairs within the next 5 years as noted under New Projects: Bridges & Roads.

Stabilization	Ida Grove	Complete. Moorhead Ave reconstruction completed in 2022 with nearly \$2.24M invested. Funding sources include \$1M in SWAP funding was designated for this project.
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D. Risk Assessment

Regionally, there are a few notable centers of population with Sioux City hosting the most residents and Monona County having the highest proportion of aging residents 65 years and older. Public input identifies Severe Winter Storm, Tornado/Windstorm, and Flash Flooding as causing the most concern. Thunderstorm with Lightning/Hail and Extreme Heat were frequently rated with a high level of concern and consistently in the respondents' top three concerns.

Published: Jul. 9, 2024 at 4:57 PM CDT



SIOUX CITY (KTIV) - Iowa Gov. Kim Reynolds announced Tuesday that Woodbury County has been added to the Presidential Major Disaster Declaration for the flooding seen in June.

According to the governor's office, Woodbury County residents are now eligible for Individual Assistance under the previously approved Major Disaster Declaration for Iowa counties hit by June's severe weather. Those eligible for the assistance are people who received significant damage from severe storms, flooding, straight-line winds and tornadoes that occurred from June 16, 2024, and onward.

The Federal Emergency Management Agency's (FEMA) Individual Assistance Program is already activated for eight other Northwest Iowa counties. Those included are Buena Vista, Cherokee, Clay, Emmet, Lyon, O'Brien, Plymouth, and Sioux Counties.

www.ktiv.com/2024/07/09/woodbury-county-is-now-part-presidential-disaster-declaration/?utm June 9, 2025

SUMMARY OF DISASTERS

3000-05 5357: Between June 20 and June 22, 2024, Iowa's Regional Planning Area 4 (RPA 4), including Sioux City and surrounding communities, experienced unprecedented rainfall. In some areas, rainfall totals reached up to 15 inches over this period, with localized amounts exceeding 20 inches in parts of southeastern South Dakota and northwestern Iowa.

This extreme precipitation led to widespread flash flooding, overwhelming rivers such as the Big Sioux, Little Sioux, and Rock Rivers, and causing levee breaches in towns like Rock Valley.

The flooding resulted in extensive property damage, infrastructure destruction, and necessitated numerous evacuations and rescues.

Condition: The 2020 Midwest derecho significantly impacted Iowa's Rural Planning Agency (RPA4) region, which includes counties such as Woodbury, Plymouth, Cherokee, Ida and Monona. On August 10, 2020, a powerful windstorm known as a Derecho swept across the Midwest, causing widespread damage. In Iowa, the storm destroyed over 10 million acres of corn and soybean crops, affecting approximately 43% of the state's cropland. This powerful windstorm not only devastated crops but also caused widespread property damage, power outages, and infrastructure disruptions, leading to significant recovery efforts throughout the region and across the state.

Part: While train-related incidents in the region are not constant, they have been a recurring issue over the years, particularly at railroad crossings. Many communities have taken steps to address these concerns through enforcement and awareness efforts. However, the recurrence of such incidents underscores the need for continued vigilance and improvement in railroad crossing safety measures.

RECORD OF RECENT EVENTS

There are several resources for weather event records of occurrence within the region. Some examples are provided within the *Description* section of Identified Hazards portion of this plan and reference sites such as NOAA, local newspapers, and the National Weather Service. To highlight the risk some hazards pose, State and Presidential Disaster declarations are provided for reference. FEMA includes information specific to the Disaster Declaration Process on its website stating:

... All emergency and major disaster declarations are made solely at the discretion of the President of the United States.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5207 (the Stafford Act) §401 states in part that: "All requests for a declaration

by the President that a major disaster exists shall be made by the Governor of the affected State."¹⁸

Presidential Declarations from 11/01/2019 through 12/31/2024 that include all or some of the Region follow.

<i>ID</i>	<i>Type</i>	<i>Date</i>	<i>Incident Type</i>	<i>Declaration Title</i>	<i>Designated Area</i>
DR-4483-IA	DR	3/23/2020	Biological	COVID-19 PANDEMIC	C
EM-3480-IA	EM	3/13/2020	Biological	COVID-19	C
DR-4642-IA	DR	2/23/2022	Severe Storm	SEVERE STORMS, STRAIGHT-LINE WINDS, AND TORNADOES	C
DR-4784-IA	DR	5/24/2024	Severe Storm	SEVERE STORMS, TORNADOES, AND FLOODING	C
DR-4796-IA	DR	6/24/2024	Severe Storm	SEVERE STORMS, FLOODING, STRAIGHT-LINE WINDS, AND TORNADOES	C
DR-4483-IA	DR	3/23/2020	Biological	COVID-19 PANDEMIC	I
EM-3480-IA	EM	3/13/2020	Biological	COVID-19	I
DR-4483-IA	DR	3/23/2020	Biological	COVID-19 PANDEMIC	M
EM-3480-IA	EM	3/13/2020	Biological	COVID-19	M
DR-4796-IA	DR	6/24/2024	Severe Storm	SEVERE STORMS, FLOODING, STRAIGHT-LINE WINDS, AND TORNADOES	M
DR-4483-IA	DR	3/23/2020	Biological	COVID-19 PANDEMIC	P
EM-3480-IA	EM	3/13/2020	Biological	COVID-19	P
DR-4796-IA	DR	6/24/2024	Severe Storm	SEVERE STORMS, FLOODING, STRAIGHT-LINE WINDS, AND TORNADOES	P
DR-4483-IA	DR	3/23/2020	Biological	COVID-19 PANDEMIC	W
EM-3480-IA	EM	3/13/2020	Biological	COVID-19	W
DR-4796-IA	DR	6/24/2024	Severe Storm	SEVERE STORMS, FLOODING, STRAIGHT-LINE WINDS, AND TORNADOES	W

According to the Iowa HSEM site, a Governor’s Disaster Proclamation begins the process where:

¹⁸ Source: <https://www.fema.gov/disaster-declaration-process>

State resources may be activated and deployed to assist with the ongoing disaster at no cost to local jurisdictions. State resources include equipment, personnel, technical assistance/guidance, supplies, and essential services to provide assistance in the form of debris removal, traffic control, levee patrol, security, vaccines, transportation, and other emergency response and recovery capabilities. A governor's proclamation may also make assistance available to low income residents in the proclaimed counties.¹⁹

Iowa Governor's Disaster Declarations involving one or more counties in the Region follow showing date of declaration, declaration number, incident, and county/counties from November 2019 through December 2024.

<i>Date</i>	<i>Proc #</i>	<i>Incident</i>	<i>Area</i>
8/19	2024-42	Severe Storms and Flooding June 21 and continuing	(Monona)
8/1	2024-39	Severe Storms July 29 and continuing	(Cass, Mills, Plymouth, Pottawattamie, Wapello, Webster, and Woodbury)
7/22	2024-37	Extension for June Severe Storms	(Buena Vista, Cherokee, Clay, Dickinson, Emmet, Fremont, Harrison, Kossuth, Lyon, Mills, Monona, O'Brien, Osceola, Plymouth, Pottawattamie, Sioux, Cerro Gordo, Floyd, Hancock, Humboldt, Palo Alto, Pocahontas, Webster, Winnebago, Woodbury, Worth, and Wright)
7/15	2024-34	Disaster Recovery Housing Assistance Program Activation	(Adair, Adams, Buena Vista, Cedar, Cherokee, Clarke, Clay, Emmet, Harrison, Jasper, Lyon, Mills, Montgomery, O'Brien, Plymouth, Polk, Pottawattamie, Ringgold, Shelby, Sioux, Story, Union and Woodbury)
7/3	2024-32	Severe Storms and Flooding June 21 and continuing	(Buena Vista, Cerro Gordo, Cherokee, Clay, Dickinson, Emmet, Floyd, Fremont, Harrison, Hancock, Humboldt, Kossuth, Lyon, Mills, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Pottawattamie, Sioux, Webster, Winnebago, Woodbury, Worth and Wright)
6/28	2024-31	Severe Storms and Flooding June 21 and continuing	(Buena Vista, Cerro Gordo, Cherokee, Clay, Dickinson, Emmet, Floyd, Fremont, Harrison, Hancock, Humboldt, Kossuth, Lyon, Mills, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Pottawattamie, Sioux, Webster, Winnebago, Woodbury, Worth and Wright)
6/26	2024-30	Severe Storms and Flooding June 21 and continuing	(Buena Vista, Cerro Gordo, Cherokee, Clay, Dickinson, Emmet, Floyd, Fremont, Harrison, Hancock, Humboldt, Kossuth, Lyon, Mills, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Pottawattamie, Sioux, Webster, Winnebago, Woodbury, Worth and Wright)
6/26	2024-29	Highly Pathogenic Avian Influenza (HPAI) Extension	(Sioux, Cherokee, and Sac)

¹⁹ Source: https://www.homelandsecurity.iowa.gov/disasters/disaster_proclamations.html

6/24	2024-26	Severe Storms and Flooding June 21 and continuing	(Fremont, Harrison, Mills, Monona, and Pottawattamie)
6/22	2024-24	Severe Storms and Flooding June 21 and continuing	(Buena Vista, Cerro Gordo, Cherokee, Clay, Dickinson, Emmet, Floyd, Hancock, Humboldt, Kossuth, Lyon, O'Brien, Osceola, Plymouth, Pocahontas, Sioux, Webster, Winnebago, Woodbury, Worth, and Wright)
6/14	2024-20	Severe weather beginning June 12 and continuing	(Monona and Woodbury Counties)
6/2	2024-17	Highly Pathogenic Avian Influenza (HPAI)	(Cherokee County)
2/23	2023-05	Avian Influenza – Extension for Buena Vista, Cherokee, Ida, and Sac Counties	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)
1/27	2023-04	Avian Influenza – Extension for Buena Vista, Cherokee, Ida, Sac, and Wright Counties	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)
1/3	2023-01	Avian Influenza – Extension for Buena Vista, Cherokee, Ida, Sac, and Wright Counties	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)
12/13	2022-33	Avian Influenza – Ida County	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)
12/6	2022-32	Avian Influenza – Cherokee and Sac County	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)
5/31	2022-20	Severe weather beginning May 26 and continuing	(allows state resources to be utilized to respond to, and recover from, the effects of severe weather in Boone, Des Moines, Hamilton, Ida, Lyon and Webster counties)
5/20	2022-19	Avian Influenza – Extension for Bremer, Buena Vista, Cherokee, Guthrie, Hamilton, Hardin, Osceola, Sac, and Taylor Counties	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)
4/22	2022-17	Avian Influenza – Extension for Bremer, Buena Vista, Cherokee, Franklin, Guthrie, Hamilton, Hardin, Humboldt, Osceola, Sac, and Taylor Counties	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)

3/31	2022-10	Avian Influenza – Cherokee and Osceola Counties	(allows state resources from Iowa Homeland Security, the Iowa Department of Agriculture and Land Stewardship, and other agencies to assist with tracking and monitoring, rapid detection, containment, disposal, and disinfection, waives regulatory provisions related to commercial vehicles responding to affected sites)
12/16	2021-29	Severe weather beginning December 15 and continuing	(allows state resources to be utilized to respond to and recover from the effects of this severe weather in Emmet, Franklin, Humboldt, Palo Alto, Pocahontas, and Woodbury counties)
12/16	2021-28	Severe weather beginning December 15 and continuing	(allows state resources to be utilized to respond to and recover from the effects of this severe weather and activates the Iowa Individual Assistance Grant Program for qualifying residents, along with the Disaster Case Management Program, for the following counties: Allamakee, Appanoose, Audubon, Bremer, Buena Vista, Butler, Calhoun, Cass, Cerro Gordo, Cherokee, Chickasaw, Davis, Fayette, Floyd, Greene, Guthrie, Hamilton, Hancock, Hardin, Harrison, Howard, Ida, Kossuth, Lucas, Madison, Marshall, Mills, Mitchell, Monroe, Montgomery, O’Brien, Page, Pottawattamie, Ringgold, Sac, Shelby, Union, Washington, Webster, Winnebago, Winneshiek, Wright, and Worth)

While natural disaster-related proclamations are self-explanatory, harvest and fuel shortage proclamation can increase risk in unexpected ways. Both proclamations result in ease of transport restrictions related to hours worked, and some time load capacity, to meet increased demands – for fuel or for expediency in transporting ag products. Conditions, while apparently deemed necessary, compound potential effects of all hazards. Drivers are likely to be more tired and therefore more at risk for a mistake. Fuels loads are already volatile. Increased capacity on grain loads further stresses roadways, accelerating deterioration and ultimately intensifying the impact of weather disasters such as flooding. Therefore, inclusion of these conditions is consistent with the intent of this plan to guide mitigation efforts.

Additional risk can be assessed due to landforms and geologic characteristics of a given area. Presence of loess hill landforms within the region contribute to mitigation planning at onset of development. Author Jean C. Prior includes the following in her book, *Landforms of Iowa* (University of Iowa Press, 1991) as drawn from Iowa Geological Survey. Please note: quoted text includes edits by Drew Hutchinson as provided.

The erodibility of loess and its instability when wet pose other serious problems and land-use hazards in this region. Soil erosion rates are very high, and the amount of eroded sediment carried in streams draining the region is among the highest recorded in the United States. Gully erosion is especially pronounced,

and these deep, narrow, steep-sided features are characteristic of the region's smaller drainages (photo, left). Gullies lengthen headward, deepen, and widen quickly after rainstorms, cutting into cropland, clogging stream channels and drainage ditches, and forcing costly relocations of bridges and pipelines.

County and Jurisdiction Profiles include records of events more specific to respective communities, including NOAA Storm Event Database tables of reported events.

Historic December Severe Weather Outbreak Brings Damaging Winds and Tornadoes to Northwest Iowa

Sioux Falls, SD
Weather Forecast Office

[Weather.gov](#) > [Sioux Falls, SD](#) > Historic December Severe Weather Outbreak Brings Damaging Winds and Tornadoes to Northwest Iowa

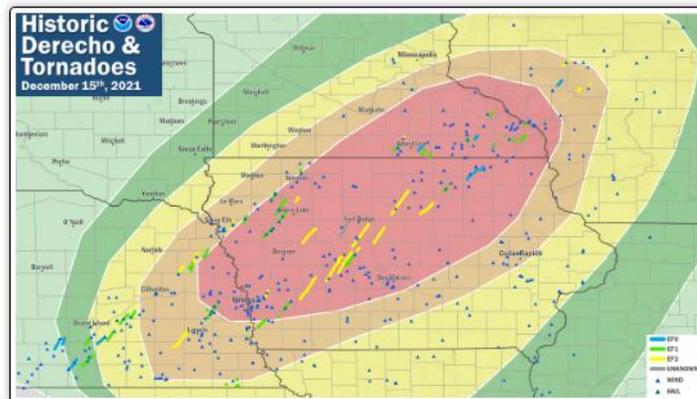
[Current Hazards](#) [Current Conditions](#) [Radar](#) [Forecasts](#) [Rivers and Lakes](#) [Climate and Past Weather](#) [Local Programs](#)

Overview

An unseasonably strong and dynamic winter system brought severe thunderstorms and tornadoes to portions of Nebraska, Iowa, Minnesota and Wisconsin on Wednesday, December 15. In addition to this, the region experienced widespread strong winds, which resulted in numerous trees, structures, and powerlines being damaged.

To put things into perspective on how rare this event was, it was the first time since record keeping began in 1986 that our office had to issue both a severe thunderstorm and tornado warning during the month of December, with 6 and 8 issued respectively.

In total, this event led to 189 warnings being issued across the central U.S., with 118 of those being for severe thunderstorms and the remaining 71 being for tornadoes.



SPC Day 1 Outlook and Reports - December 15, 2021

<https://www.weather.gov/fsd/20211215-Tornado-nwia?utm> June 9, 2025

Using the records of events and future probability scale using contributing factors such as geologic, climate, and historical occurrence, not all disasters are regionally significant. In the same manner, some jurisdictions experience a higher susceptibility than others.

E. Mitigation Goals

This Regional Hazard Mitigation Plan serves to outline a singular objective: Improve the Region's resilience to natural disasters through effective and efficient investment of public funds and private investment collaborations. This can be achieved by:

1. Maximizing use of existing *resources* and collaborations.
 - a. Take advantage of *natural resources* as mitigation components
 - b. Investigate available *human and organizational resources* through existing collaborations and civic supports such as County Emergency Management Agencies, regional training opportunities through emergency response associations, the LEPC, local businesses and health and human services agencies.
 - c. Implement *technology-based resources* that are low cost, free, or already funded.
2. Improve *flow* of information and provide education. Use established means of communication to educate on preparedness and raise awareness about hazard mitigation. For example – city website, utility billings, community bulletin board or message board, newsletter, and school district communications.
3. *Protection* of our people, public and private environments, facilities, and assets. Implement actions and strategies that significantly decrease risk associated with the effects of natural and other hazards that may otherwise result in the loss of life or damage to or loss of property.
4. Continued *operations* in the event of a natural disaster. Establish means of maintaining function of city operations and response efforts regardless of circumstance, ensuring availability of appropriate equipment as needed.
5. Implement well-planned projects that address *risks* or serve more than one purpose. Reduce vulnerability to hazardous events by incorporating mitigation

actions/strategies into all capital improvement and community betterment projects. Promotion of personal well-being and healthy living improves individual resilience and contributes to added strength of the whole.

F. Mitigation Actions, Strategies, & Projects

The intent of this Plan is to guide project planning in a manner that offers resilience as opposed to reaction. It serves as a reminder to assess the cause of what is costing the community the most money on a recurring basis, and to determine ways to mitigate or eliminate those recurring expenses. Ideally, all jurisdictions would be able to implement all of the best practices discussed through the course of developing this Plan. Realistically, some communities are in a position to consider presented actions and strategies as part of a new project only, recognizing current losses as just that – losses. As a Regional Plan, general actions and strategies are provided as uniform considerations for all communities. Projects that are actually planned or are in development are included in the respective community profiles. **A table outlining projects by jurisdiction for each priority hazard is included in Appendix B: Planning Process Documentation.**

There are no across-the-board solutions to every problem resulting from natural and other hazards. Geography and topography varies by community while weather patterns are fairly consistent. Some weather events (such as tornado or hail) are equally likely to occur in the region, however impact may be isolated to a single, small area. Technology is the same everywhere, though access varies by location. Some municipalities have the means to guide growth in a methodical, strategic manner and others operate in a more responsive mode, making adjustments as needed. Available non-financial resources are similar for all jurisdictions. However, population, a specific event, or per capita income often drive monetary awards and allocations. Understanding the elements that remove uniformity of implementation of desired strategies and actions is a significant consideration in assessing risks and identifying projects for each jurisdiction. With such factors included for consideration, it may be assumed that the minimum benefit of proposed actions is protection of a jurisdiction's given valuation. As a base point, the valuation as provided in County, City, and School District profiles indicates the least of which may be protected and/or improved by mitigation actions as provided. Interdependency of public facilities, buildings, and

infrastructure justifies use of an overall valuation as opposed to that of a singular space. Benefits to private properties and individuals are assessed during project planning and funding procurements but are not part of the consideration for prioritizations in this Plan. Using this foundation, a listing of actions and strategies that are of interest to all or most of the communities and districts included in this Plan follows under *Region-Wide Recommendations*.

GUIDING PRINCIPLES FOR DETERMINING ACTIONS, STRATEGIES, & PROJECTS

As mentioned in the Region Capabilities discussion, a thriving transportation network is critical in defining access and evacuation in the event of some hazardous incidents, an in response to most of them. Regional transportation projects that are eligible for state allocations of federal funds are processed through the MPO and SRTPA under specific programs that include the Transportation Improvement Program (TIP). Involving a 5-year planning period, projects are determined well in advance of implementation and often have the overall effect of improving resilience during and after hazardous events. More information about TIP and other transportation projects can be found on SIMPCOs website at www.simpco.org under Divisions, Transportation Planning.

Additional detail by project is provided in Title III, Section E for projects included in the 2020 HMP and in Section F for projects identified for implementation in the next five years.

PRIORITIZING ACTIONS

High Priority Projects include one or more of the following considerations.

- Action reduces risk to persons and properties in the event of natural or other disaster
- Action is imminently necessary and unavoidable (especially in situations as they arise that create necessity of immediate response). Action may be temporary or permanent
- Reduction/Elimination of recurring damages
- Collaborative projects that serve multiple purposes or may be combined with other funded projects
- Improves use of existing facilities, structures, infrastructure, programs, and/or tools
- Lack of response results in noncompliance
- Attainability of funding

- Addresses accessibility thereby reducing the risk to persons with limited mobility, hearing, and/or vision

Moderate or Medium Priority projects have some of the same characteristics as high priority projects. However, when conditions are stable, conditions are such that action may be delayed until additional funding is secured or work aligns with other planned projects. If conditions experience rapid deterioration, such projects would move to High Priority.

Low Priority projects are those that are best implemented as elements within new or potential projects or projects that may only be possible in the aftereffects of a hazardous event.

Projects as deemed necessary or desired based on current conditions may vary greatly in a very short time period. Expected issues, such as flooding along the Big Sioux and Little Sioux Rivers, have mitigation in place such as floodplain designations. Unforeseen events, such as pandemic human disease decreasing functioning capacity of emergency response teams, have unknown impacts and are key reminders to consider a wide range of obstacles and how they may be countered. A formal Disaster Declaration from City to State to Presidential initiates emergency funding supports and are therefore not the primary focus of projects outlined in this plan. However, with each extreme weather or hazardous event, communities learn more about their own resilience and are then able to further develop mitigation projects. To accommodate newly identified projects, a jurisdiction may at any time amend its identified actions, strategies, and projects by adopting the necessitated amendment at the jurisdiction level and communicating that update with the County, County Emergency Management, the State Department of Emergency Management, and FEMA.

The primary benefit in planning mitigation measures as a region is the ability to identify actions that are applicable to all or most participating jurisdictions. Not all participants may be able to initiate immediate implementation on any given action, in some cases they may not be able to proceed without a disaster declaration and receipt of related allocated funds at all. However, incorporating knowledge of ideal measures into this and other jurisdictional planning documents enables consistent goal setting and project development.

In the interest of maintaining a region-level accounting of mitigation actions, strategies and projects, all identified projects as determined necessary through the development of this Hazard Mitigation Plan are listed below as well as in the corresponding jurisdiction profile. Projects are grouped under common Goals, Hazards Addressed, and type of project. Beside the city name is the project description, listing of responsible parties (*italicized*), and potential funding sources (in parentheses). Indications do not imply formal assignation of project lead, nor does it imply guaranteed funding. Information is provided based on likely process of implementation. Jurisdictions are responsible for maintaining adequate Progress Reports to ensure accurate and complete follow-up on future updates to this Plan. This record outlines those actions as required for update in successive plan development.

IDENTIFIED ACTIONS, STRATEGIES, & PROJECTS

Communication /Education		
Promo/Info	Akron-Westfield CSD, Cherokee CSD, Ridge View CSD, Hinton CSD, Kingsley-Pierson CSD, Le Mars CS, MMC and RU CSDs, River Valley CSD, SB-L CSD, SCCSD, Westwood CSD	New. The school will pursue opportunities to share information with students & their families. District plans to coordinate with County EMA for PSA formatted messages to include in communications and on website. Information to be shared includes but is not limited to: Increasing water intake during extreme heat and/or extreme dry conditions; Red Flag warning awareness; Lightning safety, Snowstorm/Heavy snow safety, Tornado safety. These activities are intended to reduce risk of life and loss/damage to property. <i>District admin team, Principal, Superintendent's office, County EMA</i> (no funding needs anticipated) HIGH PRIORITY
Promo/Info	Cherokee Co	New. Enhance education materials and communications on water conservation and responsible use during drought; red flag warning awareness during dry conditions; winter weather safety; lightning safety; Extreme heat safety; flood safety. <i>County EMA, IA DNR.</i> (No funds needed). HIGH PRIORITY
Promo/Info	Akron, Kingsley, Le Mars, Merrill, Oyens, Remsen, Westfield	New. PSAs - Improve communications of existing programs and systems as available including but not limited to Alert Iowa, Increasing water intake during extreme heat and/or extreme dry conditions; water conservation (drought considerations); Red Flag warning awareness; Lightning safety, Snowstorm/Heavy snow safety, Tornado safety. These activities are intended to reduce risk of life and loss/damage to property. <i>City Clerk, County EMA</i> (no funds needed) HIGH PRIORITY
Promo/Info	Anthon, Bronson, Correctionville, Danbury, Hornick, Lawton, Moville, Oto, Pierson, Salix, Sloan, Smithland	New. PSAs - Improve communications of existing programs and systems as available including but not limited to Alert Iowa, Increasing water intake during extreme heat and/or extreme dry conditions; water conservation (drought considerations); Red Flag warning awareness; Lightning safety, Snowstorm/Heavy snow safety, Tornado safety. These activities are intended to reduce risk of life and loss/damage to property. <i>City Clerk, County EMA</i> (no funds needed) HIGH PRIORITY
Promo/Info	Arthur, Battle Creek, Galva, Holstein	New. PSAs - Improve communications of existing programs and systems as available including but not limited to Alert Iowa, Increasing water intake

		during extreme heat and/or extreme dry conditions; water conservation (drought considerations); Red Flag warning awareness; Lightning safety, Snowstorm/Heavy snow safety, Tornado safety. These activities are intended to reduce risk of life and loss/damage to property. <i>City Clerk, County EMA (no funds needed) HIGH PRIORITY</i>
Promo/Info	Aurelia	Carry over. Seek Smoke Detector program opportunities and similar supports, when offered at County or Region levels and promote accordingly, <i>City Clerk, Public Health, EMA (for promo: No dedicated funding necessary. For detectors: Community grants, pre-disaster funds) HIGH PRIORITY</i>
Promo/Info	Aurelia	New. City intends to increase awareness of Alert Iowa program through promotion and registration provision on city communications. <i>City Clerk, County EMA (no expense aside from staffing hours is anticipated) HIGH PRIORITY</i>
Promo/Info	Blencoe, Castana, Mapleton, Moorhead, Onawa, Rodney, Soldier, Ute, Whiting	New. PSAs - Improve communications of existing programs and systems as available including but not limited to Alert Iowa, Increasing water intake during extreme heat and/or extreme dry conditions; water conservation (drought considerations); Red Flag warning awareness; Lightning safety, Snowstorm/Heavy snow safety, Tornado safety. These activities are intended to reduce risk of life and loss/damage to property. <i>City Clerk, County EMA (no funds needed) HIGH PRIORITY</i>
Promo/Info	Cherokee	New. The city is committed to promoting alert systems as already available through the county and state. <i>City Clerk, City Administrator, County EMA (No funds expected to be needed) HIGH PRIORITY.</i>
Promo/Info	Cherokee Co	New. Enhance education materials on water conservation and responsible use. <i>County EMA, IA DNR. (No funds needed). HIGH PRIORITY</i>
Promo/Info	Cushing	New. City is committing to incorporating public awareness for disaster preparedness through promotion of Alert Iowa system. <i>City Clerk, Council, County EMA (no funding needs anticipated. HIGH PRIORITY</i>
Promo/Info	Galva	Carry over. City intends to continue seeking funds to implement project. Obtain weather radio and additional communications equipment such as handheld radios for direct communication with responders; <i>City Council, County EMA to assist (local general budget funds, PDM funds, Community benefit grant funds) MEDIUM PRIORITY</i>
Promo/Info	Hinton	Carry over. Some lines have improved but concern remains a factor in communicating course of action and conflicting chain of command (for example, C60 affecting County, DOT, City) as may result in road closures from varying directions and inadvertent closure of backup or designated alternate routes. <i>Public Works, County EMA, County Secondary Roads, IADOT. (Intent is to use existing resources in improved format to ensure communications of intent. No additional funding needs anticipated) HIGH PRIORITY</i>
Promo/Info	Ida Co	New. Improve awareness of program availability. <i>County EMA, emergency response teams throughout county, State program officer(s). (State program funds where applicable; in-kind volunteer time) HIGH PRIORITY.</i>
Promo/Info	Ida Grove	New. City promotes county-based alerts. Pending cost and related fundability, the city will increase the scope of advisory notifications to expand from just weather to other issues such as boil advisories and additional urgent notifications requiring immediate action. <i>City Clerk, Public Works, County EMA, other Department heads as applicable. (Local general</i>

		budget funds, safety grants, weather preparedness program funds if available) HIGH PRIORITY.
Promo/Info	Marcus	New. Pending fund availability, city plans to expand opportunity for preparedness workshops and readiness campaigns to better inform residents of potential disasters. Primary focus is timeliness of action on evacuation notifications and protections (such as sandbagging). Workshop/information would include before/after preparation including “ready bags” with medications and other necessary items, especially if urgent evacuation is issued. Additional preparedness resources would include facilitating a safe check process for aging and specialized needs neighbors (i.e. oxygen tank dependency or mobility limitations) and the implementation of a buddy system to ensure communications are thorough and complete for those not routinely using social media or cell phones. <i>City, local response teams, County EMA, Red Cross/United Way affiliates as applicable</i> (Need for dedicated funding not anticipated, use of local communications formats expected) MEDIUM PRIORITY
Promo/Info	Monona Co	New. Improve awareness of program availability. <i>County EMA, emergency response teams throughout county, State program officer(s).</i> (State program funds where applicable; in-kind volunteer time) HIGH PRIORITY.
Promo/Info	Plymouth Co	New. Plymouth County. Continuity of Operations plan development is in the works, assigning use of facilities when relocation is necessary. Plan includes consideration of displacement potential for all county services. Involved parties: <i>all department heads, Clerk of Court, State Officers, DOT, DNR, VA</i> (local staff paid time is anticipated as primary expense at this time) HIGH PRIORITY
Promo/Info	Sgt Bluff	New. City is seeking opportunity to develop public awareness campaign for prevention and emergency preparedness. Specific topic of interest: lightning awareness and safety. Others as deemed appropriate for season. <i>Public Works, Parks & Rec, City Council, County EMA</i> (Local general budget funds, no additional dedicated funding expected to be necessary) HIGH PRIORITY
Promo/Info	Sioux City	New. Efforts in progress to update Red Alert geo mapping capacity to specific areas and to address more than just snow city-wide. <i>Public Works, Communications Department.</i> (Local general budget funds/annual budget) MEDIUM PRIORITY
Promo/Info	Sioux City	New. Improve communications of imminent dangers due to natural disaster: storm safety; extreme temperature protections; storm alerts (promote RED Alert program in use by city); Red Flag warnings, etc. <i>City communications department</i> (no additional fund needs anticipated) HIGH PRIORITY
Promo/Info	SCCSD	New. Interest in promotion of established practice of Alert Iowa system in conjunction with school’s internal alert system. The school will also pursue opportunities to share information with students & their families. District plans to coordinate with Plymouth Co EMA for PSA formatted messages to include in communications and on website. Information to be shared includes but is not limited to: Increasing

		<p>water intake during extreme heat and/or extreme dry conditions; Red Flag warning awareness; Lightning safety, Snowstorm/Heavy snow safety, Tornado safety. These activities are intended to reduce risk of life and loss/damage to property.</p> <p><i>School communications teams, County EMA (No dedicated funding necessary) HIGH PRIORITY</i></p>
Promo/Info	Struble	<p>Ongoing. Promote established warning systems such as Alert Iowa system; Promote awareness/preparedness programs as available through regional resources. <i>City Clerk, County EMA (No dedicated funding necessary) HIGH PRIORITY</i></p>
Promo/Info	Quimby	<p>New. PSAs - Improve communications of existing programs and systems as available including but not limited to Alert Iowa, Increasing water intake during extreme heat and/or extreme dry conditions; water conservation (drought considerations); Red Flag warning awareness; Lightning safety, Snowstorm/Heavy snow safety, Tornado safety. These activities are intended to reduce risk of life and loss/damage to property. <i>City Clerk, County EMA (no funds needed) HIGH PRIORITY</i></p>
Promo/Info	Woodbury Co	<p>New. Improve awareness of program availability. <i>County EMA, emergency response teams throughout county, State program officer(s).</i> (State program funds where applicable; in-kind volunteer time) HIGH PRIORITY.</p>

Warning Sirens	Blencoe	<p>Carry over. The City still needs a second warning siren to sufficiently serve its corporate boundaries and nearby rural residents. Cost is approximately \$15,000. Funds have not been designated. <i>City Maintenance</i> (City will pursue grant opportunities and continually review opportunities to include project in the annual budget). MEDIUM PRIORITY.</p>
Warning Sirens/Alerts	Cherokee	<p>New. The city is seeking an opportunity to implement a flood warning system that can be used for in-time communication of known, pending, likely, or immediate flood conditions when urgent action is necessary. Preliminary discussion leads to use of cell alerts, but alternatives effective for those not using cell phones or in the event of service disruptions are still needed. Study or system development may be necessary as a solution is not immediately known. <i>City, Public Works, County EMA, IDNR, US ACE (FMA/PDM, local general budget funds, community foundation grants, public safety funds, others TBD) HIGH PRIORITY</i></p>
Warning Sirens	Holstein	<p>Carry over. Project carried over to 2025 Plan as siren is still needed. Community will continue to review grant and funding support opportunities as well as assess feasibility of fundraising to boost local fund options. Expected cost is in excess of \$15,000. Additional warning siren would benefit City - potential location near south end of town near CharMac, Ridgeview, Cobblestone Inn; <i>City Council, County EMA (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY</i></p>
Warning Sirens	Ida Grove	<p>New. The city is planning to replace or upgrade the sirens located at 4th & Moorhead Streets and on the 600 block of N Main and N 2nd Streets. <i>Public Works, County EMA (PDM, local general funds) HIGH PRIORITY</i></p>
Warning Sirens	Le Mars	<p>New. New warning siren at 34th & Lake is planned for 2025. <i>Public Works, County EMA (PDM, public safety funds as may be available, community grants, local general funds) HIGH PRIORITY</i></p>

Warning Sirens	Mapleton	New. City is seeking to replace the motor on their aging warning siren located at the park. Maintenance on existing is increasingly cumbersome with lack of replacement parts and continuous repairs needed. <i>Public Works, County EMA</i> (PDM, public safety funds as may be available, community grants, local general budget funds) HIGH PRIORITY
Warning Sirens	Monona Co / Rodney	Carry over. Additional sirens in rural recreation areas such as the Rodney Recreation Pits; <i>County EMA</i> collaboration w/Rodney City Council, (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Warning Sirens	Monona Co	Carry over. Warning Siren at Lewis & Clark Lake needed to improve warning efforts in the recreation area. <i>County Board of Supervisors, EMA, various departments.</i> (County general fund/EM line item, PDM, community benefit fund programs) MEDIUM PRIORITY
Warning Sirens	Monona Co / Blencoe	New. City plans to initiate a collaboration with the county to install a warning siren for the NEW Cooperative Port of Blencoe to serve the port and nearby park. <i>County, County EMA, City of Blencoe, Industry partners</i> (Private funds, Pre-disaster funds as available, local general budget and county funds, transportation funds as may be applicable) HIGH PRIORITY
Warning Sirens	Moorhead	Carry over. City siren needs rewiring/electrical replacement. Fire Department recommends upgrade pending fundability. <i>City Council, Fire Department, County EMA.</i> (Local general budget funds, BRIC as available if coordinated with additional projects) MEDIUM PRIORITY.
Warning Sirens	Moville	Carry over. Add warning sirens to supplement existing. City is seeking opportunity to fully assess need for additional siren(s). Portions of expanded residential areas exceed anticipated coverage area of existing siren. Cell phone-based alerts may meet needs of most, but not all. <i>Public Works, County EMA</i> (PDM, Local general budget , community foundation grants as available) MEDIUM PRIORITY
Warning Sirens/Alerts	Plymouth Co	New. The county is interested in enhancing capacity for alerts at the fairgrounds. As large gatherings tend to slow cell networks, a booster is needed to ensure timely notifications, especially for larger scale outdoor events. <i>County EMA, Fair board</i> (Pre-disaster mitigation funds, Community Safety program funds, county funds, allocated fairground facility funds) HIGH PRIORITY
Warning Sirens/Alerts	Plymouth Co w/ City of Le Mars	New. Further consideration is needed for improved localized warnings in Le Mars, narrowing scope of generalized county-wide warnings for events that may have significant in-town effects. Such specification are expected to improve school district and shift adaptations for major employers as may be necessary. <i>County EMA, City of Le Mars, Emergency Response teams</i> (Pre-disaster mitigation funds, Community Safety program funds, county funds, allocated fairground facility funds) HIGH PRIORITY
Warning Siren	Sgt Bluff	New. City is considering need for additional warning siren due to development of East Campus which includes outdoor school sports facilities in addition to expansion of homes and trail connections. Implementation is dependent on school district development planning as well as population changes. <i>City, Public Works, Utilities, County EMA.</i> (Local general budget funds, BRIC funds, local community and foundation grants, School District funds) Currently HIGH PRIORITY but may downgrade pending school bond measure. (2025). If it does not pass in pending election, school bond measure is anticipated to be reintroduced at next opportunity.

Warning Sirens	Smithland	Carry over. City has determined replacement of siren is necessary as parts are no longer available to maintain current siren. Replace warning siren. <i>Public Works, City Clerk, County EMA</i> (local funds, community foundation grants) HIGH PRIORITY
Warning Siren	Struble	New. Replace warning siren pending fundability. Current siren had aged out with replacement parts hard to find and very expensive. <i>City council, County EMA.</i> Local general budget funds, pre-disaster/mitigation funds as may be available, community foundation grants, community betterment grants) HIGH PRIORITY

Programs	Correctionville	New. (Property Acquisition) City is in progress of developing a housing program involving acquisition of flood prone properties. Project includes potential park expansion to include wetlands conservation / preservation area for prone property adjacent to Copeland Park. City Council, Residents, FEMA, IDNR, others to be determined (Disaster Recovery funds, PDM as available/applicable, other source to be determined) MEDIUM PRIORITY
Programs	Hornick	New. City is working toward implementing a Smoke Detector check/install program in collaboration with Fire Department and County departments as applicable (Health, EMA). City is aware that county has units available. Distribution & Install process not established. <i>City, County EMA, FD</i> (no funding needs anticipated) MEDIUM PRIORITY

Assessment/Study / planning	Blencoe	New. Emergency Response Plan – city plans to update and formalize its emergency response plan. <i>City staff, County EMA</i> (local general fund) HIGH PRIORITY
Assessment/Study	Cherokee Co	New. A study of several tributaries is needed to assess options for collection, redirection, diversion. Waterways include but are not limited to Mill Creek, Little Sioux River, Railroad Creek. County will support study of others as collaborative project. <i>EMA, County Board, affected cities, Conservation Board, DNR, ACE, Secondary Roads.</i> (Scoping project-PDM funds as may be available, local funds from participating entities) HIGH PRIORITY
Assessment/Study	Ida County	New. Due to excessive washout during flash flood events, enhanced by extremely dry/drought conditions, the county is seeking funds to enable an assessment of alternative practices to stabilize gravel roads. Key concern is maintaining access/exit in the event of severe weather. This may include a demonstration project to test varying applications. <i>County Engineer/ Secondary Roads, IA DOT, County EMA</i> (Road use funds, local general budget funds, USDA or DNR programs as may be available, Proj scoping funds). MEDIUM PRIORITY
Assessment/Study	Ida Grove	New: Long term street repairs (minimizing recurring repair/restore costs for high-impact areas). Issues include drainage and flow control in addition to surface maintenance. Project in review stage and cost not readily determined. <i>City Clerk, Streets Superintendent, Public Works, contracted engineering firm, regulatory bodies as may be applicable – County Roads, IA DOT.</i> (General fund, STBG/Road use funds as may be approved, local foundation grants). MEDIUM PRIORITY

Assessment/Study	Le Mars	New. Floyd River Redirection Study to address ongoing flood concerns as each recurring heavy flow and river flooding events decrease unaffected area surrounding the airport. Flow currently hooks around north end of runway, looping around again eastward at the south end. South end is progressively shifting east creating an unplanned contact point. The City would like to review options to redirect flow to protect its airport. <i>City Administrator, County departments as applicable, IDNR, State and Federal programs as may be applicable, contracted engineer.</i> (Local general budget funds, BRIC/FMA technical support, other grants) HIGH PRIORITY
Assessment/Study	Moorhead	Added by amendment 2021. Still needed – Study needed to determine source/cause of sinkholes believed to be a delayed effect of extensive area flooding in 2019. City’s initial assessment revealed no visible effects of that year’s flood. By 2021, sinkholes appeared throughout town affecting roadways and sidewalks. It is expected that underwashing caused by high velocity runoff is the primary cause of the sinkholes, however a study is needed to confirm that. Included in the study is an review of solutions for implementation that would eliminate the cause and prevent recurrence. City public works, State Homeland Security and Emergency Management, County EMA, USDA, potentially IDNR, other state departments as may be appropriate. (FEMA BRIC/FMA technical assistance, USDA programs, local funds) HIGH PRIORITY. Update. Initial application was not funded (2023). City is carrying project into 2025 plan with the intent of continuing to pursue funds to determine feasible solution(s) to the sinkhole issue. Carry over. – Study needed to determine source/cause of sinkholes. Included in the study is an review of solutions for implementation that would eliminate the cause and prevent recurrence. City public works, State Homeland Security and Emergency Management, County EMA, USDA, potentially IDNR, other state departments as may be appropriate. (FEMA BRIC/FMA technical assistance, USDA programs, local general budget funds) HIGH PRIORITY.
Assessment/Study	Region (Specified interest from Region Planning Team, Cherokee County, Smithland)	New. Cities as noted are planning a collaborative approach to a regional tributary study to improve monitoring capacity of tributary waterways to improve proactive flood preparations, including but not limited to monitored gauges. <i>Plan-participating counties and communities, IDNR, U SACE, others as applicable.</i> (funding sources TBD based on participation and lead entity) HIGH PRIORITY

Tools/Equipment		
Generator & Related Projects	Plymouth County	New. The County will continue this project, coordinating with communities to ensure their panels are prepped for connection. Cost will vary by facility. <i>County EMA, City public works departments.</i> (Emergency preparedness programs, BRIC, local funds, county funds) HIGH PRIORITY
Generator & Related Projects	Akron	Carry over. Transformer needed at wells to make ready for generator connections; <i>City Public Works & Waterworks Depts</i> (Local general budget funds, Community benefit fund grants) HIGH PRIORITY

Generator & Related Projects	Akron-Westfield CSD	New. Generator on facilities list but purchase and implementation not scheduled. Cost estimated at \$350,000. <i>School Board, Collaboration with city hosting facility, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Aurelia	Carry over (moved from Improve Existing Facilities). Community ctr updates to improve capacity to serve as refuge location in the event of an emergency. Transfer switch added to community center after 2021 tornado, funded privately. Dedicated generator still needed. Cost estimate provided in 2023 is \$55,000. Portion of funds have been set aside. Project pending availability to cover balance. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Battle Creek	New. Transfer switches are need for critical facilities including: Community Center, City Shed/Ambulance Shed, Lift Station, wells. This meets minimum needs in power outages enabling use of mobile generators available through county or private entities. <i>City Council, County EMA</i> (Local general budget funds, PDM, public safety funds as may be available, community benefit funds) HIGH PRIORITY
Generator & Related Projects	Battle Creek	New. Dedicated generator for lift station &/or wells. One mobile available but insufficient if several systems are cut from power. Primary use is for wells. Estimated cost \$50,000. <i>City Council, County EMA</i> (Local general budget funds, PDM, public safety funds as may be available, community benefit funds) HIGH PRIORITY
Generator & Related Projects	Blencoe	Carry over. Generators as noted in 2020 are planned for city hall/community ctr which operates as command center as needed; implementation at the N Manley Lift Station, estimated cost: \$35,000. <i>Public Works.</i> (Local general budget funds, pre-disaster funds) HIGH PRIORITY
Generator & Related Projects	Blencoe	New. In addition to the lift station project, generators are planned for the Community Center (to be established as Command Center) and the Fire Station (to maintain operations in the event of a disaster) at the estimated cost of \$35,000 each. <i>Public Works.</i> (Local general budget funds, pre-disaster funds) HIGH PRIORITY
Generator & Related Projects	Bronson	Carry over. The City is still seeking funding supports and will carry project into 2025 Plan with modified priority level. City has designated Community Center as refuge site/command center in the event of an emergency. A dedicated generator would facilitate that use. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) MEDIUM PRIORITY
Generator & Related Projects	Cherokee (City of)	New. A generator is needed for the community center which serves as a refuge/shelter center during extended power outages and as needed for extreme weather or crisis events. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Cherokee (City of)	New. A generator is needed for the community center which serves as a refuge/shelter center during extended power outages and as needed for extreme weather or crisis events. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY

Generator & Related Projects	Cherokee (City of)	<p>New. Generators are needed for Radio Repeaters that are essential for communications between the Police Department and Public Works, especially during power outages. Current backup is supplied via battery which is intended to bridge connections until a dedicated power source is (re)connected, lasting no longer than 30 minutes. Repeaters are located on</p> <ul style="list-style-type: none"> - Hill Street Water tower - Main water tower at the intersection of Hwy 59 and Hwy 3 <p>The generators would serve dual purpose, also powering the pumps and equipment at respective towers to maintain functionality of the water system. <i>Public Works, County EMA</i> (PDM funds as available, CDBG DR as applicable, Response/Communications funds as available) HIGH PRIORITY</p>
Generator & Related Projects	Cherokee County	<p>Carry over. trailer-mounted generator needed to facilitate county response efforts <i>County EMA</i> (Local funds – not yet allocated, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY</p>
Generator & Related Projects	Cherokee County	<p>New. On-site generator needed for EOC/EMA for continuity of operations extreme weather events and other disasters. Estimated cost @ \$350,000. <i>County EMA</i> (Local funds – not yet allocated, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY</p>
Generator & Related Projects	Cherokee County, Cherokee CSD	<p>New. generator to facilitate use of High School as refuge / shelter location. Generator addresses reduction in loss of life in power outage conditions (tornado, flood, wind, lightning, ice, etc.) by ensuring shelter and communication links. <i>County EMA, School Superintendent / Board, City of Cherokee</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY</p>
Generator & Related Projects	Cherokee County	<p>Carry over. On-site permanent generator for Courthouse; <i>County EMA</i> (County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY</p>
Generator & Related Projects	Danbury	<p>Carry over. Portable generator needed for water plant with potential to serve various facilities. Added: Transformer switches needed to enable connections. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds, local funds) HIGH PRIORITY</p>
Generator & Related Projects	Hinton	<p>New. This project will carry over into the 2025 plan maintaining the planned Lagoon Lift Station generator (scheduled for 2026) and the addition of need for a generator at the Public Safety Building. The project at the lagoon includes a loop connection with the Electric Company. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, BRIC, Community Benefits funds) HIGH PRIORITY</p>
Generator & Related Projects	Holstein	<p>Carry over. Permanent, dedicated generators @ lift stations & water plant. The City has received quotes to initiate the project. Planned cost is \$197,000. Support funding has not been secured. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, pre-disaster/mitigation funds as available, Community Benefits funds) HIGH PRIORITY</p>

Generator & Related Projects	Ida County	New. County is considering funding opportunities to ensure all communities are equipped with generators and/or transfer switches at City Halls/Community Centers and Fire Departments. <i>County EMA, City Emergency Response Department(s)</i> , (Varying levels of funds needed. Support may come through County, State, and Federal grant and loan programs) HIGH PRIORITY
Generator & Related Projects	Ida County	New. Add generator or transfer switch capacity to each County Department to ensure continuity of operations in the event of a disaster. Consider relocation opportunities in the event of displacement during and after absence of dedicated power source. <i>County EMA, respective County Department Head</i> (PDM, Community Benefits Grants, County General Fund) HIGH PRIORITY
Generator & Related Projects	Ida Grove	Carry over. Dedicated generators needed at City Hall and Moorhead Avenue. An additional portable generator is needed to serve all lift stations with that one generator dedicated to moving between stations as appropriate. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Ida Grove	New. Generator needed at Rec Center to facilitate function as refuge/shelter designation during disasters and other extreme hazard events. <i>City Council, Public Works, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Kingsley	Carry over. Generators needed at water plant. A portion of the backup power needs are included in the Water Plant. Replacement project slated for FY2026. Estimated project budget is \$5.5M. <i>City Council, County EMA</i> (Local general budget funds, County supports, State/Federal response funds, BRIC, Community Benefits funds, USDA) HIGH PRIORITY
Generator & Related Projects	Kingsley	New. The city has purchased a generator (\$50,000) for the community center. Funds have not yet been fully designated for installation. Cost to be determined pending correlation to other like projects. <i>City Council, Public Works, County EMA</i> as may be needed. (Local general budget funds, safety/emergency response funds as may be available, pre-disaster/mitigation funds as may be available. HIGH PRIORITY
Generator & Related Projects	Kingsley-Pierson CSD	New. Highschool currently has a generator as installed in 1979. A new generator is needed to meet capacity of updated facility and to ensure viability for use as a refuge location in the event of a disaster or other extreme event. Project anticipated to include transfer switches at all facilities. Implementation fully dependent on yet to be determined funding supports. <i>Superintendent, District Maintenance/Crew, Plymouth and Woodbury County EMAs as applicable</i> (district and local general budget funds, county supports, PDM as may be applicable) HIGH PRIORITY
Generator & Related Projects	Lawton	New. Prepare generator connection and install at Fire Station. <i>Fire Chief, City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Mapleton	Correction to the 2020 Plan stating generator was added. Carry over. Additional generators are needed to maintain function of critical facilities during disastrous and other extreme events. <i>City Administrator, Waterworks, County EMA</i> (City funds general budget , community benefit funds, IDOT program funds, PDM funds) HIGH PRIORITY

Generator & Related Projects	Marcus	Carry over. Generator for Fire Department to enable use as emergency shelter. Project is in progress as an included component of a Fire Station Expansion Project. As of late 2024, the pad has been laid, and a dedicated generator is planned. As of December 2024, local budget is the primary funding source with the city continuing to consider additional options. <i>Fire Chief, City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Marcus	New. Install transfer switch at Community Center, a critical facility as it serves a command center, refuge/shelter as needed in the event of a disaster or extreme event. Facility available for residents, students, and nearby communities as may be necessary. <i>Public works</i> (General Fund, Community Foundation grants as applicable, additional TBD) MEDIUM PRIORITY
Generator & Related Projects	Marcus	Carry over. Generator at Shelter house, also for use in the event of power outage during an emergency; <i>City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Marcus-Meriden-Cleghorn and Remsen Union CSDs	New. Both districts comprising MMC and RU are seeking to outfit their facilities with generators and related connection/transfer switches. This is especially relevant as facilities are likely to be designated as refuge/shelter locations in the event of a disaster. Priority level reflects lack of funding not level of need. Project is fully dependent on <i>Superintendent, Maintenance depts of each district, Host County EMAs</i> (district funds, host community and county supports, PDM funds as may be available) LOW PRIORITY
Generator & Related Projects	Monona Co	New. County is seeking opportunity to purchase mobile generator allowing flexibility to meet needs at varying locations as needed. <i>County EMA, County Board</i> (annual budget, public safety/response funds, PDM as available) HIGH PRIORITY.
Generator & Related Projects	Moorhead	Carry over. The project is still needed. Generator for fire station/Community Center as this facility is designated for refuge/shelter and command center in the event of an emergency. <i>Public Works, City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, BRIC, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Moorhead	New. A DNR notification was received during routine inspection of the lagoon that the generator in place is antiquated and presumed unreliable necessitating urgent priority for replacement. Community goal is to move to attain necessary funding and implement project as soon as possible. <i>Public Works, City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, BRIC, IDNR, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Moville	New. City is looking at generator purchases for Fairgrounds (County collaboration), Community Center and Fire Hall. Community Center serves as shelter when open. <i>City, Public Works, County EMA</i> (local funds general budget , pre-disaster/mitigation funds as available) HIGH PRIORITY
Generator & Related Projects	Onawa	Carry over. Generators needed for Community Center and Nursing Home. <i>City Administrator, County EMA</i> (Local – general funds, community benefit funds, IDOT program funds, PDM funds) HIGH PRIORITY

Generator & Related Projects	Oyens	New. As part of an infrastructure improvement project for the city's water systems, the city is looking at opportunities to include a dedicated generator at its wastewater treatment plant. Cost is to be determined and will dictate whether a dedicated generator is added or if a transfer switch alone is incorporated into the project. If a transfer switch is the implemented solution, the city will pursue funds for a mobile generator for use between its facilities. <i>City Council, contracted engineering firm, DNR.</i> (USDA, DNR, CDBG, Local funds general budget , PDM) HIGH PRIORITY
Generator & Related Projects	Oto	New. Oto is seeking the opportunity to purchase a generator to facilitate operation of critical functions during power outages. <i>Public Works, County EMA</i> (local funds general budget , community foundation grants, pre-disaster/mitigation funds as available. MEDIUM PRIORITY
Generator & Related Projects	Pierson	Carry over. Dedicated generator for Community Building for continuation of use as refuge location in the event of power outage; <i>City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Quimby	New. Interested in generators for Fire Station and warning siren as means of maintaining operations & communication during power outages and as need in response efforts. <i>Fire Dept, City Council, Public Works, County EMA</i> (Local supports @ general budget , fundraising, response funds as may be available, PDM funds, community benefit funds) HIGH PRIORITY
Generator & Related Projects	Ridge View SD (Galva-Holstein)	New. Generators and transfer switch installment need for facilities throughout the district. Galva-Holstein Elementary is all electric, allowing for no recourse should there be a power failure (heat in winter, hot water, lights, etc.). District is seeking opportunity to provide backup power to sustain operation during school year and to enable use a community refuge location in a major disaster/evacuation situation. <i>School Superintendent, City Council, City Public Works, School Facilities team, County EMA.</i> (School funds, city support funds and/or partner for grant opportunity through PDM.) HIGH PRIORITY
Generator & Related Projects	River Valley CSD	New. Generator(s) needed to maintain operation/function in greater capacity in the event of loss of power. School facilities serve as refuge /shelter location for Correctionville and neighboring communities. District interested in partnering with city, county, in coordinating generator, or at minimum generator connection. Cost with full facility function up to \$300, 000. <i>School Superintendent, City Council, City Public Works, School Facilities team, County EMA.</i> (School funds, city support funds and/or partner for grant opportunity through PDM.) HIGH PRIORITY
Generator & Related Projects	Salix	New. Purchase and Install Automatic back up Generator at West Lift Station. <i>Public Works</i> (Locally available grants from Farm Credit and MRHD as may be awarded, City budget - general fund, fundraising) HIGH PRIORITY
Generator & Related Projects	Sgt Bluff	New: Dedicated generator still desired at Fire Department should funding become available. Fire Station serves as designated command center as needed. Fire Chief, City Council. (General fund, GO Bond, FEMA PDM funds as may be applicable) MEDIUM PRIORITY
Generator & Related Projects	Sgt Bluff	New: Generator connections at all facilities. <i>Public Works Director</i> (General fund, GO Bond, FEMA PDM funds as may be applicable) LOW PRIORITY
Generator & Related Projects	Sgt Bluff-Luton (SB-L) CSD	New. Generator connections at all facilities. <i>Maintenance, County/City collaboration as applicable for refuge location designation</i> (district, city, county funds general budget , PDM as available) LOW PRIORITY

Generator & Related Projects	Sioux City	Carry over. Generators still needed at Police Department and other City Facilities. Project remains necessary and carries into 2025 plan. <i>City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Smithland	New. Generators are needed at the Wastewater Plant and Fire Hall as means of maintaining operations during power outages. <i>City Maintenance, County EMA</i> (local funds general budget , community benefit funds, fundraisers, pre-disaster / mitigation funds as available)
Generator & Related Projects	Soldier	New. City is interested in having dedicated generator for critical facilities. City Council, Public Works (Local funds general budget , PDM as available, community benefit grants, public safety funds as may be available) HIGH PRIORITY.
Generator & Related Projects	Ute	Carry over. Generator for community building; City Hall; <i>City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, pre-disaster/mitigation funds as available, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Whiting	<p>New. There are no generators and no transformer switches in place for critical facilities. City is developing 2 new projects with generators needs identified. Generator also needed at sewer plant lift station.</p> <ol style="list-style-type: none"> 1. water plant project in a phased overhaul, including consideration of another well (local, state, federal supports including loan ops) 2. New building for Fire Department (city funded at present, likely to include fundraising and community benefit funds) 3. Sewer plant lift station (not associated with other active or planned project) <p>Addition of generators will enable continuity of operations in the event of a power outage. Public Works, County EMA (local funds general budget, project funds as applicable, PDM funds as available) HIGH PRIORITY</p>
Generator & Related Projects	Westwood CSD	Carry over. Generator for backup during crisis events & to maintain use as refuge location in event of power outage or other emergency. <i>Superintendent, School Board, City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Woodbury Co	Carry over. Standby generator on site for each Community Center/City Hall as may be designated for command center. Some communities have added generators and/or transfer switches to accommodate mobile equipment. The county will continue to pursue opportunity to install dedicated generators where necessitated and transfer switches where still needed. during a disastrous event. <i>County EMA</i> (PDM and county emergency response funds) LOW PRIORITY
Generator & Related Projects	Woodbury Co	Carry over. Generator still needed. Plans in place to apply for generator through HMGP funding source. There are 2 small mobile generators available however, capacity is insufficient for extended period of need. A generator needed at Courthouse; <i>City Council, County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Generator & Related Projects	Woodbury Co	New. 1 dedicated/fixed and 1 mobile generator needed for secondary roads to <i>County Board of Supervisors County EMA</i> (Local funds general budget , County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY

Equipment	Battle Creek	New: New radios and operating system is needed. City needs communications improvements to better accommodate mutual aid calls. Current system does not connect with Woodbury County (on a state system) which is problematic for regional and mutual aid needs. Cost estimate not readily available. County EMS/EMA, FD, City Council (Local funds general budget , PDM, public safety systems, county funds as may be applicable) HIGH PRIORITY
Equipment	Blencoe	New. Interest in coordinating resource attainment (such as cots) in the event of an emergency where refuge/shelter designation is necessary. No cost expected to be associated with process aside from staff time. <i>City, local partnering response agencies, state and federal programs such as Red Cross.</i> (local general budget and response funds as available/necessary) HIGH PRIORITY
Equipment	Blencoe	New. Mobile pumps needed for stormwater transfer. Estimated project cost is \$50,000. <i>Public Works.</i> (City funds general budget , FMA, Disaster Mitigation/Disaster Response funds as available) HIGH PRIORITY
Equipment	Cherokee	New. Equipment needed for various city departments includes: brush truck (FD), side-by-side to improve access during extreme weather events, and pumps for stormwater transfer. Public Works, Fire Department, Streets Dept. (Local funds general budget , emergency response funds, disaster mitigation & disaster response funds as may be available) HIGH PRIORITY
Equipment	Hinton	Carry over. Project still needed and funds were not sourced. City expects to implement project using local general funds. Mobile pump; <i>Public Works</i> (City funds general budget , local community benefit funds) elevate to MEDIUM PRIORITY.
Equipment	Hinton	New. City is interested in acquiring road barriers/blockade equipment for use during emergency road closure situations. <i>City Council, Public Works, Streets Dept</i> (City funds general budget , Community Benefit funds, Response support funds) MEDIUM PRIORITY
Equipment	Hinton	New. City is interested in additional ATV for general use city-wide to ensure access as needed when multiple departments are active. <i>City Council, Public Works, Streets Dept</i> (City funds general budget , Community Benefit funds, Response support funds) LOW PRIORITY
Equipment	Hornick	New. Interested in new communications radios. Potentially available through County supports. <i>City staff, County EMA</i> (Local funds general budget , Response/Community Safety programming) MEDIUM PRIORITY
Equipment	Region (Initiated by Ida County)	Carry Over Sandbag fillers. Only 2 are available in the region and flooding often impacts several counties concurrently. Interest in accumulating a stockpile to meet multiple community needs. Increase availability for the region as flooding often impacts several counties concurrently. Interest in accumulating a stockpile to meet multiple community needs. <i>County Engineer, EMA, Regional collaboration</i> (Collective County funds general budget , PDM) HIGH PRIORITY
Equipment	Ida County	Carry over. Additional road closure barricades are needed with consideration to be given to another trailer in order to haul to multiple locations. To accommodate approximately 80 roadways are subject to closure in the event of an emergency. <i>County Engineer, EMA</i> (County Funds, PDM) HIGH PRIORITY
Equipment	Ida Grove	Carry over. City in need of small tractor with can and blower on front to facilitate and improve snow removal. <i>City Streets Department</i> (City general funds) LOW PRIORITY

Equipment	Ida Grove	Carry over. large pump our 4” gas powered pump needs replaced. <i>Wastewater dept.</i> (Loca general fund) HIGH PRIORITY.
Equipment	Le Mars Community Schools	New. District is interested in acquiring weather radios for each facility. <i>Superintendent, School Board, County EMA</i> (County EMA and related supports) HIGH PRIORITY
Equipment	Mapleton	Carry over. Lift station for water plant; <i>City Water Supt</i> (City funds general budget , PDM) HIGH PRIORITY
Equipment	Monona Co	Carry over. Region-shared equipment such as high capacity snow blower. <i>County Roads, collaboration between County Roads departments</i> (County funds—potentially multiple + general budget , IDOT funds) LOW PRIORITY
Equipment	Monona Co	No action taken on this item but project is still needed. Carry over. Trailer designated for road barricade set-up; <i>County Engineer</i> (County funds general budget , IDOT, PDM) HIGH PRIORITY
Equipment	Moorhead	New. City interested in acquiring UTV for general multi-departmental city use to improve access and maneuverability ranging from clean-up to pest prevention, etc. <i>Multi-departmental involvement.</i> (City funds general budget , Emergency Response funds as available, local foundation grants, fundraising) HIGH PRIORITY
Equipment	Onawa	Carry over. A newer plow truck is added to the budget for 2026. Additional equipment is still needed. Snow removal equipment; <i>City Streets Dept</i> (City funds general budget , transportation funds) LOW PRIORITY
Equipment	Onawa	Carry over. Portable pump with greater than 6" capacity – function @ 1,000 gallon per minute; City Administrator, Public Works, potential for county collaboration (City funds general budget , PDM) LOW PRIORITY
Equipment	Oto	Carry over. Fire Dept in need of equipment and new facility; <i>Fire Chief</i> (City support general budget , Department funds, Fire Association funds, FEMA AFG, CDBG facilities funds, State Revolving Fund loan) LOW PRIORITY
Equipment	Pierson	Carry over. ATV for use during road blockages; <i>City Council</i> (City funds general budget , PDM) LOW PRIORITY
Equipment	Remsen	New. Fire Department is in need of equipment replacements including 12 SCBA units with harness/backpack, face piece, and 2 cylinders each and 24 spare cylinders. Cost at last estimate is about \$122K. <i>City Council, Fire Chief & Department reps</i> (local general budget funds, AFG grant if awarded, community benefits funds). HIGH PRIORITY
Equipment	River Valley CSD	New. District interested in acquiring additional response equipment including but not limited to De-Choker devices to be made available in several key locations throughout district facilities. These devices offer low-cost lifesaving solutions. <i>School board, Superintendent, internal emergency response team.</i> (District funds, grants) HIGH PRIORITY
Equipment	Sgt Bluff	New. Fire department replacing Ambulance at \$305,000. <i>City, Fire Department.</i> (Local general budget funds, Response funds as available) HIGH PRIORITY
Equipment	Sgt Bluff	New. Replace AED units. 2 existing units aging out of effective life. Seeking funding supports. <i>City, Fire Department.</i> (Local general budget funds, Response funds as available) HIGH PRIORITY
Equipment	Sgt Bluff	New. Replace Life Packs. 35 are aging out of useful life. Expected cost is \$60,000. <i>City, Fire Department.</i> (Local general budget funds, Response funds as available) HIGH PRIORITY

Equipment	Sgt Bluff	New. Fire Dept planning replacement of Brush Truck pending funding availability. Replacement is approximately a year-long process with an estimated cost of \$100- to \$120,000. <i>City, Fire Department</i> (local general budget funds, fundraisers, local community benefit funds, BRIC) HIGH PRIORITY
Equipment	Sgt Bluff	Carry over. Replace 1 of 2 UTVs within 5 years. This remains a low priority activity. <i>City, Police Dept</i> (Department funds, City supports, fundraisers, pre-disaster/mitigation funds as applicable, emergency response equipment grants as available) LOW PRIORITY
Equipment	Sioux City (interest in same expressed by Ida Co.)	New. Sandbagging machine needed for local inventory. City would maintain as property with access through mutual aid for adjacent/nearby communities. Machine enables responders to produce the same amount of bags in 5 hours with 4-5 people as you can with 12-15 people loading manually in 30 hours. Investment estimated under \$50K. <i>Regional impact. Parks Department.</i> (Local - general fund, PDM/FMA) HIGH PRIORITY
Equipment	Sioux City	New. Add large capacity pump to city inventory. Estimated at \$210,000. <i>Sioux City Utilities.</i> (CIP FY 2026) HIGH PRIORITY
Equipment	Sioux City	New. Department needs an updated tool to open and close flood gates that is not electric. <i>Parks Department</i> (Local - general fund, PDM/FMA) HIGH PRIORITY
Equipment	Struble	New. City identified need to obtain tanker to keep in town to support local response efforts. Without a local fire department, Struble's risk is significantly high. Priority level reflects likelihood of extended time frame for completion due to limited funding availability. <i>City Council, County and State EMA and other response network supports as available</i> (Local general budget funds, fundraising, response equipment grants, community foundation/betterment funds) MEDIUM PRIORITY
Equipment	Whiting	New. Whiting Fire Department in need of a new rig-grass fire truck. Estimated cost is \$300,000. Fundraising efforts focused on new building therefore local funds are constrained. Priority reflects fund availability, not level need. <i>Fire Dept, City Council</i> (Response support funds as applicable, PDM if available) LOW PRIORITY
Equipment	Woodbury County	Carry over. Additional pumps - 12" & 18" capacity; Should funding be available, county will further consider addition of such pumps to their inventory. Priority level is decreased. <i>County Engineer</i> (County funds, IDNR program funds, BRIC/FMA) LOW PRIORITY
Safety/Security Equipment	Hinton CSD	New. District is considering opportunity to improve security systems for facilities including but not limited to locking systems with remote control capacity. <i>Superintendent, District Maintenance</i> (District funds, School safety program, fundraisers, local grant funds) HIGH PRIORITY
Safety/Security Equipment	Onawa	New. City is considering installing cameras in city buildings and parks. Recent bids estimate project cost at \$20,000+. Cameras would contribute to monitoring conditions in and potentially contributing to emergency situations. <i>City administrator, Parks Dept., Response teams</i> (City general budget funds, community benefits, public safety grants as may be available) HIGH PRIORITY
Safety/Security Equipment	Sgt Bluff	New. Interested in acquiring and installing Flock Camera as means of community protection. This would be a collaborative effort with the City of Sioux City as a bordering community – due to planned placement, it may also be affected. <i>City of Sgt Bluff, City of Sioux City, SB PD, Public Works.</i> (City general budget funds, Safety grants as available) HIGH PRIORITY

Safety/Security Equipment	Sgt Bluff	New. Collaborative effort to enable communication connections via software in Law Enforcement between City, County, and Sioux City. Cost estimates not currently available. <i>City of Sgt Bluff, City of Sioux City, Woodbury County Communications Center/EMA.</i> (Respective local general budget funds, Response funds as available, public safety funds as available) HIGH PRIORITY
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Development		
Policy	Onawa	Carry over. No action taken on this item. Needs have been clarified, necessitating the inclusion of water diversion in plans. Formalizing discussed recommendations to subdivision plans. Review and formal revision of subdivision regulations to address runoff concerns resulting from displacement. <i>City Council, Zoning Commission, City Attorney</i> (Local general budget funds) HIGH PRIORITY
Policy	Rodney	New. Interest in update Municipal Code of Ordinances, pending funding opportunities. <i>City, Contracted services</i> (local general budget funds, community betterment grants, public safety/wellness grants) LOW PRIORITY
Policy	Sioux City	New. Policy/regulation needed to ensure all future wells and well projects must include means for permanent protections upon implementation. <i>City Council, City Planning & Zoning.</i> (No funds anticipated aside from staff hours to compile ordinance &/or modification of existing) HIGH PRIORITY

Improve existing facilities & infrastructure	Castana	New. Castana is actively pursuing funding to reconstruct its water systems as the water is currently unusable. Mineral content in water is so significant that it cannot be used even for laundry. <i>City Council, Contracted consultant/engineer (USDA, CDBG, Local fund match via Bond/SRLF)</i> HIGH PRIORITY
Improve existing facilities & infrastructure	Cherokee	Carry over. Improve capacity and function of sewer system; <i>City Waterworks</i> (City general budget funds, USDA program funds, IDNR program funds) MEDIUM PRIORITY
Improve existing facilities & infrastructure	Cherokee	New. City is planning ADA improvements to the Community Center to enable use as refuge/shelter in the event of a disaster resulting in residential displacement. Project includes addition of dedicated generator. <i>Public Works/Utilities, local responses teams.</i> (Local general budget , CDBG, disaster response/disaster mitigation as may be available) HIGH PRIORITY
Improve existing facilities & infrastructure	Cherokee	New. Saratoga Lift station needs improvements. <i>Public Works</i> (local general budget) HIGH PRIORITY
Improve existing facilities & infrastructure	Cherokee	New. Increase well availability and function during flood events. One control panel raising project is in progress with at least one planned. Up to 3 are being considered. City is also adding one well outside flood zone. Costs were not immediately available. <i>Public Works/Utilities, local responses teams.</i> (Local general budget , CDBG, disaster response/disaster mitigation as may be available) HIGH PRIORITY
Improve existing facilities & infrastructure	Cherokee, Cherokee CSD	New. Collaborative effort to implement ADA improvements on school campus and at access routes as applicable throughout the City. Some projects have been implemented (no detail provided). Costs will be determined by project as implemented. <i>Cherokee Community Schools, City of Cherokee.</i> (accessibility

		grants, local general budget funds, trail funds where applicable, wellness grants, Safe Routes to School funds as applicable, CDBG) HIGH PRIORITY.
Improve existing facilities & infrastructure	Correctionville	New. City is in the planning stages of replacing its critical water systems infrastructure. The well, water tower, and water mains are all in need of replacing. Generators/transfer switches anticipated as part of planned projects where applicable. Public works, contracted services, IDNR, USDA (Disaster Recovery funds, CDBG, USDA, local general budget funds, SRF for design) HIGH PRIORITY
Improve existing facilities & infrastructure	Galva	New. City Hall façade improvements are in the planning stages. Estimated cost is \$15,000 - \$20,000, which will in part substantiate building integrity. <i>City staff, contracted services as applicable.</i> (Local general budget funds) HIGH PRIORITY
Improve existing facilities & infrastructure	Galva	New. Shelter House and other City Park improvements. <i>City staff, contracted services as applicable.</i> (Local general budget funds, community betterment funds, fundraisers, Galva Economic Development Corporation) HIGH PRIORITY
Improve existing facilities & infrastructure	Hinton	Carry over. Water booster to improve capacity as accesses through fire hydrants. improvements are still desired through specific fire hydrants. Not a current over-riding concern. City will continue to seek funding opportunities to implement project. <i>City Waterworks, Fire Chief</i> (City general budget funds, Fire Department funds, BRIC as applicable) MEDIUM PRIORITY
Improve existing facilities & infrastructure	Hinton	Carry over. Sewer linings in floodplain to eliminate infiltration from flooding and water table. Project priority remains. <i>City Maintenance & Waterworks departments, IDNR</i> (IDNR program funds, City general budget funds, Disaster Mitigation or Response/FMA as applicable) HIGH PRIORITY
Improve existing facilities & infrastructure	Ida County	Carry Over. Insulate outlying shops. Access and issues accelerating due to ice accumulation. <i>County Department of Secondary Roads</i> (County general fund, Transportation facilities program funds, Building remediation funds) LOW PRIORITY
Improve existing facilities & infrastructure	Ida Grove	Carry over. Casements along 7th St (Badger Creek); <i>City Roads Dept, collaborate with County Engineer</i> (City general budget funds, IDOT Program funds, PDM) HIGH PRIORITY
Improve existing facilities & infrastructure	Ida Grove	New. Water/Sewer Treatment Facility upgrades are in progress. System is undergoing modification from mechanical treatment to an anaerobic process. Early estimate is \$11M; set for bid early 2-25. <i>City utilities. Public Works.</i> (Local general budget, Water utility fees, USDA/IDNR as may be applicable) HIGH PRIORITY
Improve existing facilities & infrastructure	Ida Grove	New. Hydrant replacements are planned citywide addressing approximately 25% of the city’s hydrants, primarily located on the central and north sides of town. <i>Water Supervisor, Fire Chief</i> (General budget, Emergency services Supports as may be available, additional supports sought) HIGH PRIORITY
Improve existing facilities & infrastructure	Le Mars	New: Install new water main valves to improve flow control and access for maintenance. <i>Public Works.</i> (Local funds general budget) HIGH PRIORITY.
Improve existing facilities & infrastructure	Le Mars	New. Several waterworks projects are planned including a new reverse osmosis system, well, waterlines between wells. <i>City utilities.</i> (Local funds general budget , utility rates) HIGH PRIORITY
Improve existing facilities & infrastructure	Le Mars	New. City is planning new waste water treatment facility. <i>City utilities, public works.</i> (Local funds general budget , state/federal program supports as may be available) HIGH PRIORITY

Improve existing facilities & infrastructure	Le Mars	New. New Fire Station facility slated for 2026, with a ballot measure to be brought in 2025. Project includes new buildings and storage shed. <i>Fire Department.</i> (Local funds general budget , EOC funds). HIGH PRIORITY
Improve existing facilities & infrastructure	Mapleton	New. City is planning installation of Well House with motor at Golf Course. Budgeted for fall 2025 at an estimated cost of \$51,000. Public Works (Local funds general budget , community benefits grants, other as may become available)
Improve existing facilities & infrastructure	Onawa	New. Water Treatment Plant is planned. Estimated at \$17M, the new plant. <i>Public Works, USDA, IDNR</i> (Local funds- annual budget item , Bonds, Grants TBD) HIGH PRIORITY
Improve existing facilities & infrastructure	Onawa	New. Updates to the Electrical Substation are in discussion Repair costs are currently at \$100,000 mark. Project would include assessment of options including but not limited to replacement and/or repair of various components. <i>City council, Public Works</i> (local funds – general budget , others to be determined pending project scope) HIGH PRIORITY
Improve existing facilities & infrastructure	Pierson	New. Sewer lining project. City is lining sewers to improve existing infrastructure, and extend useful life. Approx cost is \$200,000 – planned for 2026. <i>Public Works, DNR.</i> (Local funds – general budget) HIGH PRIORITY
Improve existing facilities & infrastructure	Quimby	New. Address abandoned, vacant, and dilapidated buildings through: incentivized development, rehabilitation, and acquisition programs. Dilapidated structures are themselves at risk in extreme weather conditions, pose threat of fire, and are a general risk to public health. City is looking for programs to implement as well as funds to implement some measures as applicable (including but not limited to acquisition). <i>City Council.</i> (various funding sources depending on programs – IEDA, PDM as applicable, local general budget funds, private partnerships, IDNR Dilapidated Buildings prog) HIGH PRIORITY.
Improve existing facilities & infrastructure	Quimby	New. City is in the process of determining options to improve function of, expand, and update lagoon, sewer/wastewater system, lines and related to meet IDNR compliance standards. Needs include but are not limited to <ol style="list-style-type: none"> 1. expanded capacity with potential of adding a cell pending feasibility. 2. Berm construction or raising of lift station to protect from flood infiltration, and 3. Pre-engineering to fully assess options are part of project. <i>City, Public Works, IDNR</i> (CDBG, USDA as applicable, local general budget funds, PDM as available, other sources TBD) HIGH PRIORITY
Improve existing facilities & infrastructure	Salix	New. The City is planning to replace its fire hydrants to improve function and access to minimize loss/damages in the event of fire, including but not limited to grassland and wildfire. <i>Fire Chief, Public Works.</i> Priority reflects lack of dedicated funding, not significance of project. (Funding has not been determined aside from match coming from the city’s general fund; Response assistance and community betterment grants as may be available) MEDIUM PRIORITY

Improve existing facilities & infrastructure	Sgt Bluff-Luton (SB-L) CSD	<p>New. Improvements to roof and HVAC. Roof repairs need more permanent fix. HVAC work necessary to maintain function of facility during extreme temperatures – both hot and cold. Project is tiered. Maintenance work will be funded by district. Priority is determined due to cost, not level of need.</p> <p>Replacement for long-term resiliency as preferred would require collaborative efforts. <i>District Maintenance, City/County officials, County EMA</i> (district funds, PDM funds as applicable) LOW PRIORITY</p>
Improve existing facilities & infrastructure	Sioux City (amended & adopted 01/13/25)	<p>2025: Carry over to 2025 HMP. Bacon Creek Conduit. Estimated \$35M project - Reconstruction and relocation beginning at Rustin Street continuing to the outlet west of Lewis Boulevard. The project addresses the deteriorated condition of the existing conduit underneath Gordon Drive and the risk of structural failure, posing a risk to the traveling public on Gordon Drive. The conduit will be relocated from underneath Gordon Drive off-alignment and the capacity will be expanded to withstand a 100-year flooding event. The project improves resiliency of the utility, transportation infrastructure, and the region. <i>City of Sioux City, IA DOT.</i> (City of Sioux City Engineering Dept, CIP FY 2028) HIGH PRIORITY.</p>
Improve existing facilities & infrastructure	Sioux City (amended & adopted 01/13/25)	<p>2025: Carry over. Bacon Creek Channel Reconstruction. Estimated \$18M project is a collaborative effort to stabilize the channel built in 1930. Flooding events have resulted in Missouri River backing up channel, causing entry to the combined sanitary sewer system. Backwater infiltration has caused significant damage to Wastewater Treatment Plant.</p> <p>Project addresses the compromised combined sanitary system and includes repurposing the existing site to coordinate with economic development and urban use vision planning. <i>City of Sioux City, IA DOT.</i> (City of Sioux City Engineering Dept., CIP FY2028) HIGH PRIORITY.</p>
Improve existing facilities & infrastructure	Sioux City	<p>New: Wastewater Plant Improvement Project. In conjunction with other flood-affected area projects, the City is planning significant improvements to its wastewater treatment plant. Estimated at \$300M, the project will address system capacity updates, flood infiltration protections, and improved function overall. <i>City Utilities Department.</i> (BRIC, Local general budget matching funds) HIGH PRIORITY</p>
Improve existing facilities & infrastructure	Sioux City	<p>New. Improve outflow systems at Wastewater Plant. Estimated at \$1.5M. Protects river, local bodies of water. <i>Sioux City Utilities Dept. and related regulatory bodies – IDNR, etc.</i> (Local general budget funds, BRIC) HIGH PRIORITY</p>
Improve existing facilities & infrastructure	Sioux City	<p>New. Reconstruction of well planned, including addition of flood barrier. Project cost not provided. <i>Public Works, Water Dept.</i> (Local general budget funds, Federal/state funds as may be applicable) HIGH PRIORITY.</p>
Improve existing facilities & infrastructure	Sioux City	<p>New. City is seeking to construct a designated storage shed or container for flood response equipment. <i>Parks department.</i> (Local - general fund, PDM/FMA) HIGH PRIORITY</p>
Improve existing facilities & infrastructure	Sloan	<p>New. Sloan is preparing for a water infrastructure improvement project including wastewater treatment and a new water tower. The project will include generators and/or generator transfer switches where applicable and practical. Project is expected to exceed \$3M. <i>Public Works, contracted engineer.</i> (Local general budget funds, loans, others as may become available.) HIGH PRIORITY</p>

Improve existing facilities & infrastructure	Sloan	New. Sloan is seeking funding to support add lighting to parks and enhance trail network to improve access as well as general public safety and wellbeing. <i>City Council, Parks committee.</i> (Local general budget funds, others to be determined.) HIGH PRIORITY
Improve existing facilities & infrastructure	Soldier	New. The city is seeking upgrade opportunities for its lagoon system and related lines. Established in the 1970s, it has been 32 years since the last discharge. They've undergone a preliminary engineering report and televised lines. 3-cell lagoon but only one has been used. Looking at using all 3 for treatment / discharge. <i>Public works, DNR (CDBG, USDA RD, local general budget funds)</i> HIGH PRIORITY
Improve existing facilities & infrastructure	Soldier	New. Updated meters for the city's waterworks are warranted as means of improving monitoring and determining leakage or other flow problems, maintenance needs. Cost estimated at \$1.5M. <i>Public works, IDNR as may be applicable</i> (local general budget funds, go bonds, CDBG, USDA as available) HIGH PRIORITY
Improve existing facilities & infrastructure	Soldier	New. City is planning to put in a new pump house. <i>Public works</i> (USDA, IDNR as applicable, local general budget funds) HIGH PRIORITY
Improve existing facilities & infrastructure	Ute	New. City is planning new well. <i>Public works, USDA, contracted services</i> (local general budget funds, USDA RD) HIGH PRIORITY
Improve existing facilities & infrastructure	Westfield	New. City is in process of completing a new water treatment facility. Project is incorporating flood protections and continuity of operations features (generator/generator hook up). <i>Maintenance and Water/Sewer Supervisor, contracted project manager/administrator</i> (WTSAP, IFA Loan, General Budget) HIGH PRIORITY

Relocate critical facilities	Battle Creek	Carry over. Project was not implemented but is still needed. No estimated timeline for completion as this is highly reliant on available funding sources. Past flood issues resulted in need for elevation of the city's sewer lift station. As flooding events become more frequent and more extreme, project becomes more dire. <i>City Council, City maintenance/waterworks, collaboration with County EMA & Engineer as applicable.</i> (Local general budget funds, PDM, Bonds/Loans through approved programs) HIGH PRIORITY
Relocate critical facilities	Cherokee Co	New. Relocation of Conservation Department necessitated by floodplain expansion. Current office now in compromised area. Facility needs office space as well as storage. There is potential to collaborate with Secondary Roads to share storage space. Estimates range from \$.5M - \$.75M. Ideally, new location will be in one of the parks, River Oaks Conservation Area is being considered. <i>County Board, Conservation Dept, Secondary Roads, IDNR, State Conservation</i> (County and state funds as available, PDM/FMA as appropriate, other TBD) HIGH PRIORITY
Relocate critical facilities	Cherokee	Update: Carry Over. Cherokee is expanding project scope to include several infrastructure improvements. In addition to Beech Street, lift stations at E Sumner< Riverview, Emmet Dr (MHI), E Bluff, and Spruces need rising and/or repairs. Cost estimates not immediately available. <i>City Water & Public Works Depts</i> (City general budget funds, IDNR, Disaster Response/Disaster Mitigation funds as may be available) HIGH PRIORITY
Relocate critical facilities	Ida Grove	Carry Over. Lift replacement still needed at Hillcrest Lift Station. Cost estimate not immediately available. <i>Public Works.</i> (Local general budget budget, Water utility fees, USDA/IDNR as may be applicable) HIGH PRIORITY

Relocate critical facilities	Sgt Bluff	Carry over. Interest in relocating 2nd Fire Station for improved response to more areas; <i>City Admin, Fire Chief, Zone Administrator</i> (City general budget Funds, Fire Dept Funds, Fire Assoc funds, fundraisers, Response Support funds) LOW PRIORITY
Relocate critical facilities	Sioux City	New. Sioux City is looking at relocation of Riverside lift station outside of potential flood area. Due to existing structure's age, replacement may be warranted. Still in preliminary planning stages with expected cost not immediately available. <i>Public Works, Waterworks.</i> (local general budget funds, may be eligible for disaster/disaster mitigation funds, TBD) HIGH PRIORITY

Bridges & Roads	Cherokee	<p>Carry Over. Collaborate w/County and State on review of and implementation of roadway elevation improvements along Hwy 3 and/or Hwy 59; Several road/bridge projects are planned with 3 in progress and others pending.</p> <p>Bridges pending work: Railroad Creek Bridge and E Cherry St Bridge. Work on Bypass scheduled with preparation in progress.</p> <p>Needed but not yet planned: Maple Street Bridge <i>City Administrator & Streets Dept, County Roads Dept, IDOT</i> (Transportation funds, City/county funds) MEDIUM PRIORITY</p>
Bridges & Roads	Hinton	Carry over. Resurface alleys due to washout during rain events Oversight is the responsibility of the <i>Streets Department.</i> (local general budget) LOW PRIORITY.
Bridges & Roads	Ida County	<p>Carry over. Grove: When flooded, no access to city wells along Keystone Ave. Mapping of well needed north of 387th St, off M15. County has access road to maintenance sheds. Improvements needed.</p> <ul style="list-style-type: none"> • Collaborative project needed to develop west access point to City of Ida Grove to improve access to Keystone Ave wells. • Necessity of mapping of 387th is under consideration but is carried over to 2025 plan. • County shop south of town is needing access improvements – surface repairs. Grading/straightening is planned along 235th Street. <p>Funding sources and responsibility remain as provided - <i>County Engineer, Collaboration with City Streets Dept.</i> (County funds, City support, transportation funds, FMA/Mitigation funds where applicable) MEDIUM PRIORITY</p>
Bridges & Roads	Ida County	New. The County is looking to improve access to schools, particularly for young drivers. The following corridors are highly traveled gravel roads being programmed for paving. German Rd (one mile section to Hwy 20) and westward access roads including Lamp, Kastner, and Mueller. Secondary Roads (County funds, City collaboration where applicable, road use funds)
Bridges & Roads	Ida Grove	Update: Carry over. 2020: Potential paving project on 6th St to improve drainage; Project still needed. Cost estimated at \$1.4M includes drainage along with noted street repair needs. <i>City Streets Dept</i> (City general budget funds, Transportation funds, FMA/Disaster mitigation Disaster response funding as available) LOW PRIORITY
Bridges & Roads	Ida Grove	New: Funding has been awarded to fix Main Street bridge at \$1.5M, including major repairs. <i>Streets Dept.</i> (City budget, Transportation funds) HIGH PRIORITY
Bridges & Roads	Ida Grove	New: Funding for Washington Street bridge is pending and anticipated within the next few years. <i>Streets Department, IA DOT</i> (City budget, Transportation funds, IA DOT) HIGH PRIORITY

Bridges & Roads	Ida Grove	New. City has 6 bridges requiring significant maintenance ² are shown as New Projects in the 2025 HMP. Four bridges remain as needed projects, with lower priority due to lack of known funding opportunities. <i>City Streets Dept.</i> (City general budget funds, Transportation funds, Disaster Response/Disaster Mitigation funds as available) LOW PRIORITY
Bridges & Roads	Ida Grove	New. Resurfacing needed on 2 nd St & 6 th St. Estimated cost based on recently completed similar project is \$300K each. <i>City Streets Dept.</i> (Local road use funds, local general budget funds) HIGH PRIORITY
Bridges & Roads	Ida Grove	New. Many road repair projects throughout town are needed due to deterioration/crumbling. Damage is significant, however lack of funding may delay implementation. <i>City Streets Dept.</i> (Local general budget funds, Disaster mitigation as may be applicable, others TBD) MEDIUM PRIORITY
Bridges & Roads	Le Mars	New. Action needed to improve conditions where Willow Creek meets the Floyd River. Increase in occurrence of flood events has highlighted lack of capacity of small railroad bridge crossing that area to handle such a large volume of water. If bridge is washed out, a significant impact would be felt regionally and potentially at the national level pending severity of damage. <i>City administrator, County departments as applicable, railroad, DOT, contracted consultant as applicable.</i> (local general budget funds, BRIC/FMA, railroad programming, IDOT) HIGH PRIORITY
Bridges & Roads	Onawa	Carry over. Resurfacing projects that will address drainage issues and minimize the effects of inclement weather-caused deterioration. <i>City Streets Dept, collaborate with County Roads</i> (City general budget funds, Community Benefit funds, Transportation funds, Disaster funds as may apply, PDM as applicable) HIGH PRIORITY
Bridges & Roads	Whiting	New. K45 bridge needs new guardrails following improvements completed in 2020. <i>Streets dept, County roads.</i> (local road use funds, other road funding as may be available) HIGH PRIORITY

flow control

Flood protection	Cherokee	New. Study to determine flood protection options including but not limited to extending existing flood barrier wall. <i>City Administrator, Parks Dept, IDNR</i> (City funds, IDNR Clean Water programs/Runoff control, Disaster mitigation funds as may be available) HIGH PRIORITY
Flood protection	Ida Grove	New. The Army Corps of Engineers is completing a Slip Lining Levee project in Ida Grove on the Moorhead Park side of the levee. Implementation date, cost, and funding sources not provided. <i>US ACE (ARPA)</i> HIGH PRIORITY
Flood protection	Le Mars	Carry over. Further efforts are needed to stabilize riverbanks and creekbanks to control or direct flow from Floyd River and Willow Creek, especially when in high water stages, from both riverine and flash flood events. North and South ends of airport are increasingly at risk as high flow rate of water continues to reform the Floyd River. Bridges at 24 th Street and the RR bridge at 4 th Ave NE and the walking bridge at Hwy 3 are faced with structure failure risk increasing with each high water event, as placement in proximity to river is changing. Issue is becoming increasingly urgent. Cost estimate not readily available. <i>City Administrator, Airport administration, IDNR</i> (Local general budget funds, Economic Development funds, PDM) HIGH PRIORITY

Flood Protection	Moville	New. Improvements to the existing berm at the North Lift Station are needed as it has been compromised three times. <i>Public Works, Engineering supports as available</i> (local general budget funds, Flood/Disaster mitigation funds as available, community foundation grants) HIGH PRIORITY
Flood protection	Sioux City	New. Flood Mitigation Ponding project for FY27 in Leeds area. Full scope to be determined – intent is to mitigate frequent occurrence of flash flood points by creating intentional water retention areas. Cost is estimated at \$4M. <i>Public Works, contracted services/labor.</i> (Local general budget funds, state mitigation funds as available) HIGH PRIORITY
Flood protection	Sioux City:	New. Levee Extension along Big Sioux River affecting Riverside neighborhood. The project estimated at \$2.5M is under review for implementation. Extreme historical flooding in 2024 resulted in flood protection actions as dictated in neighboring state jurisdiction. Outcome of that last-resort implementation exposed an otherwise protected area, with significant damage to or loss of approximately 70 homes. <i>Sioux City Public Works, related regulatory systems including but not limited to the Army Corp of Engineers.</i> (CIP requested, Local general budget Funds, BRIC) HIGH PRIORITY
Flood protection	Sioux City:	New. Infrastructure protection. Riverside Collector well- permanent flood barrier and elevated access to the well. <i>Parks Department.</i> (Local - general fund, PDM/FMA) HIGH PRIORITY
Flood protection	Sioux City:	New. Infrastructure protection. Well and switchgear in Chris Larsen boat ramp- needs a deployable closure structure instead of sand bags. Needs to have plan to increase wall height if necessary as it was under built. <i>Parks Department.</i> (Local - general fund, PDM/FMA) HIGH PRIORITY
Flood Protection	Sioux City	New. Hesco sandbags needed to improve flood prevention. This \$40, 000 project may also be categorized as Equipment. <i>Public Works.</i> (Local general budget funds, FMA funds, other response/emergency management funds as may be available) HIGH PRIORITY
Flood Protection	Sioux City	New. City is looking to replace wire weight gauge on Floyd River with USGS Auto-Read gauge, allowing remote alerts. <i>Parks Department.</i> (Local - general fund, PDM/FMA) HIGH PRIORITY
Flood protection	Westfield	Carry over. City seeking options to substantially reinforce berm and/or other flood protections around lagoon. <i>City Council, City maintenance/waterworks, County EMA, FEMA, and DNR as applicable.</i> (Local – General electric fund, Disaster Recovery funds as applicable) HIGH PRIORITY

Drainage projects	Sioux City	New. Southbridge development will affect function of existing drainage ditch, which protects water treatment plant. A 46M project is planned and funded to ensure sufficient function FY26-28. <i>City Utilities</i> (CIP) HIGH PRIORITY
Drainage projects	Sioux City	New. City is planning targeted Reconstructing Undermined Pavement and Stormwater Drainage improvements including Pulaski Park area in Morningside. A collaborative effort with Morningside university resulted in \$1.5M investment, in the planning stage in 2025 with implementation set for 2026. <i>Environmental Services Dept. coordinated with Morningside University</i> (CIP) HIGH PRIORITY
Drainage projects	Correctionville	Carry over. Continue implementation of drainage projects. Additional areas need attention. Project will be recurring with opportunity to instill better long term controls should such process be made known.. Implement drainage projects as identified. Citywide culvert and ditch maintenance improvements including but not limited to bigger culverts, dredging ditches, add drainways

		where appropriate. <i>City Administrator/Streets/Public Works</i> (Local general funds, IDNR project funds, PDM) HIGH PRIORITY
Drainage projects	Akron	New. City is assessing check valve on storm sewer pipe seeking a viable solution to reduce flooding incidents. Other considerations include diverting water and/or adding a pump station. Likely to include study and implementation. <i>Public Works, DNR, County Engineer, Contracted services.</i> (local general budget funds, disaster/flood mitigation program funds as may be available) HIGH PRIORITY
Drainage projects	Akron-Westfield CSD	New. Culvert under highway directs water to school facilities in high water events, leaving district with excess water accumulation and no means of draining. District is interested in partnering with city and IA DOT as applicable to determine drainage and/or flow control solutions. Project may include study and/or implementation of solution as identified. Potential solution is plug for culvert that will sustain flow unless highway is overtaken by water. <i>District facilities staff, City of Akron, Plymouth Co Roads, and Plymouth Co EMA</i> (fund sources to be determined upon identifying feasible solution) HIGH PRIORITY
Drainage projects	Akron-Westfield CSD	New. Address bus barn flooding by waterproofing and implementing a process allowing the structure to serve as a “passthrough” to minimize effects of flooding. <i>District maintenance staff</i> (district funds, PDM as may be available) HIGH PRIORITY
Drainage projects	Hinton	Carry over. Starview is in need of stormwater management improvements. With modified priority level, this project continues to the 2025 HMP. <i>City Administration, Contracted services, IDNR</i> (Local general budget funds, IDNR program funds, Disaster Response/Mitigation funds) MEDIUM PRIORITY
Drainage projects	Holstein	Carry over. Sidewalk trail at ball field and rec center with drainage project incorporated; <i>City Administration, Contracted services, County collaboration for trail projects</i> (Health & Wellness funds, Transportation Alternatives funds, Local funds, fundraisers, Walk/Bike program funds) LOW PRIORITY
Drainage projects	Ida Co	Carry over. Areas of particular need of drainage ditch dredging include 7 th Street at Rowher, Jasper, and M15. Old Hwy 59 still needs attention. Project carries over to 2025 HMP with same priority. <i>County Engineer, Collaborate with City staff, IDNR</i> (County Roads funds, local general budget funds) HIGH PRIORITY
Drainage projects	Ida Grove	New. Storm sewers and culverts citywide need of drudging with Moorhead Ave and US 175 being highest priority. Cost estimate not immediately available. <i>City Streets Dept</i> (Local general budget funds, disaster mitigation funds as available, other funds TBD) HIGH PRIORITY
Drainage projects/ Study-Assessment	Merrill	New. River flooding hits north side of town and around highway. Additional attention is needed to determine prevention options. Interested in feasibility study and implementation of related solutions. Funding is a barrier. <i>City Council, City staff</i> (Local general budget funds, PDM, FMA) HIGH PRIORITY
Drainage Projects	Moorhead	Carry over. City is seeking options to improve stormwater drainage. Latent effects of 2019 floods resulted in underwashing of the city’s sidewalks and streets, the presumed cause of sinkholes throughout town. The city did pursue a scoping grant through FEMA BRIC but was not awarded. A study to confirm/determine cause and development of an implementation plan is still needed. <i>Public Works</i> (Disaster Mitigation Funds as available, Local general budget Funds) HIGH PRIORITY
Drainage Projects	Pierson	New. The city has made some drainage improvements in recent years (4 th St), but more work is needed along Front Street. <i>Public Works</i> (local general budget funds, other infrastructure funds as may be available) HIGH PRIORITY

Drainage Projects	Plymouth Co	New & Ongoing. Drainage ditch improvements are needed throughout the county. Maintenance is performed as needed with monitoring in effect for Akron, Westfield, and Hinton as areas frequently affected by flash flooding. Monitoring includes assessing opportunities for long term improvements that may supplement drainage ditch network. <i>Secondary Roads</i> (County budget, IDNR as may be applicable, Disaster response as may be needed) HIGH PRIORITY
Drainage Projects	Remsen	New. Storm drains are needed at each end of Beck Park. <i>City Council, public Works, Parks & Rec, DNR as applicable</i> (local general budget funds, DNR as available, PDM/Flood prevention as available) HIGH PRIORITY
Drainage Projects	Rodney	Carry over. Remaining streets throughout town still need work to improve drainage and drainage paths. Project is carried to 2025 HMP. <i>City Council</i> (City – general fund, transportation funds, Community Benefit funds) LOW PRIORITY
Drainage Projects	Salix	Carry over. Phase II - Implement stormwater drainage system to resolve issues created by cancelation of agreement to direct stormwater into nearby Drainage District. The project identified through the study included the construction of a flow channel connecting the Salix Drainage District to the Farmers Drainage District, including a retention pond and other flow diversions. Project is awaiting finalization of cost-benefit analysis as interim conditions put Salix at heightened risk for street flood potential, storm drain backup, and home infiltration. <i>Salix Drainage District</i> (Drainage district funds, others to be determined pending necessitated corrections) HIGH PRIORITY
Drainage projects	Sioux City	New. Southbridge development will affect function of existing drainage ditch, which protects water treatment plant. A 46M project is planned and funded to ensure sufficient function FY26-28. <i>City Utilities</i> (CIP) HIGH PRIORITY
Drainage projects	Sioux City	New. City is planning stormwater drainage improvements at Pulaski Park area in Morningside. A collaborative effort with Morningside university resulted in \$1.5M investment, in the planning stage in 2025 with implementation set for 2026. <i>Public Works, Parks & Rec, Morningside University</i> (funding sources not identified beyond local general budget) HIGH PRIORITY
Drainage	Struble	New. City is in need of improved stormwater drainage and runoff controls for downtown. <i>City Council</i> (City general budget funds, transportation funds, Community Benefit funds) LOW PRIORITY
Shelter	Cherokee	New. City of Cherokee is aware of need for shelter location south of the river, serving the ball fields and surrounding parks and considering funding opportunities to support the project. A cost estimate is not immediately available as funding source may dictate size and other components affecting the cost. Priority level reflects lack of feasible funding in the near future, not the importance of the project. <i>City parks dept., City Council, County EMA.</i> (Local general budget funds, fundraisers, community benefit grants, public safety initiatives) LOW PRIORITY
Shelter	Cherokee	New. City is assessing options for refuge locations for extreme heat/ extreme cold weather events, especially for individuals whose homes may not have air conditioning or sufficient heat systems. This would also serve to benefit those using rec areas where a brief respite may be necessary. <i>City departments, clerk & administrator, County EMA as consult</i> (local general budget funds as needed) HIGH PRIORITY
Shelter	Correctionville / River Valley School District	New. Formalize shelter/refuge/command center designation(s) and declaration process specific to hazard type and need. <i>City, River Valley School District, County EMA.</i> (No funding needs anticipated) HIGH PRIORITY

Shelter	Hinton	Carry over. Additional shelter options needed. The City would still like to incorporate a shelter at City parks to serve as refuge site during ball games and other events. This project will carry over to the 2025 HMP, maintaining assigned priority. <i>City Administration, County EMA collaboration</i> (Local general budget funds, Improving public spaces funds, PDM) LOW PRIORITY
Shelter	Ida Co	New. Interested in adding storm shelter at Fairgrounds. Project is primarily limited by funding but will remain on priority list for consideration when updates and other investments are planned. <i>County Board, County EMA, Fair Board</i> (Mitigation program funds, local general budget /county funds, community safety programs, local foundation and betterment grants) MEDIUM PRIORITY
Shelter	Ida Co (w/Ida Grove)	New. Schmidt's Addition on 6 th in Ida Grove is a residential development without basements. Interest in establishing storm shelter in area. Location and scale of facility to be determined. May require preliminary study or project scoping to determine most effective option. <i>County EMA, County Board, Ida Grove City administration/Council, residents as applicable</i> (Community Safety funding opportunities, community foundation and/or betterment grants, local general budget funds) MEDIUM PRIORITY
Shelter	Merrill	Carry over. Interest in designating refuge locations at City Park and Campgrounds. Structural enhancements to be considered for formal designation. <i>City Council, City staff County EMA as applicable.</i> (local general budget funds, community benefit programs, local groups, fundraising). LOW PRIORITY
Shelter	Monona County	Carry over. At Onawa: Interest in adding formal storm shelter with tornado designation at the Fairgrounds &/or at the Christian Camp within the State Park. Priority level reflects lack of funding opportunity, not level of need. <i>County Conservation/Parks Dept, EMA, IDNR/State Parks Dept, City administration</i> (County funds, IDNR Program funding, PDM, Community Benefit funds, private funds as applicable) LOW PRIORITY
Shelter	Monona County	Carry over. Shelter at Peters Park. <i>County Conservation/Parks Dept, EMA, IDNR/State Parks Dept,</i> (County funds, IDNR Program funding, PDM, Community Benefit funds, fundraisers, PDM) LOW PRIORITY
Shelter	Oyens	New. The city is in the process of establishing a city park. Plans include a shelter to offer moderate protection from thunderstorms, hail & lightning as well as shade in extreme heat conditions. <i>City Park Planning Committee, City Council</i> (Local general budget funds, community betterment, PDM as applicable. HIGH PRIORITY

technology

Improve effectiveness	Hinton	New. City has incorporated a plan to review their local Emergency Response and Emergency Operations Plans to assess and improve emergency response actions through: <ol style="list-style-type: none"> 1. Establishing a chain of command process specific to emergency type and area of effect 2. Designate command center, including alternate location if center is impacted by event 3. Identify refuge/shelter locations that may serve in a general capacity <i>Council, City Clerk, Public Works</i> (Staff time, general budget) HIGH PRIORITY
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Improve effectiveness	Hinton	New. City is working to better inform residents of pending and potential extreme weather and other hazardous events through the promotion of existing services including but not limited to Alert Iowa. <i>City Clerk</i> (no funding outside of staffing hours necessary) HIGH PRIORITY
Improve effectiveness	Hinton	New. Implementation of improved ADA access is needed for restrooms at community center and city parks. <i>Parks & Rec, Public Works</i> (local general budget funds, accessibility or multi-generational living program grants, fundraisers) HIGH PRIORITY
Improve effectiveness	Ida Co	New. Efforts will continue as opportunities become available. <i>County Board</i> (State/Federal connectivity programs as may be available, private-public partnerships) MEDIUM PRIORITY
Improve effectiveness	Moorhead	New. City is planning to increase awareness of Monona County's Alert Iowa system as effective means of communicating in-time weather events, as well as connected preparedness tools, as may be needed for residents. <i>City Clerk, County EMA</i> (No funds expected to be necessary beyond staff time) MEDIUM PRIORITY
Improve effectiveness	Rodney	Carry over. Promote available weather alert subscription services such as Alert Iowa and storm-spotter training as available. <i>City Clerk, Council, County EMA</i> (no cost anticipated) HIGH PRIORITY
Improve effectiveness	Woodbury Co	New. County is in the process of developing a Continuity of Operations Plan including alternate worksite locations for county offices in the event of displacement due to disaster, including reprioritization process for alternate work sites. <i>County EMA, heads from collaborating departments.</i> (staff time anticipated as primary cost item) HIGH PRIORITY.

natural barriers/ supports

Retention Pond	Bronson	Carry over. Assess opportunity to implement retention pond to mitigate flooding through natural methods. <i>County EMA, Contracted engineer services</i> (Local general budget funds, Community Benefit funds, IDNR Program funds, pre-disaster funds as may be available) LOW PRIORITY
Dike improvement	Merrill	New. Dike enhancement and/or replacement with more effective protections against flood, especially for lagoon. Project may require a study to determine feasible options. Priority based on funding viability, not project need. <i>City Council, County, and DNR collaboration as applicable.</i> (Local general budget funds) MEDIUM PRIORITY
Levees/Berms	Akron	New. Berms/Levees to reduce flood risk; rip rap for bank stabilization. <i>City, FEMA coordination</i> (Local general budget funds, disaster/flood mitigation funds as may be available) HIGH PRIORITY
Trees	Marcus	New. Recognizing the benefits of a healthy tree population, the city is seeking funding opportunities to fortify its tree density, especially in recreation and public greenspace areas, filling gaps left by removal of dead/diseased trees. <i>Public Works, City Council, County Conservation as applicable</i> (local general budget funds, Trees Please and similar re-treeing programs, Arbor Day Foundation) MEDIUM PRIORITY

Trees	Moorhead	New. City has removed dying/diseased trees from public rights of way as needed, but no schedule of removal or replacement is currently in place. City is interested in seeking funds to add trees back into parks, pending availability of funds, to serve as protection from extreme heat, soil stabilization/erosion control, and to serve as a wind barrier. <i>City administration</i> (City general budget funds, IDNR programs, UPS Tree Grants and similar community reforestation funds, private funds) LOW PRIORITY
Trees	Rodney	Carry over. Community will continue to seek funding opportunities to re-substantiate its tree population. Funding support to sustain/improve tree population. <i>City administration</i> (City general budget funds, IDNR programs, UPS Tree Grants and similar community reforestation funds, private funds) LOW PRIORITY
Trees	Ute	New. Re-tree plan to be implemented. City reduced loss with treatment of ash trees in parks, however additional trees are needed to provide soil stabilization, respite from extreme heat/sun, and to serve as natural windbreak. <i>City administration</i> (City general budget funds, IDNR programs, UPS Tree Grants and similar community reforestation funds, private funds) HIGH PRIORITY
Trees	Westwood CSD	New. District is seeking viable mode of tree replacement including an implementation plan and funding sources. <i>Superintendent, District Maintenance, Re-Tree programs as applicable</i> (district funds, community grants, IDNR, others as may be applicable) LOW PRIORITY

Stabilization	Anthon	Carry over. Riverbank stabilization @ access point; <i>City administration</i> (City funds, Disaster funds, PDM) HIGH PRIORITY
Stabilization	Castana	Carry over. Carry over. Due to multi-faceted and severe funding constraints, action was not taken on this project. The city is interested in stabilizing the gravel roads throughout its hilly terrain to address proneness to wash out. Modify road overlay with "packable rock" or more stable substance to minimize washout episodes; <i>City Maintenance</i> (City general funds, PDM) MEDIUM PRIORITY
Stabilization	Cherokee	New. Lake bank stabilization. Repetitive flooding is having an impact on the lake in addition to riverbanks. The city is implementing a stabilization project intended for long term sustainability. <i>City, IDNR as applicable</i> (local general budget funds, DNR grants as may be available, other TBD) HIGH PRIORITY
Stabilization	Cherokee	New. City, in collaboration with the County, is considering options in controlling flow of river to reduce meandering. Increase of intensity and frequency of high water events has resulted in accelerated meandering of the river, threatening to overtake River Road. <i>City, County, IDNR, USACE as applicable.</i> (local general budget funds, county funds, waterway program funds as may be available, pre-disaster funds) HIGH PRIORITY
Stabilization	Holstein	Carry over. Efforts are ongoing with consideration being given to more long-term solutions. Determination of such action has not been made. Drainage projects to stabilize dirt in areas prone to washout; <i>City Maintenance/Streets</i> (Local – general fund, PDM) HIGH PRIORITY
Stabilization	Ida County	New. Spillway maintenance is ongoing and cumulatively expensive. County is interested in addressing channel stability with a long-term approach, reducing recurring expenses and substantiating infrastructure. <i>Operations Supervisor, County Conservation.</i> (Funding to be determined but will include county funds and pursuit of applicable grant programs) HIGH PRIORITY

Stabilization	Ida Grove	New. Stabilization as a project carries over to the 2025 Plan. Particular needs at Railroad St at Badger Creek. Significant erosion. Steep pitch of bank complicates stabilization. <i>City administration & Streets Dept, County Engineer</i> (Local general budget funds, if scheduled accordingly State/Federal Transpo funds PDM) HIGH PRIORITY
Stabilization	Merrill	New. City is using rip rap for stabilization and reduction of wash out potential. Interested in more permanent means of stabilizing river bank and protective berms. <i>Public Works, City Maintenance, DNR as may be applicable.</i> (Local general budget funds, PDM, Flood Disaster funds, community benefits program) HIGH PRIORITY
Stabilization	Plymouth County	New. Rip rap repair and assessment for permanent stabilization is in progress for a man-made berm surrounding a 20-acre lake south of Akron. Flooding in 2024 exceeding historic high flood marks by 5', resulting in significant deterioration of berm. <i>County departments, IDNR as applicable</i> (County budget item, disaster response funds as may be applicable, mitigation funds as may be available) HIGH PRIORITY
Stabilization	Sioux City	New: Tree replacement plan included in CIP. Replace trees that have been removed due to dead/diseased as means of soil stabilization, wind break, and relief from extreme heat/sun events. <i>Parks & Recreation Department.</i> (Local funds via CIP, grants as available - DNR, tree foundations, MidAmerican, etc.) HIGH PRIORITY.

REGION-WIDE RECOMMENDATIONS

In addition to planned projects, some general strategies have been identified that are expected to contribute to community resiliency. The following provides some specific actions and strategies that may be incorporated into future projects as well as existing practices with little or no cost to communities.

Awareness	Increased use of technology to provide relevant information -- event or season specific.
	Promote Alert Iowa notification services through City, School District, and County websites.
Coordinated Projects	Modify action to carry into new plan strategy: Identify need for shelter from tornado and windstorm. Then, design and develop storm shelters. Strategy should be routine assessment based on current and expected conditions and consideration how those conditions may be evolving, causing a change in need.
Equipment	Adjust flood level assessment practices to include tributary flooding and relative impacts for all waterways within the region that have incurred damage.
	Equip
	High capacity snow thrower(s) (truck mounted) for use between counties within the region -- shared equipment. Monona & Woodbury specified potential for shared equipment if possible. Better capacity accelerates removal process; increases efficiency. Each county made some moderate improvements in fleet capacity, however coordination is still desired to reduce redundancy and improve efficiency of mutually needed equipment.

	Provide generators or alternate energy reserves for facilities identified as critical in times of crisis -- backup power supply
	Equip City as necessary to implement emergency protocol (materials to restrict access and/or infiltration such Road barricades; flood barriers, etc.)
Human Resources	Address decline in volunteer response departments necessitates need for action. Paid staff or at minimum paid time for training to meet certification requirements.
	Assess how other smaller communities are addressing volunteer shortages. Standardize "junior" responders -- high school students 17 and older, having been certified. Connect with school credits/internships.
	To account for time constraints on volunteers, region should assess ability for remote training opportunity through web meetings or archived video training that may be interactive. Petition State to enable allowable flex-training options.
Policy	Formal ordinance directing routine/scheduled ditch maintenance to manage debris accumulation/blockages. Silt management needed for retention ponds as part of new developments.
	Ensure development guidelines include language addressing water retention &/or flow controls.
Promotion of existing resources	Promotion of subscription to Alert Iowa or other location-specific alert systems
	Promote availability of awareness materials and alert systems as available through respective EMA offices
	Make use of existing means of local communications to improve disaster awareness and preparedness -- postings, bulletin board, newsletter, email, text
Security	Consider security-oriented cameras and remote/keyless entry to enable access for refuge
Technology	Improved cell and internet services to maximize use of technological advancements is needed throughout the region.
	Equip tributaries with remotely monitored flood gauges (current gauges are manually assessed and monitored)
	tri-band radio communications capacity

For jurisdictions that have participated in the development of this Plan but have not identified a specific action, strategy, or project, an amendment must be filed for FEMA and the Iowa Department of Homeland Security to formally recognize this jurisdiction as an eligible applicant for Pre-Disaster Mitigation Funds. Such condition is noted in the profile of respective jurisdictions. Since most School Districts did not outline specific actions, strategies, or projects, a statement indicating terms of eligibility is included in the district introduction under Title V. *School Districts Participating as Jurisdictions, Section A. Summary of Relevance to Plan.*